

B.Sc-I Physics.

PRACTICALS

Minimum 16 (Eight from each group)

Experiments out of the following or similar experiments of equal standard

GROUP-A

1. Study of laws of parallel and perpendicular axes for moment of inertia.
2. Moment of inertia of Fly wheel.
3. Moment of inertia of irregular bodies by inertia table.
4. Study of conservation of momentum in two dimensional oscillations.
5. Study of a compound pendulum.
6. Study of damping of a bar pendulum under various mechanics.
7. Study of oscillations under a bifilar suspension.
8. Study of modulus of rigidity by Maxwell's needle.
9. Determination of Y , k , η by Searl's apparatus.
10. To study the oscillation of a rubber band and hence to draw a potential energy curve from it.
11. Study of oscillation of a mass under different combinations of springs.
12. Study of torsion of wire (static and dynamic method).
13. Poisson's ratio of rubber tube.
14. Study of bending of a cantilever or a beam.
15. Study of flow of liquids through capillaries.
16. Determination of surface tension of a liquid.
17. Study of viscosity of a fluid by different methods.

GROUP-B

1. Use of a vibration magnetometer to study a field.
2. Study of magnetic field B due to a current.
3. Measurement of low resistance by Carey-Foster bridge.
4. Measurement of inductance using impedance at different frequencies.
5. Study of decay of currents in LR and RC circuits.
6. Response curve for LCR circuit and response frequency and quality factor.
7. Study of waveforms using cathode-ray oscilloscope.
8. Characteristics of a choke and Measurement of inductance.
9. Study of Lorentz force.
10. Study of discrete and continuous LC transmission line.
11. Elementary FORTRAN programs, Flowcharts and their interpretation.
12. To find the product of two matrices.
13. Numerical solution of equation of motion.
14. To find the roots of quadratic equation.

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- Ball, D. W. Physical Chemistry Thomson Press, India (2007).
- Castellan, G. W. Physical Chemistry 4th Ed. Narosa (2004).
- Mortimer, R. G. Physical Chemistry 3rd Ed. Elsevier: NOIDA, UP (2009).
- Engel, T. & Reid, P. Physical Chemistry 3rd Ed. Pearson (2013).
- Puri, B.R., Sharma, L. R. and Pathania, M.S., Principles of Physical Chemistry, Vishal Publishing Co., 47th Ed. (2016).
- Bahl, A., Bahl, B.S. and Tuli, G.D. Essentials of Physical Chemistry, S Chand Publishers (2010).
- Rakshit P.C., Physical Chemistry, Sarat Book House Ed. (2014).
- Singh B., Mathematics for Chemist, Pragati Publications.

PAPER - IV
LABORATORY COURSE

INORGANIC CHEMISTRY

A. Semi-micro qualitative analysis (using H_2S or other methods) of mixtures - not more than four ionic species (two anions and two cations, excluding interfering, insoluble salts) out of the following:

Cations : NH_4^+ , Pb^{2+} , Bi^{3+} , Cu^{2+} , Cd^{2+} , Fe^{3+} , Al^{3+} , Co^{2+} , Ni^{2+} , Mn^{2+} , Zn^{2+} , Ba^{2+} , Sr^{2+} , Ca^{2+} , Na^+
Anions : CO_3^{2-} , S^{2-} , SO_3^{2-} , $S_2O_3^{2-}$, NO_2^- , CH_3COO^- , Cl^- , Br^- , I^- , NO_3^- , SO_4^{2-}

(Spot tests may be carried out wherever feasible)

B. Acid-Base Titrations

- Standardization of sodium hydroxide by oxalic acid solution.
- Determination of strength of HCl solution using sodium hydroxide as intermediate.
- Estimation of carbonate and hydroxide present together in mixture.
- Estimation of carbonate and bicarbonate present together in a mixture.
- Estimation of free alkali present in different soaps/detergents

C. Redox Titrations

- Standardization of $KMnO_4$ by oxalic acid solution.
- Estimation of Fe(II) using standardized $KMnO_4$ solution.
- Estimation of oxalic acid and sodium oxalate in a given mixture.
- Estimation of Fe(II) with $K_2Cr_2O_7$ using internal (diphenylamine, anthranilic acid) and external indicator.

D. Iodo / Iodimetric Titrations

- Estimation of Cu(II) and $K_2Cr_2O_7$ using sodium thiosulphate solution iodimetrically.
- Estimation of (a) arsenite and (b) antimony iodimetrically.

- Estimation of available chlorine in bleaching powder iodometrically.
- Estimation of Copper and Iron in mixture by standard solution of $K_2Cr_2O_7$ using sodium thiosulphate solution as titrants.

ORGANIC CHEMISTRY

1. Demonstration of laboratory Glasswares and Equipments.
2. Calibration of the thermometer. $80^\circ-82^\circ$ (Naphthalene), $113.5^\circ-114^\circ$ (Acetanilide), $132.5^\circ-133^\circ$ (Urea), 100° (Distilled Water).
3. Purification of organic compounds by crystallization using different solvents.
 - Phthalic acid from hot water (using fluted filter paper and stemless funnel).
 - Acetanilide from boiling water.
 - Naphthalene from ethanol.
 - Benzoic acid from water.
4. Determination of the melting points of organic compounds.
Naphthalene $80^\circ-82^\circ$, Benzoic acid $121.5^\circ-122^\circ$, Urea $132.5^\circ-133^\circ$, Succinic acid $184.5^\circ-185^\circ$, Cinnamic acid $132.5^\circ-133^\circ$, Salicylic acid $157.5^\circ-158^\circ$, Acetanilide $113.5^\circ-114^\circ$, m-Dinitrobenzene 90° , p-Dichlorobenzene 52° , Aspirin 135° .
5. Effect of impurities on the melting point – mixed melting point of two unknown organic compounds.
 - Urea – Cinnamic acid mixture of various compositions (1:4, 1:1, 4:1).
6. Determination of boiling point of liquid compounds. (boiling point lower than and more than $100^\circ C$ by distillation and capillary method).
 - Ethanol 78° , Cyclohexane 81.4° , Toluene 110.6° , Benzene 80° .
- i. Distillation (Demonstration)
 - Simple distillation of ethanol-water mixture using water condenser.
 - Distillation of nitrobenzene and aniline using air condenser.
- ii. Sublimation
 - Camphor, Naphthalene, Phthalic acid and Succinic acid.
- iii. Decolorisation and crystallization using charcoal.
 - Decolorisation of brown sugar with animal charcoal using gravity filtrations crystallization and decolorisation of impure naphthalene (100 g of naphthalene mixed with 0.3 g of Congo red using 1 g of decolorizing carbon) from ethanol.
7. Qualitative Analysis

Detection of elements (N, S and halogens) and functional groups (Phenolic, Carboxylic, Carbonyl, Esters, Carbohydrates, Amines, Amides, Nitro and Anilide) in simple organic compounds.

PHYSICAL CHEMISTRY

1. Surface tension measurements.
 - Determine the surface tension by (i) drop number (ii) drop weight method.
 - Surface tension composition curve for a binary liquid mixture.
2. Viscosity measurement using Ostwald's viscometer.
 - Determination of viscosity of aqueous solutions of (i) sugar (ii) ethanol at room temperature.
 - Study of the variation of viscosity of sucrose solution with the concentration of solute.
 - Viscosity Composition curve for a binary liquid mixture.
3. Chemical Kinetics
 - To determine the specific rate of hydrolysis of methyl/ethyl acetate catalysed by hydrogen ions at room temperature.
 - To study the effect of acid strength on the hydrolysis of an ester.
 - To compare the strengths of HCl & H₂SO₄ by studying the kinetics of hydrolysis of ethyl acetate.
4. Colloids
 - To prepare colloidal solution of silver nanoparticles (reduction method) and other metal nanoparticles using capping agents.

Note: Experiments may be added/ deleted subject to availability of time and facilities

PRACTICAL EXAMINATION

05 Hrs.
M.M. 50

Three experiments are to be performed

1. Inorganic Mixture Analysis, four radicals two basic & two acid (excluding insoluble, Interfering & combination of acid radicals) OR Two Titrations (Acid-Bases, Redox and Iodo/Iodimetry)

12 marks

2. Detection of functional group in the given organic compound and determine its MPt/BPt.

8 marks

O R

Crystallization of any one compound as given in the prospectus along with the determination of mixed MPt.

O R

Decolorisation of brown sugar along with sublimation of camphor/ Naphthlene.

3. Any one physical experiment that can be completed in two hours including calculations.

14 marks

4. Viva

10 marks

5. Sessionals

06 marks

In case of Ex-Students two marks will be added to each of the experiments

REFERENCE TEXT:

1. Mendham, J., A. I. Vogel's Quantitative Chemical Analysis 6th Ed., Pearson, 2009.
2. Ahluwalia, V. K., Dhingra, S. and Gulati, A. College practical Chemistry, University Press.
3. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry, Pearson Education (2009)
4. Furniss, B.S.; Hannaford, A.J.; Smith, P.W.G.; Tatchell, A.R. Practical Organic Chemistry, 5th Ed., Pearson (2012)
5. Khosla, B. D.; Garg, V. C. & Gulati, A. Senior Practical Physical Chemistry, R. Chand & Co.: New Delhi (2011).
6. Garland, C. W.; Nibler, J. W. & Shoemaker, D. P. Experiments in Physical Chemistry 8th Ed.; McGraw-Hill: New York (2003).
7. Halpern, A. M. & McBane, G. C. Experimental Physical Chemistry 3rd Ed.; W.H. Freeman & Co.: New York (2003).

B.Sc. PART - I
COMPUTER SCIENCE
PAPER II
PROGRAMMING IN 'C' LANGUAGE
(Paper Code - 0806)

Max Marks: 50

NOTE: The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice.

UNIT-I

Fundamentals of C Programming: Overview of C: History of 'C', Structure of 'C' program: Keywords, Tokens, Data types, Constants, Literals and Variables, Operators and Expressions: Arithmetic operators, Relational operator, Logical operators, Expressions, Operator: operator precedence and associativity, Type casting, Console I/O formatting, Unformatted I/O functions: getch(), getchar(), getchc(),getc(), puts(), putchar().

UNIT- II

Control Constructs: If-else, conditional operators, switch and break, nested conditional branching statements, loops: do while, while, for, Nested loops, break and continue, goto and label, exit function
Functions: Definition, function components: Function arguments, return value, function call statement, function prototype, Types of function, Scope and lifetime of variable, Call by value and call by reference, function using arrays, function with connected line argument, User defined function, static and charac functions, Recursive function.

UNIT-III

Array: Array declaration, One and Two dimensional numeric and character arrays, Multidimensional arrays.
String: String declaration, initialization, string manipulation with/without using library function.
Structure, Union and Enum - Structure: Basics, declaring structure and structure variable, typedef statement, array of structure, array within structure, Nested structure; passing structure to function, function returning structure. **Union:** basics, declaring union and union variable, **Enum:** declaring enum and enum variable.

UNIT- IV

Pointer: Definition of pointer, Pointer declaration, Using & and * operators, Void pointer, Pointer to pointer, Pointer in math expression, Pointer arithmetic, Pointer comparison, Dynamic memory allocation functions - malloc, calloc, realloc and free. Pointer vs. Array, Array of pointer, Pointer to array, Pointers to function, Function returning pointer, Passing function as Argument to function, Pointer to structure, Dynamic array of structure through pointer to structure.

UNIT-V

File Handling and Miscellaneous Features: File handling: file pointer, File accessing functions: fopen, fclose, fgetc, fputc, fprintf, fscanf, fread, fwrite, eof, fflush, rewind, fseek, ferror. File handling through command line argument. Introduction to C preprocessor #include, #define, Conditional compilation directives: #if, #else, #elif, #endif, #ifndef etc.

TEXT BOOKS:

1. Programming in ANSI C, S. Balagurusamy, Tata McGraw-Hill, Third Edition.
2. Let Us C, YashwantKametkar, Infinity Science Press, Eighth Edition.
3. Mastering C, K R Venugopal, Tata McGraw-Hill.
4. The C Programming Language, Brian W. Kernighan, Dennis M. Ritchie, Prentice Hall, Second Edition.
5. Applications Programming in ANSI C, R. Johnsonbaugh, Martin Kalin, Macmillan, Second Edition.
6. The Spirit of C, Mellich Coozer, Java publishing House.
7. How to use C in Computers, R.S. Dinesh, Pearson Education.

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B.Sc. (CS)
I Year

B.Sc. PART - I
COMPUTER SCIENCE
PAPER - I
COMPUTER FUNDAMENTALS
(PAPER CODE - 6885)

NOTE: The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice.

UNIT - I Classification and Organization of Computers

History of computer, Generation of computer, Calculator vs. Computer, Digital and Analog computers and its evolution, Major components of digital computers, Memory addressing capability of CPU, Word length and processing speed of computers, Microprocessors, Single chip microcomputer, Large and small computers, Users interface, Hardware, software and firmware, multi programming multi user system, Dumb smart and intelligent terminals, computer network and multi processing, LAN parallel processing, Flynn's classification of computers, Control flow and data flow computers

UNIT - II Central Processing Unit

Parts of CPU - ALU, Control Unit, Registers, Architecture of Intel 8085 microprocessor, Instructions for Intel 8085 microprocessor, instruction Word size, Various addressing mode, Interrupts, Some special Control signals, instruction cycle, fetch and execute operation, Timing Diagram, Instruction flow and data flow.

UNIT - III Memory

Memory hierarchy, Primary and Secondary Memory, Cache memory, Virtual Memory, Direct Access Storage Devices (DASD), Destructive and Nondestructive Readout, Program and data Memory, Memory Management Unit (MMU), PCMCIA Cards and Slots

UNIT - IV I/O Devices

I/O devices- Keyboard, Mouse, Monitor, Impact and Non-Impact Printers, Plotter, Scanner, other Input/output devices; Scan method of Display- Raster Scan, Vector Scan, Bit Mapped Scan, CRT Controller, I/O Port- Programmable and Non Programmable I/O ports, Inbuilt I/O ports- Parallel and Serial ports, USB, IEEE 1394, AGP, Serial data transfer scheme, Memory controller, Input Processor I/O processor, Arithmetic Processor

UNIT - V SOFTWARE AND PROGRAMMING TECHNIQUES

Application and System Software: Introduction, Example, Difference etc., Introduction to Open Source Software (such as Unix/Linux (Ubuntu), Libre office etc., Introduction to Machine Language, Assembly Language and High Level Language; Programming Techniques, Stack, Subroutine, Debugging of programs, Macro, Program Design, Software development, Flow Chart, Multi programming, Multiuser, Multitasking Protection, Operating system and Utility programs, Application packages.

TEXT BOOKS:

1. Computer Fundamentals, P. K. Sinha, BPH Publications, Sixth Edition.
2. Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
3. Fundamentals of Computers, M. Rajaraman, PHI, Sixth Edition.
4. Computers Today, Donald B. Sanders, McGraw-Hill, Third Edition.
5. IBM PC and Clones, B. Govindarajan, McGraw-Hill, Second Edition.
6. UNIX Concepts and Applications, Somitabha Das, Tata McGraw-Hill, Fourth Edition.

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Practical

- At least 20 Practical based on Syllabus of Paper-I and Paper-II.

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Yash
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Hani Shankar Prasad Tande

B.Sc. I (BOTANY)

PRACTICAL

Study of external (Morphological) and internal (microscopic/anatomical) features of representative genera given in the theory.

1. Algae: Gloeocapsa, Scytonema, Gloeotrichia, Volvox, Oedogonium, Vaucheria, Chara, Ectocarpus, Sargassum, Batrachospermum
2. Gram staining
3. Fungi: Albugo, Aspergillus, Peziza, Agaricus, Puccinia, Alternaria and Cercospora
4. Bryophyta: Riccia, Marchantia, Pellia, Anthoceros, Sphagnum, Funaria
5. Pteridophyta: Lycopodium, Selaginella, Equisetum, Marsilea.
6. Gymnosperm: Cycas, Pinus, Ephedra.

PRACTICAL SCHEME

TIME: 4 Hrs.

M.M. : 50

1. Algae/Fungi/Gram Staining	10
2. Bryophyta/Pteridophyta	10
3. Gymnosperm	10
4. Spotting	10
5. Viva-Voce	05
6. Sessional	05

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Govt. Bilasa Girls College, Bilaspur

(Mr. Shivakant Mishra)


(Mr Sudheer Tiwari)

PRACTICAL SCHEME

TIME: 4 Hrs.

M.M. : 50

1.	Anatomy	08
2.	Economic Botany	04
3.	Physiology	08
4.	Ecology	10
5.	Spotting	10
6.	Viva-Voce	05
7.	Project Work/ Field Study	10



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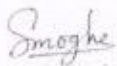


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(Mr. Shivakant Mishra)

(Mr Sudheer Tiwari)

PRACTICAL SCHEME

TIME: 4 Hrs.

M.M. : 50

1.	Plant Disease/Symptoms	10
2.	Instrumentation techniques	05
3.	Staining of Microbes	05
4.	Tissue Culture techniques	05
5.	Spotting	10
6.	Project Work/ Field Study	05
5.	Viva-Voce	05
6.	Sessional	05



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Zoology
B.Sc. Part I 2018-19
Practical

The practical work will, in general be based on the syllabus prescribed in theory and the candidates will be required to show knowledge of the following:-

- Dissection of Earthworm, Cockroach, Palaemon and Pila
- Minor dissection—appendages of Prawn & hastate plate, mouth parts of insects, radulla of Pila.

(Alternative methods: By Clay/Thermacol/drawing/Model etc.)

- Adaptive characters of Aquatic, terrestrial, aerial and desert animals.
- Museum specimen invertebrate
- Slides- Invertebrates, frog embryology, Chick embryology and cytology,

Scheme of Practical Exam

Time: 3hrs

1. Major Dissection	10 Marks
2. Minor Dissection	05 Marks
3. Comments on Excercise based on Adaptation	04 Marks
4. Cytological Preparation	05 Marks
5. Spots-8 (Slides-4, Specimens-4)	16 Marks
6. Sessional	10 Marks

B. Sc. II Physics

PRACTICALS

Minimum 16 (Eight from each group)

Experiments out of the following or similar experiments of equal standard

1. Study of Brownian motion.
2. Study of adiabatic expansion of a gas.
3. Study of conversion of mechanical energy into heat.
4. Heating efficiency of electrical kettle with varying voltage.
5. Study of temperature dependence of total radiation.
6. Study of temperature dependence of spectral density of radiation.
7. Resistance thermometry.
8. Thermo emf thermometry.
9. Conduction of heat through poor conductors of different geometries.
10. Experimental study of probability distribution for a two-option system using a coloured dice.
11. Study of statistical distribution on nuclear disintegration data (GM counter used as a black box).
12. Speed of waves on a stretched strings.
13. Studies on torsional waves in a lumped system.
14. Study of interference with two coherent source of sound.
15. Chlandi's figures with varying excitation and loading points.
16. Measurements of sound intensities with different situations.
17. Characteristics of a microphone-loudspeakers system
18. Designing an optical viewing system.
19. Study of monochromatic defects of images.
20. Determining the principle point of a combination of lenses.
21. Study of interference of light (biprism or wedge film).
22. Study of diffraction at a straight edge or a single slit.
23. Study of F-P etalon fringes.
24. Study of diffraction grating and its resolving power.
25. Resolving power of telescope system.
26. Polarization of light by reflection; also cos-squared law.
27. Study of optical rotation for any system.
28. Study of laser as a monochromatic coherent source.
29. Study of a divergence of laser beam.
30. Calculation of days between two dates of a year.
31. To check if triangle exists and the type of a triangles.
32. To find the sum of the sine and cosines series and print out the curve.

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Jablonski diagram depicting various process occurring in the excited state, qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), photosensitized reactions, energy transfer processes {simple examples}, photostationary states, Chemiluminescence.

REFERENCE BOOKS

1. Physical Chemistry, G. M. Barrow, International student edition, McGraw Hill.
2. University General Chemistry, C. N. R. Rao, Macmillan.
3. Physical Chemistry, R. A. Alberty, Wiley Eastern.
4. The elements of physical chemistry, Wiley Eastern.
5. Physical Chemistry through problems, S. K. Dogra & S. Dogra, Wiley Eastern.
6. Physical Chemistry, B. D. Khosla,.
7. Physical Chemistry, Puri & Sharma.
8. Bhautik Rasayan, Puri, Sharma and Pathania, Vishal Publishing Company.
9. Bhautik Rasayan, P. L. Soni.
10. Bhautik Rasayan, Bahl and Tuli.
11. Physical Chemistry, R. L. Kapoor, Vol I-IV .
12. Chemical kinetics, K. J. Laidler, Pearson Educations, New Delhi (2004).

Paper -IV

LABORATORY COURSE

INORGANIC CHEMISTRY

Qualitative semimicro analysis of mixtures containing 5 radicals. Emphasis should be given to the understanding of the chemistry of different reactions. The following radicals are suggested:

CO_3^{2-} , NO_2^- , S^{2-} , SO_3^{2-} , $\text{S}_2\text{O}_3^{2-}$, CH_3COO^- , F^- , Cl^- , Br^- , I^- , NO_3^- , BO_3^{3-} , $\text{C}_2\text{O}_4^{2-}$, PO_4^{3-} , NH_4^+ , K^+ , Pb^{2+} , Cu^{2+} , Cd^{2+} , Bi^{3+} , Sn^{2+} , Sb^{3+} , Fe^{3+} , Al^{3+} , Cr^{3+} , Zn^{2+} , Mn^{2+} , Co^{2+} , Ni^{2+} , Ba^{2+} , Sr^{2+} , Ca^{2+} , Mg^{2+} .

Mixtures should preferably contain one interfering anion, or insoluble component (BaSO_4 , SrSO_4 , PbSO_4 , CaF_2 or Al_2O_3) or combination of anions e.g. CO_3^{2-} and SO_3^{2-} , NO_2^- and NO_3^- , Cl^- , Br^- , and I^- .

Volumetric analysis

- (a) Determination of acetic acid in commercial vinegar using NaOH.
- (b) Determination of alkali content-antacid tablet using HCl.

- (c) Estimation of calcium content in chalk as calcium oxalate by permanganometry.
- (d) Estimation of hardness of water by EDTA.
- (e) Estimation of ferrous & ferric by dichromate method.
- (f) Estimation of copper using thiosulphate.
- Principles involved in chromatographic separations. Paper chromatographic separation of following metal ions: i. Ni (II) and Co (II) ii. Fe (III) and Al (III)

ORGANIC CHEMISTRY

- Detection of elements (X, N, S).
- Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, nitro, amine, amide, and carbonyl compounds, carbohydrates)
- Preparation of Organic Compounds:
 - (i) m-dinitrobenzene, (ii) Acetanilide, (iii) Bromo/Nitro-acetanilide, (iv) Oxidation of primary alcohols-Benzoic acid from benzylalcohol, (v) azo dye.

PHYSICAL CHEMISTRY

Transition Temperature

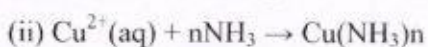
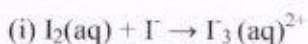
- Determination of the transition temperature of the given substance by thermometric/dilatometric method (e.g. $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$ / $\text{SrBr}_2 \cdot 2\text{H}_2\text{O}$).

Thermochemistry

- Determination of heat capacity of a calorimeter for different volumes using change of enthalpy data of a known system (method of back calculation of heat capacity of calorimeter from known enthalpy of solution or enthalpy of neutralization).
- Determination of heat capacity of the calorimeter and enthalpy of neutralization of hydrochloric acid with sodium hydroxide.
- To determine the solubility of benzoic acid at different temperature and to determine ΔH of the dissolution process.
- To determine the enthalpy of neutralization of a weak acid/ weak base versus strong base/ strong acid and determine the enthalpy of ionization of the weak acid/ weak base.
- To determine the enthalpy of solution of solid calcium chloride and calculate the lattice energy of calcium chloride from its enthalpy data using Born Haber cycle.

Phase Equilibrium

- To study the effect of a solute (e.g. NaCl, Succinic acid) on the critical solution temperature of two partially miscible liquids (e.g. phenol-water system) and to determine the concentration of that solute in the given phenol-water system.
- To construct the phase diagram of two component system (e.g. diphenylamine–benzophenone) by cooling curve method.
- Distribution of acetic/ benzoic acid between water and cyclohexane.
- Study the equilibrium of at least one of the following reactions by the distribution method:



Molecular Weight Determination

Determination of molecular weight by Rast Camphor and Landsburger method.

Note: Experiments may be added/ deleted subject to availability of time and facilities.

Reference Books

1. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry, Pearson Education (2009)
2. Furniss, B.S., Hannaford, A.J., Smith, P.W.G. & Tatchell, A.R. Practical Organic Chemistry, 5th Ed. Pearson (2012)
3. Ahluwalia, V.K. & Aggarwal, R. Comprehensive Practical Organic Chemistry: Preparation and Quantitative Analysis, University Press (2000). 22
4. Ahluwalia, V.K. & Dhingra, S. Comprehensive Practical Organic Chemistry: Qualitative Analysis, University Press (2000).
5. Khosla, B. D.; Garg, V. C. & Gulati, A. Senior Practical Physical Chemistry, R. Chand & Co.: New Delhi (2011). Garland, C. W.; Nibler, J. W. & Shoemaker, D. P. Experiments in Physical Chemistry 8th Ed.; McGraw-Hill: New York (2003).
6. Halpern, A. M. & McBane, G. C. Experimental Physical Chemistry 3rd Ed.; W.H. Freeman & Co.: New York

Hrs.5

PRACTICAL EXAMINATION

M.M.50

Three Experiments are to be performed.

1. Inorganic – Qualitative semimicro analysis of mixtures. **12 marks**

OR

One experiment from synthesis and analysis by preparing the standard solution.

2. (a) Identification of the given organic compound & determine its M.Pt./B.Pt. **6 marks**

(b) Determination of Rf value and identification of organic compounds by paper chromatography. **6 marks**

3. Any one physical experiment that can be completed in two hours including calculations.

12 marks

4. Viva **10 marks**

5. Sessional **04 marks**

In case of Ex-Students one marks will be added to each of the experiment.

B.Sc.(CS)
II Year

COMPUTER SCIENCE
PAPER - I
COMPUTER HARDWARE
(Paper Code - 0655)

Duration 3 hours Max.Marks 50

AIM - The emphasis is on the design concepts & organizational details of the common PC, leading the complicated electronics of the system of the computer Engineers.

OBJECT OF THE COURSE -

1. To introduce the overall organisation of the microcomputers.
2. To introduce the common peripheral devices used in computers.
3. To introduce the hardware components, use of micro processor and function of various chips used in microcomputer.

N.B. : Since the computer organisation study is very vast & complicated, so the study is restricted to only the description and understanding part, hence the paper setter is requested to keep this important factor in mind.

UNIT-I CLASSIFICATION AND ORGANIZATION OF COMPUTERS

Digital and analog computers and its evolution. Major components of digital computers; Memory addressing capability of CPU; word length and processing speed of computers. Microprocessors single chip microcomputers; large and small computers. Users interface Hardware software and firmware. multi programming multi user system. Data smart and intelligent terminals computer network and multi processing. LAN parallel processing. Flynn's classification of computers. Computer flow and data flow computers.

UNIT-II CENTRAL PROCESSING UNIT.

CPU organisation, ALU control unit registers. Instructions for INTEL 8085, Instruction word size, Various addressing mode interrupts and exceptions. Some special Control signals and I/O devices. Instruction cycle Fetch and execute operation, time Diagram, data flow.

UNIT-III MEMORY OF COMPUTERS.

Main memory secondary memory, backup memory, cache memory; real and virtual Memory Semiconductor memory. Memory controller and magnetic memory; RAM; disks, optical disks Magnetic bubble memory; DASD, destructive and non destructive. readout. Program of data Memory and MMU.

UNIT-IV I/O DEVICES.

I/O devices of micro controller, processor. I/O devices, printer, plotter, other out put devices, I/O port serial data transfer scheme, Micro controller, signal processor, I/O processor I/O processor arithmetic processor.

UNIT-V SYSTEM SOFTWARE AND PROGRAMMING TECHNIQUE.

ML, AL, HLL, static subroutine debugging of programs macro, micro programming, Program Design, software development, flow & chart multi programming, multiuser, multi tasking; Protection, operating system and utility program, application package.

S-91-07

Sumit
11-06-18
(Dr. Anshu Kumar)

Praveen
11/06/18
(Dr. K. Gaur)

Yash
11-06-18
Hasi Shankar Prasad Tadd

Anshu
11/11/18
(Dr. A.K. Divedi)
Dr. J. Dey
11-06-18
Dr. Dey

RECOMMENDED BOOKS :

- 1 Computer Fundamentals : Architecture and Organization - By B.Pan (Willey East-
ern Ltd.)
- 2 Computers Today - By Donald H. Sanders
- 3 Computers Fundamental - By Rajaraman.
- 4 IBM PC - XT Clones - By Govinda Rajalu

PAPER - II

SOFTWARE

(Paper Code - 0056)

AIM - Introduction to the web-language-HTML, a problem solving through the concept of object oriented programming.

OBJECT OF THE COURSE -

- 1 To introduce the internet & web related technology & learn the intricacies of web-page designing using HTML.
- 2 To introduce the object oriented programming concept using C++ language.
- 3 To introduce the problem solving methodology using the C++ programming features.

N.B. : Examiners are requested to prepare unit-wise Questions papers.

UNIT-I HTML BASICS & WEB SITE DESIGN PRINCIPLES

Concept of a Web Site, Web Standards, What is HTML? HTML Versions, Naming Scheme for HTML Documents, HTML document/file, HTML Editor, Explanation of the Structure of the homepage, Elements in HTML Documents, HTML Tags, Basic HTML Tags, Comment tag in HTML, Viewing the Source of a web page, How to download the web page source? XHTML, CSS, Extensible Markup Language (XML), Extensible Style sheet language (XSL), Some tips for designing web pages, HTML Document Structure, HTML Document Structure-Head Section, Illustration of Document Structure, <BASE> Element, <ISINDEX> Element, <LINK> Element, <META>, <TITLE> Element, <SCRIPT> Element, Practical Applications, HTML Document Structure-Body Section:-Body elements and its attributes: Background; Background Color; Text; link; Active Link (ALINK); Visited Link (VLINK); Left margin; Top margin, Organization of Elements in the BODY of the document: Text Block Elements, Text Emphasis Elements; Special Elements - Hypertext Anchors; Character-Level Elements; Character References, Text Block Elements: HR (Horizontal Line); Hn (Headings); P (Paragraph); Lists; ADDRESS; BLOCKQUOTE; TABLE; DIV (HTML 3.2 and up); PRE (Preformatted); FORM, Text Emphasis Elements, Special Elements - Hypertext Anchors, Character-Level Elements; line breaks (BR) and Images (IMG), Lists, ADDRESS Element, BLOCKQUOTE Element, TABLE Element, COMMENTS in HTML, CHARACTER Emphasis Modes, Logical & Physical Styles, Netscape, Microsoft and Advanced Standard Elements List, FONT, BASEFONT and CENTER.

UNIT-II IMAGE, INTERNAL AND EXTERNAL LINKING BETWEEN WEBSITES

Netscape, Microsoft and Advanced Standard Elements List, FONT, BASEFONT and CENTER Insertion of images using the element IMG (Attributes: SRC (Source),

B.E.-II

(50) Anil 11/6/18
(Dr. A.K. Gavel)

Srinivas
11/06/18
Dr. Jayaraman

Gavel
11/6/18
(L.K.Gavel)

M. Srinivas
11.06.18
M. Srinivas

11/6/18
Dr. J. Jayaraman
Dr. K. Srinivas

WIDTH, HEIGHT, ALT (Alternative), ALIGN, IMG (In-line Images) Element and Attributes; Illustrations of IMG Alignment, Image as Hypertext Anchor, Internal and External Linking between Web Pages Hypertext Anchors ,HREF in Anchors ,Links to a Particular Place in a Document ,NAME attribute in an Anchor ,Targeting NAME Anchors ,TITLE attribute, Practical IT Application Designing web pages links with each other, Designing Frames in HTML. Practical examples.

UNIT-III INTRODUCTION TO OOP

Advantages of OOP, The Object Oriented Approach, Characteristics of object oriented languages- Object, Classes, Inheritance, Reusability, Polymorphism and C++.

Function: Function Declaration, Calling Function, Function Defines, Passing Argument to function, Passing Constant, Passing Value, Reference Argument, returning by reference, Inline Function, Function Overloading, Default Arguments in function.

UNIT-IV OBJECT CLASSES AND INHERITANCE

Object and Class, Using the class, class constructor, class destructors, object as function argument ,copy constructor ,struct and classes , array as class member, Static Class Data, Static Member Functions, , Friend function, Friend class, operator overloading, Type of inheritance, Base class, Derive class, Access Specifier: protected, Function Overriding, member function, String, Template Function.

UNIT-V POINTERS AND VIRTUAL FUNCTION

pointers: & and * operator pointer variables, ,pointer to pointer, void pointer, pointer and array, pointer and function, pointer and string, memory management, new and delete, pointer to object, this pointer Virtual Function: Virtual Function, Virtual member function, access with pointer, pure virtual function

File and Stream: C++ streams, C++ Manipulators, Stream class, string I/O, char I/O, Object I/O, I/O with multiple object, Disk I/O,

RECOMMENDED BOOKS :

- | | | |
|---------------------------------------|---|---|
| 1. Introduction to HTML | : | Kamlesh Agarwala, O.P.Vyas, Prateek A. Agrawala (Kitab Mahal Publication) |
| 2. Let us C++ | : | Y. Kanetkar B.P.B Publication |
| 3. Programming in C++ | : | E. Balaguruswami |
| 4. Mastering in C++ | : | Venu Gopal |
| 5. Object Oriented Programming in C++ | : | Lafore R, Galgotia Publications. |

B.R.-II

Sharma
11-06-18
(Dr. Sujay Kumar)

Gopal
11/06/18
(L. & Gopal)

YMP
Ladd
11-06-18
Hani Shankar Prasad

Anand
11/6/2018
(Dr. A.K. Dandekar)

Sharma
11/6/18
(Dr. J. D. Singh (A. Sharma))

Books Recommended:

Nelson, DL, Cox, MM, Lehninger *Principles of Biochemistry*, W.H. Freeman and Company, New York, USA.

Cooper, GM, *The Cell: A Molecular Approach*, ASM Press & Sunderland, Washington, D.C. Sinauer Associates, MA.

Singh BD, *Fundamental of Genetics*, Kalyani Publication

Singh BD, *Genetics*, Kalyani Publication

Gupta, PK, *Cell and Molecular Biology*, Rastogi Publications, Meerut

Singh, BD, *Biotechnology: Expanding Horizons*, Kalyani publications

Gupta, PK, *Elements of Plant Biotechnology*, Rastogi Publications, Meerut

Gupta, SN, *Concepts of Biochemistry*, Rastogi Publications, Meeru

Jain, JL., Jain S, Jain, N, *Fundamentals of Biochemistry*, S Chand Publishing, New Delhi

B.Sc.-III (Botany)**Practical**

1. Study of host parasite relationship of plant diseases listed above.
2. Demonstration of preparation of Czapek's Dox medium and Potato dextrose agar medium, sterilization of culture medium and pouring.
3. Inoculation in culture tubes and petriplates.
4. Gram Staining.
5. Microscopic examination of Curd.
6. Study of plant diseases as listed in the theory paper.
7. Biochemical test of carbohydrate and protein.
8. Instrumentation techniques

Zoology
B.Sc. Part II 2018-19
Practical

The practical work in general shall be based on the syllabus prescribed and the students will be required to show the knowledge of the following:

- Study of the representative examples of the different chordates (Classified characters).
- Dissection of various systems of scoliodon-Afferent and Efferent branchial cranial nerves, internal ear.

Alternative methods: By Clay/Thermacol/ Drawing/ Model etc.)

- Simple microscopic technique through unstained or stained permanent mount.
- Study of prepared slides histological, as per theory papers.
- Study of limb girdles and vertebrae of Frog, Varanus, Fowl and Rabbit.
- Identification of species and individual of honey bee.
- Life cycle of honey bee and silkworm.
- Exercise based on Evolution and Animal behavior.

Scheme of Practical Exam

Time: 3:30hrs

• Major dissection (Cranial nerves/efferent branchial vessel)	10
• Exercise based on evolution	05
• Exercise based on applied zoology	05
• Exercise based on animal behavior	04
• Spotting-8 (slides-4,bones-2,specimen-2)	16
• Viva	05
• Sessional marks.	05

B.Sc. II Physics

TEXT AND REFERENCE BOOKS:

1. Introduction to solid state physics: C. Kittel.
2. Solid State Physics: A.J. Dekkar.
3. Electronic Circuits: Mottershead.
4. Electronic Circuits: Millman and Halkias.
5. Semiconductor Devices: S.M. Sze.
6. Electronic devices: T.L. Floyd.
7. Device and Circuits: J. Millman and C. Halkias.
8. Electronic Fundamental and Applications: D. Chatopadhyay and P.C. Rakshit.
9. Electricity and Magnetism: K.K. Tiwari.

PRACTICALS

Minimum 16 (Eight from each group)

Experiments out of the following or similar experiments of equal standard

1. Determination of Planck's constant.
2. Determination of e/m by using Thomson tube.
3. Determination of e by Millikan's methods.
4. Study of spectra of hydrogen and deuterium (Rydberg constant and ratio of masses of electron proton).
5. Absorption spectrum of iodine vapour.
6. Study of alkali or alkaline earth spectra using a concave grating.
7. Study of Zeeman effect for determination of a Lande g -factor.
8. Analysis of a given band spectrum.
9. Study of Raman spectrum using laser as an excitation source.
10. Study of absorption of alpha and beta rays.
11. Study of statistics in radioactive measurement.
12. Coniometric study of crystal faces.
13. Determination of dielectric constant.
14. Hysteresis curve of transformer core.
15. Hall-probe method for measurement of magnetic field.
16. Specific resistance and energy gap of semiconductor.
17. Characteristics of transistor.
18. Characteristics of tunnel diode.
19. Study of voltage regulation system.
20. Study of regulated power supply.

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21. Study of lissajous figures using CRO.
22. Study of VTVM.
23. Study of RC and TC coupled amplifiers.
24. Study of AF and RF oscillators.
25. Find roots of $f(x) = 0$ by using Newton-Raphson Method.
26. Find root of $f(x) = 0$ by using secant method.
27. Integration by Simpson rule.
28. To find the value of V at
29. String manipulations.
30. Towers of Hanoi (Non-recursive).
31. Finding first four perfect numbers.
32. Quadratic interpolation using Newton's forward-difference formula of degree two.

TEXT AND REFERENCE BOOKS:

1. B.G. Strechman, Solid state electronics devices II edition (Prentice-Hall of India New Delhi 1986)
2. W.D. Stanley, Electronics devices, circuits and applications (Prentice-Hall new jersey, USA 1988).
3. S. Lipschutz and A Poe; Schaum's outline of theory and problems of programming with Fortran (Mc Graw-Hill Book Co. Singapore, 1986).
4. C Dixon, Numerical Analysis.

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INORGANIC CHEMISTRY

Gravimetric analysis:

- Estimation of nickel (II) using Dimethylglyoxime (DMG).
- Estimation of copper as CuSCN
- Estimation of iron as Fe_2O_3 by precipitating iron as $\text{Fe}(\text{OH})_3$.
- Estimation of Al (III) by precipitating with oxine and weighing as $\text{Al}(\text{oxine})_3$ (aluminium oxinate).
- Estimation of Barium as BaSO_4

Inorganic Preparations:

- Tetraamminecopper (II) sulphate, $[\text{Cu}(\text{NH}_3)_4]\text{SO}_4 \cdot \text{H}_2\text{O}$
- Cis and trans $\text{K}[\text{Cr}(\text{C}_2\text{O}_4)_2 \cdot (\text{H}_2\text{O})_2]$ Potassium dioxalatodiaquachromate(III)
- Tetraamminecarbonatocobalt (III) ion
- Potassium tris(oxalate)ferrate(III)/ Sodium tris(oxalate)ferrate(III)
- Cu(I) thiourea complex, Bis (2,4-pentanedionate) zinc hydrate; Double salts (Chrome alum/ Mohr's salt)

ORGANIC CHEMISTRY

1. Preparation of organic Compounds

- Acetylation of one of the following compounds: amines (aniline, o-, m-, p- toluidines and o-,m-, p-anisidine) and phenols (β -naphthol, vanillin, salicylic acid)
- Benzoylation of one of the following amines (aniline, o-, m-, p- toluidines and o-, m-, panisidine) and one of the following phenols (β -naphthol, resorcinol, p cresol) by Schotten-Baumann reaction.
- Bromination of any one of the following: a. Acetanilide by conventional methods b.Acetanilide using green approach (Bromate-bromide method)
- Nitration of any one of the following: a. Acetanilide/nitrobenzene by conventional method b. Salicylic acid by green approach (using ceric ammonium nitrate).
- Reduction of p-nitrobenzaldehyde by sodium borohydride.
- Hydrolysis of amides and esters.
- Semicarbazone of any one of the following compounds: acetone, ethyl methyl ketone, cyclohexanone, benzaldehyde.

- Benzyliothiuronium salt of one each of water soluble and water insoluble acids (benzoic acid, oxalic acid, phenyl acetic acid and phthalic acid).
- Aldol condensation using either conventional or green method.
- Benzil-Benzilic acid rearrangement.
- Preparation of sodium polyacrylate.
- Preparation of urca formaldehyde.
- Preparation of methyl orange.

The above derivatives should be prepared using 0.5-1g of the organic compound. The solid samples must be collected and may be used for recrystallization, melting point and TLC.

2. Qualitative Analysis Analysis of an organic mixture containing two solid components using water, NaHCO_3 , NaOH for separation and preparation of suitable derivatives.
3. Extraction of caffeine from tea leaves.
4. Analysis of Carbohydrate: aldoses and ketoses, reducing and non-reducing sugars.
5. Identification of simple organic compounds by IR spectroscopy and NMR spectroscopy. (Spectra to be provided).
6. Estimation of glycine by Sorenson's formalin method.
7. Study of the titration curve of glycine.
8. Estimation of proteins by Lowry's method.
9. Study of the action of salivary amylase on starch at optimum conditions.
10. Effect of temperature on the action of salivary amylase.

PHYSICAL CHEMISTRY

Conductometry

- Determination of cell constant
- Determination of equivalent conductance, degree of dissociation and dissociation constant of a weak acid.
- Perform the following conductometric titrations:
 - i. Strong acid vs. strong base
 - ii. Weak acid vs. strong base
 - iii. Mixture of strong acid and weak acid vs. strong base
 - iv. Strong acid vs. weak base
- To determine the strength of the given acid conductometrically using standard alkali solution.
- To determine the solubility and solubility product of a sparingly soluble electrolyte conductometrically
- To study the saponification of ethyl acetate conductometrically.

Potentiometry/pH metry

Perform the following potention/pH metric titrations:

- i. Strong acid vs. strong base
- ii. Weak acid vs. strong base
- iii. Dibasic acid vs. strong base
- iv. Potassium dichromate vs. Mohr's salt
- v. Determination of pKa of monobasic acid

UV/ Visible spectroscopy

- Verify Lambert-Beer's law and determine the concentration of $\text{CuSO}_4/\text{KMnO}_4/\text{K}_2\text{Cr}_2\text{O}_7$ in a solution of unknown concentration
- Determine the concentrations of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ in a mixture.
- Study the kinetics of iodination of propanone in acidic medium.
- Determine the amount of iron present in a sample using 1,10-phenanthroline.
- Determine the dissociation constant of an indicator (phenolphthalein).
- Study the kinetics of interaction of crystal violet/ phenolphthalein with sodium hydroxide.
- Study of pH-dependence of the UV-Vis spectrum (200-500 nm) of potassium dichromate.
- Spectral characteristics study (UV) of given compounds (acetone, acetaldehyde, acetic acid, etc.) in water.
- Absorption spectra of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ (in 0.1 M H_2SO_4) and determine λ_{max} values.

Note: Experiments may be added/deleted subject to availability of time and facilities

REFERENCE BOOKS:

1. Vogel, A.I. Quantitative Organic Analysis, Part 3, Pearson (2012).31
2. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry, Pearson Education (2009)
3. Furniss, B.S.; Hannaford, A.J.; Smith, P.W.G.; Tatchell, A.R. Practical Organic Chemistry, 5th Ed., Pearson (2012)
4. Ahluwalia, V.K. & Aggarwal, R. Comprehensive Practical Organic Chemistry: Preparation and Quantitative Analysis, University Press (2000).
5. Ahluwalia, V.K. & Dhingra, S. Comprehensive Practical Organic Chemistry: Qualitative Analysis, University Press (2000)
6. Manual of Biochemistry Workshop, 2012, Department of Chemistry, University of Delhi.

8 Hrs.

PRACTICAL EXAMINATION

M.M.50

Five experiments are to be performed.

1. **Inorganic** - Two experiments to be performed. Gravimetric estimation compulsory

08 marks. (Manipulation 3 marks)

Anyone experiment from synthesis and analysis

04 marks.

2. **Organic** - Two experiments to be performed. Qualitative analysis of organic mixture containing two solid components. compulsory carrying **08 marks** (03 marks for each compound and two marks for separation).

One experiment from synthesis of organic compound (Single step)

04 marks.

3. Physical-One physical experiment

12 marks.

4. Sessional

04 marks.

5. Viva Voce

10 marks.

In case of Ex-Students one mark each will be added to Gravimetric analysis and Qualitative analysis of organic mixture and two marks in Physical experiment.

B.Sc - 117

B.Sc. (C.S.)
III Year

COMPUTER SCIENCE

PAPER - I

(Paper Code-0909)

COMPUTER HARDWARE PART-C

AIM : The emphasis is on the design concepts & organizational details of the common PC, lowering the complicated Electronics of the system to the computer engineers.

Objective of the Course :

1. To introduce the overall organization of the microcomputers and operating systems.
2. To introduce the interaction of common devices used with computers with operating softwares, excluding the Assembly languages, with special reference to DOS/WINDOWS.
3. To introduce the working of hardware components, Micro-Processor and various chips used in micro-computers by operating system, without the use of electronic circuitry.
4. To introduce the use of operating systems architecture with IBM-PC & clones, excluding Assembly language, with forms an important part of hardware.

N.B. : Since the computer organization study is very vast & complicated, so the study is restricted only to the description and understanding part, hence the paper-setter is requested to keep this important factor in mind.

UNIT-1 : ORGANISATION OF Micro-Processor & MICRO-COMPUTER :-

1. Introduction & organization of Micro-Computer :
 - a) Basic Components of Micro-computer : Basic Block; Prime bus memory; Data memory; I/O Ports; Clock generator; Integration of functional blocks.
 - b) Interconnecting Components in a Micro-computer : Necessary functional block; Bussed architecture for microcomputer; memory addressing; Addressing I/O ports; comparison of I/O mapped and memory mapped I/O.
 - c) Input Output Techniques : Non-CPU devices, Program & Interrupt controlled I/O, Hardware controlled I/O or DMA.
2. An Introduction to the various as :
 - a) General understanding of different μP or CPU : Intel 8088, 286, 386, 486, 586 Pentium, P54C, MMX P55C; Motorola 6800 & 68100 series; CYRIX & AMD CPUs.
 - b) The Registers of CPU : (Give Example of P-8088) Register organization of 8088, Scratch pad register, pointer, Index and Flag, Registers.
 - c) Memory addressing modes of P-8088 : Register offset; Data addressing modes; Addressing for branch instructions.
 - d) I/O Addressing with P-8088 : Memory mapped I/O & I/O mapped I/O.

UNIT-2 : SYSTEM HARDWARE ORGANISATION OF COMPUTERS :

1. Hardware Organisation of the Personal Computer :
 - a) Block diagram with various parts of PC.
 - b) The Mother Board of General P.C. : 8088 CPU; ROM & RAM; Keyboard

B.Sc. III

(45)

Sharma
11/06/18
(Dr. Jyoti Sharma)

Sharma
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(Dr. K. Gopal)

JMP
11-06-18
Haji Mankar Lakshman

Sharma
11/6/18
(Dr. Jyoti Sharma)

Anil
11/6/18
(Dr. A.K. Dainodi)

& its interface; System timer/counters; Hardware interrupt vectoring; DMA controller & channels; Interfacing to audio speaker; Bus slots & feature cards.

- ① The Serial I/O ports, COM-1 & COM-2.
 - ② The parallel Port for Printer.
 - ③ Expansion Slots for RAM.
 - ④ Disk Controllers : For Floppy, Hard disk, CD-ROM & Cassets drives.
2. The Video Display of PCs :
- ① Video Monitors, Monochrome and colour.
 - ② Video Display Adapters & Their Video Modes; Monochrome & colour graphics adapters.
 - ③ Video Control Through ANSI-SYS.
 - ④ Video Control Through ROM-BOIS : INT 10H.
 - ⑤ Direct Video Control; Monochrome & colour graphics adapters.
 - ⑥ Installing Customized Character Sets.

UNIT-3 : ORGANISATION OF OPERTING SYSTEM WITH SYSTEM HARDWARE :

1. The ROM-BIOS Services :

- ① Introduction to UNIX, ENIX, SUN, solaris, DOS & MAC with special reference to DOS & Windows, its ver., as DOS becomes more popular than others in PCs.
- ② The ROM-BIOS Diskette Services, INT 13H.
- ③ The ROM-BIOS Serial Port Services, INT 14H.
- ④ The ROM-BIOS Keyboard Services, INT 16H.
- ⑤ The ROM-BIOS Printer Services, INT 17H.
- ⑥ Miscellaneous Service Provided by the ROM-BIOS : INT 05H, INT 13H, INT 12H, INT 18H, INT 19H, INT 1AH.

2. The fundamental of Operating System viz. DOS/WINDOWS :

- ① The loading of DOS & Its Basic Structure ; ROM bootstrap, IO.SYS, DOS.SYS & Command.COM.
- ② The Execution of the programs under DOS ; EXEC functions, program segment prefix; Features of COM & EXE program files.
- ③ Device Handling by Dos ; PTD, HDD, CON, Keyboard, PRN, AUX, CLOCK and NUL devices; Block devices; Character devices; Driver installation sequence.
- ④ File Structures of DOS ;
- ⑤ The DOS Interrupts : INT 20H-2FH
- ⑥ The DOS functions through INT 21H; Discuss only the understanding part of various other DOS function to handle hard & softwares.
- ⑦ Installation of windows - Important system files in windows.

UNIT-4 : ORGANIZATION & HANDLING BY OPERATING SYSTEMS :

1. Disk and Files under DOS :

- ① Logical Structure of a Disk : Organisation of disk for use; Boot record ; FAT

U&C-III

499

Suman
11-06-2018
(Dr. Sanyog Kumar)

Ch. K. Gavel
11/06/18

Harj Thakur
11-06-18
Harj Thakur Prasad Funder

(Dr. J. D. Singh)
11/6/18

Anuj
11/6/18
(Dr. A.K. Desivadi)

files; disk or not directory.

- (i) File Organisation on a DOS disk : Logical volumes ; Sub directories; Volume labels.
 - (ii) Manipulating Files under DOS : File attributes ; date and time, file Access; PCB functions.
2. Memory Allocation, Program Loading and Execution :
- (a) Memory Management under DOS : EXEC loader; Memory Management & its functions; Modifying a Program's memory allocation.
 - (b) Loading and Executing Programs under DOS : The EXEC function ; Memory considerations; parameter blocks; calling & returning from EXEC.
 - (c) Loading the program overlays through EXEC.

UNIT-5 : ORGANISATION OF HARDWARE BY OPERATING SYSTEM :

1. Interrupt Handling through DOS :

- (a) Types of interrupts.
- (b) Interrupt Vector Table in PC.
- (c) Interrupt Service Routines.
- (d) Special Interrupts in PC : Clock Interrupt; The -C or Break Interrupt ; DOS reserved interrupt INT 29H ; Fetching memory resident routines.

2. Filters for DOS :

- (a) Filters in operating systems.
- (b) Redirection of I/O under DOS.
- (c) The Filters Supplied with DOS.
- (d) Writing Filters to run under DOS.

3. Handling of Various Versions of Windows O.S. :

- (a) Setup Installation
- (b) Trouble shooting
- (c) Networking features

Text Book :

1. Hardware and Software of Personal Computers.
By Sanjay K. Bose. (Wiley Eastern Ltd. New Delhi).

Supporting Text Books :

1. Digital System from Gates to Microprocessor.
By Sanjay K. Bose. (Wiley Eastern Ltd. New Delhi).
2. Computer Fundamentals : Architecture & Organisation.
By S. Ram., (Wiley Eastern Ltd. New Delhi).

Reference Books :

1. IBM PC-XT and Clones : By Govinda Rajalu.
2. Microprocessor and Interfacing : By Douglas Hall.
3. Insight the IBM-PC : Peter Norton.
4. Microprocessor System : 8086/8088 family architecture, programming & design : By Liu and Gibson.

B.Sc.-III

Sanjay
11-06-18

Ch. K. Gavel
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Y.M.P. Gade
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Hari Shankar Prasad Tunde

Arif
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(Dr. A.K. Divedi)

Dr. J. D. J. Patil
11/6/18
(Dr. J. D. J. Patil)

PAPER - II
(Paper Code-0910)

Aim : To introduce DBMS and RDBMS using Back-end tool and Front-end tool.

Object of the Course :

1. To introduce Data Base Management System concepts.
2. To introduce the Relational Database Management System and Relational Database Design.
3. To introduce the RDBMS software and utility of query language.
4. To introduce basic concept of GUI Programming and database connectivity using Visual Basic.

UNIT-1 : CONCEPT OF D.B.M.S. AND DATA MODELS

- (a) Introduction to DBMS :- Purpose of Data base systems, Views of data, Data Modeling Database Languages, Transaction management, Storage Management, Database Administrator and User, Database System Structure.
- (b) E-R Model : Basic concepts, Constraints, Keys, Mapping Constraint, E-R Diagram, Weak and Strong Entity sets, E-R Database Schema, Reduction of an E-R Schema to Table.

UNIT-2. : RELATIONAL DATABASE MANAGEMENT SYSTEM

- (a) Relational Model : Structure of Relational Database, Relational Algebra, Domain Relational Calculus, Extended Relational- Algebra Operation, Modification of database, Views.
- (b) Relational Database Design : Pitfalls in Relational Database Design, Decomposition Functional Dependencies, Normalization : 1NF, 2NF, BCNF, 3NF, 4NF, 5NF.

UNIT-3 : INTRODUCTION TO RDBMS SOFTWARE - ORACLE

- (a) Introduction : Introduction to personal and Enterprises Oracle, Data Types, Commercial Query Language, SQL, SQL*PLUS.
- (b) DDL and DML : Creating Table, Specifying Integrity Constraint, Modifying Existing Table, Dropping Table, Inserting, Deleting and Updating Rows in a Table, Where Clause, Operators, ORDER BY, GROUP Function, SQL Function, JOIN, Set Operation, SQL Sub Queries, Views : What is Views, Create, Drop and Retrieving data from views.
- (c) Security : Management of Roles, Changing Password, Granting Roles & Privilege, with drawing privileges.
- (d) PL/SQL : Block Structure in PL/SQL, Variable and constants, Running PL/SQL in the SQL*PLUS, Data base Access with PL/SQL, Exception Handling, Record Data type in PL/SQL, Triggers in PL/SQL.

UNIT-4 : G.U.I. PROGRAMMING

- (a) Introduction to Visual Basic : Event Driven Programming, IDE, Introduction to Object, Controlling Objects, Models and Events, Working with Forms, MDI Form Working with standard Controls.
- (b) Overview of Variables, Declaring, Scope, Arrays, User defined data types, Constants, Working with procedures : Function, Subroutine, and Property.

201-10

Smr
17-06-18
(Dr. Susmita Anand)

Gavel
11/06/18
(C.K. Gavel)

JMP
11-06-18
Hari Shankar Parshad

Anuj
11/6/18
(Dr. A.K. Divedi)

PK
11/6/18
(Dr. J. D. Singh)

Working with Data, Time, Format, String, and Math's Fraction. Controlling Program Execution: Comparison and Logical Operators, If...Then statements, Select Case Statement, Looping Structures, Exiting a loop, Error Trapping and Debugging.

- (c) File Organization : Saving data to file, Sequential and Random access file, the design and coding.

UNIT-5 : V DATA BASE PROGRAMMING IN VB

- (a) Introduction :- Concept of DAO, RDO, ADO, input validation : field & form level validation, ADO object model : the ADO object Hierarchy, the connection object, the command object, record set object, parameter object, field object, record object, stream object, Error object, parameter object.
- (b) Using Bound control to Present ADO data : Using the ADO data control, ADO data control properties, binding simple controls : Data List, data combo, Data Grid, Data Form Wizard : single form wizard, Grid form, master/Detail form. Programming the ADO data control : Refresh method, Event, Hierarchical flex Grid control.
- (c) Data Environment & Data Report : Creating connection, Using command object in the data Environment, Data Environment option and operation, Binding Form to the data Environment, ADO Events in the Data report, Print Preview, Print, Report, Data report in code : Data reports Events, Binding data reports Directly.

REFERENCE BOOKS :

1. Data Base System Concept : By Hery F. Korth, Tata McGraw Hill
2. Fundamental of Data Base System Concept : Nawathe & Elmasri (Pearson educations)
3. Oracle Complete Reference : By Oracle Press
4. Introduction to OOPS & VB : By V.K. Jain, Vikas Publishing House
5. Database Programming VB 6 : By B.P.B. Publication

PRACTICALS :

1. Practicals on Oracle :
At least 20 practicals covering the SQL, PL/SQL, Triggers, Views.
2. Practicals on Visual Basic :
At least 20 practicals on VB that covering basic and data controls components.

B.S.-III

Pennson
11-06-2018

(Dr. Vijay Kumar)

YMP
11/06/18
(L. K. Gavel)

Amey
11/06/18
(Dr. A. K. Parivadi)

YMP
11-06-18
Hari Shankar Prasad Tande

YMP
11/06/18
(Dr. J. Dnyanesh Kumar)

10. Melvin J. Maron, Numerical Analysis A Practical Approach, Macmillan publishing Co., Inc. New York, 1982.
11. M.K. Jain, S.R.K. Iyengar, R.K. Jain, Numerical Methods Problems and Solutions, New Age International (P) Ltd., 1996.
12. M.K. Jain, S.R.K. Iyengar, R.K. Jain, Numerical Methods for Scientific and Engineering Computation, New Age International (P) Ltd., 1999.
13. R.Y. Rubistein, Simulation and the Monte Carlo Methods, John Wiley, 1981.
14. D.J. Yakowitz, Computational Probability and Simulation, Addison-Wesley, 1977.

PAPER - III - (OPTIONAL)

(IV) PRACTICAL

PROGRAMMING IN C AND NUMERICAL ANALYSIS

LIST OF PRACTICAL TO BE CONDUCTED...

1. Write a program in C to find out the largest number of three integer numbers.
2. Write a program in C to accept monthly salary from the user, find and display income tax with the help of following rules :

Monthly Salary	Income Tax
9000 or more	40% of monthly salary
7500 or more	30% of monthly salary
7499 or less	20% of monthly salary

3. Write a program in C that reads a year and determine whether it is a leap year or not.
4. Write a program in C to calculate and print the first n terms of fibonacci series using looping statement.
5. Write a program in C that reads in a number and single digit. It determines whether the first number contains the digit or not.
6. Write a program in C to computes the roots of a quadratic equation using case statement.
7. Write a program in C to find out the largest number of four numbers using function.
8. Write a program in C to find the sum of all the digits of a given number using recursion.
9. Write a program in C to calculate the factorial of a given number using recursion.
10. Write a program in C to calculate and print the multiplication of given 2D matrices.
11. Write a program in C to check that whether given string palindrome or not.
12. Write a Program in C to calculate the sum of series:

$$1 + x + \frac{1}{2!}x^2 + \frac{1}{3!}x^3 + \dots + \frac{1}{n!}x^n$$

13. Write a program in C to determine the grade of all students in the class using Structure. Where structure having following members - name, age, roll, sub1, sub2, sub3, sub4 and total.
14. Write a program in C to copy one string to another using pointer. (Without using standard library functions).
15. Write a program in C to store the data of five students permanently in a data file using file handling.

Singh, JS Singh SP and Gupta SR. *Ecology and Environmental Science and Conservation*, S. Chand Publishing, New Delhi

Sharma, PD. *Ecology and Environment*, Rastogi Publications, Meerut

Hopkins, WG and Huner, PA. *Introduction to Plant Physiology*, John Wiley and Sons.

Pandey SN and Sinha BK, *Plant Physiology*, Vikas Publishing, New Delhi

Taiz, L and Zeiger. E. *Plant Physiology*, 5th edition, Sinauer Associates Inc. M.A, USA

Srivastava, HS *Plant Physiology and Biotechnology*, Rastogi Publications, Meerut

B.Sc. II (BOTANY)

Practical

1. Taxonomy: Detailed description and identification of locally available plants of the families as prescribed in the theory paper.
2. Economic Botany: Identification and comment on the plants and plant products belonging to different economic use categories
3. Preparation of Herbarium of local wild plants.
4. Quantitative vegetation analysis of a grassland ecosystem.
5. Anatomical characteristics of hydrophytes and xerophytes.
6. Demonstration of root pressure.
7. Demonstration of transpiration.
8. Demonstration of evolution of O₂ in photosynthesis, factors affecting of photosynthesis.
9. Comparison of R.Q. of different respiratory substrates.
10. Demonstration of fermentation.
11. Determination of BOD of a water body.
12. Demonstration of mitosis.

B. Sc. Part III 2018-19

Zoology

Practical

The practical work in general shall be based on syllabus prescribed in theory.

The candidates will be required to show knowledge of the following:

- Estimation of population density, percentage frequency, relative density.
- Analysis of producers and consumers in grassland.
- Detection of gram-negative and gram-positive bacteria.
- Blood group detection (A,B,AB,O)
- R. B. C. and W.B.C count
- Blood coagulation time
- Preparation of hematin crystals from blood of rat
- Observation of Drosophila, wild and mutant.
- Chromatography-Paper or gel.
- Colorimetric estimation of Protein.
- Mitosis in onion root tip.
- Biochemical detection of Carbohydrate, Protein and Lipid.
- Study of permanent slides of parasites, based on theory paper.
- Working principles of pH meter, colorimeter, centrifuge and microscope.

Scheme of marks distribution

Time: 3:30hrs

• Hematological Experiment	08
• Ecological Experiment: Grassland Ecosystem/ Population Density/Frequency/relative density	06
• Bacterial staining	05
• Biochemical experiment	06
• Practical based on Instrumentation (Chromatography/ pH meter/microscope/centrifuge.	05
• Spotting (5 spots)	10
7 Viva	05
8. Sessional	05

B.A.-I
HOME SCIENCE
PAPER - I

ANATOMY PHYSIOLOGY & HYGIENE

M.M. : 50

- UNIT-1** Structure & functions of cell general introduction of Tissue and their functions skeletal system - Types of bones, classification general structure & functions of bones. Muscular system - General structure, types and function.
- UNIT-2** Circulatory system - General structure of organs and functions. composition of blood & function. Respiratory system - General structure of organs and functions.
- UNIT-3** Digestive system - General introduction of Nutrients, Liver and spleen organs of digestion their general structure and function. Excretory system- organs of excretion.
Kidney & skin - structure & function.
- UNIT-4** Nervous system - Central nervous system structure and function.
Senses and Sensory organs - ear and eye structure & function.
- UNIT-5** Hygiene - Personal Hygiene
social Hygiene
Enviromental and Industrial Hygiene
Water - its importance and purification.
Air - its importance and purification.
First aid home nursing - Principles, qualities of nurse, Responsibilities, selection of sick room. care of the patient. Some common accidents and their aid, poison, bleeding, Burns and scalds, fracture sprain, dislocation.

प्रायोगिक

कुल समय 3 घंटे

कुल अंक- 50

अंको का विभाजन

1. सेशनल	10
2. प्राथमिक उपचार	10
3. गृह परिचर्या	15
4. शरीर रचना एवं स्वास्थ्य विज्ञान	15

सेशनल : (परीक्षा के समय छात्राएँ प्रायोगिक नेट बुक एवं प्राथमिक उपचार पेटी जमा करें)।

प्रयोग क्रमांक-1 रिपोर्ट : कालेज की कक्षाओं का प्रतिदिन की सफाई एवं वायुविज्ञान संबंधित निरीक्षण।

प्रयोग क्रमांक-2 स्वयं के परिवार में पीने के पानी के प्रसि के साधन, संग्रह के प्रकार एवं साधन पानी की शुद्ध एवं स्वच्छता के लिये प्रयुक्त विधि।

प्रयोग क्रमांक-3 रिपोर्ट : स्वयं के परिवार एवं अन्य दो पड़ोसी परिवार के घर में अगस्त से दिसम्बर (अनुमानतः पांच महीने) के दौरान हुई बीमारियों के संबंध में जानकारी।

1. रोग का नाम।
2. प्राथमिक उपचार - जो दिया गया।
3. आहार (जो उपयोग में लाया गया)।

- प्रयोग क्रमांक-4** प्राथमिक उपचार पेटी (आवश्यक सामान)
1. घाव धोने एवं बांधने का सामान ।
 2. दर्द कम करने की दवाईयाँ ।
 3. अपाचन - में प्रयुक्त दवाईयाँ ।
- प्राथमिक उपचार पेटी छात्राएँ परीक्षा के समय अपना नाम एवं परिवार के सदस्यों की संख्या लिखकर प्रस्तुत करें ।
- प्रयोग क्रमांक-5** रोगी के लिये उपचारात्मक व्यंजनों का अध्यापक द्वारा करके बताना ।
1. सब्जियों का सूप ।
 2. दाल का सूप ।
 3. उबला अंडा ।
 4. फटे दूध का पानी (व्हे वाटर) ।
 5. सब्जी एवं फलों का स्टू (Vegetable and fruit stew).
- इन व्यंजनों की विधि एवं उपयोगिता नोट बुक में अंकित की जावेगी ।
- प्रयोग क्रमांक-6** प्राथमिक उपचार
1. विभिन्न प्रकार की पट्टियाँ (तिकोनी, गोल) ।
 2. घाव की देखभाल ।
 3. कृत्रिम श्वसन ।
- प्रयोग क्रमांक-7** गृह परिचर्चा
1. शरीर के तापमान का चार्ट
 2. गरम एवं ठंडे पानी की थैली तैयार करना ।
 3. बिस्तर लगाना / चद्दर बदलना ।
- प्रयोग क्रमांक-8** दृष्य श्रव्य यंत्र का बनाना ।
- महत्वपूर्ण निदेश-** प्रयोग क्रमांक 1, 2, 3, तथा 5 की रिपोर्ट छात्राओं द्वारा प्रायोगिक नोट बुक में लिखकर एवं अध्यापक द्वारा प्रति हस्ताक्षरित / प्रमाणित करवाकर परीक्षा के समय प्रस्तुत की जावेगी ।

HOME SCIENCE

Paper - II

HOME SCIENCE - EXTENSION EDUCATION

- UNIT-1** Introduction of Home Science Extension Education :
- (A) Home Science - Concepts, goals and Areas of Home Science & their inter relationship with extension.
 - (b) Principles and methods of home science extension education general concepts of extension work.
 - (c) Objectives of extension education qualities of extension workers, extension education process.
- UNIT-2** Community Development problems and Role of Home Scientists :

चयापचयी रोग

1. मधुमेह-

परिभाषा, लक्षण, कारण, इन्स्युलिन के प्रकार, आहार का प्रभाव, हाइपोग्लोसेमिक दवाइयाँ, मधुमेह में असामान्य स्थितियाँ, मधुमेह व गर्भावस्था, मधुमेह व बाल्यावस्था।

2. अधिक वजन/ कम वजन-

परिभाषा, कारण, उपचारात्मक तरीके, असामान्य स्थितियाँ,

पौष्टिक तत्वों की कमी से होने वाले रोग -

1. रक्तहीनता- प्रकार, कारण, पहचान, आहार।

2. ए-विटामीनोसिस- प्रकार, कारण, उपचार।

3. प्रोटीन कैलोरी कुपोषण - कारण, उपचारात्मक तरीके।

रोग जिसमें आहारिय चिकित्सा सम्मिलित है -

1. यकृत के रोग - प्रकार, कारण, आहार (पौष्टिक तत्वों की आवश्यकता)

अमाशय के रोग-

1. पेट्टीक अल्सर - कारण, लक्षण, आहार (पौष्टिक तत्वों की आवश्यकता)

2. अपचन- कारण, पौष्टिक तत्वों की आवश्यकता।

3. अतिसार - प्रकार, कारण, आहार।

4. कब्ज - प्रकार, कारण, आहार।

5. उक्त रक्तचाप - कारण आहार।



बी.ए. तृतीय वर्ष

गृह विज्ञान प्रायोगिक

प्रश्न पत्र -

कुल अंक 50

1. अनाज, दातें, अण्डा, दूध, मेवे, सब्जियाँ, फलों के उपयोग द्वारा तैयार करना, हर भोज्य पदार्थ की कोई भी तीन पाक विधियों के प्रायोगिक रिकार्ड। बुक में लिखना कैलोरी एवं प्रोटीन की गणना।
2. आहार आयोजन एवं कैलोरी प्रोटीन की गणना -
अ- गर्भवती महिला, ब- कब्ज की स्थिति
स- मधुमेह रोग द अधिक वजन की स्थिति
3. विभिन्न आर्थिक स्थिति में आहार योजना।
4. खाद्य संरक्षण कोई भी चार पाक विधि बनायी जाये।

5. सम्पूर्ण भोजन - आयोजन, गणना।
6. व्यक्तित्व मापन विधि।
7. बुद्धिमान विधि

प्रायोगिक परीक्षा अंकों का विभाजन -		कुल अंक - पचास
सेशनल	10	
योजना	10	
तैयारी	10	
गणना	10	
मौखिक प्रश्न	10	
कुल अंक	50	

List of Text / References Books

Normal & Therapeutic Nutrition.

1. C.H. Robinson - Normal & Therapeutic Nutrition.
2. F.P. Antia - Clinical Nutrition & Dietetics.
3. M. Swaminathan - Essentials of Nutrition Vol. I & II.
4. P. Rajalaxmi - Applied Nutrition.
5. C. Gopalan et al ICHR. 1991 - The Nutrition value of Indian Foods.
6. Mangde Kongo - Normal & Therapeutic Nutrition (In Hindi).
7. Jyoti Kulkarni - Normal Therapeutic Nutrition.
8. Geeta Pushpa Sha -
9. Kreuse M.N. - Food Nutrition & Diet Therapy.

B.Sc. (HOME -SCIENCE) PART -II

Group -III

Paper - A

HUMAN PHYSIOLOGY & COMMUNITY NUTRITION

M. Marks: 50

THEORY

- Unit – I** An introduction of Physiology and Anatomy
1. Cell – Structure and functions of human cell.
 2. Tissues – Classification and structure
 3. Cardiovascular System –
 - (a) Blood – Composition & Functions
 - (b) Heart – Structure and Functions
 - (c) Vessles – Structure and Functions of Artery, Veins and Capillaries.
- Unit – II** Gastrointestinal System :
1. Structure and Functions of various organs of the gastrointestinal tract.
 2. Digestion and absorption of food.
- Nervous System :
- (a) Elementary Anatomy of Nervous System
 - (b) Functions of different part of the brain and spinal card.
 - (c) Autonomic, symphathenic & parasympathetic nervous system.
- Unit – III** Excretory System :
1. Structure and functions of kidney, bladder, formation of urine.
 2. Structure and functions of spin.
 3. Regulation of temperature of the body.
- Respiratory System :
1. Structure of Lungs.
 2. Mechanism of respiration and its regulation.
 3. Transportation of Gases
- Special Sense Organs :
1. Structure and functions of eye, Ear, Nose, Skin & tongue.
- Unit – IV** Musculo Skeletal System
1. Types of Muscles and its functions.
 2. Skeletal System – Types of Bones.
- Reproductive System –
Structure and functions of male & female reproductive organs.
- Unit – V** Concept and Scope of Community Nutrition :
1. Nutritional problems of the community & implications for public health.
Common Problems in India – Causes (Nutritional and Non Nutritional Problems)
Incidence of Nutritional problems, sigh, symptoms & Treatment.
Protein-Energy Malnutrition (PEM)
 2. Prophylaxis Programmes to Combat Nutritional Problems in India.


Deputy Registrar
Sant Gahira Guru Vishwavidyalaya
Surguja, Ambikapur (C.G.)

3. Food born disease-

- Food Poisoning
- Food Infections

REFERENCES:

1. Guyton, A.C. Hall, J.E. 1996, Text book of Medical Physiology, 9th Ed. Prism Books (Pvt.) Ltd., Bangalore.
2. Winwood 1988 : Sear's Anatomy and Physiology for nurses, London, Edward Arnold.
3. Wilson 1989 : Anatomy and Physiology in Health and Illness, Edinburgh, Churchill Livingstone.
4. Chatterjee Chandi Charan 1988 : Text book of Medical physiology, London, W.B.
5. Saunder's Co. Verma, V. 1986 : A text book of Practical Botany, Vc;. I to IV, Rastogy Publication.
6. Anderson, D.B. and Mayer, B.S. 1970 : Plant physiology, Van Nostrand Reinhold Company', East West Press Edition.
7. Kochhar, P.L. 1994 : A text book of plant physiology, Atma Ram & Sons, Delhi..
8. Dhama, P.S. 1987 : A text book of Zoology, S. Nagin & Company, Julundhar.
9. K.S. Gopalaswamy iyengar 1991 : Complete Gardening in India, Bangalore, Gapalasswamy Parthasarthy.
10. Kochar, S.L. 1981 : Economic. Botany in tropics, Macmillan, India.
11. Hartmann, H. and Kester, D.E. 1993 : Plant Propagation principles and Practice, New Delhi, Prentice Hall of India (Pvt.) Ltd.

Group-III, Practical-A

1. Recording pulse rate.
2. Measurement of Blood Pressure.
3. Preparation of temperature chart.
4. Study of Histological slides of different organs.
5. Visit to one Anaganwadi centre and record the activities conducted by Anaganwadi.
6. Testing of adulterants in common foods (any five).
7. Making report of midday meal programme running at nearby school.

B.Sc. (HOME-SCIENCE) PART- II

Group -III

Paper - B

COMMUNICATION PROCESS

M. Marks: 50

Focus:

The course focuses on the process of communication, especially in development work in rural and urban areas.

Objectives: To enable students to –

1. Understand the process .of communication in development work ;
2. Develop skirls in the use of methods and media ; and
3. Be sensitive to the interests and needs of the people and the power of the media and methods.in catering to these needs and interests.

THEORY

- UNIT-I** Concept of development communication
- Meaning and importance of communication in development
 - The purpose of communication
 - Existing patterns of communication
 - Factors that help or hinder communication
- UNIT-II** Communication Precess
- One-way and two-way or interactive communication
 - Gaps in communication or distortions in transmission of message and their causes
 - Importance of two way communication
 - Basis for effective, interactice communication.
 - Attitude of 'respect for others
- UNIT-III** Methods of communication in Development Methods to reach individuals
- Personal conference
 - Interviews
 - House visits
 - Exhibits
 - Methods to reach small groups
 - Illustrated lecture
 - Group discussions
 - Co-operation
- UNIT-IV** Role Plays
- Demonstrations
 - Workshop
 - Camps
 - Radio announcements/programs
 - Newspaper stories
 - Posters
 - Videos, films
 - Television programmes
 - Letters, folders or pamphlets
 - Public meetings

- UNIT-V** Media for development communication
- Folk media Songs Stories Street-theatre
 - Games Arts
 - Puppet play Print media
 - Posters Pamphlets, leaflets
 - Newspapers - articles, stories
 - Periodicals - articles, stories, songs
 - Books
 - Cartoons
 - Audio/Visuals, Audio-Visual Media
 - Audio-tapes, radio broadcasts
 - Slides, pictures, drawings, photographs etc.
 - Videos, telecasts
 - Films-documentary, feature

Group-III, Practical-B

(ANY SIX)

1. Organising group discussion.
2. Organising group demonstration.
3. Preparation & Presentation of Audio visual aids, i.e. Posters, Charts, Cartoons, Models
Puppets.
4. Problem/need identification "of a community.
5. Planning an educational programme.
6. Evaluation of the effectiveness of methods and media.
7. Visit to Radio Station/T.V. Centre/Printing Press.
8. Preparation of Drama based on Social Development

B.Sc. (Home Science) PART-I

Group – II

Paper –A

BASIC NUTRITION

M.M.50

OBJECTIVE:

- This course will enable the student to understand the functions of food and the role of various nutrients, their requirements and the effects of deficiency and excess (in brief).
- Learn about the structure, composition, nutritional contribution and selection of different foodstuffs,
- Be familiar with the different methods of cooking, their advantages and disadvantages, Develop an ability to improve the nutritional-quality of food.

THEORY

UNIT-I

Concept of Nutrition – Food, Nutrition, Under and Over Nutrition, Health

1. Functions of Food
2. Basic Terminology (Blanching, Marination, in cookery- Caramalization, Seasoning)
3. Methods of Cooking

UNIT-II Nutrients: Macro nutrients

Classification, sources, functions
Recommended Dietary-Allowances
Deficiency and excess (in brief)
Water
Carbohydrates
Fats
Protein
Fiber

UNIT-III Nutrients: Micro nutrients

Calcium
Iron
Magnesium
Zinc
Fluorine
Iodine, Selenium, Copper, Manganese
Fat-soluble vitamins (A,D,E,K)
Water soluble Vitamins (Thiamine, Riboflavin, Niacin, Vitamin C, Folic Acid ,Pyridoxine, Pantothenic acid and vitamin B12)

UNIT-IV Food, Structure Composition Classification and Functions.

- Cereals, Millets and their products
- Pulses, Legumes and their products
- Fruits and Vegetables
- Milk and Milk Products
- Nuts and oil Seeds
- Meat, Fish, Poultry and Eggs
- Tea, Coffee, Cocoa, Chocolate and other beverages
- Condiments and spices.


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UNIT-V Improving Nutritional quality of Foods:

- Germination
- Fermentation
- Substitution
- Fortification and Enrichments

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- Swaminathan, M.S. (1985) : Essentials of Food and Nutrition VI : Fundamentals Aspects VII: Applied Aspects.
- Hughes, O. Behnion, M. (1970) : Introductory Foods, 5th Edn., MacMillan Company.
- Williams, S.R. (198-9) -.Nutrition and Diet Therapy, 4th Edn., C.V. Mosby Co.

PRACTICAL

OBJECTIVES:

1. To acquire skills in food preparation techniques.
2. To use appropriate methods of cooking for preparation of specific food products.

I

1. Weights and Measures standard and household measures for raw and cooked food.
2. Preparation of two recipes using cooking methods Boiling, Steaming, Baking, Roasting, Frying and Grill

II

Vegetables

- a. Simple salads and sprouting
- b. Curries

III

Fruits

Fruit preparations using fresh and dried fruits.

IV

Milk

- a. Porridges
- b. Curds, paneer and their commonly made preparation.
- c. Milk based simple desserts and puddings – custards, kheer, ice-cream

V

Soups

Basic, clear and cream soups

VI

Peanut chikki, Paushitik ladoo

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B.Sc. (HOME SCIENCE) PART-I

Group – II Paper-B

INTRODUCTION TO RESOURCE MANAGEMENT

M.M.50

FOCUS :

This course deals with the management of resources in-the family with particular reference to mobilising all the resources for achieving the family goals. It also deals with the factors motivating management and management applied to specific resources. The course intends to create awareness, appreciation and understanding of environment. The major environmental issues and problems are to be critically analysed for inculcating environmental consciousness among the learners and to help them take individual/ household/community level decision for making the physical environment conducive for . family living. The course content has to be taught at an elementary level.

OBJECTIVES :

1. To create an awareness among the students about, management in the family as well as the other systems.
2. To recognize the importance' of wise use of resources in order to achieve goals.
3. The physical environment and its components and the major issues.
4. The impact of human, activities on environment
5. The action needed for checking environmental threats

THEORY

Unit – I

- 1- Introduction to Resource Management Definitions
- 2- Types of Management
- 3- Advantages of Management Limitation in Management

Unit – II Factors Motivating Management

- 1- Goals – Definition, Types and Utility
- 2- values – Importance, Sources, Classification, Characteristics, Changing values.
- 3- Standards – Conventional and non conventional – qualitative, quantitative, conventional and non conventional.
- 4- Relation between values, goods and standard

Unit – III (1) Resource

- (a) Types of Resources
- (b) Characteristics of Resource
- (c) Factors affecting use of Resources
- (d) Relation to Resources to Management

(2) Decision Making –

- (a) Definitions and Importance
- (b) Steps of Decision
- (c) Factors affecting decision
- (d) Resolving conflicts.

Unit – IV Management Process -


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FOCUS:

This is an attempt to guide undergraduate students in understanding of the field of Human Development in a basic way.

A Concious deviation is taken from the stage-wise approach to the life span so as to make the course more meaningful and to allow for flexibility in understanding human development, as a continuous process. All topics are given a cross-cultural orientation. The major topics covered are : An overview of the field ; factors important for growth and development; different dimensions of development across the life-span namely, physical and motor, cognition, language, socio-emotional and personality and finally relevant issues in human development and social change.

Techers are encouraged to use the points of emphasis mentioned and culturally relevant examples to stimulate throught and participatroty discussion. The use of Video-films is also recommended to suppliemnt course content and facilitate discussions. This course purports to create awareness and appreciation for the role and functions of marriage and family as basic institutions. The changing trends, the dynamics of adjustment and contemporary problems and issues are to be critically analysed for developing better understanding of needs, adjustment areas and intervention strategies.

OBJECTIVES:

The student will –

1. Acquire knowledge and insights about the dynamics of contemporary marriage and family systems in India.
2. Become acquainted with the concept, goals and areas of adjustment, relationship within the family.
3. Become aware of her changing roles and relationships with the family.
4. Understand the dynamics of families in distress and crisis.
5. To introduce student to the field of human development-concept, dimensions and interrelations
6. To sensitize students to social and cross-culture contexts in human development.
7. To sensitize students to interventions in the field of human development

THEORY

Unit –I An overview on the field of HD

- i what is human development? Why do we need to studyit? defenition of development,ie. family and society, variations across cultures and individual differences inHuman development.
- ii family and child welfare ;a. family welfare programme, b. childwelfare programme,
- iii Growth and Development
 - a. Understanding growth and development (Definitions)
 - b. General Principles of development.
 - c. Constraints and facilitators in growth and development (influences of heredity and environment)

PRACTICAL

Production to Human Development and Family Dynamics

1. Visit to a pediatric ward to observe a new born baby and a premature baby.
2. Preparing a growth average height weight chart of five (5) children from one to (1 -3) years.
3. Study of immunization schedule.
4. Survey of parent's regulative awareness about weaning food, toys; clothes.
5. Preparation of body Kit- Baby carry bag, bib, Jhabla.

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B.Sc. (HOME-SCIENCE) PART- II

Group -IV

Paper - A

LIFE SPON DEVELOPMENT

M. Marks: 50

Focus :

This course covers the entire life span and traces the various developmental stages. Its encompasses in scope development in utero, infancy up to senescence identifying critical concerns in Socio-cultural perspectives.

To develop understanding of various methods and materials, which can be used-while working with children. The emphasis is on promoting creativity and use of different materials to allow for optimum development.

Objectives :

To become acquainted with developmental stages from birth to old age.

1. To develop awareness of important aspects of development during the whole life span.
2. To know the reqDon Welers (1974): uirement of infants and fidders and develop skills to create play materials and designing learning experiences.
3. To understand the significance of various creative activities and teachers role in implementry them.

Note : For each of the following stages of development, the-influence and inter-actions of sociocultural and environmental factors needs to be discussed.

THEORY

UNIT-I

1. Life Span development and need to study development through the life cycle. Inter-relationship between the aspects of development.
2. Childhood period (2 to 12 years) - Definition, Characteristics and Developmental tasks. "Review (2-6 yrs to 6-12 yrs) of different developmental areas (Physical, motor, Social, emotional, intellectual.

UNIT-II

Adolescence (13 to 18 years)

1. Definition, Developmental tasks.
2. Physical Development - Puberty, growth, spurts, Primary and Secondary sex characteristics, early and late maturing adolescents.
3. Identity - Definition, body image, positive and negative outcomes (Role confusion, ego-identity)
4. Heightened emotionality- Meaning causes, expression characteristics of emotional maturity, conflict with, authority coping up strategies.
5. Problems - Drug and alcohol abuse, psychological breakdown (Behaviour) STD and AIDS.

UNIT-III

Adulthood (19 to 60 years) and ageing- (Early adulthood 19 to 40 years) Definition and characteristics Development tasks, significance of the period, reponsibilities and adjustment - New family, parenthood, independence, financial matters.

1. Middle Adulthood (41 to 60' years), Definition, physical changes (senses, diseases- Transitation Period.
2. Menopause- Health issues.


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Other materials

- Sand
 - (a) Characteristics of the medium.
 - (b) Values, materials required and teacher's role.
- Water.
 - (a) Characteristics of the medium.
 - (b) Values, materials required and teacher's role.

Group-IV, Practical-A (ANY TEN)1. **Infancy and Toddlerhood**

1. A file to be prepared to list activities appropriate for age groups - 0-6 months, 7-12 months, 13 to 20 months and 25 to 36 months.
 2. Students be encouraged to observe materials available in the locality, Different types of shops, tailor.
 3. Develop play materials suitable for each age group.
 4. List activities, which can be used for working with different age groups.
 - (a) 0 to 6 months.
 5. Prepare materials and design activities for seeing, hearing touching and feeling.
 6. Sensation and movement for soothing movements and exercises.
 - (b) 7 to 12 months.
 7. Prepare materials and design activities for touching and feeling sensation and movement, and manipulation.
 - (c) 13 to 14 months.
 8. Identify activities for gross motor development and prepare play materials available in the locality.
 9. Prepare play materials and list activities promote manipulation sensory experiences, concepts and language.
- Art Activity
10. Visit to old age homes.

Art Activities

11. A few suggestions are given under each category as guideline students be encouraged to explore experiment with each media and understand the characteristics of each medium.
Samples of each be included in the resource file which each student is expected to maintain along with description of values materials and technique used.
12. Difficulty level of each activity be considered and decide its suitability for different age groups.
 - Painting and graphics
 - Prepare a variety of brushes from different types of brooms, cotton, wool, strips of cloth, feather etc

Tearing cutting and pasting

13. 3-5 years
Tearing with all fingers, tearing with thumb and two fingers as used in holding pencil, tearing on straight line, curved line.
14. 6-8 years
Tearing circular rings starting from one corner of the page till centre of page, Making designs.
15. 3-5 cutting and pasting
Cutting a design, pasting, please of paper, cloth, sticks leaves collage, mosaic Printing

Printing

16. Printing with strings, leaf, vegetable blocks, stencil printing, thumb," finger, spray painting
17. Keeping coins, leaves with veins below paper and gently colouring with crayon.

B.Sc. (HOME-SCIENCE) PART-II

Group -IV

Paper - B

Consumer Economics

M. Marks: 50

THEORY

- Unit – I** Consumer
- 1- Definition of consumer
 - 2- Consumer rights and responsibility
 - 3- Consumer buying habits convenience goods
 - 4- Factors affecting consumer decision
- Unit – II** Personal income
- (1) Types of income – real, money, psychic, national income, disposable income.
 - (2) Saving and investment
 - (3) Sources of investment
 - (4) Factors affecting savings
 - (5) Ways of selecting investment
- Unit – III** Consumer in the market
- (1) Market- Definition, types of market, functions, channels of distribution.
 - (2) Buying motives – Primary selective, rational emotional and totanages.
Types of Products
Advertisement, Sales, Promotion packing
 - (3) Consumer Buying Problems
 - (1) Adulteration- kinds and identification of adulteration.
 - (2) Faculty weights and measure
 - (3) Pricing
 - (4) Legal – guarantee and warrantee contracts, installment buying
 - (4) Buying process
- Unit – IV** Consumer Protection services
- (1) Organisations
 - (2) Legislation – import laws for consumer protection
 - (3) Consumer representation
Consumer and consumers problems- choice and buying problems of consumer
 - (4) Consumer protective services
 - (1) Indian Standard Institution
 - (2) Educational Institution
 - (3) Consumer Co-operatives
 - (4) Government Agencies Municipality
- Unit – V**
- (1) Consumer Decision making
 - (2) Factors effecting consumer decision in the market
 - (3) Good buy man ship
 - (4) Consumer aides for decision making

Group-IV, Practical- B

- 1- Test for adulteration
- 2- Filling of different types of form to protect consumer
- 3- Filling of form of investment services
- 4- Activity of educate consumer
- 5- Collection of samples of different symbols for helping consumer buying .
- 6- Project preparation in any relevant area.

B.Sc. (HOME-SCIENCE) PART- III

Group -II

Paper - A

NUTRITIONAL BIOCHEMISTRY

M. Marks: 50

THEORY

UNIT-I

- (A) Introduction to Biochemistry - definition, objectives, scope and interrelationship between Biochemistry and other biological sciences.
- (B) Carbohydrates - Definition, classifications functions and properties of
- Monosaccharides - Glucose, Fructose, Galactose
 - Disaccharides - Maltose, Lactose, Sucrose
 - Polysaccharides - Dextrin, Starch, Glycogen
- Glycolysis, Gluconeogenesis, Glycogenesis
Glycogenolysis, Citric acid Cycle.
Blood sugar regulation.

UNIT-II

- (A) Lipids - Definition, composition, importance and classification
Fatty acids - Functions, properties, classification of MUFA and PUFA.
Significance of Acid value, Iodine value and saponification value.
Chemistry and function of Phospholipids, Glycolipids and sterols.
Metabolism - Beta Oxidation
- (B) Aspects of transport - Passive diffusion, Facilitated diffusion, Active transport

UNIT-III

- (A) Proteins - Definition composition function, and classification.
Amino acids - Essential and Nonessential
Metabolism - Urea cycle, Nitrogen balance, Amino acid pool
- (B) Enzymes - Definition, properties, classification, Mode of action of enzymes, factors affecting velocity of enzyme catalyzed reactions, coenzymes.

UNIT- IV

- (A) Hormones - Biological roles of hormones of Pituitary, Adrenal cortex and medulla, Thyroid, Parathyroid, Pancreas, Sex glands.
- (B) Urine - Formation and Composition

UNIT-V

- (A) Blood - Blood composition & its Function, Blood Coagulation, Blood Groups
- (B) Nucleic Acid and Nucleoproteins - Chemistry, composition, structure, functions

Practical

Nutritional biochemistry

1. Identification of Glucose, Fructose, Maltose, Lactose, Sucrose, Starch.
2. Colour and precipitation reactions of Protein.
3. Estimation of Glucose by Benedict's method.
4. Estimation of Haemoglobin by acid haemolysis method.
5. Estimation of Glycine by Titration.
6. Estimation of ascorbic acid by idometric method.
7. Visit to pathological lab (**compulsory**) to study the
 - Method of collection of sample
 - Application of latest techniques
 - Processing of sample
 - Use of reference values of blood and urine

B.Sc. (HOME-SCIENCE) PART -III

Group -II

Paper - B

FOOD PRESERVATION

M. Marks: 50

THEORY

UNIT- I

Food and its preservation.
Home and community level including commercial operations.
Principles of food Preservation
Causes of spoilage of food.

Unit - II

- Food Storage – Principles and Methods
 - Fresh Foods – Fruits & Vegetables
 - Dried Foods – Rice, Wheat & Pulses
- Canning of Foods**
- Definition and Principles of Canning
 - Nutritive value of Canned Foods

UNIT-III

Pasteurisation

Effect on food quality.
Storage of pasteurised food.

Drying & Dehydration

Methods used and effect on food quality. Types of driers. Storage and deterioration of dehydrated food products.

UNIT-IV

Use of low temperature

Refrigeration and freezing methods, principles and applications. Preparation of foods for freezing influence on food components and structure. Shelf life of frozen foods

Pickling and Fermentation

Pickles, chutneys, ketchups sauces. Fermentation - Types, products and method use
Establishment of a small scale industry / cottage industry.

UNIT-V

Chemical Preservatives

Preparation of Fruit, Juices, Squashes, Fruit Syrups, Cordials, Jam Jelly.

High Acid & High Sugar Products –

common defects, Preservation of crystallized and glazed fruits.

Nutritional Implications of food processing

Causes for loss of vitamins and minerals, Enrichment, Restoration and Fortification

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Practical

1. Preparation of Jam, Jellies marmalades.
2. Preparation of Pickles & chutneys.
3. Dehydration of Vegetables & Fruits.
4. Preparation of Papad, Badi, Chips
5. Preparation of synthetic syrups & squashes.
6. Survey of market products and packaging

B.Sc. (HOME-SCIENCE) PART- III

Group –III

Paper - A

EARLY CHILDHOOD EDUCATION

M. Marks: 50

FOCUS-

The course focuses on need to provide various early childhood care and educational facilities through different programmes, for early childhood education. Types and present status of ECCE programmes are covered in this course. The recent policies affectionary young children are also included.

The course introduces students to the concept of curriculum for all round development of children. The main emphasis is on various components of curriculum to be included in daily program through medium of play. Method of learning by doing which forms the basis for understanding and knowledge is extended to the first two years of primary school.

OBJECTIVES :-

1. To know importance of early childhood care and significance of intervention programmes for early child development.
2. To understand major theoretical approaches and implication for early child development.
3. To become acquainted with current policies and programs in ECCE.
4. To meaning of curriculum and various components to be included in the daily programmes to promote all round development of children.
5. To recognize role of play in children's development.
6. To understand goals, principles, factors and approaches used in programme planning.
7. To recognize the advantages of project method and learn to use integrated approach in the development of daily programme.

THEORY

UNIT-I

Significance and objectives of early childhood care and education.

1. Significance of early childhood years in individuals development.
2. Meaning and need for intervention programmes for better growth and development.
3. Objectives of ECCE.
4. Different types of programs currently offered. Objectives of the program routine and target group covered by each of the following. ECE programme - Balwadi, anganwadi, Nursery school, Kindergarten, Montessori, laboratory nursery school ECCE Program - ICDS and mobile crech. Play group : day care.

UNIT-II

Current Status and Expansion of Scope of ECE to ECCE

- Expansion from ECE to ECCE.
- Current Status of ECCE programme.
- Admission tests and effects on children.
- Effects of pressures on young children due to formal education.
- Need for ECCE programmes to provide quality care where mothers are at work.
- Global perspective - views of educationists - Froebel, Mac Millan sister, Deweu and Montessori,
- ECE in India : Overview of pre.and post independence period.
- Contributions of Ravindranath Tagore, Mohandas Gandhi, Gijubhai Bodheka, Tarabai Modak, Anutai Wagh.

Recent Developments : Policies, Institutions and contributions of NGOs

- National policy on children.

Evaluation

- Need for evaluation.
- Formative and summative evaluation.
- Methods of evaluation : Observations.
- Evaluation of daily work, tools for evaluation
- Reporting to parents.

Practical (any four)

1. Plan three activities for children : list objectives, analyst tasks to achieve goals, select and organize instructional and learning materials, teacher's role, preparation of evaluation sheets i.e. check list, rating scale.
2. Prewriting activities.
3. (a) Mathematics
(b) Readiness
(c) Materials for classifying, comparing, seriations, patterning, counting shapes, fractions, list vocabulary related to mathematical concepts.
(d) Material for addition, subtraction, multiplication and divisions.
(e) Graphs.
(f) Experiences for understanding time distance weight, capacity and money.
4. Prepare a lesson for early childhood education.
5. Plan a project based on lessons of first and second standard, plan activities which children can do at home.
6. Visit to nursery school (**compulsory**).

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B.Sc. (HOME-SCIENCE) PART III

Group -III

Paper - B

EXTENSION EDUCATION

M. Marks: 50

THEORY

UNIT-I

1. Concept of Education
 - (a) Meaning of Extension
 - (b) Origin of Extension
2. Extension Education Process
 - (a) Environment for learning
 - (b) Role of educator
 - (c) Role of the people participants
3. Home science extension and community development

UNIT-II

4. Concept of adult / non formal education
 - (a) Meaning
 - (b) Purpose
5. Five Year Plans
 - (a) History of planning in India.
 - (b) Five year plans and their focus.
6. Planning at different levels- National to Grass roots.

UNIT-III

7. Programmes to enhance food production
 - (a) national food production programmes.
8. Poverty alleviation efforts and food security
 - (a) Programmes for poverty alleviation for rural and urban areas.
 - (b) Current programmes for rural and urban poor

UNIT-IV

9. Programmes for women and children Women as target groups - specific measures for women and children such as DWCRA, ICDS, IMY. Current programmes for women as initiated and implemented by the different ministeries and departments.
10. PMKVY (Pradhan Mantri Kaushal Vikas Yojana).

11 Role of NGOs

Need for participation of Non-Governmental organizations in developmental efforts.

Encouragement given NGO's.

UNIT-V

Advertising Media

12. Different media for advertising.

13. Methods of Extension Education

14. Non-media advertising

15. Outdoor advertisement - Hoardings, Posters, Billboards, Bulletin Boards, Electronic signs, Letterbins, Aerial methods.

16. Transportation media (Mobile Vehicles)

17. Exhibition and Trade fair.

Practical

1. Visits to Radio / T.V. stations.

2. Script writing for Radio.

3. Visit to Extension Education Unit.

4. Write slogan about Adult-Education.

5. Designing an Advertisement for any product with relevant slogan at least two.

6. Study of programme for women as target group and children.

B.Sc. (HOME-SCIENCE) PART -III

Group -IV

Paper - A

Foundation of Art and Design

M. Marks: 50

THEORY

Unit – I Introduction to foundation of art

1. Design, Definition and types : Structural and Decorative
2. Elements of Design :-
 1. Line
 2. Size
 3. Form
 4. Structure
 5. Space
 6. Pattern
 7. Shape
 8. Light – Characteristics and Classifications
 9. Study of Colour – Classifications, Dimensions, Colour Schemes and effect.
3. Principles of design – definition and their characteristics and types :-
 1. Balance
 2. Harmony
 3. Scale
 4. Proportion
 5. Rhythm
 6. Emphasis

Unit – II **1. Indian, regional, traditional and contemporary arts and their use in :-**

1. Floor decoration
 2. Home decoration
 3. Accessories
- 2. Appreciation of art**
1. In terms of principles of art and design
 2. In terms of composition and aesthetic appeal
 3. Flower arrangement material and principles.

Unit – III 1. Family's Housing Needs

1. Protective, economic, affectional, social, standard of living, housing goals, style, function occupation.
2. Factors influencing selection and purchase of site to house building
 - 1- Legal aspects, location, physical feature, soil conditions, cost, services
3. House planning-
 - 1- Reading house plans
 - 2- Planning principles
Grouping of rooms, orientation, circulation, flexibility, privacy spaciousness, services, aesthetically, economy, light and ventilation.
 - 3- Planning different rooms: living room, bedrooms, kitchen, store room, toilet, passage, staircase.
 - 4- Landscape planning-Principles and application.

B.Sc. (HOME-SCIENCE) PART- III

Group -IV

Paper - B

APPAREL MAKING & FASHION DESIGNING

Marks : 50

THEORY

Unit – I

1. Anatomy Of Human Body
 - Skeleton & Muscular System
 - Joints Of Human Body
1. Normal Body
2. Abnormal Body
1. Figure Problems & Different Types Of Figure Defects
 - Erect, Stooping, Low Shoulder, Square Shoulder, Thin Waist, Stout Waist, Long Body, Short Body, Full Back, Flat Back, Cylindrical, Corpulent, Head Forward, Head Backward
2. Deformity
 1. Natural & Accidental
3. Principle of Figure Drawing
4. Sketching of Different Body Features

Unit – II

1. Drawing Of Human Form In Different Angles
 - Front
 - Back
 - Side
2. Figure Head Theories
 - 8 ½ (Average Figure)
 - 12 ½ (Fashion Figure)
3. Introduction to Elements of Design
 - Color / Line
 - Texture
 - Shapes / forms
4. Principles of Design
 - Proportion
 - Balance
 - Harmony
 - Rhythm
 - Emphasis
5. Different types of Textile design
 - Structural / Decorative
 - Realistic / Abstract
 - Stylized / Geometrical

- Kutch & Kathiyawar Of Gujrat
 - Zari Embroidery
 - Applique Work
3. Entrepreneurship
 - Meaning, Definition, Nature & Types
 - Qualities of a Successful Entrepreneur
 - Factors Affecting the Development of Entrepreneurship
 4. Channels of Distribution : Meaning, Definition, Types & Functions
 5. Salesmanship : Duties & Main Qualities of Successful Salesmanship, Salesmanship & Advertisement.

REFERENCES -

1. Bane, A. 1974 ; Railoring, Magraw Hill.
2. Bane, A. 1979 : Flat pattern Design, Mcgraw Hill.
3. Brary Nathalie 1978 : Dress Pattern Designing London, Crossby Lockwood & Staples.
4. Gillelle, D.A. Berte, B. : Figure Types & Size Ranges, Fairchild Publication.
5. Goubourn M. 1971 : Introduction pattern cutting, Grading and Modelling, London, B.T. Batsford Lts.
6. Goldsworthy 1980 : Simple Dressmaking, Londown, Mills and Boon.altd.
7. Littman Connie 1977 : Pattern Making Design, Litton Educational Publishing Inc.
8. Muka A. 1979 : French Touch, Pittsburgh, Wolfson Publishing Co., Inc.

Practical

1. Average Figure (8 ½ Head Length)
2. Fashion Figure (12 ½ Head Length)
3. Sketching of different Body Features & Different Hair Styles
4. Preparation of Samples of different types of Necklines
5. Preparation of Samples of different types of Collars
6. Preparation of Samples of different types of Sleeves
7. Preparation of Samples of different types of Yokes
8. Preparation of Samples of different tucks and pleats
9. Construction of Ladies Garment With Different Patterns
 - Frock : A line / short body / long body
 - Petticoat / Blouse,
 - A-Line Kurti / Fitted Kurti / Flared Kurti
 - Simple Salwar / Salwar With Belt / Patiyala / Churidar
10. All samples of traditional embroidery fix in the file
11. Draw design with different colour schemes
12. Reducing and Enlarging a design
13. Draw an objects involving various Elements of design

B.Sc. (HOME SCIENCE) PART-I

**Group – III
Paper- B
TEXTILE AND CLOTHING**

M. Marks: 50

FOCUS:

(A) Variety in clothing depends on variety of textiles. Though very few textiles were known to man earlier, presently, he is seeing newer textiles each one superseding to other. Their performance is also varying. It is essential for a student to have some basic knowledge of these textiles to select the right kind of fabric for specific use.

(B) Clothing is important for protection, comfort, personality and growth in relevant age groups. The course should deal with, keeping in view the activities of concerned age group with consideration for safety, ease of care and comfort.

OBJECTIVES:

To enable students to-

1. To acquaint with proper notion regarding choice of fabrics
2. To develop skills in clothing construction
3. To acquaint with different textiles and their performances
4. Impart knowledge on different textiles finishes

THEORY

Unit – I

1. Introduction of the Subject
2. Common Terminologies used in Textile
3. Properties of Textile Fibers

Classification of the textile fibres : History, composition, types, production & properties

- Natural Fiber – Cotton, Linen, Silk, Wool
- Man-Made Fiber – Rayon
- Thermoplastic Fiber – Nylon

Unit – II

1. Study of Yarn
 - Meaning, Yarn Making : Mechanical & Chemical
 - Types – Simple, Complex, Novelty and Textured yarn
 - number , yarn count , Yarn Twist
2. Methods of fabric construction
 - Weaving : Handloom and its parts.
 - Different types of weaves- Plain weaves, Floting weaves, Pile, Jaquard and Leno weaves.
3. Other methods of fabric construction : Felting, Knitting, Crocheting, Braiding & Lacing

Unit – III

1. Finishes : Meaning and purpose
 - Physical finishes : Singeing , Napping ,Brushing ,Shearing, sizing , shrinking , tentaring, Calendaring etc.
 - Chemical finishes : Bleaching & mercerizing


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- Special purpose finishes : wrinkle resistance , water resistant & water repellent , Flame retardant , crease resistance , soil resistant etc.
2. Identification of Fabric
 - Appearance test / Microscopic test
 - Burning test / Creasing test
 - Breaking test / Tearing test & Chemical test
 3. Importance of Clothing

Unit – IV

1. Dyes

- Definition and Classification
 - Different types of dyes : Natural & Synthetic dyes
 - Suitability of various dyes to different fibres
2. Dyeing methods of different stages of processing :
 - Fiber , yarn , piece , union & cross
 3. Household method of dyeing
 4. Colour fastness
 - Characteristics of colour fastness
 - Fastness to sunlight ,crocking ,perspiration

Unit – V

1. Printing

- Its significance
- Methods of printing : Block, Stencil, Screen & Roller printing
- Advantages and disadvantages of various methods of printing
- Faults in different printing methods
- Preparation of printing paste
- Preparation of cloth for printing
- After treatment of printed goods
- Resist dyed - Bandhej of Gujrat and Rajasthan

PRACTICAL

1. Identification of yarn
2. Identification of textile fibres :
 - Visual test / Microscopic test
 - Burning test /Chemical test
3. weaves and their variations :
 - Plain weave / Twill weave
 - Satin & Sateen weave
 - Honeycomb & Birdseye weave
4. Printing
 - Block printing / Screen printing / Stencil printing
5. Tie & dye

6. Simple dyeing of different fabrics
7. Finishing of fabric before dyeing & printing
 - Scouring
 - Bleaching
 - Designing
8. Bleaching & whitening
9. Starching
10. Laundering of cotton, silk, wool and synthetic fabric
10. Batik

CHEMISTRY
SANT GAHIRA GURU VISHWAVIDYALAYA
Sarguja Ambikapur (C.G.)

CHOICE BASED CREDIT SYSTEM
(CBCS) *chemistry -*
Department

SYLLABUS

M.Sc. CHEMISTRY

SEMESTER SYSTEM
SESSION 2018-19



For Affiliated Colleges of
SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001

Deputy Registrar
Sant Gahira Guru Vishwavidyalaya
Sarguja, Ambikapur (C.G.)

M.Sc. CHEMISTRY FIRST SEMESTER

First Semester (CBCS)

Third Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ABC 301		CCC	6	4	2	0	3	0
2.	ABC 302		CCC	6	4	2	0	3	0
3.	ABC 303		CCC	6	4	2	0	3	0
4.	ABC 502		OSC	6	4	2	0	3	0
5.	ABC A03/B03/ C03/D03/ E03/F03		ECC	6	4	2	0	3	0
				30					

Fourth Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ABC 401		CCC	6	4	2	0	3	0
2.	ABC 402		CCC	6	4	2	0	3	0
3.	ABC 403		CCC	6	4	2	0	3	0
4.	ABC 421		PRJ/FST/ EST	6	4	2	0	3	0
5.	ABC A04/B04/ C04/D04/ E04/F04		ECC	6	4	2	0	3	0
				30					

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)		Marks	
				L	T	P	Thy	P	SE	IA
MSC 101	CCC	INORGANIC CHEMISTRY-1	6	4	3	0	3	0	80	20
MSC 102	CCC	ORGANIC CHEMISTRY-1	6	4	3	0	3	0	80	20
MSC 103	CCC	ANALYTICAL CHEMISTRY	6	4	3	0	3	0	80	20
MSC 111	CCC	INORGANIC AND ANALYTICAL CHEMISTRY-1 LAB	6	0	0	9	0		100	
MSC S01	OSC	RESEARCH METHODOLOGY & COMPUTER APPLICATION: BASICS	6	4	3	0	3	0	80	20
MSC A01	ECC/C B	CONSTITUTIONALISM & INDIAN POLITICAL SYSTEM								
MSC A02	ECC/C B	GROUP THEORY, SPECTROSCOPY AND DIFFRACTION METHODS	6	4	3	0	3	0	80	20
MSC A03	ECC/C B	COMPUTER PROGRAMMING IN CHEMISTRY								
MSC A04	ECC/C B	MEDICINAL CHEMISTRY								
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30			Total Credits=	36						

Second Semester (CBCS)

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)		Marks	
				L	T	P	Thy	P	SE	IA
MSC 201	CCC	INORGANIC CHEMISTRY-2	6	4	3	0	3	0	80	20
MSC 202	CCC	ORGANIC CHEMISTRY-2	6	4	3	0	3	0	80	20
MSc 203	CCC	PHYSICAL CHEMISTRY	6	4	3	0	3	0	80	20
MSC 211	CCC	ORGANIC AND PHYSICAL CHEMISTRY LAB	6	0	0	9	0		100	
MSC S02	PRI/SS C	SOCIAL OUTREACH AND SKILL DEVELOPMENT	6	4	3	0	3	0	80	20
MSC B01	ECC/C B	ENVIRONMENTAL AND FOREST LAWS	6	4	3	0	3	0	80	20
MSC B02	ECC/C B	POLYMER CHEMISTRY								
MSC B03	ECC/C B	ORGANIC SYNTHESIS-1								
MSC B04	ECC/C B	APPLIED CHEMISTRY								
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30			Total Credit=	36						

M.Sc. CHEMISTRY SECOND SEMESTER
 COURSE CODE: MSC201
 COURSE TYPE: CCC
 COURSE TITLE : INORGANIC CHEMISTRY-2

CREDIT: 6
 THEORY: 6

PRACTICAL : 0

HOURS: 90

THEORY: 90 PRACTICAL : 0

MARKS:

THEORY: 100 (80+20)

MARKS:

THEORY: PRACTICAL :

OBJECTIVE:

To study about the theories of coordination complexes, Chemistry of lanthanides, to learn about Nanotechnology and use of Inorganic Compounds in Biological Chemistry.

UNIT-1

24 Hours

ELECTRONIC SPECTRA AND MAGNETIC PROPERTIES OF TRANSITION METAL COMPLEXES

Spectroscopic ground states, determining the ground state term, Hund rules, correlation, Orgel diagram d1 and d9, d2 and d8 and d5 ions and Tanabe-Sugano diagrams for transition metal complexes (d1 to d9 states), calculation of Dq B and P parameters, charge transfer spectra, spectroscopic method of assignment of absolute configuration in Optically active metal chelates and their stereochemical information, and spin crossover, coupling of orbital angular momenta, coupling of spin angular momenta, spin orbital coupling

UNIT-2

15 Hours

METAL CLUSTERS

Higher Boranes, Carboranes, Metalloboranes and Metallo carboranes, Metal Carbonyl and halide clusters, compounds with metal metal multiple bonds.

ACID AND BASE: Bronsted and Lewis acid and base concept, HSAB concept and its application, Buffer solutions.

UNIT-3

18 Hours

THE CHEMISTRY OF LANTHANIDES, ACTINIDES AND NANOTECHNOLOGY

lanthanides and actinides: electronic structure oxidation state, colour and spectral, magnetic characteristics, coordination numbers, stereochemistry, lanthanide contraction, separation of the lanthanide

Third Semester (CBCS)

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours			ESE Duration (Hrs.)		Marks	
				Per Week			Thry	P	SEE	IA
				L	T	P				
MSC 301	CCC	APPLICATIONS OF SPECTROSCOPY- INORGANIC CHEMISTRY	6	4	3	0	3	0	80	20
MSC 302	CCC	APPLICATIONS OF SPECTROSCOPY- ORGANIC CHEMISTRY	6	4	3	0	3	0	80	20
MSC 303	CCC	PHOTOCHEMISTRY AND PERICYCLIC REACTION	6	4	3	0	3	0	80	20
MSC 311	CCC	ORGANIC CHEMISTRY LAB	6	0	0	9	0			100
MSC 303	OSC	INTELLECTUAL PROPERTY, HUMAN RIGHTS & ENVIRONMENT: BASICS	6	4	3	0	3	0	80	20
MSC 011	ECCCB	TRIBAL STUDIES	6	4	3	0	3	0	80	20
MSC 012	ECCCB	GREEN CHEMISTRY								
MSC 013	ECCCB	ORGANIC SYNTHESIS II								
MSC 014	ECCCB	HETEROCYCLIC CHEMISTRY								
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30			Total							
			Credit=36							

M.Sc. CHEMISTRY THIRD SEMESTER COURSE CODE: MSC301 COURSE TYPE: CCC

COURSE TITLE : APPLICATIONS OF SPECTROSCOPY- INORGANIC CHEMISTRY

CREDIT: 6
THEORY: 6 PRACTICAL : 0

HOURS: 90
THEORY: 90 PRACTICAL : 0

MARKS:
THEORY: 100 (80+20)

MARKS:
THEORY: PRACTICAL :

OBJECTIVE: To learn about application of Spectroscopy in various field of In organic Chemistry.

UNIT-1

16 Hours

Applications of Atomic Absorption Spectroscopy, Atomic Emission Spectroscopy, Plasma Emission Spectroscopy, Flame Emission Spectroscopy, photo electron spectroscopy and there application and raman spectroscopy in inorganic chemistry.

UNIT-2

18 Hours

Vibrational Spectroscopy Symmetry and shapes of AB₂, AB₃, AB₄, AB₅ and AB₆, mode of bonding of ambidentate ligands, ethylenediamine and diketonato complexes, application of resonance Raman spectroscopy particularly for the study of active sites of metalloproteins.

UNIT-3

20 Hours

Electron Spin Resonance Spectroscopy :Hyperfine coupling, Zero field splitting and kramers degeneracy, spin orbit coupling and significance of g-tensors, application to transition metal complexes (having one unpaired electron) including biological systems and to inorganic free radicals such as PH₂, F₂ and [BH₃].

UNIT-4

17 Hours

Nuclear Magnetic Resonance of Paramagnetic Substances in Solution The contact and pseudo contact shifts, factors affecting nuclear relaxation, some applications including biochemical systems, an overview of NMR of metal nuclides with emphasis on 195 Pt and 199Sn NMR, specific study of MRI,

fused benzo ring: synthesis and reaction including medicinal applications of benzopyrroles, bezofurans and benzothiophenes.

UNIT-4 BICYCLIC RING SYSTEM AND MESO IONIC HETEROCYCLES: 18 Hours

six-membered Heterocycles with one Heteroatom. Synthesis and reactions of pyridines, quinolines, isoquinolines, pyrylium salts and pyrones and Synthesis and reactions of quionlizinium and benzopyrylium.

UNIT-5 HIGHER HETEROCYCLES: 16 Hours

Six membered Heterocycles with two or more Heteroatoms. Synthesis and reactions of diazenes, and thiazines, pyrimidines. Seven- and Large-membered Heterocycles: Synthesis and reactions of azepines, oxepines, thiepinines.

SUGGESTED READING BOOKS

1. Heterocyclic Chemistry Vol. 1-3, R.R. Gupta, M. Kumar and V.Gupta, Springer Verlag.
2. The Chemistry of Heterocycles, T. Eicher and S. Hauptmann, Thieme.
3. Heterocyclic chemistry J.A. Joule, K. Mills and G.F. Smith, Chapman and Hall.
4. Heterocyclic Chemistry, T.L. Gilchrist, Longman Scientific Technial.
5. Contemporary Hetrocyclic Chemistry, G.,R. Newkome and W.W. Paudler, Wiley-Inter Science.
6. An Introduction to the Heterocyclic Compounds, R.M. Acheson, Johnwiely.
7. Comprehensive Heterocyclic Chemistry, A.R. Katrizky and C.W. Rees, eds. Pergamon Press
8. R.K. Bansal, Hetrocyclic chemistry, 5th edn. New Age International Publishers

Fourth Semester (CBCS)

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			ESE Duration (Hrs.)		Marks	
				L	T	P	Thy	P	SEE	IA
MSC 401	CCC	BIOINORGANIC CHEMISTRY	6	4	3	0	3	0	80	20
MSC 402	CCC	ENVIRONMENTAL CHEMISTRY	6	4	3	0	3	0	80	20
MSC 403	CCC	SOLID STATE CHEMISTRY	6	4	3	0	3	0	80	20
MSC 411	CCC	GENERAL CHEMISTRY LAB	6	0	0	9	3	0	100	
MSC 804	PR/SSC	DISSERTATION	6	4	3	0	3	0	80	20
MSC D01	ECCCB	PHOTOINORGANIC CHEMISTRY	6	4	3	0	3	0	80	20
MSC D02	ECCCB	MATERIAL SCIENCE								
MSC D03	ECCCB	CHEMISTRY OF NATURAL PRODUCT								
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30				Total Credit = 36						

SYLLABUS

(CORE MODULES SYLLABUS FOR ENVIRONMENT STUDIES FOR UNDERGRADUATE COURSES OF ALL BRANCHES OF HIGHER EDUCATION)

UNIT 1

The multidisciplinary nature of environment studies. Definition, scope and importance. (2 Lectures)

Need of public awareness.

Natural resources : Renewable and non-renewable resources : Natural resources and associated problems.

(a) **Forest resources :** Use and over-exploitation, deforestation, case studies, timber extraction, mining, dams and their effects on forest and tribal people.

(b) **Water resources :** Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams – benefits and problems.

(c) **Mineral resources :** Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

(d) **Food resources :** World food problem, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizers, pesticide problems, water logging, salinity, case studies.

(e) **Energy resources :** Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.

(f) **Land resources :** Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

Role of an individual in conservation of natural resources.

Equitable use of resources for sustainable life styles. (8 Lectures)

UNIT 2

ECOSYSTEMS : Concept of an ecosystem.

Structure and function of an ecosystem.

Producers, consumers and decomposers.

Energy flow in the ecosystem.

Ecological succession.

Food chains, food webs and ecological pyramids.

Introduction, types, characteristic, features, structure and function of the following ecosystem :

(a) **Forest ecosystem,**

Grassland ecosystem,

Aquatic ecosystem,

Wetland ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) (6 Lectures)

UNIT 3

Biodiversity and its conservation.

Introduction : Definition, genetic species and ecosystem diversity.

Biogeographical classification of India.


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Value of biodiversity, consumptive use, productive use, social ethical, aesthetic and option values.

Biodiversity at global, national and local levels.

India as a mega-diversity nation.

Hot-spots of biodiversity.

Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.

Endangered and endemic species of India.

Conservation of biodiversity : *In situ* and *Ex situ* conservations of biodiversity. (8 Lectures)

UNIT 4

Environmental Pollution.

Definition, Causes, effects and control measures of :

- | | |
|----------------------|------------------------|
| (a) Air pollution, | (b) Water pollution, |
| (c) Soil pollution, | (d) Marine pollution, |
| (e) Noise pollution, | (f) Thermal pollution, |
| (g) Nuclear hazards. | |

Solid Waste Management : Causes, effects and control measures of urban and industrial wastes.

Role of an individual in prevention of pollution.

Pollution case studies.

Disaster Management : Floods, earthquake, cyclone and land slides.

Human Population and the Environment :

Population growth, variation among nations.

Population explosion - Family welfare programme.

Environment and human health.

Human Rights. Value Education.

(18 Lectures)

UNIT 5

Social Issues and the Environment :

From unsustainable to sustainable development.

Urban problems related to energy.

Water conservation, rain water harvesting, watershed management.

Resettlement and rehabilitation of people; its problems and concerns, case studies.

Environmental ethics : Issues and possible solution.

Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies.

Wastland reclamation.

Consumerism and waste products.

Environment Protection Act.

Air (Prevention and control of pollution) Act.

Water (Prevention and control of pollution) Act.

Wildlife Protection Act, Forest Conservation Act.

Issues involved in enforcement of environmental legislation.

Public awareness.

HIV/AIDS.

Women and child welfare.

Role of Information Technology in Environment and human health.

Case studies.

(7 Lectures)

(6 Lectures)


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Zoology
B.Sc. Part III 2018-19
Paper-I

**ECOLOGY, ENVIRONMENTAL BIOLOGY: TOXICOLOGY,
MICROBIOLOGY AND MEDICAL ZOOLOGY**

Unit: I (Ecology)

- Aims and scopes of ecology
- Major ecosystems of the world-Brief introduction
- Population- Characteristics and regulation of densities
- Communities and ecosystem
- Bio-geo chemical cycles
- Air & water pollution
- Ecological succession

Unit: II (Environmental Biology)

- Laws of limiting factor
- Food chain in fresh water ecosystem
- Energy flow in ecosystem- Trophic levels
- Conservation of natural resources
- Environmental impact assessment

Unit: III (Toxicology)

- Definition and classification of Toxicants
- Basic Concept of toxicology
- Principal of systematic toxicology
- Heavy metal Toxicity (Arsenic, Mercury, Lead, Cadmium)
- Animal poisons- snake venom, scorpion & bee poisoning
- Food poisoning

Unit: IV (Microbiology)

- General and applied microbiology
- Microbiology of domestic water and sewage
- Microbiology of milk & milk products
- Industrial microbiology: fermentation process, production of penicillin, alcoholic beverages, bioleaching.

Unit: V (Medical Zoology)

- Brief introduction to pathogenic microorganisms, Rickettsia, Spirochaetes, AIDS and Typhoid
- Brief account of life history & pathogenicity of the following pathogens with reference to man: prophylaxis & treatment
- Pathogenic protozoan's- Entamoeba, Trypanosome & Plasmodium
- Pathogenic helminthes- Schistosoma
- Nematode pathogenic parasites of man
- Vector insects


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B.Sc.-II (BOTANY) PAPER-II
(ECOLOGY AND PLANT PHYSIOLOGY)

UNIT-I

Introduction and scope of ecology, environmental and ecological factors, Soil formation and soil profile, Liebig's law of minimum, Shelford's law of tolerance, morphological and anatomical adaptations in hydrophytes, xerophytes and epiphytes.

UNIT-II

Population and community characteristics, Raunkiaer's life forms, population interactions (e.g. Symbiosis, Amensalism etc.), succession, ecotone and edge effect, ecological niches, ecotypes, ecads, keystone species

Concept of ecosystem, trophic levels, flow of energy in ecosystem, food chain and food web, concept of ecological pyramids

Biogeochemical cycles: carbon cycle, nitrogen cycle and phosphorus cycle

UNIT-III

Plant water relations: Diffusion, permeability, osmosis, imbibitions, plasmolysis, osmotic potential and water potential, Types of soil water, water holding capacity, wilting, Absorption of water, theories of Ascent of sap, Mineral nutrition and absorption, Deficiency symptoms, Transpiration, stomatal movement, significance of transpiration, Factors affecting transpiration, guttation.

UNIT-IV

Photosynthesis: Photosynthetic apparatus and pigments, light reaction mechanism of ATP synthesis. C₃, C₄ CAM pathway of carbon reduction, photorespiration, factors affecting photosynthesis.

Respiration: Aerobic and anaerobic respiration, Glycolysis, Krebs's cycle, factors affecting respiration, R.Q.

UNIT-V

Plant growth hormones: Auxin, Gibberellin, Cytokinin, Ethylene and Abscisic acid. Physiology of flowering, Florigen concept, Photoperiodism and Vernalization. Seed dormancy and germination, plant movement.

Books Recommended:

Koromondy, E.J. *Concepts of Ecology*, Prentice Hall, USA


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B.Sc.–II (BOTANY) PAPER-I

(PLANT TAXONOMY, ECONOMIC BOTANY, PLANT ANATOMY AND EMBRYOLOGY)

UNIT-I

Bentham and Hooker system of classification. Binomial Nomenclature, International Code of Nomenclature for Algae, Fungi, and plants (IUCN), Typification, numerical Taxonomy and chemotaxonomy. Preservation of Plant material and Herbarium techniques. Important botanical gardens and herbaria of India, Kew Botanical garden, England.

UNIT-II

Systematic position, distinguishing characters and economic importance of the following families, Ranunculaceae, Magnoliaceae, Brassicaceae, Rosaceae, Papaveraceae, Caryophyllaceae, Rutaceae, Cucurbitaceae, Apiaceae, Rubiaceae, Apocynaceae, Asclepiadaceae, Solanaceae, Malvaceae, Convolvulaceae, Orchidaceae, Acanthaceae, verbenaceae, Lamiaceae, Asteraceae, Fabaceae, Euphorbiaceae, Poaceae and Liliaceae.

UNIT-III

Economic Botany: Botanical name, family, part used and uses of the following economically important plants, fiber yielding plants; Cotton, jute, sun, hemp, coir. Timber yielding plants: Sal, Teak, Shisham and Pine. Medicinal plants: Kalmegh, Ashwagandha, Ghritkumari, Giloy, Brahmi, sarpgandha, ---of medicinal plants of C.G. Food plants: Pearl millet, Buck of wheat, Sorghum, Soyabean, gram, Ground nut, Sugarcane and Potato. Fruit plants: Pear, Peach, Litchi. Spices: Cinnamon, Turmeric, Ginger, Asafoetida and Cumin. Beverages : Tea, Coffee Rubber Cultivation of important flowers: Chrysanthemum, Dahelia, Biodiesel plants Jatropa, Pongamia Ethnobotany in context of Chhattisgarh.

UNIT-IV

Plant Anatomy: Root and shoot apical meristems theories of root and shoot apex organization, permanent tissues, anatomy of root, stem and leaf of dicot and monocot, secondary growth in root and stem, Anatomical anomalies in the primary structure of stems (Nyctanthes, Boerhaavia, Casuarina), Anamolous secondary growth in Dracaena, Bignonia, Laptadenia.

UNIT-V

Embryology: Flower as a reproductive organ, anther, microspofogenesis, types of ovules, megasporogenesis, development of male and female gametophyte, pollination, mechanisms, self incompatibility, fertilization, endosperm, embryo, polyembryonoy, apomixes and parthenocarpy.

Books Recommended:


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बी. ए. भाग एक B. A. Part I

राजनीति विज्ञान Political Science

द्वितीय प्रश्न पत्र : भारतीय शासन एवं राजनीति Paper II : Indian Government and Politics

- इकाई 1 : भारतीय राष्ट्रीय आन्दोलन : 1858 का प्रथम स्वतन्त्रता संग्राम, असहयोग आन्दोलन, सविनय अवज्ञा आन्दोलन, भारत छोड़ो आन्दोलन । भारत का संविधानिक विकास : 1858, 1909, 1919 और 1935 का भारत शासन अधिनियम ।
- Unit 1 : Indian National Movement : First Independence Movement 1858, Non cooperation Movement, Civil Disobedience Movement and Quit India Movement. Constitutional Development of India : Govt. of India Act of 1858, 1909, 1919 and 1935.
- इकाई 2 : भारतीय संविधान : विशेषताएं , प्रस्तावना, स्रोत, । संघीय व्यवस्था , मौलिक अधिकार, मूल कर्तव्य, नीति निर्देशक तत्व । संविधान संशोधन प्रक्रिया ।
- Unit 2 : Constitution of India : Characteristics, Preamble, Sources. Federal System. Fundamental Rights and Duties, Directive Principles of State Policy. Constitution Amendment Process.
- इकाई 3 : संघीय कार्यपालिका : राष्ट्रपति, उपराष्ट्रपति, मन्त्रिपरिषद् और प्रधानमंत्री । संघीय व्यवस्थापिका : संसद : लोकसभा और राज्यसभा । संसदीय प्रक्रिया ।
- Unit 3 : Union Executive : President , Vice President, Council of Ministers and Prime Minister, Union Legislature : Parliament: Lok Sabha and Rajya Sabha. Parliamentary Procedure.
- इकाई 4 : संघीय न्यायपालिका : सर्वोच्च न्यायालय : गठन, क्षेत्राधिकार, न्यायिक पुनरावलोकन, न्यायिक सक्रियतावाद । राज्य कार्यपालिका : राज्यपाल , मन्त्रिपरिषद् और मुख्यमंत्री ।
- Unit 4 : Union Judiciary : Supreme Court : Organisation, Jurisdiction, Judicial Review, Judicial Activism. State Executive : Governor, Council of Ministers and Chief Minister.
- इकाई 5 : राज्य व्यवस्थापिका : विधानसभा एवं विधानपरिषद् । निर्वाचन आयोग व चुनाव सुधार । राष्ट्रीय व क्षेत्रीय दल । भारतीय राजनीति के प्रमुख मुद्दे : जाति, धर्म, भाषा और क्षेत्र । पंचायती राज व्यवस्था ।
- Unit 5 : State Legislature : Legislative Assembly and Legislative Council. Election Commission and Election Reforms. National and Regional Parties. Major issues of Indian Politics : Caste, Religion, Language and Region. Panchayati Raj System.

संदर्भ पुस्तकें (Reference Books)

8. डॉ. सुभाष कश्यप, भारत का संवैधानिक विकास और संविधान, हिन्दी माध्यम कार्यान्वयन निदेशालय दिल्ली विश्वविद्यालय ।
डॉ. सुभाष कश्यप, हमारी संसद, भारत की संसद एक परिचय, राष्ट्रीय पुस्तक न्यास ।
10. डॉ. रूपा मंगलानी, भारतीय शासन एवं राजनीति, राजस्थान हिन्दी ग्रंथ अकादमी जयपुर ।

11- M.V. Pylee , Constitutional History of India , S.Chand.

12- D.D. Basu Indian Constitution


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- इकाई 1 : प्लेटो : आदर्श राज्य – न्याय, शिक्षा, साम्यवाद, दार्शनिक शासक ।
अरस्तू : राज्य, दासप्रथा, नागरिकता, क्रांति ।
- Unit 1 : Plato : Ideal State : Justice, Education, Communism , Philosopher King.
Aristotle : State, Slavery, Citizenship , Revolution.
- इकाई 2 : मेकियावेली : युग का शिशु, धर्म व नैतिकता, राजा के कर्तव्य और आवरण ।
हॉब्स : सामाजिक समझौता सिद्धान्त – लेवियाथन । लॉक : सामाजिक समझौता सिद्धान्त ।
रूसो : सामाजिक समझौता सिद्धान्त , सामान्य इच्छा ।
- Unit 2 : Machiavelli : Child of his times, Religion and Morality, Duties and Conduct of King. Hobbes :
Social Contract Theory: Leviathan. Locke : Social Contract Theory. Rousseau : Social Contract
Theory and General Will.
- इकाई 3 : बेथम : उपयोगितावाद । मिल : उपयोगितावाद में संशोधन, स्वतंत्रता और प्रतिनिधि शासन ।
ग्रोन : राजनीतिक विचार । मार्क्स : राजनीतिक विचार ।
- Unit 4 : Bentham : Utilitarianism. Mill : Amendment in Utilitarianism. Liberty and Representative
Government. Green : Political Thoughts. Marx : Political Thoughts.
- इकाई 4 : आदर्शवाद, व्यक्तिवाद, उदारवाद, समाजवाद, फासीवाद : विशेषताएं और आलोचना ।
- Unit 4 : Idealism, Individualism, Liberalism, Socialism, Fascism : Features and
Criticism.
- इकाई 5 : मनु और कौटिल्य : सप्तांग सिद्धान्त, राजा और राजपद, प्रशासकीय व्यवस्था, राज्यमण्डल ।
गांधी : सत्य, अहिंसा, सत्याग्रह एवं राजनीतिक विचार । अम्बेडकर : राजनीतिक एवं सामाजिक विचार
दीनदयाल उपाध्याय : एकात्ममानववाद ।
- Unit 5 : Manu and Kautilya : Saptang Theory, King and Kingship, Administrative
System, Rajyamandal.
Gandhi : Truth , Non violence , Satyagrah and Political thoughts.
Ambedkar : Political and Social thoughts.
Deen Dayal Upadhyay : Akatmamanavvad.


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द्वितीय प्रश्नपत्र : तुलनात्मक शासन एवं राजनीति Paper II : Comparative Government and Politics

- इकाई 1 : ब्रिटिश संविधान : विकास, विशेषताएं, कार्यपालिका, व्यवस्थापिका, न्यायपालिका ।
- Unit 1 : British Constitution : Evolution, Salient Features, Executive, Legislature and Judiciary.
- इकाई 2 : संयुक्त राज्य अमेरिका का संविधान : विशेषताएं, कार्यपालिका, व्यवस्थापिका, न्यायपालिका, शक्ति पृथक्करण व नियंत्रण संतुलन का सिद्धान्त ।
- Unit 2 : Constitution of United States of America : Salient Features, Executive, Legislature and Judiciary. Theory of Separation of Powers and checks and balances.
- इकाई 3 : स्विटजरलैण्ड का संविधान : विशेषताएं, कार्यपालिका, व्यवस्थापिका, न्यायपालिका, प्रत्यक्ष प्रजातन्त्र । Unit 3 : Constitution of Switzerland : Salient Features, Executive, Legislature and Judiciary. Direct Democracy.
- इकाई 4 : चीन का संविधान : विशेषताएं, कार्यपालिका, व्यवस्थापिका, न्यायपालिका, साम्यवादी दल ।
- Unit 4 : Constitution of China : Salient Features, Executive, Legislature and Judiciary. Communist Party.
- इकाई 5 : तुलनात्मक राजनीति : अर्थ, परिभाषा, । ईस्टन का व्यवस्था सिद्धान्त, आमण्ड का संरचनात्मक-प्रकार्यात्मक उपागम । राजनीतिक विकास, राजनीतिक समाजीकरण, राजनीतिक संस्कृति की अवधारणा ।
- Unit 5 : Comparative Politics : meaning, Definition. System Theory of David Easton, Structural-functional Approach of Almond. Concept of Political Development, Political Socialisation, Political Culture


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द्वितीय प्रश्नपत्र : लोक प्रशासन Paper : II : Public Administration

- इकाई 1 : लोक प्रशासन : अर्थ, परिभाषा, प्रकृति, क्षेत्र । लोक प्रशासन और निजी प्रशासन । अध्ययन पद्धतियाँ । नवीन लोक प्रशासन । तुलनात्मक लोक प्रशासन ।
- Unit 1 : Public Administration : meaning and definition, nature, scope. Public Administration and Private Administration. Method of Studies. New Public Administration. Comparative Public Administration.
- इकाई 2 : संगठन के सिद्धान्त : पदसोपान, नियंत्रण का क्षेत्र , आदेश की एकता, प्रत्यायोजन । मुख्य कार्यपालिका । सूत्र एवं स्टाफ अभिकरण । विभागीय संगठन , लोक निगम । कार्मिक प्रशासन : भर्ती, पदोन्नति , प्रशिक्षण ।
- Unit 2 : Principles of Organisation : Hierarchy, Span of Control, Unity of Command, Delegation. Chief Executive. Line and Staff Agencies. Departmental Organisation. Public Corporation. Personnel Administration : Recruitment, Promotion, Training.
- इकाई 3 : विकास प्रशासन : प्रकृति, मुद्दे और विशेषताएं । रिग्स मॉडल । प्रशासन में नागरिक सहभागिता । सुशासन और ई शासन । संघ लोक सेवा आयोग ।
- Unit 3 : Development Administration : Nature, Issues, Characteristics. Riggs Model. Public participation in Administration. Good Governance and e- Governance. Union Public Service Commission.
- इकाई 4 : वित्तीय प्रशासन : बजट के सिद्धान्त । भारत में बजट प्रक्रिया । भारत में प्रशासनिक सुधार । प्रशासन पर कार्यपालिका, विधायी, न्यायिक और जन नियंत्रण ।
- Unit 4 : Financial Administration: Principles of Budget. Budget procedure in India. Administrative reforms in India. Executive, Legislative, Judicial and Public Control on Administration.
- इकाई 5 : प्रशासन में भ्रष्टाचार : आम्बुड्समैन, लोकपाल और लोक आयुक्त । वैश्वीकरण के युग में लोक प्रशासन । उदासीकरण । नौकरशाही । लोक सम्पर्क । Corruption in Administration: Ombudsman, Lokpal and Lok Ayukta. Public Administration in the age of Globalisation. Liberalisation. Bureaucracy. Public Relation.


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संशोधित पाठ्यक्रम

बी.ए./बी.एस-सी./बी.कॉम./बी.एच.एस.-सी.
भाग - एक (आधार पाठ्यक्रम)
प्रश्न पत्र- प्रथम (हिन्दी भाषा)
(पेपर कोड -0101)

पूर्णांक- 75

नोट :-

1. प्रश्न पत्र 75 अंक का होगा।
2. प्रश्न पत्र अनिवार्य होगा।
3. इसके अंक श्रेणी निर्धारण के लिए जोड़े जायेंगे।
4. प्रत्येक इकाई के अंक समान होंगे।

पाठ्य विषय :-

इकाई-1

क. पल्लवन, पत्राचार, अनुवाद, पारिभाषिक शब्दावली एवं हिंदी में पदनाम

ख. ईदगाह (कहानी) - मुंशी प्रेमचंद

इकाई-2

क. शब्द शुद्धि, वाक्य शुद्धि, शब्द ज्ञान-पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी शब्द, समश्रुत शब्द, अनेक शब्दों के लिए एक शब्द एवं मुहावरे-लोकोक्तियाँ

ख. भारत वंदना (कविता)- सूर्यकान्त त्रिपाठी निराला

इकाई-3

क. देवनागरी लिपि - नामकरण, स्वरूप एवं देवनागरी लिपि की विशेषताएँ, हिंदी अपठित गद्यांश, संक्षेपण, हिंदी में संक्षिप्तीकरण

ख. भोलाराम का जीव (व्यंग्य) - हरिशंकर परसाई

इकाई-4

क. कम्प्यूटर का परिचय एवं कम्प्यूटर में हिंदी का अनुप्रयोग

ख. शिकागो से स्वामी विवेकानंद का पत्र

इकाई-5

क. मानक हिन्दी भाषा का अर्थ, स्वरूप, विशेषताएँ, मानक, उपमानक, अमानक भाषा

ख. सामाजिक गतिशीलता - प्राचीन काल, मध्यकाल, आधुनिक काल


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संशोधित पाठ्यक्रम
बी. ए. भाग- 3
हिन्दी साहित्य
प्रथम प्रश्न पत्र
जनपदीय भाषा- साहित्य (छत्तीसगढ़ी)
(पेपर कोड- 0233)

प्रस्तावना-

हिन्दी केवल खड़ी बोली नहीं है, बल्कि एक बहुत बड़ा भाषिक समूह है। हिन्दी जगत में अनेक विभाषाएं, बोलियाँ और उपबोलियाँ विद्यमान हैं जिनमें सकल साहित्य सम्पदा है। इनके सम्यक अध्ययन और अन्वेषण की आवश्यकता है। जनपदीय भाषा छत्तीसगढ़ी निरन्तर विकास की ओर अग्रसर हो रही है अस्तु, इस भाषा का और इसमें रचित साहित्य का इतिहास- विकास स्पष्ट करते हुए इनसे संबंधित प्रमुख रचनाकारों का आलोचनात्मक अनुशीलन करना हिन्दी के वृहत्तर हित में होगा। छत्तीसगढ़ी भाषा का पाठ्यक्रम निम्न बिन्दुओं पर आधारित हैं-

- (क) छत्तीसगढ़ी भाषा का इतिहास- विकास
- (ख) छत्तीसगढ़ी भाषा में रचित साहित्य का इतिहास
- (ग) छत्तीसगढ़ी भाषा के प्रमुख प्राचीन एवं अर्वाचीन रचनाकारों की कृतियों का अध्ययन।

पाठ्य विषय-

रचनाएँ-

- (1) प्राचीन कवि संत धर्मदास के 3 पद
 1. गुरु पड़या लागों नाम लखा दीजो हो।
 2. नैना आगे ख्याल घनेरा।
 3. भजन करौ भाई रे, अइसन तन पाय के।
(सन्दर्भ- धर्मदास के शब्दावली से उद्धृत)
- (2) लखनलाल गुप्त का गद्य-
 1. सोनपान
(गद्य- पुस्तक 'सोनपान' के उद्धृत)
- (3) अर्वाचीन रचनाकार
डॉ. सत्यभामा आडिल रचित गद्य
 1. सीख सीख के गोठ
(गद्य पुस्तक 'गोठ' के उद्धृत)
- (4) डॉ. विनय पाठक की कविताएँ-
 1. तैंय उठथस सुरुज उथे
 2. एक किसिम के नियाव
(अकादसी और अनचिन्हार' पुस्तक से उद्धृत)

संशोधित
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हिन्दी साहित्य
द्वितीय प्रश्न पत्र

हिन्दी निबंध तथा अन्य गद्य विधाएँ(पेपर कोड- 0174)

पूर्णांक- 75

पाठ्य विषय-

व्याख्या एवं आलोचनात्मक प्रश्नों के लिए एक नाटक, पांच प्रतिनिधि निबंध और पाँच एकांकी का निर्धारण किया गया है।

नाटक- अंधेरी नगरी- भारतेन्दु हरिश्चन्द्र

निबंध-	1. क्रोध	- आचार्य रामचन्द्र शुक्ल।
	2. बसन्त	- डॉ. हजारी प्रसाद द्विवेदी।
	3. उस अमराई ने राम- राम कही है	- डॉ. विद्यानिवास मिश्र।
	4. काव्येषु नाट्यम् रम्यम्	- बाबू गुलाब राय।
	5. बेईमानी की परत	- हरिशंकर परसाई
एकांकी-	1. औरंगजेब की आखिरी रात	- डॉ. रामकुमार वर्मा
	2. स्ट्राईक	- भुनेश्वर
	3. एक दिन	- लक्ष्मीनारायण मिश्र
	4. दस हजार	- उदयशंकर भट्ट
	5. मम्मी ठकुराईन	- डॉ. लक्ष्मीनारायण लाल

द्रुत पाठ के लिए तीन गद्यकारों का अध्ययन किया जायेगा, जिन पर लघुउत्तरीय प्रश्न पूछे जायेंगे।

1. राहुल सांकृत्यायन 2. महादेवी वर्मा 3. हबीब तनवीर

अंक विभाजन-	व्याख्याएं (3)	- 21 अंक
	आलोचनात्मक प्रश्न (2)	- 24 अंक
	लघुउत्तरीय प्रश्न (5)	- 15 अंक
	वस्तुनिष्ठ (15)	- 15 अंक
	कुल अंक	75 अंक

इकाई विभाजन-

इकाई- 1 व्याख्या

इकाई- 2 अंधेरी नगरी एवं क्रोध, बसन्त, उस अमराई ने राम- राम कही हैं।

इकाई- 3 औरंगजेब की आखिरी रात, स्ट्राईक, एक दिन, दस हजार, मम्मी ठकुराईन

इकाई- 4 द्रुतपाठ के गद्यकार- राहुल सांकृत्यायन, महादेवी वर्मा, हबीब तनवीर।

इकाई- 5 वस्तुनिष्ठ (समग्र पाठ्य विषय से)


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संशोधित
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प्रथम प्रश्न पत्र

अर्वाचीन हिन्दी काव्य (पेपर कोड- 0173)

पूर्णांक- 75

प्रस्तावना- आधुनिक काव्य आधुनिकता की समस्त विशेषताओं को समेटे हुए है। स्वतंत्रता प्राप्ति के पूर्व की भाव- भाषा, शिल्प, अन्तर्वस्तु सम्बन्धी समस्त विकास धारा यहां सजीव रूप में देखी जा सकती है। इसे अनदेखा करना मनुष्य की विकास यात्रा को नजर अंदाज करना है। इस यात्रा के साक्षात्कार के लिए आधुनिक काव्य का अध्ययन अपेक्षित ही नहीं अपितु अनिवार्य हैं।

पाठ्य विषय-

1. मैथिलीशरण गुप्त - भारत- भारती की कविताएँ
2. सूर्यकान्त त्रिपाठी निराला - (1) सखि बसन्त आया।
(2) वर दे, वीणा वादिनी वर दे।
(3) हिन्दी के सुमनों के प्रति पत्र।
(4) तोड़ती- पत्थर।
(5) राजे ने अपनी रखवाली की।
3. सुमित्रानंदन पंत - (1) बादल।
(2) परिवर्तन 2 पद (1.खोलता इधर जन्मलोचन
2. आज का दुख कल का आल्हाद)
(3) ताज।
(4) झंझा में नीम।
(5) भारत माता।
4. माखन लाल चतुर्वेदी - (1) बलि पंथी से।
(2) सौंझ और ढोलक की थापें।
(3) मैं बेच रही हूँ दही।
(4) उलाहना।
(5) निः शस्त्र सेनानी।
5. स. ही. वात्स्यायन अज्ञेय - (1) सबेरे उठा तो धूप खिली थी।
(2) साम्राज्ञी का नैवेद्य दान।
(3) घर।
(4) चांदनी जी लो।
(5) दूर्वाचल।

द्रुतपाठ हेतु निम्न कवियों का अध्ययन किया जाएगा, जिन पर लघुउत्तरीय प्रश्न पूछे जायेंगे-

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हिन्दी कथा साहित्य
(पेपर कोड- 0104)

पूर्णांक 75

उद्देश्य एवं प्रस्तावना-

गद्य की प्रमुख विधाओं का इतना द्रुत विकास इनकी लोकप्रियता का प्रमाण प्रस्तुत करता है। इसमें आधुनिक जीवन, अपनी विविध कमियों के साथ यथार्थ रूप में अभिव्यंजित हुआ है। जीवन की अनुभूतियाँ, संवेदनाओं तथा विविध परिस्थितियों के साक्षात्कार के लिए इनका अध्ययन सर्वथा अपेक्षित है।

पाठ्य विषय-

व्याख्या एवं आलोचनात्मक प्रश्नों के लिए एक उपन्यास एवं आठ कहानीकारों की एक- एक प्रतिनिधि कहानी का अध्ययन आवश्यक है।

उपन्यास 1. प्रेमचंद - गबन

- कहानी 1. प्रेमचंद - कफन
2. जयशंकर प्रसाद - आकाश दीप
3. यशपाल - परदा
4. फणीश्वनाथ रेणु - टेस
5. मोहन राकेश - मलबे का मालिक
6. भीष्म साहनी - चीफ की दावत
7. गुलशेर खॉं शानी - जली हुई रस्सी
8. रांगेय राघव - गदल

द्रुत पाठ के लिए निम्नांकित तीन कथाकारों का अध्ययन अपेक्षित है, जिनमें से किन्हीं दो पर लघुउत्तरीय प्रश्न पूछे जावेंगे-

1. उपेन्द्रनाथ अश्क, 2. बाल शौरि रेड्डी 3. शिवानी

अंक विभाजन-	व्याख्या (3)	21 अंक
	आलोचनात्मक प्रश्न (2)	24 अंक
	लघुउत्तरीय प्रश्न (5)	15 अंक
	वस्तुनिष्ठ प्रश्न (15)	15 अंक


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हिन्दी साहित्य

प्रथम- प्रश्न पत्र

(प्राचीन हिन्दी काव्य)

पूर्णांक 75

(पेपर कोड- 0103)

उद्देश्य एवं प्रस्तावना-

प्राचीन से तात्पर्य है- आधुनिक काल से पूर्व का काल। सही अर्थ में हिन्दी भाषा और साहित्य का विकास आदिकाल से शुरू होता है। इसमें धार्मिक तथा ऐतिहासिक दो प्रकार का साहित्य मिलता है, जो प्रबंध, मुक्तक, रासो, फागु, चरित, सुभाषित आदि विविध काव्यरूपों में अभिव्यजित है। मध्यकालीन साहित्य की पृष्ठभूमि के रूप में इसे प्रतिष्ठापित किया जाता है।

मध्यकालीन काव्य में भक्तिकाव्य, जहां लोक जागरण को स्वर देने वाला है, वहीं रीतिकाल अपने लौकिक- श्रृंगारिका, परिदृश्य में तत्कालीन सामाजिक, सांस्कृतिक, राजनीतिक स्थितियों को बेलौस अभिव्यजित करता है। अतः भाषा, संस्कृति, विचार, मानवता, काव्यरूपता, लौकिकता- पारलौकिकता, आदि दृष्टियों से इसका अध्ययन अत्यावश्यक है।

पाठ्य विषय-

1. कबीर (कबीर- कांतिकुमार जैन, प्रारंभिक 50 सांख्यियाँ)
2. जायसी- (संक्षिप्त पद्यावत- श्यामसुंदर दास, नागमती वियोग वर्णन)
3. सूर (भ्रमर गीत सार- सं. आचार्य रामचन्द्र शुक्ल, प्रारंभिक 25 पद)
4. तुलसी - "रामचरित मानस" के सुंदरकाण्ड से प्रारंभिक 30 दोहे चौपाई छंद सहित
5. घनानन्द (घनानन्द- सं. विश्वनाथ प्रसाद मिश्र, प्रारंभिक 25 छंद)

द्वुत पाठ हेतु निम्नांकित तीन कवियों का अध्ययन किया जावेगा- जिसमें से किन्हीं दो पर लघुउत्तरीय प्रश्न पूछे जायेंगे-

1. विद्यापति
2. रहीम
3. रसखान

अंक विभाजन-

1. व्याख्याएँ (3) - 21 अंक
2. आलोचनात्मक प्रश्न (2) - 24 अंक
3. लघुउत्तरीय प्रश्न (5) - 15 अंक
4. वस्तुनिष्ठ प्रश्न (15) - 15 अंक


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भाग - दो, आधार पाठ्यक्रम
प्रश्न पत्र - प्रथम (हिन्दी भाषा) (पेपर कोड - 0171)

पूर्णांक- 75

खण्ड - क निम्नलिखित 5 लेखकों के पाठ शामिल होंगे - अंक-35

1. महात्मा गांधी - चोरी और प्रायश्चित
2. आचार्य नरेंद्र देव - युवकों का समाज में स्थान
3. वासुदेव शरण अग्रवाल - मातृभूमि
4. हरि ठाकुर - डॉ. खूबचंद बघेल
5. पं. माधवराव सप्रे - सम्भाषण-कुशलता

खण्ड-ख हिन्दी भाषा और उसके विविध रूप अंक-16

1. कार्यालयीन भाषा
2. मीडिया की भाषा
3. वित्त एवं वाणिज्य की भाषा
4. मशीनी भाषा

खण्ड-ग हिन्दी की व्याकरणिक कोटियों अंक-24

- संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण,
समास, संधि एवं संक्षिप्तियां
अनुवाद व्यवहार : अंग्रेजी से हिन्दी में अनुवाद

इकाई विभाजन-

- इकाई- 1 चोरी और प्रायश्चित : महात्मा गांधी / कार्यालयीन भाषा, मीडिया की भाषा
इकाई- 2 युवकों का समाज में स्थान : आचार्य नरेन्द्र देव / वित्त एवं वाणिज्य की भाषा, मशीनी भाषा
इकाई- 3 मातृभूमि: वासुदेवशरण अग्रवाल / संज्ञा सर्वनाम, विशेषण, क्रिया विशेषण
इकाई- 4 डॉ. खूबचंद बघेल : हरि ठाकुर/समास, संधि,
इकाई- 5 सम्भाषण-कुशलता : पं. माधवराव सप्रे, / अनुवाद - अंग्रेजी से हिन्दी में अनुवाद, संक्षिप्तियां

मूल्यांकन योजना -

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। प्रत्येक इकाई को दो-दो खण्डों (कमश 'क' और 'ख' में) विभक्त करते हुए निर्धारित पाठ से 8 एवं शेष पाठ्य सामग्री से 7 अंक के प्रश्न होंगे। इस प्रकार पूरे प्रश्न-पत्र के पूर्णांक 75 होंगे।


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B.Com Part- I

Compulsory

Group – I Paper – II - BUSINESS COMMUNICATION

OBJECTIVE – To develop effective business communication skills among the students.

Present Syllabus	Proposed Syllabus	Remark
<p>UNIT –I Introducing Business Communication : Definitions, concept and Significance of communication, Basic forms of communicating ; Communication models and process principles of effective communication; Theories of communication; Audience analysis. Self Development and Communication ; Development of positive personal attitudes, SWOT analysis; Vote's model of interdependence ; Whole Communication.</p> <p>UNIT –II Corporate Communication : Formal and Informal communication networks; Grapevine; Miscommunication (Barriers) ; improving communication Practices in business communication ; Group discussions ; Mock interviews, Seminars; Effective listening exercises, Individual and group presentations and report writing.</p> <p>UNIT –III Writing skill : Planning business messages; Rewriting and editing; The first draft; Reconstructing the final draft; Business letters and memo formats; Appearance request letters; Good news and bad new letters; Persuasive letters; Sales letters; Collection letters; Office memorandum.</p> <p>UNIT –IV Report Writing : Introduction to a proposal, Short report and formal</p>	<p>UNIT –I Introducing Business Communication : Definitions, concept and Significance of communication, Basic forms of communicating ; Communication models and process; principles of effective communication; Theories of communication; Self-Development and Communication ; Development of positive personal attitudes, SWOT analysis;</p> <p>UNIT –II Corporate Communication : Formal and Informal communication networks; Grapevine; Miscommunication (Barriers) ; improving communication. Practices in business communication ; Group discussions ; Seminars; Effective Listening : Principles of effective listening; Factor affective listening exercises; Oral, Written, and video session, Audience analysis and feedback.</p> <p>UNIT –III Writing skill : Business letters – Defination, concepts ,structure, advantages disadvantage, need and kinds of business letter ,Essentials of effective business letter. Good news and bad new letters; Office memorandum. Writing Resume and Letter of Job Application.</p> <p>UNIT –IV Report Writing : Introduction to a proposal, Short report and formal report , report preparation. Oral Presentation : Principles of oral presentation, factor affecting presentation, sales presentation, training presentation, conducting surveys, speeches to motivate, presentation skill.</p>	<p>Omission of Vote's model of interdependence.</p> <p>Balancing of Syllabus and omitted repetition .</p>

बी,कॉम. भाग - एक

अनिवार्य

समूह-1 प्रश्नपत्र - 2 - व्यावसायिक संचार

वर्तमान पाठ्यक्रम	प्रस्तावित पाठ्यक्रम
<p>इकाई - 1 व्यावसायिक संचार परिचय : परिभाषा , अवधारणाएं एवं संचार का महत्व, संचार के आधारभूत प्रकार एवं मॉडल एवं प्रभावी संचार के सिद्धांत , प्रक्रिया , श्रोता विश्लेषण। आत्म विकास एवं संचार , सकारात्मक व्यक्तिगत दृष्टिकोण का विकास , स्वॉट विश्लेषण , मतों की परस्पर निर्भरता का प्रतिरूप।</p> <p>इकाई - 2 व्यावसायिक संस्था का संचार तंत्र :- औपचारिक एवं अनौपचारिक संचार तंत्र, अंगूरी लता संचार, संचार की बाधाएं एवं सुधार। व्यवहार में व्यावसायिक संचार :- सामूहिक परिचर्चा, साक्षात्कार, संगोष्ठी , प्रभावपूर्ण सूचना , व्यक्तिगत एवं सामूहिक प्रस्तुतीकरण एवं रिपोर्ट लेखन।</p> <p>इकाई - 3 लेखन कुशलता : व्यावसायिक संदेश की योजना एवं उसे संशोधित करना, प्रथम मसौदा, अंतिम मसौदा का पुनर्निर्माण , व्यावसायिक पत्र एवं ज्ञापन, प्रारूप : निवेदन पत्र , अनुकूल एवं प्रतिकूल संवाद पत्र, प्रेरक पत्र, विक्रय संबंधी पत्र, तकादे का पत्र या संग्रहण पत्र ,कार्यालयीन ज्ञापन व पत्र ।</p> <p>इकाई - 4 रिपोर्ट लेखन - एक प्रस्ताव का परिचय , लघु रिपोर्ट एवं औपचारिक रिपोर्ट ,रिपोर्ट लेखन की तैयारी। मौखिक प्रस्तुती : मौखिक प्रस्तुती के सिद्धांत , प्रस्तुतीकरण को प्रभावित करने वाले कारक, विक्रय प्रस्तुतीकरण , प्रशिक्षण प्रस्तुतीकरण, सर्वेक्षण आयोजित करना, प्रेरक भाषण, प्रभावी प्रस्तुती कौशल।</p>	<p>इकाई - 1 व्यावसायिक संचार परिचय : परिभाषा , अवधारणाएं एवं संचार का महत्व, संचार के आधारभूत प्रकार एवं मॉडल, प्रक्रिया एवं प्रभावी संचार के सिद्धांत । आत्म विकास एवं संचार , सकारात्मक व्यक्तिगत दृष्टिकोण का विकास , स्वॉट विश्लेषण ।</p> <p>इकाई - 2 व्यावसायिक संस्था का संचार तंत्र :- औपचारिक एवं अनौपचारिक संचार तंत्र, अंगूरी लता संचार, संचार की बाधाएं एवं सुधार। व्यवहार में व्यावसायिक संचार :- सामूहिक परिचर्चा, संगोष्ठी , प्रभावपूर्ण सूचना : प्रभावपूर्ण सूचने के सिद्धांत, प्रभावपूर्ण सूचने के कारक, मौखिक , लिखित एवं विडियो सत्र का व्यवहारिक अध्ययन, श्रोता विश्लेषण एवं प्रतिपुष्टी।</p> <p>इकाई - 3 लेखन कुशलता : व्यावसायिक पत्र - परिभाषा, अवधारणा, संरचना, गुण दोष , आवश्यकता एवं विभिन्न प्रकार के व्यावसायिक पत्र , प्रभावी व्यापारिक पत्र व्यवहार के मूल तत्व। अनुकूल एवं प्रतिकूल संवाद पत्र, कार्यालयीन ज्ञापन व पत्र । जीवनवृत्त लेखन एवं नौकरी के लिए आवेदन पत्र।</p> <p>इकाई - 4 रिपोर्ट लेखन - एक प्रस्ताव का परिचय , लघु रिपोर्ट एवं औपचारिक रिपोर्ट ,रिपोर्ट लेखन की तैयारी। मौखिक प्रस्तुती : मौखिक प्रस्तुती के सिद्धांत , प्रस्तुतीकरण को प्रभावित करने वाले कारक, विक्रय प्रस्तुतीकरण , प्रशिक्षण प्रस्तुतीकरण, सर्वेक्षण आयोजित करना, प्रेरक भाषण, प्रभावी प्रस्तुती कौशल।</p>


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वर्तमान पाठ्यक्रम	प्रस्तावित पाठ्यक्रम
<p>इकाई - 5 अशाब्दिक संचार के पहलू - दैहिक भाषा : समय एवं पार्श्व भाषा , प्रभावपूर्ण सूचना : प्रभावपूर्ण सूचने के सिद्धांत, प्रभावपूर्ण सूचने के कारक, मौखिक , लिखित एवं विडियो सत्र का व्यवहारिक अध्ययन। साक्षात्कार कुशलता : साक्षात्कार में शामिल होना, साक्षात्कार का आयोजन, जीवनवृत्त - सारांश लेखन एवं आवेदन पत्र। संचार के आधुनिक रूप - फ़ैक्स , ई मेल, वीडियो कॉन्फ़ेसिंग आदि अंतराष्ट्रीय संचार : सांस्कृतिक संवेदनशीलता एवं सांस्कृतिक संदर्भ , अंतराष्ट्रीय स्थितियों में लेखन और प्रस्तुतीकरण करना : अंतराष्ट्रीय क्रियाओं में अंतराष्ट्रीय सांस्कृतिक कारक , वैश्विक व्यापार के संदर्भ में।</p>	<p>इकाई - 5 अशाब्दिक संचार के पहलू - दैहिक भाषा , समय एवं पार्श्व भाषा , साक्षात्कार कुशलता : साक्षात्कार में शामिल होना, साक्षात्कार का आयोजन, मौक साक्षात्कार। संचार के आधुनिक रूप - फ़ैक्स , ई मेल, वीडियो कॉन्फ़ेसिंग आदि अंतराष्ट्रीय संचार : सांस्कृतिक संवेदनशीलता एवं सांस्कृतिक संदर्भ , भूमण्डलीय व्यावसाय के लिए अंतराष्ट्रीय संप्रेषण।</p>

Suggested Readings:

1. Dr. P. K. Agrawal, Dr. A.K. Mishra ; Business Communication ; Sahitya Bhawan Publication ; Agra (Hindi medium)
2. Balasubramanyam: Business Communication; Vikas Publishing House, Delhi. (English medium)
3. Dr. Vinod Mishra : Business Communication; Sahitya Bhawan Publication ; Agra. (Hindi medium)
4. Kaul : Effective Business Communication; Prentice Hall, New Delhi. (English medium)
5. Patri VR : Essentials of Communication ; Greenspan Publications, New Delhi. (English medium)
6. Senguin J : Business Communication; The Real World and Your Career, Allied Publishers , New Delhi. (English medium)
7. Dr. Mishra , Shukla & Patel ; Business Communication ; SBPD Publishing House, Agra. (Both Hindi and English medium)



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बी,कॉम. भाग – एक

अनिवार्य

समूह-2 प्रश्नपत्र – 2 – व्यावसायिक नियमन रूपरेखा

वर्तमान पाठ्यक्रम	प्रस्तावित पाठ्यक्रम
<p>इकाई – 1 भारतीय अनुबंध अधिनियम (1872) : अनुबंध की प्रकृति : वर्गीकरण , प्रस्ताव तथा स्वीकृति, अनुबंध के योग्य पक्षकार , पक्षकारों की स्वतंत्र सहमति , प्रतिफल, उद्देश्य की वैधता , व्यर्थ घोषित ठहराव : अनुबंध का निष्पादन , अनुबंधों की समाप्ति , अनुबंध भंग के उपाय एवं परिणाम।</p> <p>इकाई – 2 विशिष्ट अनुबंध : क्षतिपूर्ति , प्रतिभूति, निक्षेप, गिरवी अनुबंध, एजेंसी।</p> <p>इकाई – 3 वस्तु विक्रय अधिनियम (1930) : वस्तु विक्रय अनुबंध का निर्माण , माल का वर्गीकरण , कीमत, शर्तें और आश्वासन , माल के स्वामित्व का हस्तांतरण, विक्रय अनुबंध का निष्पादन , अदत्त विक्रेता के अधिकार , नीलाम द्वारा विक्रय , किराया क्रय ठहराव।</p> <p>इकाई – 4 विनिमय साध्य विलेख अधिनियम (1881) : परिभाषाएं, विशेषताएं , प्रतिज्ञा पत्र, विनिमय विपत्र और घनादेश (चैक) : धारक तथा यथाविधिधारी , रेखांकित चैक, रेखांकन के प्रकार, परक्रामण, विनिमय साध्य विलेख का अनदारण व मुक्ति।</p> <p>इकाई – 5 उपभोक्ता संरक्षण अधिनियम (1986) : मुख्य विशेषताएं , उपभोक्ता की परिभाषा , उपभोक्ता विवाद निवारण अभिकरण। मुख्य प्रावधान , सूचना का अधिकार अधिनियम (2005) – मुख्य प्रावधान।</p>	<p>इकाई – 1 भारतीय अनुबंध अधिनियम (1872) : अनुबंध की प्रकृति : वर्गीकरण , प्रस्ताव तथा स्वीकृति, अनुबंध के योग्य पक्षकार , पक्षकारों की स्वतंत्र सहमति , प्रतिफल, उद्देश्य की वैधता , व्यर्थ घोषित ठहराव ।</p> <p>इकाई – 2 अनुबंध का निष्पादन , अनुबंधों की समाप्ति , अनुबंध भंग के उपाय एवं परिणाम। विशिष्ट अनुबंध : क्षतिपूर्ति , प्रतिभूति, निक्षेप , गिरवी अनुबंध, एजेंसी।</p> <p>इकाई – 3 वस्तु विक्रय अधिनियम (1930) : वस्तु विक्रय अनुबंध का निर्माण , माल का वर्गीकरण , कीमत, शर्तें और आश्वासन , माल के स्वामित्व का हस्तांतरण, विक्रय अनुबंध का निष्पादन , अदत्त विक्रेता के अधिकार , नीलाम द्वारा विक्रय , किराया क्रय ठहराव।</p> <p>इकाई – 4 विनिमय साध्य विलेख अधिनियम (1881) : परिभाषाएं, विशेषताएं , प्रतिज्ञा पत्र, विनिमय विपत्र और घनादेश (चैक) : धारक तथा यथाविधिधारी , रेखांकित चैक, रेखांकन के प्रकार, परक्रामण, विनिमय साध्य विलेख का अनदारण व मुक्ति।</p> <p>इकाई – 5 उपभोक्ता संरक्षण अधिनियम (1986) : मुख्य विशेषताएं , उपभोक्ता की परिभाषा , उपभोक्ता विवाद निवारण अभिकरण। भारतीय साझेदारी अधिनियम 1932। सीमित दायित्व वाली साझेदारी अधिनियम 2008। बौद्धिक संपदा अधिकार अधिनियम का परिचय – कॉपीराइट, पेटेंट एवं ट्रेडमार्क।</p>



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B.Com Part- I

Compulsory

Group – II Paper – II – BUSINESS REGULATORY FRAMEWORK

OBJECTIVE – To provide a brief idea about the framework of Indian business laws.

Present Syllabus	Proposed Syllabus	Remark
<p>UNIT –I Law of Contract (1872) : Nature of contract ; Classification ; Offer and acceptance; Capacity of parties to contract, free consent, Considerations, Legality of object; Agreement declared void; Performance of contract; Discharge of contract; Remedies for breach of contract.</p> <p>UNIT –II Special contracts; Indemnity ; Guarantee; Bailment and pledge; Agency.</p> <p>UNIT –III Sale of Goods Act (1930) ;Formation of contracts of sale ;Goods and their classification, price, Conditions and warranties; Transfer of property in goods; Performance of the contract of sales; Unpaid seller and his rights; sale by auction; Hire purchase agreement.</p> <p>UNIT –IV Negotiable Instrument Act (1881) : Definition of negotiable instrument; Feature; Promissory note; Bill of exchange & cheque; Holder and holder in the due course; Crossing of a cheque, types of crossing; Negotiation; Dishonour and discharge of negotiable instrument.</p> <p>UNIT –V The Consumer Protection Act 1986 : Salient features; Definition of consumer ; Grievance redressal machinery; Foreign Exchange Management Act 2000 : Definition and main provisions, Right to Information Act 2005(Main Provision)</p>	<p>UNIT –I Law of Contract (1872) –I : Nature of contract ; Classification ; Offer and acceptance; Capacity of parties to contract, free consent, Considerations, Legality of object; Agreement declared void.</p> <p>UNIT –II Law of Contract (1872) - II : Performance of contract, Discharge of contract; Remedies for breach of contract. Special contracts; Indemnity ; Guarantee; Bailment and pledge; Agency.</p> <p>UNIT –III Sale of Goods Act (1930) ;Formation of contracts of sale ;Goods and their classification, price, Conditions and warranties; Transfer of property in goods; Performance of the contract of sales; Unpaid seller and his rights; sale by auction; Hire purchase agreement.</p> <p>UNIT –IV Negotiable Instrument Act (1881) : Definition of negotiable instrument; Feature; Promissory note; Bill of exchange & cheque; Holder and holder in the due course; Crossing of a cheque, types of crossing; Negotiation; Dishonor and discharge of negotiable instrument.</p> <p>UNIT –V The Consumer Protection Act 1986 : Main Provision, Definition of consumer ,Consumer Disputes , Grievance redressal machinery ; Indian Partnership Act 1932. Limited Liabilities Partnership Act 2008. Introduction of Intellectual Property Right Act – Copyright, Patent & Trademark.</p>	<p>Balancing of Syllabus</p> <p>Replaced FEMA & RTI with Partnership act, LLP Act 2008 and Intellectual property right act.</p>


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स्नातकोत्तर हेतु अनिवार्य विषय -

COURSE TITLE : INTELLECTUAL PROPERTY RIGHTS, HUMAN RIGHTS & ENVIRONMENT: BASICS

CREDIT: THEORY: PRACTICAL : 6	HOURS: 90 THEORY: 90 PRACTICAL : 135
MARKS: 80 + 20 THEORY: PRACTICAL :	MARKS: THEORY: PRACTICAL :

OBJECTIVE:

- Understands the concept and place of research in concerned subject
- Gets acquainted with various resources for research
- Becomes familiar with various tools of research
- Gets conversant with sampling techniques, methods of research and techniques of analysis of data.

UNIT-1 12 Hrs

- Patents :- Introduction & concepts, Historical Overview.
- Subject matter of patent.
- Kinds of Patents.
- Development of Law of Patents through international treaties and conventions including TRIPS Agreement.
- Procedure for grant of patents & term of Patent.
- Surrender, revocation and restoration of patent.
- Rights and obligations of Patentee
- Grant of compulsory licenses
- Infringement of Patent and legal remedies
- Offences and penalties
- Discussion on leading cases.

UNIT-2 24 Hrs

- Meaning of Copyright, Historical Evolution,
- Subject matter of copyright.
- Literary works
- Dramatic Works & Musical Works
- Computer Programme
- Cinematographic films
- Registration of Copyrights

- Term of Copyright and Ownership of Copyrights
- Neighboring Rights
- Rights of Performers & Broadcasters
- Assignment of Copyright.
- Author's Special Rights (Moral Rights)
- Infringement of Copyrights and defenses
- Remedies against infringement (Jurisdiction of Courts and penalties)
- International Conventions including TRIPS Agreement WIPO, UCC, Paris Union, Berne Convention, UNESCO.
- Discussion on leading cases.

UNIT - 3 10 Hrs

- Rights: Meaning
- Human Rights- Meaning & Essentials
- Human Rights Kinds
- Rights related to Life, Liberty, Equals & Disable.

UNIT - 4 24 Hrs

- National Human Rights Commission
- State Human Rights Commission
- High Court
- Regional Court
- Procedure & Functions of High & Regional Court.

UNIT - 5 20 Hrs

- Right to Environment as Human Right
- International Humanitarian Law and Environment
- Environment and Conflict Management
- Nature and Origin of International Environmental Organisations (IEOs)
- Introduction to Sustainable Development and Environment
- Sustainable Development and Environmental Governance.

SUGGESTED READINGS

1. G.B.Reddy, *Intellectual Property Rights and Law*, Gogia Law Agency, Hyderabad.
2. S.R.Myneni, *Intellectual Property Law*, Eastern Law House, Calcutta


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**COURSE TITLE : RESEARCH METHODOLOGY &
COMPUTER APPLICATION: BASICS**

CREDIT:6
THEORY: 6 PRACTICAL : 0

HOURS: 90
THEORY: 90 PRACTICAL : 0

MARKS:
THEORY: 100 (80+20)

OBJECTIVE:

- Understands the concept and place of research in concerned subject
- Gets acquainted with various resources for research
- Becomes familiar with various tools of research
- Gets conversant with sampling techniques, methods of research and techniques of analysis of data
- Achieves skills in various research writings
- Gets acquainted with computer Fundamentals and Office Software Package .

UNIT-1 18 Hours

CONCEPT OF RESEARCH :

- ① Meaning and characteristics of research , Steps in research process , Types of research - 2
- i) Basic , applied and action research ii) Quantitative and qualitative research , Areas of research in concern discipline

SELECTION OF PROBLEM FOR RESEARCH :

Sources of the selection of the problem , Criteria of the selection of the problem , Drafting a research proposal , Meaning and types of variables , Meaning and types of hypotheses. 6 7

UNIT-2 18Hours

TOOLS OF RESEARCH :

⑧ Meaning and general information about construction procedure of (i) Questionnaire , (ii) Interview , (iii) Psychological test , (iv) observation (v) Rating scale (vi) Attitude scale and (vii) check list , Advantages and disadvantages of above tools 11


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SAMPLING :

(Meaning of population and sample, Importance and characteristics of sample) (Sampling techniques - i) Probability sampling : random sampling, stratified random sampling, systematic sampling, cluster sampling ii) Non-probability sampling: incidental sampling, purposive sampling, quota sampling)

UNIT-3

18 Hours

METHODS OF RESEARCH:

(14) Meaning and conducting procedure of following methods of research : Historical method, Survey method, Case study, Causal comparative method, Developmental methods, Experimental methods)

UNIT-4

18 Hours

TREATMENT OF DATA:

(16) (Level of measurements of data) (Steps in treatment of data: editing, coding, classification, tabulation, analysis and interpretation of results)

WRITING RESEARCH REPORT:

(17) Sections of report : Preliminary section, Content section : various chapters, Supplementary section : appendices, references, abstract, Format and style

UNIT-5

18 Hours

Computer Fundamentals:

Computer System : Features, Basic Applications of Computer, Generations of computers.

Parts of Computer System : Block Diagram of Computer System ; Central Processing Unit (CPU) ; Concepts and types of Hardware and Software. Input Devices - Mouse, Keyboard, Scanner, Bar Code Reader, track ball ; Output Devices - Monitor, Printer, Plotter, Speaker ; Computer Memory - primary and secondary memory, magnetic and optical storage devices.

Operating Systems - MS Windows : Basics of Windows OS ; Components of Windows - icons, taskbar, activating windows, using desktop, title bar, running applications, exploring computer, managing files and folders, copying and moving files and folders ;

Word Processing - MS Word : Creating, Saving, Opening, Editing.

12

Formatting, Page Setup and printing Documents ; Using tables, pictures, and charts in Documents ; Using Mail Merge sending a document to a group of people and creating form, letters and label. Spreadsheet - MS Excel : Opening a Blank or New Workbook, entering data/Function/ Formula into worksheet cell, Saving, Editing, Formatting, Page Setup and printing Workbooks. Presentation Software - MS Power Point : Creating and enhancing a presentation

SUGGESTED READINGS

Agrawal, Y. P. (1988). *Better sampling : Concepts, Techniques and Evaluation*. New Delhi : sterling Publishers Private Ltd. Best, J. W. (1993).

Research in Education (6th ed.) New Delhi : Prentice-Hall of India Pvt. Ltd.

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New Delhi : Wiley Eastern Limited.

Dasgupta, A. K. (1968). *Methodology of Economic Research*.

Bombay: Asia Publishing House. Edwards, A. L. (1957).

Techniques of Attitude Scale construction. New York : Appleton-Century

Gall, M. D., Gall, J. P. and Borg, W. R. (2007). *Educational Research : An introduction*

(8th ed.) Coston : Allyn and Bacon.

Garrett, H. E. & Woodworth, R. S. (1969). *Statistics in Psychology and Education*. Bombay : Vakils, Fecffer & Simons Pvt. Ltd.

Goode, W. J. & Hatt, Paul K. (1952). *Methods in Social Research*. New York : McGraw-Hill.

Gopal, M. H. (1964). *An Introduction to research Procedure in Social Sciences*. Bombay : Asia Publishing House.

Hillway, T. (1964) *Introduction to Research* (2nd ed.) Noston : Houghton Mifflin.

Hyman, H. H., et al. (1975). *Interviewing in Social Research*.

Chicago : University of Chicago Press.

Kerlinger, F. N. (1983) *Foundation of Behavioural Research*. (2nd


PRINCIPAL
Govt. Girls College Ambikapur
Distt - Surguja (C.G.)

SUGGESTED READINGS

Bhanucha, Erach. Text Book of Environmental Studies. Hyderabad : University Press (India) private limited ,2005
 Doabia, T.S. Environmental and Pollution Laws in India. New Delhi : Wadhwa and Company,2005
 Joseph, Benny: Environmental Studies, New Delhi : Tata McGraw-Hill Publishing Company Limited 2006.
 Khan, I.A., Text Book of Environmental Laws. Allahabad : Central Law Agency,2002.
 Leelakrishnan, P. Environmental Law Case Book. 2nd Edition New Delhi : LexisNexis Butterworths,2006
 Leelakrishnan, P. Environmental Law in India 2nd Edition. New Delhi : LexisNexis Butterworths,2005.
 Shastri, S.C. (ed). Human Rights, Development and Environmental Law, An Anthology. Jaipur : Bharat law Publications, 2006
 Environmental Pollution by Asthana and Asthana, S. Chand Publication
 Environmental Science by Dr. S.R.Myneni, Asia law House
 Gurdip Singh , Environmental Law in India (2005) Macmillan.
 Shyam Dikran and Ann in Roseencranz, Environmental Law and Policy in India-Cases, Materials and Statutes (2nd ed.2001) Oxford University press.

JOURNALS:-
 Journals of Indian Law Institute , IIL New Delhi.
 Journals of Environmental Law , NLSIU , Bangalore.

MAGAZINES:-
 Economical and Political Weekly
 Down to Earth.

M.A. SOCIOLOGY SECOND SEMESTER

COURSE CODE : MAS B02		COURSE TYPE : ECC/CB	
COURSE TITLE : SOCIOLOGY OF DEVELOPMENT			
CREDIT :		HOURS :	
THEORY :	PRACTICAL :	THEORY :	PRACTICAL :
6		90	
MARKS :		MARKS	
THEORY :	PRACTICAL :	THEORY :	PRACTICAL :
80+20			
<p>OBJECTIVE : To give a basic understanding of sociology. To know the meaning and subject matter of sociology. To understand the nature of scientific study. To know the nature and scope of sociology. To study the contribution of early thinkers towards the development of sociology.</p>			
UNIT-1 18 Hours	Perspectives on Development a. Modernization b. Marxist c. Dependency d. Alternative		
UNIT-2 18 Hours	Changing Conception of Human Development a. Mainstream vs. Indigenous Model of Development b. Human Indicator Index c. Sustainable Development. Socio Cultural d. Impact of Bio- Technology and Information Technology on Development		
UNIT-3 18 Hours	Indian Experience on Development a. Sociological Appraisal of Five year plans b. Social Consequences of Economic Reforms c. Socio Cultural Impact of Globalization d. Social Implication of info Tech and Bio-Tech Revolution		
UNIT-4 18 Hours	Consequences of Development a. Development and Disparities b. Development and Socio- Economic Disparities c. Environmental Degradation d. Development and Migration		
UNIT-5 18 Hours	Issues and development in Contemporary India a. Sustainable condition b. Gender Discrimination c. Privatization and Globalization d. Sustainability		


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B.Sc. (HOME SCIENCE) PART- F

Group – IV

Paper-A

COMMUNITY DEVELOPMENT

M. Marks: 50

FOCUS

The focus of the course is on the evaluation of approaches to community development in general and in our country in particular. The course focuses on the structure of rural and urban communities, the systems comprising of interacting structures and interlocking of these to form the existing society. It will also indicate the relationship of social change to changes in the structures and systems that exist. It is expected to help students to orient themselves to be part of the development process.

OBJECTIVES: To enable students to

1. Be aware of the approaches to development
2. Develop faith in the capacity of the people, to take responsibility for their own development.
3. Understand the existing support structures for development efforts.
4. Understand the role of non Govt organizations in community development.
5. Understand the socio - economic structures and systems that make up the rural and urban communities.
6. Understand the meaning of social change through development plans and programs in the context of the exiting socio-economic structures and systems.
7. Recognise one's own role in the development process.

THEORY

UNIT-I Development:

- a. Definitions, types - large scale and centrally planned and small scale and locally planned.
- b. Goals, the purpose of development - processes of development - the input process and social action process.

Historical Perspective of Development Approaches:

- a. The Capitalistic approach.
- b. The welfare approach
- c. The Gandhian approach
- d. The modernisation approach
- e. The institutional and social justice approach

Critical Development Issues :

- a. Massive poverty
- b. Food security

Community Development in India :

- a. Evolution of community development programme in India since Independence.

UNIT-II Support structures and their Functions :

- a. Central Social Welfare Board
- b. State Social Welfare Board
- c. National Level Voluntary Agencies such as CAPART, KVIC.
- d. Elected Panchayats.


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PRACTICAL

Field Experience in Village(s) / Urban Slums

- a. Practical use of RRA / PRA Methods
- b. Reporting on Socio-economic analysis of the rural / urban community
- c. To select, Plan, preparation & use of different-audio visual aids., aids, i.e. Chart - Educational, Tree Chart, Flow. Chart., Suspense Chart.-
Posters - Cartoons Pemphelets Puppets.
- d. Conduct of survey based on Unit IV & V of Theory Papers, (any two)
- e. Organising group demonstration.

REFERENCES :

- Desrochers, John (1977) : Methods of Societal Analysis, Bangalore, India Centre for Social Action.
- Desrochers, John (1980): Casto in India Today, Bangalore, India, Centre for Social Actions. Desrochers, John (1984): Classes in India Today, Bangalore, India, Centre for Social Action. Dietrich, Gabriele (1978) : Culture, Religion and Development, Bangalore, India, Centre for Social Action.
- Desrochers, John (1984) : India's Search for Cevelopment and Social Justice, Analysis of Indian Society. The Development Debate, Bangalore, India, Centre for Social Action. Dhurate, Barreto (1984) : India's Search for Development and Social Justice, Analysis of Indian Society. The Indian. Situation, Bangalore, India, Centre for Social Action. Chamber, Robert (1.992) : Rural Appraisal, Rapid, Relaxed and Participatory, Discussion paper, 311, IDS, Sussex University, Brighton, BNI 9E, England.
- Mukherjee, Neel (1992): Villagers' Perception of Rural poverty through the Mapping methods of participatory Rural appraisal or participatory Learning Methods : PRA / PALM Series, No. 2, Service Road, Domlur Layout, Bangalore - 560071. MYRADA'.
- Engberg, Lila E. (1990) : Rural Households and Resource Allocation for Development - An Ecosystem Perspective, Guidelines for Teaching and Learning, Rome, FAO. Singh, K. (1980) :Principles of Sociology, Lucknow, Prakashan Kendra.
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- Desai, Vasant (1990) A Study of Rural Economics - Systems Approach, New Delhi, Himalaya Publishing House.
- Agarwal A.N. (1985) : Indian Economy PRoblems of Development and planning, Madras, Wiley Eastern Ltd.
- Mann, Peter H. (1985) : Methods of Social Investigation, Basil Blackwell. Oakley, Peter and David, Marsden (1984): Approaches to Participation in Rural Development - Published on behalf of the ACC Task Ferce of Rural Development, Geneva, International Labour Office.

B.Sc. (HOME-SCIENCE) PART-I

Group - IV

Paper-B

PERSONAL EMPOWERMENT AND COMPUTER BASICS

M. Marks: 50

FOCUS:

This course is designed to create awareness and understanding of the need for empowerment and motivating the student towards higher goals and challenges of self-improvement. The focus is on the adolescent moving towards making choices, developing competencies and skills for handling responsibilities of self-growth and interpersonal relationships in personal and professional spheres. The thrust of this course must be in the Indian context, creating pride in and respect for cultural heritage and values. The teaching approach should be truly a "facilitator"-convinced and committed to the cause of empowerment of youth.

The Purpose of inclusion of this course must be viewed as "offering opportunities, motivation, information and skills" for enhancing the total outlook (perspectives) of the young student particularly girls. Hence the thrust is on development, women and the concept of Home Science education as holistic education with interface (and integration) of professionalism and qualitative development of individuals and families. The teacher (facilitator) for this course must share such an -outlook and be oriented towards the same to be really effective. Also the zeal and motivational ethos in the classroom.

This course is designed to give basic inputs to students on Computers and their functioning and hands-on experience.

The awareness of the basic applications of computers as the tool for education, information and research is to be created and emphasized. The teaching learning process should include demonstrations and hands-on experience for all the students. Individuals, families and community.

OBJECTIVES:

The student will

1. become aware of the need, competencies and skills to be developed for empowerment and be motivated for self improvement/self-enhancement.
2. become aware of the role of empowerment of women from the perspectives of personal and national development;
3. become aware of the interdisciplinarity of Home Science education and its potential for personal and professional enhancement.
4. become sensitized to some pertinent contemporary issues that affect the quality of life of individuals, families and community.
5. know the basics of computers;
6. to be able to use computers for education, information and research.

NOTE :

Practical based and participatory teaching-learning methodology to be utilized : not conventional lectures. Dynamism on the part of the teacher is essential for successful outcome of the course.

- d. Secondary storage devices
- e. Number Systems : Decimal, Binary, Octal, Hexadecimal
- f. Representation of information : BCD, EBCDIC, ASCII
- g. Representation of Data : Files, Records, Files
- h. File organization and access
- i. Security and safety of data.
- j. Introduction to Operating Systems.

PRACTICAL

COMPUTER BASICS

1.
 - a. Introduction
 - b. Exploring the Desktop
 - c. Running multiple programmes
 - d. Accessories
 - e. Control Panel
 - f. Managing Documents and Folders
2. **MS Word**
 - a. Starting MS-WORD
 - b. Creating and Formatting a document
 - c. Changing Fonts and Point Size
 - d. Table Creation and operations
 - e. Autocorrect, Auto Text, Spell Check, Thesaurus
 - f. Word Art, inserting objects
 - g. Mail merge, letter, label, envelope
 - h. Page set-up, Page preview
 - i. Printing a document
3. **MS-Excel**
 - a. Starting Excel
 - b. Work Sheet, Cell, Inserting Data into Rows/Columns
 - c. Alignment, Text-wrapping
 - d. Sorting data, Auto sum
 - e. Use of functions, referencing formula cells in other formulae
 - f. Naming cells and ranges, Goal seek
 - g. Generating graphs
 - h. integrating Worksheet, data and charts with WORD
 - i. Creating Hyperlink to a WORD document
 - j. Page set-up, Print Preview, Printing Worksheets.
4. **Internet**
 - a. Genesis and use of Internet
 - b. Software and hardware requirements for Internet
 - c. Accessing the Internet, Web Page, Using a Search Engine, Accessing the Internet from MS-Office applications

REFERENCES:

1. Adair, J. (1992) : The action Centrod Loaders, Bombay, Jaico Publishing House.
2. Antony, M.J. (1989) : Women's Rights, New Delhi, Hind Pocket Books Pvt. Ltd.
3. Bhattacharya, R. (1987): Career Management: A NEw Challenge, Vol. I, New Delhi Enkg.
4. Chandrashekar R. (1992) : (Ed) Women's Resource and National Development - A Perspective, New Delhi; Gaurav Publishing House.
5. Chandra A.A. Shah and U. Joshi (1989): Fundamentals of Teaching Home Science, New Delhi; Sterling Publishers Pvt Ltd.
6. Feldman, R. (1987) : Understanding Psycholoty, New York; McGraw Hill Co.
7. Forham, A. (1995) : Why Psychology, London : University College, London Press Ltd.
8. Gore, M.S. : Indian Youth; Procesres of Socialization New Delhi, Vishwa Yuvak Kendra.

B.Sc. (HOME-SCIENCE) PART II

Group -II

Paper - A

CLINICAL NUTRITION & DIETETICS

M. Marks: 50

Focus : The course encompasses the various stages of the life cycle and how nutrition is critical at various stages. It briefly familiarizes students with the role of nutrition in common elements.

Objectives: This course will enable to students to -

1. Understand the concept of an adequate diet and the importance of meal planning.
2. Know the factors affecting the nutrient needs during the life cycle and the RDA-for various age groups.
3. Grain knowledge about dietary management in common ailments.

THEORY

UNIT-I

Definition of Health & Nutrition

Dimensions of Health (Physical, Psychological emotional & Spiritual)

Energy Requirements - Factors affecting energy requirements-BMR, Activity, age, climate, diet - induced thermogenesis (SDA physiological conditions.

Concept of nutritionally adequate diet and meal planning

- (a) Importance of meal planning
- (b) Factors affecting meal planning-Nutritional, Socio-cultural, Religious, Geographic, Economic Availability of time.

UNIT-II

Nutrition through the life cycle -

(At different activity and Social economic levels) requirements, nutritional problems, food selection.

(a) Adulthood

(b) Pregnancy

(c) Lactation

(d) Infancy

(e) Pre-School

(f) Adolescence

(g) Old age

UNIT-III

Principles of diet therapy

(A) Modification of normal diet for therapeutic purposes, full diet, soft diet, Fluid diet, Bland diet.

(B) Energy modification and Nutrition for weight management- Identifying the overweight and obese etiological factors contributing to. Obesity Prevention & treatment, low energy diets.

(C) Under weight - etiology and assessment.

(D) High energy diet, Diet for febrile (fever) conditions & surgical condition.

(E) Nutritional Anemia

(F) Fevers - Typhoid

UNIT-IV

Etiology, Symptoms & diet management of the following -Diarrhea, Constipation, Peptic ulcer, Jaundice, Viral Hepatitis, Cirrhosis, musculoskeletal disease, Arthritis, Gout.

UNIT-V

Diet in disease of the endocrine –

Pancreas - Diabetes mellitus - classification, symptoms, diagnosis, Dietary care & Nutritional, management of diabetes mellitus. Insulin therapy, Oral Hypoglycemic agents, special dietetic food, sweeteners & sugar substitutes, Diabetic coma, Juvenile Diabetes.

Diseases of the Cardio Vascular system –

Atherosclerosis Etiology & Risk Factors.

Hypertension - Etiology, prevalence Nutritional management & prevention.

Renal diseases - Etiology, characteristic, Symptoms & Dietary management of Glomerulonephritis- Acute & Chronic

REFERENCES:

1. Krause, M.V. and Mohan, L.K. 1986 : Food, Nutrition and Diet Therapy, Alan R. Liss, Saunders Co., London.
2. Passmore, R. and Davidson, S. 1986 : Human Nutrition and Dietetics, Livingstone Publishers.
3. Robinson, OH., Laer, M.R. Chenoweth, W.L. Ganwick, A.E. 1986 : Normal and Therapeutic Nutrition, MacMillan publishing Company, New York.
4. Williams, S.R. 1989 : Nutrition and Diet Therapy, 4th Ed., C.V. Mosby Co.
5. Shils, M.E. Olson, J. A. Shike, M. Eds. 1994 : Modern Nutrition in Health and Disease, 8th edn., Lea and Febiger a Waverly Company.

Group-II, Practical-A

1. **Planning- Preparation of Normal and Therapeutic diet in relation to special and nutrient requirements (Any 15)**
 - 1 Adult
 - 2 Pregnancy
 - 3 Lactation
 - 4 Constipation
 - 5 Diarrhea
 - 6 Obesity
 - 7 Underweight
 - 8 Peptic Ulcer
 - 9 Jaundice
 - 10 Viral Hepatitis
 - 11 Cirrhosis
 - 12 Acute glomerulonephritis
 - 13 Chronic glomerule nephritis
 - 14 Diabetes mellitus (using food exchange list)
 - (i) With Insulin
 - (ii) Without insulin
 - 15 Hypertension(Atherosclerosis)
 - 16 Anemia
2. **Standardization of recipes**

B.Sc. (HOME-SCIENCE) PART II

Group - II

Paper - B

TEXTILE AND FIBRE SCIENCE

THEORY

M. Marks : 50

Unit - I

1. Principles of laundry and its methods
2. Equipment for washing :

- Washing equipment

- Drying equipment

- Finishing equipment

- Storage equipment

3. Cleaning materials and Detergents :

- Soap and detergent

- Other cleaning agents

4. Water : Composition, Classification, Hardness of water, Methods of removal of hardness

Unit - II

1. Useful suggestions for laundering

2. Washing of different kinds of fabrics : Cotton, wool, silk & synthetic
3. Bleach agents and other reagents used in laundry
4. Starch : types and uses
5. Blue : types and uses

Unit - III

1. Dry Cleaning

2. Stain removal : classification and technique of stain removal

3. Disinfection of cloths

4. Care and Storage of fabrics

5. Consumer problems and protections

Unit - IV

1. Equipment and supplies used in clothing construction :

- Measuring equipment

- Cutting equipment

- Stitching equipment

- Finishing equipment

2. Sewing machine: its parts & function, maintenance of machine, problems faced and remedies.
3. Selection of fabric for dress according to Climate, Age, Occupation, Personality, Occasion, Figure Type, Fashion etc.
4. Wardrobe Planning

Unit - V

1. Tailoring

- General Principles of clothing construction

- Taking body measurement for different type of garments

- Interrelationship Of Needles, Thread, Stitch Length, & Fabric
 - Cloth Estimation For Different Garments
 - Drafting & Draping
2. Pattern Making
 - General Instructions For Pattern Making
 - Method
 - Types & Layout
 3. Fitting
 - Fundamentals Of Fitting
 - Problems Area In Fitting
 - Factors Affecting Good Fit

Group-II, Practical-B.

Printing - Block, screen, tie & die, stencil printing. -.

1. Stain Removal
2. Laundering of cotton, rayon silk wool & synthetics etc.
3. Bleaching & whitening
4. Starching
5. Care of household linen
6. Simple dyeing of different fabric.
7. Tie and Dye techniques
8. Batik
9. Finishing of fabric before dyeing & printing, Scoring, bleaching, Desizing.

REFERENCES:

Course: Introduction to Fashion Illustration

1. Tate, S.L., Edwards, M.S. 1987 : The complete Book of Fashion Illustration, New York, Harper & Row Publications, 2nd Edn.
2. Allen, Anne & Seaman, Julian : Fashion drawing : basic principles, B.T. Batsford, London, 1993, 108p.
3. Barnes Colin : Fashion Illustration, Macdonald, 1988.
4. Chowdhry, Sonia : A Unique phenomenon : understanding the dynamics of fashion, Clothesline 11 (11) Nov. 1998 p. 75-77
5. Ewing, Elizabeth : History of twentieth century fashion, Elizabeth Ewing, London, 1974, XI, 300P.
6. Ireland John Patrick 1976 : Drawing and Designing Men's Wear, London B.T. Brandford Ltd.

Hindi

SANT GAHIRA GURU VISHWAVIDYALAYĀ

Sarguja Ambikapur (C.G.)

**CHOICE BASED CREDIT SYSTEM
(CBCS)**

SYLLABUS

Master of M.A. Hindi

**SEMESTER SYSTEM
SESSION 2018-19**



Dr.
Deputy Registrar
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Sarguja, Ambikapur (C.G.)

**For Affiliated Colleges of
SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001**

DEPARTMENT OF HINDI

- M. A. in HINDI :
- FACULTY OF ARTS
- SECOND SEMESTER (EVEN SEMESTER)

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week					EoSE Duration (Hrs.)					
					L	T	P	Th	P						
After appearing in the first semester examination irrespective of any number of back/ atone papers	HND 201	CCC	आधुनिक काव्य	06	4	3	00	3	00						
	HND 202	CCC	कथा साहित्य	06	4	3	00	3	00						
	HND 203	CCC	भारतीय काव्य शास्त्र	06	4	3	00	3	00						
	HND 501	DSC	सामाजिक अधिगम और कौशल विकास	06	4	3	00	3	00						
	HND5 01	ECCCB	भारतीय राजनैतिक व्यवस्था एवं संवैधानिकता	06	4	3	00	3	00						
	HND5 02	ECCCB	आदिकाव्य												
	HND5 03	ECCCB	संत काव्य												
	HND5 04	ECCCB	रीति काव्य												
	HND5 05	ECCCB	छायावाद काव्य												
HND5 06	ECCCB	स्वातंत्र्योत्तर हिंदी काव्य													
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30										TOTAL=					
										30					

COURSE CODE: HND102 COURSE TITLE: आधुनिक काव्य ✓ COURSE TYPE: CCC

CREDIT THEORY: 6 PRACTICAL: NA HOURS: 90 THEORY: 90 PRACTICAL:

MARKS: THEORY: 80+20 PRACTICAL: MARKS THEORY: PRACTICAL:

OBJECTIVE:

- विद्यार्थियों को आधुनिक हिंदी काव्य की प्रवृत्तियों का परिचय कराना।
- विद्यार्थियों को आधुनिक काल के प्रबंध और मुक्तक काव्य के तात्त्विक स्वरूप की जानकारी देना।
- आधुनिक युग के इन काव्य प्रकारों के विकासक्रम से परिचित कराना।
- विद्यार्थियों को आधुनिक काव्य प्रकारों के तात्त्विक स्वरूप एवं विकासक्रम के परिप्रेक्ष्य में रचनाओं के आस्वादन, अध्ययन और मूल्यांकन की दृष्टि देना।

UNIT-1: 118 Hours	भारतेंद्रु हरिचन्द्र - यमुना शोभा, हरिजीव - प्रिय प्रवास - एक सर्ग, मैथिलिशरण गुप्त - साकेत (नंदन तर्ग)
UNIT-2: 218 Hours	पाठ्यग्रन्थ आधुनिक कविता के प्रतिमान - डॉ. आर्या प्रसाद त्रिपाठी, डॉ. राजकुमार उपाध्याय नथि
UNIT-3: 18 Hours	जयशंकर प्रसाद : कामायनी (चिता, शब्दा, लज्जा सर्ग)
UNIT-4: 18 Hours	सूर्यकांत त्रिपाठी 'निराला' : बादल राग, संघा सुन्दरी, स्नेह निर्झर बह गया, जूही की कली संरोम स्मृति, राम की शक्तिपूजा
UNIT-5: 18 Hours	सुमित्रानन्दन पंत : नौका विहार, ताज, भारतमहता, परिवर्तन
UNIT 5: 18 Hours	महादेवी वर्मा - बोन नी हूँ मैं तुम्हारी रागिनी भी हूँ, मैं नीर नरोत्तुल की बदली, गीरे-धीरे स्तर क्षितिज से आ बसत रजनी, यह मंदिर का दीप इस नीरवनेजले, पिक होल-होले बोल पंथ होने दो अपरिचित।

Sl. No.	Course Code	Course Type	Course (Paper/Subjects)	Credits	Cond. Hours Per Week	Exam Duration (Hrs.)	Thy.	P.
06	HND 401	CC	✓ भारतीय साहित्य	4	3	3	00	00
06	HND 402	CC	✓ हिन्दी प्रकाशिका	4	3	3	00	00
06	HND 403	CC	✓ प्रबन्ध-मूलक हिन्दी	4	3	3	00	00
06	HND 421	SSC	✓ वाच्य शोध प्रश्न	06	00	00	09	00
06	HND 01		प्रयोगिक एवं मौखिक					
	HND 02	ECC09	भारतीय संस्कृत पाठ्य					
	HND 03	ECC08	अनुवाद विज्ञान					
	HND 04	ECC08	कौशल विज्ञान					
	HND 05	ECC08	भाषाशास्त्र					
	HND 06	ECC08	भाषा विज्ञान					
MINIMUM CREDITS IN SEMESTER 18 AND IN COMPLETE SEMESTER IT WOULD BE 30				TOTAL=	06			

After appearing in the Theory section student should appear in respective of any number of back/ reserve papers

- 1 लोक का अर्थ - संक्षेप में
- 2 लोक - संक्षेप में
- 3 लोक साहित्य - संक्षेप में
- 4 लोक साहित्य की श्रेणियाँ - संक्षेप में
- 5 लोक साहित्य का अर्थ - संक्षेप में
- 6 लोक साहित्य का अर्थ - संक्षेप में
- 7 लोक साहित्य - संक्षेप में
- 8 लोक साहित्य का अर्थ - संक्षेप में
- 9 लोक साहित्य का अर्थ - संक्षेप में
- 10 लोक साहित्य का अर्थ - संक्षेप में
- 11 लोक साहित्य का अर्थ - संक्षेप में
- 12 लोक साहित्य का अर्थ - संक्षेप में
- 13 लोक साहित्य का अर्थ - संक्षेप में
- 14 लोक साहित्य का अर्थ - संक्षेप में
- 15 लोक साहित्य का अर्थ - संक्षेप में

HISTORY
SANT GAHIRA GURU VISHWAVIDYALAYA
Sarguja Ambikapur (C.G.)

CHOICE BASED CREDIT SYSTEM
(CBCS)

SYLLABUS
M.A. HISTORY

SEMESTER SYSTEM
SESSION 2018-19




Deputy Registrar
Sant Gahira Guru Vishwavidyalaya
Sarguja, Ambikapur (C.G.)

For Affiliated Colleges of
SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001

MA. HISTORY
Second Semester (CBCS)

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			Duration (Hrs)	Mark		
				L	T	P				
MAH 201	CCC	HISTORIOGRAPHY	6	4	3	0	3	0	70	30
MAH 202	CCC	CONTEMPORARY WORLD	6	4	3	0	3	0	70	30
MAH 203	CCC	MODERN CHHATTISGARH	6	4	3	0	3	0	70	30
MAH S02	CCS	SOCIAL OUTREACH AND SKILL DEVELOPMENT	6	4	3	0	3	0	70	30
MAH B01	BOC/ CB	MODERN ENGLAND 1885-1956 AD								
MAH B02	BOC/ CB	HISTORY OF CHINA & JAPAN 1911-1950 AD	6	4	3	0	3	0	70	30
MAH B03	BOC/ CB	WOMEN IN INDIAN HISTORY IN MODERN PERIOD								
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30			30							

M.A. HISTORY

II SEMESTER

COURSE CODE: MAH 201

COURSE TYPE: CCC

COURSE TITLE: HISTORIOGRAPHY

CREDIT: THEORY: 6 PRACTICAL: 6
HOURS: THEORY: 90 PRACTICAL: 90

MARKS: THEORY: 80+20 PRACTICAL: 80+20
MARKS: THEORY: 80+20 PRACTICAL: 80+20

OBJECTIVE: विद्यार्थियों में इतिहास लेखन के विविध आयामों को समझ विकसित करना।

UNIT-1 20Hours

1. यूनानी एवं रोमन इतिहास लेखन
2. यूनानी इतिहास लेखन
3. मध्यकालीन यूरोपीय इतिहास लेखन
4. प्रबुद्धवादी इतिहास लेखन

UNIT-2 20Hours

1. अरबी तथा परशियन (फारसी) इतिहास लेखन
2. प्राचीन भारत में इतिहास लेखन
3. मध्यकालीन भारतीय इतिहास लेखन— सल्तनत काल
4. मध्यकालीन भारतीय इतिहास लेखन— मुगल काल

UNIT-3 17Hours

1. भारतीय इतिहास की साम्राज्यवादी व्याख्या
2. भारतीय इतिहास की राष्ट्रवादी व्याख्या
3. भारतीय इतिहास की मार्क्सवादी व्याख्या
4. भारतीय इतिहास की जनवादी व्याख्या

UNIT-4 17Hours

1. भारतीय इतिहास की विषयवस्तु— आर्थिक इतिहास
2. भारतीय इतिहास की विषयवस्तु— सामाजिक एवं सांस्कृतिक इतिहास
3. जातीय एवं जनजातीय इतिहास
4. क्षेत्रीय इतिहास लेखन

M.A. HISTORY Fourth Semester (CBCS)

M.A. HISTORY

IV SEMESTER

COURSE CODE: MAH 401

COURSE TYPE: CCC

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			ESE Duration (Hrs.)			Marks
				L	T	P	Thy	P	SEE/IA	
MAH 401	CCC	HISTORY OF NATIONAL MOVEMENT (1922 to 1947 A.D.)	6	4	3	0	3	0	70	30
MAH 402	CCC	Indian Polity and Economy in Mughal Period	6	4	3	0	3	0	70	30
MAH 403	CCC	Modern India 1858 A.D. to 1964 A.D.	6	4	3	0	3	0	70	30
MAH S04	OSC	(Political, Administrative) DISSERTATION	6	4	3	0	3	0	70	30
MAH D01	ECC /CB	Gandhism Theory and Practice	6	4	3	0	3	0	70	30
MAH D02	ECC /CB	The Evolution of Human Rights in the 20th Century	6	4	3	0	3	0	70	30
MAH D03	ECC /CB	Tourism Theory and Principles In Reference of History	30							
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30										

COURSE TITLE: HISTORY OF INDIAN NATIONAL MOVEMENT (1922 TO 1947 A.D.)

CREDIT: 6
THEORY: PRATICAL: 6
HOURS: 90
THEORY: PRATICAL:

MARKS: 80+20
THEORY: PRATICAL: 80+20
MARKS: THEORY: PRATICAL:

OBJECTIVE: भारतीय राष्ट्रीय आंदोलन के इतिहास से विद्यार्थियों को अवगत कराना, स्वतंत्रता प्राप्ति के बाद साम्प्रदायिक राजनीति के इतिहास से विद्यार्थियों को परिचित कराना।

UNIT-1 18/Hours

1. स्वराज्य दल
2. साइमन कमीशन का विरोध एवं नेहरू रिपोर्ट
3. सविनय अवज्ञा के समय भारत की राजनीतिक स्थिति
4. सविनय अवज्ञा आंदोलन

UNIT-2 18/Hours

1. गोलमेज सम्मेलन
2. पूना समझौता एवं श्वेतपत्र
3. प्रांतीय स्वायत्तता का क्रियान्वयन
4. राजनीतिक गतिरोध 1940-45

UNIT-3 18/Hours

1. क्रांतिकारी आंदोलन द्वितीय चरण
2. भारतीय राजनीति में वामपंथी विचारधारा
3. कृषक एवं जनजातीय आंदोलन
4. श्रमिक आंदोलन

POLITICAL SCIENCE
SANT GAHIRA GURU VISHWAVIDYALAYA
Sarguja Ambikapur (C.G.)

CHOICE BASED CREDIT SYSTEM
(CBCS)

SYLLABUS

M.A. POLITICAL SCIENCE

SEMESTER SYSTEM
SESSION 2018-19



For Affiliated Colleges of

SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001

Deputy Registrar
Sant Gahira Guru Vishwavidyalaya
Sarguja, Ambikapur (C.G.)

M.A. in POLITICAL SCIENCE
(FIRST SEMESTER)

COURSE CODE:	MAP A03	COURSE TYPE :	ECC/CE
COURSE TITLE: CONTEMPORARY DEBATES IN POLITICAL THEORY			
CREDIT:	06	HOURS:	90
THEORY:	06	THEORY:	90
MARKS:	100		
THEORY:	80	CCA :	20

OBJECTIVE: The main objective to know about algebraic Equations, Simultaneous algebraic equations, Interpolations, Differentiation and Integration and Differential equations.

UNIT-1	Liberalism, Socialism, Marxism, Neo-Marxism
UNIT-2	Modernism, Post Modernism, Feminism
UNIT-3	Environmentalism, Multiculturalism, Fascism
UNIT-4	Role of Ideology, End of Ideology
UNIT-5	Theories of Change: Lenin, Mao and Gandhi, Communitarianism
SUGGESTED READINGS	<ol style="list-style-type: none"> 1. B. Partha, Rethinking Multiculturalism: Cultural Diversity and Political theory, Macmillan Press, London, 2000 2. E. Said, Orientalism, Chatto and Windus, London, 1978 3. C. Taylor, Multiculturalism: Examining the Politics of Recognition, edited by J.P. Mayer and M. Lerner, New York, Harper, London, Fontana, 1968. 4. S.K. White, Political Theory and Postmodernism, Cambridge University Press, Cambridge, 1991 5. I.M. Young, Justice and the Politics of Difference, Princeton University Press, Oxford, 1990. 6. A. Ahmed, In Theory: Classes, Nations, Literatures, Verso, London, 1992.

Syllabus of M.A. (Political science) for Regular Mode (CBCS

Pattern-2018)

M.A. (Political science) SECOND SEMESTER

Eligibility criteria (Qualifying Exams)	Course code	Course Type	Name of Papers	Credits	Teaching Hours Per Week	
					Lecture	Tutorial
After appearing in the first semester examination	MAP 201	CCC	ADMINISTRATIVE THEORY: PRINCIPLES AND APPROACHES	6	4	3
	MAP 202	CCC	THEMES IN INDIAN POLITICAL THOUGHT	6	4	3
	MAP 203	CCC	WESTERN POLITICAL THOUGHT	6	4	3
	MAP 211	PRATYAKSH	SOCIAL JUSTICE AND SKILL DEVELOPMENT	6	4	3
number of marks/ error papers	MAP 201	ECC/CE	ETHICS AND POLITICS			
	MAP 202	ECC/CE	CRITICAL TRADITIONS IN POLITICAL THEORY	6	4	3
	MAP 203	ECC/CE	SOCIAL MOVEMENTS AND REVOLUTIONS			
			Total	36		

Syllabus of M.A. (Political science) for Regular Mode (CBCS Pattern-2018)

M.A. (Political science) FOURTH SEMESTER

Eligibility criteria (Qualifying Exam)	Course code	Course Type	Name of Papers	Credits	Teaching Hours Per Week	
					Lecture	Tutorial
After appearing in the third semester examination irrespective of any number of back/ error paper	MAP 401	CCC	PRINCIPLES OF INTERNATIONAL POLITICS	6	4	3
	MAP 402	CCC	INDIA AND THE WORLD	6	4	3
	MAP 403	CCC	POLITICAL HISTORY OF CHHATTISGARH	6	4	3
	MAP 471	SSC/PRJ	DISSERTATION	6	4	3
	MAP D81	ECC/CB	FOREIGN POLICY OF MAJOR POWERS	6	4	3
	MAP D82	ECC/CB	DEVELOPMENT PROCESS AND POLITICS IN INDIA	6	4	3
	MAP D83	ECC/CB	INTERNATIONAL SECURITY	6	4	3
Total				30		

M.A. in POLITICAL SCIENCE (FOURTH SEMESTER)

COURSE CODE	COURSE TITLE	COURSE TYPE
MAP 401	PRINCIPLES OF INTERNATIONAL POLITICS	CCC
CREDITS	06	HOURS: 90
THEORY	06	THEORY: 90
MARKS	100	
THEORY	80	CCA: 20

OBJECTIVE: The aim of this course is to give students a thorough introduction to the literature on international politics, both theoretical and policy-oriented. It deploys the use of social and environmental) and, emphasizes the salience of levels-of analysis (individual, national, regional and global) in thinking about international politics.

UNIT 1	Evolution of International Politics as a Discipline, Nature and scope Concept of Power, Elements and Limitations of National Power Balance of Power, Collective Security
UNIT 2	Theories of International Politics: Realism, New Realism, Structural Realism, Idealism, Equilibrium, Decision Making, Game Theory and System Theory
UNIT 3	Disarmament: PTBT, NPT, CTBT and Other Weapon Proliferation Treaty. Regional Organisation: SAARC, ASEAN, OPEC, BRICS, IBSA Non-alignment in International Politics: Basics Role, Importance and Relevance
UNIT 4	Cold War and End of Cold War: Causes and Result New Economic World Order (NEWO) North-South Dialogue, South-South Cooperation
UNIT 5	UNO and its agencies Peace Keeping Role of UNO
SUGGESTED READINGS	1. Cryptography and Network Security By William Stallings, 4th Edition Pearson Publication 2. Applied cryptography - protocols and algorithm By Bruce Schneier, Springer Verlag 2003

ANNEXURE/M.Sc. Home Science
Human Development/SYLLABUS

SANT GHIRA GURU VISHWAVIDYALAYA SARGUJA AMBIKAPUR (C.G.)



CHOICE BASED CREDIT SYSTEM
(CBCS)
2018-19

Syllabus

Deputy Registrar
Sant Ghira Guru Vishwavidyalaya
Sarguja, Ambikapur (C.G.)

M.Sc. Home Science Human Development



Third Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ABC 301		CCC	6	4	2	0	3	0
2.	ABC 302		CCC	6	4	2	0	3	0
3.	ABC 303		CCC	6	4	2	0	3	0
4.	ABC S02		OSC	6	4	2	0	3	0
5.	ABC A03/B03/ C03/D03/ E03/F03		ECC	6	4	2	0	3	0
				30					

Fourth Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ABC 401		CCC	6	4	2	0	3	0
2.	ABC 402		CCC	6	4	2	0	3	0
3.	ABC 403		CCC	6	4	2	0	3	0
4.	ABC 421		PRJ/FST/ EST	6	4	2	0	3	0
5.	ABC A04/B04/ C04/D04/ E04/F04		ECC	6	4	2	0	3	0
				30					

XXXII

FIRST SEMESTER (ODD SEMESTER)

Eligibility Criteria (Qualifying Exams)	Admission Criteria	Course Code	Course Type	Course (Paper/Subjects)	Credits			Contact Hours Per Week			EoSE Duration (Hrs.)				
					L	T	P	L	T	P	L	Thy	P		
1) Merit List 2) Entrance Test (Written or/and oral) If decided by the University 3) Observance of Reservation Policy		HHD 101	CCC	THEORIES OF HUMAN DEVELOPMENT	5	4	2	0	3	0					
		HHD 111	CCC	THEORIES OF HUMAN DEVELOPMENT-LABORATORY WORK	2	00	00	3	0	3					
		HHD 102	CCC	EARLY CHILDHOOD EDUCATION	5	4	2	0	3	0					
		HHD 112	CCC	EARLY CHILDHOOD EDUCATION-LABORATORY WORK	2	00	00	3	0	3					
		HHD 103	CCC	CURRENT TRENDS AND ISSUES IN HUMAN DEVELOPMENT	5	4	2	0	3	0					
		HHD 113	CCC	CURRENT TRENDS AND ISSUES IN HUMAN DEVELOPMENT-LABORATORY WORK	2	00	00	3	0	3					
		HHD S01	OSC	RESEARCH METHODOLOGY & COMPUTER APPLICATION: BASICS	6	4	3	00	3	00					
		HHD A01	ECC/IB	CONSTITUTIONALISM & INDIAN POLITICAL SYSTEM	6	4	3	00	3	00					
						WOMEN STUDIES	6	4	3	00	3	00			
							TOTAL=				33				

SUGGESTED READINGS	UNIT-5- 18 Hours	UNIT-4- 18-Hours	UNIT-3- 18 Hours	UNIT-2- 18 Hours
Aslana (1974) Women's Movement in India. Vikash Delhi. Anthony, M.L. (1985). Women's Rights: Dialogue. New Delhi. Baker: H.A, Bertheide: G.W and Others (Eds) (1980). Women Today. A multi disciplinary approach to Women's Studies. Brooks and Cole Publication.	<ul style="list-style-type: none"> Women Identity - Educational opportunities and sex based education Employment Women politics Legal status of women 	<ul style="list-style-type: none"> Problems and issues related to women in India Female mortality Female feticide, infanticide Socialization of girl child Downy Violence Child marriage 	<ul style="list-style-type: none"> Role of women in national development Women in family and community: Demographic changes menarche, marriage, fertility, morbidity, mortality, life expectancy, sex ratio, aging, widowhood. Women in society: Women's role, their resources, and contribution to family 	<ul style="list-style-type: none"> Understanding concepts related to gender differences from social and developmental perspective. Patriarchy Caste, class culture and gender interface Gender and education Economic empowerment and gender Development processes and programs from women's perspective.

M. Sc. in HOME SCIENCE (HUMAN DEVELOPMENT)
SECOND SEMESTER (EVEN SEMESTER)

FACULTY OF SCIENCE

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
After the first semester examination After a number of back/answer papers	HHD 201	CCC	ADOLESCENT PSYCHOLOGY	5	4	2	00	3	00
	HHD 211	CCC	ADOLESCENT PSYCHOLOGY- LABORATORY WORK	2	00	00	3	00	3
	HHD 202	CCC	MANAGEMENT AND PROJECT PLANNING	5	4	2	00	3	0
	HHD 212	CCC	MANAGEMENT AND PROJECT PLANNING-LABORATORY WORK	2	00	00	3	00	3
	HHD 203	CCC	NUTRITION FOR HEALTH OF WOMEN AND CHILDREN	5	4	2	00	3	0
	HHD 213	CCC	NUTRITION FOR HEALTH OF WOMEN AND CHILDREN- LABORATORY WORK	2	00	00	3	00	3
	HHD 221	PRJ/FST/EST	SOCIAL OUTREACH AND SKILL DEVELOPMENT	6	00	00	9	00	4
	HHD B01	ECC/CB	ENVIRONMENTAL AND FOREST LAWS	6	4	3	00	3	00
			CHILD AND HUMAN RIGHTS						
				TOTAL=	33				

M.A. SOCIOLOGY SECOND SEMESTER			
COURSE CODE : MAS B0		COURSE TYPE : ECC/CH	
COURSE TITLE : <u>POLITICAL SOCIOLOGY</u>			
CREDIT : THEORY : 6	PRACTICAL :	HOURS : THEORY : 90	PRACTICAL :
MARKS : THEORY : 80+20	PRACTICAL :	MARKS THEORY :	PRACTICAL :
OBJECTIVE: To give a basic understanding of sociology. To know the meaning and subject matter of sociology. To understand the nature of scientific study and subject matter of sociology. To know the nature and scope of sociology. To study the contribution of early thinkers towards the development of sociology.			
UNIT-1/ 18 Hours	Relationship between Society and polity, Sociological Definitions of Politics, authority and the state <i>Pol. Science</i>		
UNIT-2/ 18 Hours	Theoretical Approaches to the State: Liberal, Pluralist, Power - elite, Post-modernist Marxist tradition, Weberian Tradition, Discourse Theory and the New Political sociology <i>G.P. Chak.</i>		
UNIT-3/ 18 Hours	Dominance and power within the nation state nature of post-colonial state, State-civil society relationship Silent revolution, Limited citizenship mass movements Issues of nation - building and citizenship: ethnicity, class, gender and caste.		
UNIT-4/ 18 Hours	Society and the state in India: religious nationalism, Hinduva and politics of upper castes the caste system and patriarchy; Language, Ethnicity and Region. * Contemporary Challenges: Limited Citizenship, New Social Movements, Globalization, Civil society-state relationship		

M.A. SOCIOLOGY SECOND SEMESTER			
COURSE CODE : MAS B05		COURSE TYPE : ECC/CH	
COURSE TITLE : <u>THEORETICAL PERSPECTIVES IN SOCIOLOGY</u>			
CREDIT : THEORY : 6	PRACTICAL :	HOURS : THEORY : 90	PRACTICAL :
MARKS : THEORY 80 + 20	PRACTICAL :	MARKS THEORY :	PRACTICAL :
OBJECTIVE : To give a basic understanding of sociology. To know the meaning and subject matter of sociology. To understand the nature of scientific study. To know the nature and scope of sociology. To study the contribution of early thinkers towards the development of sociology.			
UNIT-1/ 18 Hours	Tribal Society as Agrarian Society a. Tribe Concept and Characteristic b. Tribe class c. Changing problems of Tribal Land		
UNIT-2/ 18 Hrs.	Social issues a. Migration b. Land Alienation c. Loss of Livelihood		
UNIT-3/ 18 Hrs.	Contemporary issues a. Health b. Education c. Changing status of Rural Women d. Inequality		
UNIT-4/ 18 Hrs.	Peasant Movement a. Causes b. Types c. Tebhaga d. Telengana		
UNIT-5/ 18 Hrs.	Naxlite movement in Contemporary India, a. Origin and affected b. Causes c. Present status; Government measures and people's response		
Recommended Reading	1. Betelle A. 1986 Inequality and Social change Oxford, New Delhi 2. Bardhan, p. Poverty, Agrarian structure and political Economy in India 3. Desai, A. R. 1979 Rural Society in Transition Popular, Mumbai 4. ----- 1979 Peasant Struggle in India Oxford, New Delhi 5. ----- (ed) 2003 Rural Sociology in India popular, Mumbai 6. Dreze, j and Sen A. India: Development and participation, Oxford		


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2
M.A. SOCIOLOGY FOURTH SEMESTER

COURSE CODE : MAS 402 COURSE TYPE : CCC

COURSE TITLE :
COMPARATIVE SOCIOLOGY ✓

CREDIT : THEORY : 5 PRACTICAL : HOURS : THEORY : 90 PRACTICAL :

MARKS : THEORY : 80+20 PRACTICAL : MARKS THEORY : PRACTICAL :

OBJECTIVE : To give a basic understanding of sociology. • To know the meaning and subject matter of sociology. • To understand the nature of scientific study. • To know the nature and scope of sociology. • To study the contribution of early thinkers towards the development of sociology.

UNIT-1/ 18 Hours Historical and Social Context of Emergence of Sociology in the West: a. Emergence of growth of Sociology in West b. Eurocentric Moorings western Sociology Tradition c. Americanization of Sociology.

UNIT-2/ 18 Hours Central Themes in Comparative: a. Modernity and Development b. Diversity and multi Culturalism c. Environment d. Globalization

UNIT-3/ 18 Hours Theoretical Concepts in Comparative sociology: a. Problems of theorizing in sociology b. Theoretical and Methodological approaches in sociology.

UNIT-4/ 18 Hours Current Debates: a. Contextualization b. Indianization c. Use of Native Categories d. Criticism

UNIT-5/ 18 Hours Debate on "The Sociology of India" a. Sociology of India b. Sociology in India c. Sociology for India d. Criticism

3
M.A. SOCIOLOGY FOURTH SEMESTER

COURSE CODE : MAS 403 COURSE TYPE : CCC

COURSE TITLE :
CRIMINOLOGY-II

CREDIT : THEORY : 6 PRACTICAL : HOURS : THEORY : 90 PRACTICAL :

MARKS : THEORY : 80+20 PRACTICAL : MARKS THEORY : PRACTICAL :

OBJECTIVE : To give a basic understanding of sociology. • To know the meaning and subject matter of sociology. • To understand the nature of scientific study. • To know the nature and scope of sociology. • To study the contribution of early thinkers towards the development of sociology.

UNIT-1/ 18 Hours Roots of Correction to prevent Crime: a. Socialization b. Family values c. Role of education

UNIT-2/ 18 Hours Correction and it's Forms: a. Meaning and Significance of Correction; Prison Based and Community Based b. Correctional Programmes in Prison: History of Prison Reforms in India c. After care and Rehabilitation Programme

UNIT-3/ 18 Hours Problem of Correctional Administration: a. Overcrowding: Lack of inter Agency Co-Ordination among Police, Prosecution, Judiciary and Prison b. Offences c. Problem of Criminal Justice Administration

UNIT-4/ 18 Hours Victimological Perspective: a. Victim's Responsibility in Crime b. Violation of Prisoner's Human Rights c. Problems of Women Offenders

UNIT-5/ 18 Hours Community Policing: a. Concept and Objectives b. Types c. Significance


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Recommended	UNIT-5/ 18 Hours
<ol style="list-style-type: none"> 1. Banks, J.A., 1972; The Sociology of Social Movements (London : Macmillan) 2. Desai, A.R., Ed., 1979; Peasant Struggles in India (Bombay : Oxford University Press) 3. Danagare, D.N., 1983; Peasant Movements In Indian 1920-1950 (Delhi : Oxford University Press. 4. Gore, M.S., 1993; The Social Context of an Ideology : Ambedkar's Political and Social 5. Coonen, T.K., 1990 : Protest and Change : Studies in Social Movements (Delhi : Sage). 	New Social Movements a. Dalit b. Women c. Ethnic d. Environmental

PART-4

M.A. SOCIOLOGY FOURTH SEMESTER (CBCS)

Course Code	Course Type	Course Name / Subjects	Credits	Contact Hours Per Week							Total Duration (Hrs.)		Marks	
				L	T	P	T	P	Thy	P	SEE	IA		
MS-301	SSC	Compulsory paper	6	4	3	00	3	0	3	0	0	70	30	
MS-302	SSC	WOMEN, SOCIOLOGICAL THEORY & COOPERATIVE MOVEMENTS	6	4	3	00	3	0	3	0	0	70	30	
MS-303	SSC	CRIMINOLOGY II	6	4	3	00	3	0	3	0	0	70	30	
MS-304	PRISSE	DISSERTATION	6	4	3	00	3	0	3	0	0	70	30	
		OPTIONAL PAPER												
MS-305	PRISSE	URBAN SOCIETY IN INDIA	6	4	3	00	3	0	3	0	0	70	30	
MS-306	PRISSE	SOCIOLOGY OF DISASTER	6	4	3	00	3	0	3	0	0	70	30	


PRINCIPAL
 Govt. Girls College Ambikapur
 Distt.-Surguja (C.G.)

M.A. SOCIOLOGY FOURTH SEMESTER			
COURSE CODE : MAS D02		COURSE TYPE : ECC/CB	
COURSE TITLE : URBAN SOCIETY IN INDIA			
CREDIT : THEORY : 6	PRACTICAL :	HOURS : THEORY : 90	PRACTICAL :
MARKS : THEORY : 80+20	PRACTICAL :	MARKS THEORY :	PRACTICAL :
<p>OBJECTIVE : To give a basic understanding of sociology. ● To know the meaning and subject matter of sociology. ● To understand the nature of scientific study. ● To know the nature and scope of sociology. ● To study the contribution of early thinkers towards the development of sociology.</p>			
UNIT-1/ 18 Hours	Classical sociological traditions as urban and city dimensions, Emile Durkheim, Karl Marx, Max Weber and Tonnies.		
UNIT-2/ 18 Hours	Urban sociology in India ; Emerging trends in urbanisation, Factors of urbanisation, sociological dimensions of urbanisation, Social consequences of urbanisation.		
UNIT-3/ 18 Hours	Classification of urban centres, cities and towns, City industrial urbanbase, its growth and special features, industry centered developments.		
UNIT-4/ 18 Hours	Changing occupational structure, and its impact on social stratification - class, caste Gender, family Indian city and its growth, migration, problems of housing, slum development, urban environment problems, urban poverty.		
UNIT-5/ 18 Hours	Urban planing and problems of urban management of India. Urban institutions, Factors affecting planing, regional planing and the links between social and spatial theory.		

M.A. SOCIOLOGY FOURTH SEMESTER			
COURSE CODE : MAS 403		COURSE TYPE : CCG	
COURSE TITLE : SOCIOLOGY OF DISASTERS MGT, AND DISASTER PLANING			
CREDIT : THEORY : 6	PRACTICAL :	HOURS : THEORY : 90	PRACTICAL :
MARKS : THEORY : 80+20	PRACTICAL :	MARKS THEORY :	PRACTICAL :
<p>OBJECTIVE : To give a basic understanding of sociology. ● To know the meaning and subject matter of sociology. ● To understand the nature of scientific study. ● To know the nature and scope of sociology. ● To study the contribution of early thinkers towards the development of sociology.</p>			
UNIT-1/ 18 Hours	Concepts, definitions and Nature of disasters.		
UNIT-2/ 18 Hours	Causes and Types of Disasters : Floods, earthquakes, epidemics, wars, industrial disasters, nuclear disasters,		
UNIT-3/ 18 Hours	The effects and aftermath of disasters : victims and survivors		
UNIT-4/ 18 Hours	The Welfare State and Disasters : the role of the state in preventing, apprehending and managing disasters.		
UNIT-5/ 18 Hours	Disasters and civil Society meaning of Disasters, the role of voluntary organizations, political organizations, citizens associations international bodies		


PRINCIPAL
 Govt. Girls College Ambikapur
 Distt.-Suroula (C.G.)

M.A. SOCIOLOGY SECOND SEMESTER

COURSE CODE : MASB01

COURSE TYPE : FCC/CB

COURSE TITLE : ENVIRONMENTAL AND FOREST LAWS

CREDIT : 06

THEORY : 06

HOURS : 90

THEORY : 90

MARKS : 100

THEORY : 80

OBJECTIVE :

- Understands the concept and place of research in concerned subject
- Gets acquainted with various resources for research
- Becomes familiar with various tools of research
- Gets conversant with sampling techniques, methods of research and techniques of analysis of data
- Achieves skills in various research writings
- Gets acquainted with computer Fundamentals and Office Software Package

UNIT-1
18 Hours

EVOLUTION OF FOREST AND WILD LIFE LAWS

- Importance of Forest and Wildlife
- Evolution of Forest and Wild Life Laws
- Forest Policy during British Regime
- Forest Policies after Independence
- Methods of Forest and Wildlife Conservation

UNIT-2
18 Hours

FOREST PROTECTION AND LAW

- Indian Forest Act 1927
- Forest Conservation Act, 1980 & Rules therein
- Rights of Forest Dwellers and Tribal
- The Forest Rights Act, 2006
- National Forest Policy 1988

UNIT-3
18 Hours

WILDLIFE PROTECTION AND LAW

- Wild Life Protection Act, 1972
- Wild Life Conservation strategy and Projects
- The National Zoo Policy

UNIT-4
18 Hours

CHAPTER - BASIC CONCEPTS

- Meaning and definition of environment
- Multidisciplinary nature of environment
- Concept of ecology and ecosystem
- Importance of environment
- Meaning and types of environmental pollution
- Factors responsible for environmental degradation.

CHAPTER - INTRODUCTION TO LEGAL SYSTEM

- Acts, Rules, Policies, Notification, circulars etc
- Constitutional provision on Environment Protection
- Judicial review, precedents

CHAPTER- LEGISLATIVE FRAMEWORK FOR POLLUTION CONTROL LAWS

- Air Pollution an Law
- Water Pollution and Law
- Noise Pollution an Law,

UNIT-5
18 Hours

CHAPTER- LEGISLATIVE FRAMEWORK FOR ENVIRONMENT PROJECT

- Environment Protection Act & rules there under
- Hazardous Waste and Law
- Principles of strict and absolute Liability
- Public Liability Insurance Act
- Environment Impact Assessment Regulation in India

CHAPTER- ENVIRONMENTAL CONSTITUTIONALISM

- Fundamental Rights and Environment:
 - Right to Equality Article 14
 - Right to Information Article 19
 - Right to Life Article 21
 - Freedom of Trade and Business
- The Forty-second Amendment Act
- Directive Principles of state Policy & Environment
- Judicial Activism and PIL.


PRINCIPAL
Govt. Girls College Ambikapur
Distt.-Surguja (C.G.)

M.A. SOCIOLOGY FIRST SEMESTER			
COURSE CODE : MAS103		COURSE TYPE : CCC	
III - COURSE TITLE : SOCIAL CHANGE IN INDIA			
CREDIT : THEORY : 6	PRACTICAL :	HOURS : THEORY : 90	PRACTICAL :
MARKS : THEORY : 80+20	PRACTICAL :	MARKS : THEORY :	PRACTICAL :
OBJECTIVE : To give a basic understanding of sociology. • To know the meaning and subject matter of sociology. • To understand the nature of scientific study. • To know the nature and scope of sociology. • To study the contribution of early thinkers towards the development of sociology.			
UNIT-I 22 Hours	Conceptual and Theoretical Frame Work a. Concept b. Forms c. Linear Theory d. Cyclic Theory		
UNIT-II 23 Hours	Factors of Social Change a. Techno-Economic b. Socio-Psychological c. Cultural and Religious d. Media		
UNIT-III 22 Hours	Trends and Processes of Change in Modern India a. Sanskritization b. Secularization c. Gandhian d. Globalization		
UNIT-IV 23 Hours	Change in Urban and Industrial India a. In Migration and Growth of informal sector b. Development of Slums c. Development of Criminal Activities d. Welfare measures and Consequent Changes		

M.A. SOCIOLOGY FIRST SEMESTER			
COURSE CODE : MAS A02		COURSE TYPE : ECC/CB	
I - COURSE TITLE : GENDER AND SOCIETY			
CREDIT : THEORY : 6	PRACTICAL :	HOURS : THEORY : 90	PRACTICAL :
MARKS : THEORY : 80+20	PRACTICAL :	MARKS : THEORY :	PRACTICAL :
OBJECTIVE : To give a basic understanding of sociology. • To know the meaning and subject matter of sociology. • To understand the nature of scientific study. • To know the nature and scope of sociology. • To study the contribution of early thinkers towards the development of sociology.			
UNIT-I 22 Hours	1. Gender in Sociological Analysis : a. Approaches to the Study of Gender b. Gender Studies as a Critique of Ethnography and Theory		
UNIT-II 23 Hours	2. Reproduction, Sexuality and Ideology : a. Biology and Culture b. Concepts of Male and Female c. Life Cycle		
UNIT-III 22 Hours	3. Family, Work and Property : a. Production and Reproduction b. Work and Property c. Family and Household		
UNIT-IV 23 Hours	4. The Politics of Gender : a. Complementarity, Inequality, Dependence, Subordination b. Feminist Theories and Feminist Politics		


PRINCIPAL
 Govt. Girls College, Ambikanur
 Distt. - Sarguja (C.G.)

M.A. SOCIOLOGY THIRD SEMESTER

COURSE CODE : MASS 02

COURSE TYPE : OSC

COURSE TITLE : INTELLECTUAL, PROPERTY RIGHTS, HUMAN RIGHTS & ENVIRONMENT : BASICS ✓

CREDIT : 06

HOURS : 90

THEORY : 06

THEORY : 90

OBJECTIVE :

Understands the concept and place of research in concerned subject
 Gets acquainted with various resources for research
 Becomes familiar with various tools of research
 Gets conversant with sampling techniques, methods of research and techniques of analysis of data

UNIT-1/
12 Hours

- Patents :- Introduction & concepts, Historical Overview.
- Subject matter of patent.
- Kinds of Patents.
- Development of Law of Patents through international treaties and conventions including TRIPS Agreement.
- Procedure for grant of patents & term of Patent.
- Surrender, revocation and restoration of patent.
- Rights and obligations of Patentees
- Grant of compulsory licenses
- Infringement of Patent and legal remedies
- Offences and penalties
- Discussion on leading cases.

UNIT-2/
24 Hours

Meaning of Copyright, Historical Evolution,
 Subject matter of copyright
 Literary works
 Dramatic Works & Musical Works
 Computer Programme
 Cinematographic films
 Registration of Copyrights
 Term of Copyrights and Ownership of Copyrights
 Neighboring Rights
 Rights of Performers & Broadcasters
 Assignment of Copyrights

Author's Special Rights (Moral Rights)
 Infringement of Copyrights and defenses
 Remedies against Infringement (Jurisdiction of Courts and penalties)
 International Conventions including TRIPS Agreement WIPO, UCC, Paris Union, Berne Convention, UNESCO.
 Discussion on leading cases.

UNIT-3/
10 Hours

Rights - Meaning
 Human Rights - Meaning & Essentials
 Human Rights Kinds
 Rights related to Life, Liberty, Equals & Disable

UNIT-4/
24 Hours

- National Human Rights Commission
- State Human Rights Commission
- High Court
- Regional Court
- Procedure & Functions of High & Regional Court.

UNIT-5/
20 Hours

- Right to Environment as Human Right
- International Humanitarian Law and Environment
- Environment and Conflict Management
- Introduction to Sustainable Development and Environment
 Sustainable Development and Environmental Governance


PRINCIPAL
 G.M. Girls College Ambikapur
 Dist. Sonbhadra (C.G.)

M.A. SOCIOLOGY THIRD SEMESTER

COURSE CODE : MASS 02

COURSE TYPE : OSC

COURSE TITLE : INTELLECTUAL, PROPERTY RIGHTS, HUMAN RIGHTS & ENVIRONMENT : BASICS ✓

CREDIT : 06

HOURS : 90

THEORY : 06

THEORY : 90

OBJECTIVE :

- Understands the concept and place of research in concerned subject
- Gets acquainted with various resources for research
- Becomes familiar with various tools of research
- Gets conversant with sampling techniques, methods of research and techniques of analysis of data

UNIT-1/
12 Hours

- Patents :- Introduction & concepts, Historical Overview.
- Subject matter of patent.
- Kinds of Patents.
- Development of Law of Patents through international treaties and conventions including TRIPS Agreement.
- Procedure for grant of patents & term of Patent.
- Surrender, revocation and restoration of patent.
- Rights and obligations of Patentee
- Grant of compulsory licenses
- Infringement of Patent and legal remedies
- Offences and penalties
- Discussion on leading cases.

UNIT-2/
24 Hours

- Meaning of Copyright, Historical Evolution.
- Subject matter of copyright
- Literary works
- Dramatic Works & Musical Works
- Computer Programme
- Cinematographic films
- Registration of Copyrights
- Term of Copyrights and Ownership of Copyrights
- Neighboring Rights
- Rights of Performers & Broadcasters
- Assignment of Copyrights

Author's Special Rights (Moral Rights)
Infringement of Copyrights and defenses
Remedies against infringement (Jurisdiction of Courts and penalties)
International Conventions including TRIPS Agreement WIPO, UCC, Paris Union, Berne Convention, UNESCO.
Discussion on leading cases.

UNIT-3/
10 Hours


Rights - Meaning
Human Rights - Meaning & Essentials
Human Rights Kinds
Rights related to Life, Liberty, Equals & Disable

UNIT-4/
24 Hours

- National Human Rights Commission
- State Human Rights Commission
- High Court
- Regional Court
- Procedure & Functions of High & Regional Court.

UNIT-5/
20 Hours

- Right to Environment as Human Right
- International Humanitarian Law and Environment
- Environment and Conflict Management
- Introduction to Sustainable Development and Environment
- Sustainable Development and Environmental Governance


PRINCIPAL
G. S. Girls College Ambikapur
Distt. - Surguja (C.G.)

M.Sc (BOTANY)		IIND SEMESTER	
COURSE CODE: MBTB 02		COURSE TYPE: ECC/CB	
COURSE TITLE: SYSTEMATICS, EVOLUTION AND ENVIRONMENTAL SCIENCE			
CREDIT:6		HOURS:90	
THEORY: 6	PRACTICAL:0	THEORY:90	PRACTICAL: 00
MARKS			
THEORY: 100 (20+80)		PRACTICAL:00	

OBJECTIVE : This course is aimed towards generating fundamental knowledge, concepts and dimensions of Botany/Plant Science.

UNIT-1
78 Hours

Systematics and Evolutionary Biology : History of developments in taxonomy; Linnaean to post-Linnaean era; Systematics - concepts and components; Botanical Nomenclature; Evolutionary ecology- concepts and principles; Microevolution - theory and concepts; Species and speciation; Phylogenetic systematics;

UNIT-2
18Hours

Macroevolution - inferring phylogenies; Diversity and classification of flowering plants; Taxonomic evidence - structural and biochemical; Molecular systematics;

UNIT-3
18 Hours

Diversity and classification of flowering plants; Biological diversity-concepts and applications; Diversity- patterns, indices and applications.

UNIT-4
18Hours

Environmental Science: Introduction to Environmental Science and Sustainability, Environmental laws, Ecosystems and living organisms,

UNIT-5
18Hours

Major ecosystems of the world and India, Human health and environmental change, Population issues, the search for fuels, natural resources and their management, applications of GIS and RS technology in environmental studies, the future of planet earth.


PRINCIPAL
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 Distt. Surguja (C.G.)

M.Sc (BOTANY)		IIIIRD SEMESTER	
COURSE CODE: MBT302		COURSE TYPE:CCC	
COURSE TITLE: PRINCIPLES OF ECOLOGY			
CREDIT:7		HOURS:135	
THEORY: 5	PRACTICAL:2	THEORY:90	PRACTICAL: 45
MARKS			
THEORY: 100 (20+80)		PRACTICAL:33	
OBJECTIVE : This course is aimed towards generating fundamental knowledge, concepts and dimensions of Botany/ Plant Science			
UNIT-1 18 Hours	Introduction to ecology, evolutionary ecology, environmental concepts, Population ecology – characters of polulation, population growth, population dynamics life forms, age structure, fertility, growth curves, eades and ecotypes.		
UNIT-2 18Hours	Nature of ecosystem, structure, component, productivity, food chain, food web, energy flow through ecosystem. Biogeochemical cycles – Carbon cycle, nitrogen cycle, phosphorus cycle, Sulpher. Ecosystem management, Community Ecology		
UNIT-3 18 Hours	Environmental Stresses and their management, Global climatic pattern and variations over time, Global climatic changes, Global warming, acid rain and Nitrogen deposition. Ecological succession – Types, mechanism, changes involved in succession, concept of climax.		
UNIT-4 18Hours	Biodiversity & Conservation, concept and levels, distribution and global patterns biodiversity act of India and related international conventions. Phytogeography, behavioral ecology, molecular ecology.		
UNIT-5 18Hours	Environmental pollution air, water, soil pollution, use of fertilizer, pestisides and other chemicals in agriculture. Industrial pollution and impact of chemical on Biodiversity of microbes animals and plants. Seed and seedling ecology.		


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 Distt.-Surguja (C.G.)

M.Sc (BOTANY)		IIND SEMESTER	
COURSE CODE: MBTB 01		COURSE TYPE: ECC	
COURSE TITLE: FOREST AND ENVIRONMENTAL LAWS			
CREDIT: 06		HOURS: 90	
THEORY: 06		THEORY: 90	
MARKS: 100			
THEORY: 80	CCA: 20		

OBJECTIVE :

- Understands the concept and place of research in concerned subject
- Gets acquainted with various resources for research
- Becomes familiar with various tools of research
- Gets conversant with sampling techniques, methods of research and techniques of analysis of data
- Achieves skills in various research writings
- Gets acquainted with computer Fundamentals and Office Software Package .

UNIT - 1
18 Hrs

EVOLUTION OF FOREST AND WILD LIFE LAWS

- a) Importance of Forest and Wildlife
- b) Evolution of Forest and Wild Life Laws
- c) Forest Policy during British Regime
- d) Forest Policies after Independence.
- e) Methods of Forest and Wildlife Conservation.

UNIT - 2
18 Hrs

FOREST PROTECTION AND LAW

- a) Indian Forest Act, 1927
- b) Forest Conservation Act, 1980 & Rules therein
- c) Rights of Forest Dwellers and Tribal
- c) The Forest Rights Act, 2006
- d) National Forest Policy 1988

UNIT - 3
18 Hrs

WILDLIFE PROTECTION AND LAW

- a) Wild Life Protection Act, 1972
- b) Wild Life Conservation strategy and Projects
- c) The National Zoo Policy

UNIT - 4
18 Hrs

CHAPTER - BASIC CONCEPTS

- a. Meaning and definition of environment.
- b. Multidisciplinary nature of environment
- c. Concept of ecology and ecosystem
- d. Importance of environment
- e. Meaning and types of environmental pollution.
- f. Factors responsible for environmental degradation.

CHAPTER- INTRODUCTION TO LEGAL SYSTEM

- a. Acts, Rules, Policies, Notification, circulars etc
- b. Constitutional provisions on Environment Protection
- c. Judicial review, precedents
- d. Writ petitions, PIL and Judicial Activism


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 Distt.-Surguja (C.G.)

CHAPTER – LEGISLATIVE FRAMEWORK FOR POLLUTION CONTROL LAWS

- a) Air Pollution and Law.
- b) Water Pollution and Law.
- c) Noise Pollution and Law.

CHAPTER- LEGISLATIVE FRAMEWORK FOR ENVIRONMENT PROTECTION

- a) Environment Protection Act & rules there under
- b) Hazardous Waste and Law
- c) Principles of Strict and absolute Liability.
- d) Public Liability Insurance Act
- e) Environment Impact Assessment Regulations in India

UNIT - 5
18 Hrs

CHAPTER – ENVIRONMENTAL CONSTITUTIONALISM

- a. Fundamental Rights and Environment
 - i) Right to EqualityArticle 14
 - ii) Right to InformationArticle 19
 - iii) Right to LifeArticle 21
 - iv) Freedom of Trade vis-à-vis Environment Protection
- b. The Forty-Second Amendment Act
- c. Directive Principles of State Policy & Fundamental Duties
- d. Judicial Activism and PIL

SUGGES
TED
READIN
GS

Bharucha, Erach. Text Book of Environmental Studies. Hyderabad : University Press (India) Private limited, 2005.

Doabia, T. S. Environmental and Pollution Laws in India. New Delhi: Wadhwa and Company, 2005.

Joseph, Benny. Environmental Studies, New Delhi: Tata McGraw-Hill Publishing Company Limited, 2006.

Khan, I.A, Text Book of Environmental Laws. Allahabad: Central Law Agency, 2002.

Leelakrishnan, P. Environmental Law Case Book. 2nd Edition. New Delhi: LexisNexis Butterworths, 2006.

Shastri, S. C (ed). Human Rights, Development and Environmental Law, An Anthology. Jaipur: Bharat law Publications, 2006.

Environmental Pollution by Asthana and Asthana, S, Chand Publication

Environmental Science by Dr. S.R.Myneni, Asia law House

Gurdip Singh, Environmental Law in India (2005) Macmillan.

Shyam Diwan and Armin Rosencranz, Environmental Law and Policy in India – Cases, Materials and Statutes (2nd ed., 2001) Oxford University Press.

JOURNALS :-

Journal of Indian Law Institute, ILI New Delhi.

Journal of Environmental Law, NLSIU, Bangalore.


PRINCIPAL
Govt. Girls College Ambikapur
Distt.-Surguja (C.G.)

MATHEMATICS
SANT GAHIRA GURU VISHWAVIDYALAYA
Sarguja Ambikapur (C.G.)

CHOICE BASED CREDIT SYSTEM
(CBCS)

SYLLABUS
M.Sc. MATHEMATICS

SEMESTER SYSTEM
SESSION 2018-19



For Affiliated Colleges of
SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001

Deputy Registrar
Sant Gahira Guru Vishwavidyalaya
Sarguja, Ambikapur (C.G.)

M.Sc. (Mathematics) SECOND SEMESTER

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours per Week			EoSE Dutation (Hrs.)
				L	T	P	
MSM 201	CCC	Advanced Abstract Algebra (II)	6	4	3	0	3
MSM 202	CCC	Real Analysis (II)	6	4	3	0	3
MSM 203	CCC	Topology (II)	6	4	3	0	3
MSM S02	OSC	Social Outreach And Skill Development	6	0	0	9	0
MSM B01	ECC/CB	Advanced Discrete Mathematics (II)	6	4	3	0	3
MSM B02	ECC/CB	Algebraic Number Theory					
MSM B03	ECC/CB	Complex Analysis (II)					
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30			TOTAL =30				

M.Sc. (MATHEMATICS)
COURSE CODE:MSM201

II SEMESTER
COURSE TYPE: CCC

COURSE TITLE ADVANCED ABSTRACT ALGEBRA - II

CREDITS: THEORY: 6 PRACTICAL : 0	HOURS: THEORY: 90 PRACTICAL : 0
MARKS: THEORY: 100 (20+80)	MARKS: THEORY: 80 PRACTICAL : 0

Unit 1- 18 Hrs.

Localizer and Artinian rings and Modules, Rings - Hilbert Basis theorem. Wedderburn Artin theorem, uniform Modules primary Modules, Noether - Lasker theorem.

Unit 2- 18 Hrs.

Field theory - Extension fields, Algebraic and transcendental extensions, Separable and inseparable extensions.

Unit 3- 18 Hrs.

Normal extensions, Splitting field - perfect fields, Finite field, Primitive Elements, Algebraically closed fields, Automorphisms of extensions.

Unit 4- 18 Hrs.

Galois Field and extensions, Fundamental theorem of Galois theory. Solution of polynomial equations by radicals.

Unit 5- 18 Hrs.

Insolvability of the general equation of degree 5 by radicals, Rational Canonical form, Generalised Jordan form over any field.

SUGGESTED READINGS

1. P.B. Bhattacharya, S.K. Jain. S.R. Nagpaul: Basic Abstract Algebra, Cambridge University press.
2. I.N. Herstein: Topics in Algebra- Wiley Eastern Ltd.

M.Sc. (Mathematics) FOURTH SEMESTER

Course Code	Course Type	Course (Paper/ Subjects)	Credits	Contact Hours per Week			EoSE Duration (Hrs.)	
				L	T	P	Thy	P
MSM401	CCC	Integration Theory and Functional Analysis (II)	6	4	3	0	3	0
MSM402	CCC	Partial Differential Equations & Mechanics (II)	6	4	3	0	3	0
MSM403	CCC	Operations Research (II)	6	4	3	0	3	0
MSM421	OSC	Dissertation	6	0	0	9	0	4
MSMD01	ECC/CB	Numerical Analysis (II)	6	4	3	0	3	0
MSMD02	ECC/CB	Mathematical Modeling						
MSMD03	ECC/CB	Number Theory and Cryptography						
MSMD04	ECC/CB	Fuzzy Sets and their Application- II						
MSMD05	ECC/CB	Computer Fundamental and Programming in C-II						
MINIMUM CREDITS IN INDIVIDUAL SUBJECT IS 6 AND IN COMPLETE SEMESTER IT WOULD BE 30			TOTAL					

M.Sc. (MATHEMATICS)
COURSE CODE: MSM 401

IV SEMESTER
COURSE TYPE: CCC

COURSE TITLE:
INTEGRATION THEORY AND FUNCTIONAL ANALYSIS II

CREDIT:
THEORY: 6 PRACTICAL : 0

HOURS:
THEORY: 90 PRACTICAL : 0

MARKS:
THEORY: 100(20+80) PRACTICAL : 0

UNIT -1 18 HOURS

Uniform boundedness theorem and some of its consequences. open mapping and closed graph theorems.

UNIT -2 18 HOURS

Hahn-Banach theorem for real linear spaces, complex linear spaces and normed linear spaces. Reflexive spaces. weak sequential compactness. Compact operators. Solvability of linear equations in Banach spaces. The closed Range Theorem.

UNIT -3 18 HOURS

Inner product spaces. Hilbert spaces. Orthonormal sets. Bessel's inequality. Complete orthonormal sets and parseval's identity.

UNIT -4 18 HOURS

Structure of Hilbert spaces. Projection theorem. Riesz representation theorem. adjoint of an operator on a Hilbert spaces. Reflexivity of Hilbert spaces.

UNIT -5 18 HOURS

Self-adjoint operators, Positive, projection, normal and unitary operators. Abstract variational boundary-value problem. the generalized lax-Milgram theorem.

SOCIOLOGY
SANT GAHIRA GURU VISHWAVIDYALAYA
Sarguja Ambikapur (C.G.)
CHOICE BASED CREDIT SYSTEM
(CBCS)

SYLLABUS
M.A. SOCIOLOGY

SEMESTER SYSTEM
SESSION 2018-19



For Affiliated Colleges of
SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001

M.A. SOCIOLOGY SECOND SEMESTER		COURSE TYPE : CCC	
COURSE CODE : MAS201		I - COURSE TITLE : CLASSICAL SOCIOLOGICAL THINKERS	
HOURS : THEORY :	PRACTICAL :	HOURS : THEORY :	PRACTICAL :
90		90	
MARKS : THEORY :	PRACTICAL :	MARKS : THEORY :	PRACTICAL :
20		20	
<p>OBJECTIVE : To give a basic understanding of sociology. To know the meaning and subject matter of sociology. To understand the nature of scientific study. To know the nature and scope of sociology. To study the contribution of early sociologists towards the development of sociology.</p> <p>Auguste Comte- positivism, Enlightenment and Conservative Reaction; Contribution to the subject matter of sociology; social static and social Dynamics.</p> <p>Emile Durkheim: Division of Labour in the Capitalist Society, Mechanical and Organic solidarities; Theory of suicide; Theory of Religion : Sacred and Profane. Contribution to the methodology of Sociology : Concept of Social Fact.</p> <p>Karl Marx : Marx's Theory of Social Change; Dialectical Materialism as a Perspective of Explaining Transformation of Human Society through Different Stages; Theory of Capitalist Development, Class and Class Conflict, Alienation and its Social Implications.</p> <p>Max weber : Theory of Social Action and its types; Analysis of modern capitalism; Protestant ethics and spirit of capitalism; Power, Status and Authority : Authority and its types, Theory of Bureaucracy. Contribution to the Methodology of Social Science: Value Neutrality and Ideal types</p>			

M.A. SOCIOLOGY SECOND SEMESTER (CBCS)

Course Code	Course Type	Course(Paper /Subjects) Compulsory paper	Credits	Contact Hours Per Week			Eose Duration (Hrs.)		Marks	
				L	T	P	Thy	P	SEE	IA
MAS 101	CCC	CLASSICAL SOCIOLOGICAL TRADITION	6	4	3	00	3	0	70	30
MAS102	CCC	SOCIAL ANTHROPOLOGY	6	4	3	00	3	0	70	30
MAS103	CCC	SOCIAL CHANGE IN INDIA	6	4	3	00	3	0	70	3
MAS111	CCC	FIELD WORK	6	00	00	08	0	3	100	00
		OPTIONAL PAPER								
MAS02	ECC/CB	GENDER AND SOCIETY	6	4	3	00	3	00	70	00
MAS405	ECC/CB	URBAN SOCIOLOGY	6	4	3	00	3	00	70	00

Recommended	UNIT-5/ 18 Hours
<ol style="list-style-type: none"> 1. Banks, J.A., 1972; The Sociology of Social Movements(London : Macmillan) 2. Desai, A.R., Ed., 1979; Peasant Struggles in India (Bombay : Oxford University Press) 3. Danagare, D.N., 1983; Peasant Movements In Indian 1920-1950 (Delhi : Oxford University Press. 4. Gore, M.S., 1993; The Social Context of an Ideology : Ambedkar's Political and Social 5. Oomen, T.K., 1990 : Protest and Change : Studies in Social Movements (Delhi : Sage). 	New Social Movements a. Dalit b. Woman c. Ethnic d. Environmental

PART-4

M.A. SOCIOLOGY FOURTH SEMESTER (CBCS)

Course Code	Course Type	Course(Paper /Subjects)	Credits	Contact Hours Per Week			Eose Duration (Hrs.)		Marks	
				L	T	P	Thy	P	SEE	IA
		Compulsory paper		L	T	P	Thy	P		
				L	T	P	Thy	P		
MAS 401	CCC	MODERN SOCIOLOGICAL THEORY	6	4	3	00	3	0	70	30
MAS 402	CCC	COMPARATIVE SOCIOLOGY	6	4	3	00	3	0	70	30
MAS 303	CCC	CRIMINOLOGY-II	6	4	3	00	3	0	70	30
MAS 304	PRJ/SSC	DISSERTATION	6	4	3	00	3	0	70	30
		OPTIONAL PAPER								
MASD01	ECC/CB	URBAN SOCIETY IN INDIA	6	4	3	00	3	0	70	30
MAD02	ECC/CB	SOCIOLOGY OF DISASTER MGT. AND DISASTER PLANNING	6	4	3	00	3	0	70	30

सरगुजा विश्वविद्यालय
अम्बिकापुर (सरगुजा-छ.ग.)

(छ.ग. विश्वविद्यालय अधिनियम क्र. 18/2008 द्वारा स्थापित व निगमित)



पाठ्यक्रम

BACHELAR OF COMPUTER APPLICATION (BCA)

DIPLOMA IN COMPUTER APPLICATION (DCA)

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION (PGDCA)

परीक्षा वर्ष : 2011

कुलसचिव
सरगुजा विश्वविद्यालय, अम्बिकापुर
छत्तीसगढ़

S. K. Gupta
Asstt. Professor (Maths)
Govt. RMD. Girls P. G. Coliege
Ambikapur, Distt.-Surguja (C.G.)

मूल्य : 30/-

Deputy Registrar
Sant Gahlra Guru Vishwavidyalaya
Surguja, Ambikapur (C.G.)

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION, 2010-2011
[DURATION - ONE YEAR - FULL TIME]

The duration of the course shall be one year consisting of two semesters. There shall be three theories and two practical courses in the each semester. There shall be grading system of awards.

FIRST SEMESTER

PGDCA	:	Introduction to software organization.
PGDCA	:	Programming in "C" & "C++".
PGDCA	:	DBMS (SQL/Oracle).

INTRODUCTION TO SOFTWARE ORGANISATION

- 1. Introduction to Computers**
Computers – Introduction, Computer System Characteristics, Strength and Limitations of Computer, Development of Computers, Types of Computers, Generations of Computers.
Introduction to Personnel Computers – Uses of PC's, Components of PC's, Evolution of PC's, Developments of Processors, Architecture of Pentium IV, Configuration of PC's; Input Device; Output Devices.
- 2. Computer Organization**
Central Processing Unit – Arithmetic Logic Unit, Control Unit, Registers, Instruction Set, Processor speed.
Storage Devices – Storage and its need, Storage Evaluation Units, Primary Storage, Secondary Storage, Data Storage and Retrieval Systems, SIMM, DIMM, Types of Storage Devices.
- 3. Computer Software**
Basics of Software – needs of Software, Types of Software; Free Domain Software; Open Source Software; Compiler, Interpreter and Assembler; Linker and Loader; Debugger; Integrated Development Environment;
Operating System – Introduction, Uses of OS, Functions of OS, Booting process, Types of Reboot, Booting from different OS, Types of OS, DOS, Windows, Linux.
Programming Languages – Introduction, Comparison between Human and Computer Language; Program; Data, Information and Knowledge; Characteristics of Information; Types of Programming Languages; Generations of Languages; Program Development Steps; Programming Paradigms; Object-Oriented Programming; Structured Programming, Functional Programming, Process Oriented Programming.
- 4. Communication, Networks and Internet**
Communication – Introduction, Communication process, Communication Types, Communication Protocols, Communication Channels/Media.
Networks – Introduction; Types of Network; Topology; Media - NIC, NOS, Bridges, HUB, Routers, Gateways.
Internet – Introduction, Growth off Internet, Owner of Internet, Internet Service Provider, Anatomy of Internet, ARPANET and Internet History of World Wide Web, Services Available on Internet - File Transfer Protocol, Gopher, E-mail, Telnet, Newsgroups, WWW, Archie, Whols, WAIS, Veronica, Internet Relay Chat, Basic Internet Terminologies, Net Etiquette, Applications of Internet. Applications of Computers and Information Technology.
- 5. Linux**
Open source Software concept and evolution of Linux; Features of Multi-User Operating System; Structure of Linux OS; Security Features of Linux, File System, Directory Structure and related commands. Linux Editors & editor commands, Linux commands cd, md, rm, mv, cp, ls, cat, find, grep.

3. Mastering in C++ - Venugopal
 4. Let us C ++ - Yashwant Kanitkar

DBMS (SQL/Oracle)

1. **Introduction To DBMS:** - Purpose of database systems, views of data, Data Modeling, Database Languages, Transaction Management, Storage Management, Database Administrator and User, Database System Structure.
2. **E-R Model:** - Basic concepts, Constraints, Keys, Mapping Constraint, E-R Diagram, Weak and Strong Entity sets, E-R Database Schema, Reduction of an E-R Schema to Table.
3. **Relational Model:** Structure to Relational Database, Relational Algebra, The Domain Relational Calculus, Extended Relational- Algebra Operation, Modification of database, Views.
4. **Relational Database Design:** - Pitfalls in Relational Database Design, Decomposition, Functional Dependencies, Normalization: 1NF, 2NF, BCNF, 3NF, 4NF, 5NF.
5. **Introduction to RDBMS Software - Oracle**
 - 5.1 **Introduction:** - Introduction to personnel and Enterprises Oracle, Data Types, Commercial Query Language, SQL, SQL* PLUS.
 - 5.2 **DDL and DML:** Creating Table, Specify Integrity Constraint, Modifying Existing Table, Dropping Table, Inserting, Deleting and Updating Rows in as Table, Where Clause, Operators, ORDER BY, GROUP Function, SQL Function, JOIN, Set Operation, SQL Sub Queries, Views: What is Views, Create, Drop and Retrieving data from views.
 - 5.3 **Security:** - Management of Roles, Changing Password, Granting Roles & Privilege, with drawing privileges.
 - 5.4 **PL-SQL/TSQL:** Block Structure in PL-SQL/TSQL, Variable and constants, Running PL-SQL/TSQL in the SQL *PLUS, Data base Access with PL-SQL/TSQL, Exception Handling, Record Data type in PL-SQL/TSQL, Triggers in PL-SQL/TSQL.

Suggested Books :

- | | | |
|--|---|-----------------------|
| 1. Data base system | : | Korth & Silberschatz. |
| 2. Data Base Management System | : | Alexies & Mathews |
| 3. An Introduction to Data base System | : | C.J. Date |
| 4. Data Base Management System | : | Raguramakrishnan. |
| 5. Data Base Management System | : | Elmasri & Nawathe. |

PRACTICAL

Note- Syllabus of Practical Exam - "Office Automation" is as follows, also the contents of **DBMS (SQL/Oracle)** should be included for practicals.

1. **Windows 98/XP/2000**
 Windows Concepts, Features, Structure, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin.
 Accessories : Calculator, Notepad, Paint, WordPad, Character Map.
 Explorer : Creating folders and other Explorer facilities.
 Object Linking & Embedding, Understanding OLE, Embed/Ling Using Cut and Paste, Object, Manage Embedded/Linked Object.
 Communication : Dialup Networking, Phone Dialer.
 Installation of various devices and Operating system like Windows/Linux.
2. **Office S/W : Word Processing, Spreadsheet, Power Point & Outlook Express**
Word : Creating, Editing, & Previewing Documents, Formatting, Advanced Features, Using Thesaurus, Mail Merge, Table & Charts, Handling Graphics, Converting Word Documents into other Formats.
Excel : Worksheet Basics, Creating, Opening, & Moving in Worksheet, Working with Formula & Cell referencing, Absolute & Relative addressing, Working with Ranges,

Formatting of Worksheet, Graphs & Charts, Database, Function, and Macros.

Power Point : Creating a presentation, Modifying visual Elements, Adding objects, Applying Transitions, animations and linking, Preparing handouts, presenting a slide show.

Outlook Express : Configuring mail-Inbox, Outbox, Drafts, (To, Cc, Bcc); Understanding & maintaining address book/Contacts, POP, IAMP, calendar/scheduler.

3. **Foxpro**

Preparing Database files, access & retrieval of records in a data base file, inserting & deleting of records. Programming preliminaries. Sorting & Indexing. Development of programs LOOPING, Branching, report making.

4. **Tally**

Setting up Ledger & Groups. Study of recording of transactions in the 'Voucher'. (According to Golden rules). Study of 'Final A/C preparation & displaying in different mode/format'. Study of alteration & Deletion of ledger/Groups. Study of cash & fund flow, day book, sales register, purchase register, bills receivable/Payable etc. Study of data security & backing up data. Outline of entry for Income Tax, ED, VAT, ST/ CST, PF, Gratuity, Bonus, Loans & Depreciation etc.

[Practical Exams to be conducted to test the proficiency of the candidate in each of the above syllabus-modules including the practicals based on DBMS (SQL/Oracle)]

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION, 2010-2011
[DURATION - ONE YEAR - FULL TIME]

The duration of the course shall be one year consisting of two semesters. There shall be three theory and two practical course in the each semester. There shall be grading system of awards.

SECOND SEMESTER :

PGDCA	:	GUI - Programming in Visual Basic.
PGDCA	:	Programming in Java.
PGDCA	:	Electives 1. Essential of E -Commerce .
PGDCA	:	Practicals based
PGDCA	:	Project

GUI - PROGRAMMING IN VISUAL BASIC

1. **Introduction to visual Basic**

Editions of Visual Basic, Event Driven Programming, Terminology, Working environment, project and executable files ,Understanding modules, Using the code editor window, Other code navigation features, Code documentation and formatting, environment options, code formatting option, Automatic code completion features.

2. **Creating Programs**

Introduction to objects, Controlling objects, Properties, methods and events, Working with forms, Interacting with the user: MsgBox function, InputBox function, Code statements, Managing forms, Creating a program in Visual Basic, Printing.

3. **Variable and Procedures**

Overview of variables, Declaring, Scope, arrays, User-defined data types, constants working with procedures, Working with dates and times, Using the Format function, Manipulating text strings.

4. **Controlling Program Execution**

Comparison and logical operators, If...Then statements, Select Case Statements looping structures, Using Do...Loop structures, For...Next statement, Exiting a loop.

SUGGESTED READINGS	UNIT-5- 18 Hours	UNIT-4- 18-Hours	UNIT-3- 18 Hours	UNIT-2- 18 Hours
Aslana (1974) Women's Movement in India. Vikash Delhi. Anthony, M.L. (1985). Women's Rights: Dialogue, New Delhi. Baker, H.A. Bertheide, G. W and Others (Eds) (1980). Women Today. A multi disciplinary approach to Women's Studies. Brooks and Cole Publication.	<ul style="list-style-type: none"> Women Identity - Educational opportunities and sex based education Employment Women politics Legal status of women 	<ul style="list-style-type: none"> Problems and issues related to women in India Female mortality Female feticide, infanticide Socialization of girl child Downy Violence Child marriage 	<ul style="list-style-type: none"> Role of women in national development Women in family and community: Demographic changes menarche, marriage, fertility, morbidity, mortality, life expectancy, sex ratio, aging, widowhood. Women in society: Women's role, their resources, and contribution to family 	<ul style="list-style-type: none"> Understanding concepts related to gender differences from social and developmental perspective. Patriarchy Caste, class culture and gender interface Gender and education Economic empowerment and gender Development processes and programs from women's perspective.

M. Sc. in HOME SCIENCE (HUMAN DEVELOPMENT)
SECOND SEMESTER (EVEN SEMESTER)

FACULTY OF SCIENCE

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
After the first semester examination After a number of back/answer papers	HHD 201	CCC	ADOLESCENT PSYCHOLOGY	5	4	2	00	3	00
	HHD 211	CCC	ADOLESCENT PSYCHOLOGY- LABORATORY WORK	2	00	00	3	00	3
	HHD 202	CCC	MANAGEMENT AND PROJECT PLANNING	5	4	2	00	3	0
	HHD 212	CCC	MANAGEMENT AND PROJECT PLANNING-LABORATORY WORK	2	00	00	3	00	3
	HHD 203	CCC	NUTRITION FOR HEALTH OF WOMEN AND CHILDREN	5	4	2	00	3	0
	HHD 213	CCC	NUTRITION FOR HEALTH OF WOMEN AND CHILDREN- LABORATORY WORK	2	00	00	3	00	3
	HHD 221	PRJ/FST/EST	SOCIAL OUTREACH AND SKILL DEVELOPMENT	6	00	00	9	00	4
	HHD B01	ECC/CB	ENVIRONMENTAL AND FOREST LAWS	6	4	3	00	3	00
			CHILD AND HUMAN RIGHTS						
				TOTAL=	33				

M.Sc IN HOME SCIENCE (HUMAN DEVELOPMENT) IIIrd SEMESTER		
COURSE CODE: HHD21		COURSE TYPE: ECC/CB
COURSE TITLE : SOCIAL OUTREACH AND SKILL DEVELOPMENT LABORATORY WORK		
CREDIT: 6		HOURS: 135
THEORY: 6	THEORU: 0	PRACTICAL:135
THEORY: 100 (20+80)		PRACTICAL:0
MARKS : 100		
<p>OBJECTIVE: The aim of the project work or field work is to introduce students the research methodology in the subject and to prepare them for the pursuing theoretical or computational areas of the subject.</p>		
<p>Preparation of reports on following issues experimental assets — river/ forest/grassland/hill/mountain etc. • Environmental pollution - Urban/ Rural/ Industrial/Agricultural/mining • Study of common plants/ insects / birds / wild lives etc. • Study of simple ecosystems — pond/ river / hill slopes, etc. • Human population & Environment • Municipal Solid waste management and handling.</p>		
<p>Visit to mently Related Centre, Childcare Centre, Hospital, Welfare Centre, Juvenile court Social welfare centres etc. Anganwadi Centres, etc. pre school Centre, Old Home, Women Welfare Centre.</p>		

FACULTY OF SCIENCE

M. Sc. In HOME SCIENCE (HUMAN DEVELOPMENT)
 THIRD SEMESTER (ODD SEMESTER)

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
After the completion of the course, the student should be able to:	HHD 301	CCC	PRINCIPLES OF GUIDANCE AND COUNSELING	5	4	2	00	3	00
	HHD 311	CCC	PRINCIPLES OF GUIDANCE AND COUNSELING-LABORATORY WORK	2	00	00	3	00	3
	HHD 302	CCC	ADVANCED STUDY IN HUMAN DEVELOPMENT	5	4	2	00	3	00
	HHD 312	CCC	ADVANCED STUDY IN HUMAN DEVELOPMENT -LABORATORY WORK	2	00	00	3	00	3
	HHD 303	CCC	CHILDHOOD PSYCHOPATHOLOGY	5	4	2	00	3	00
	HHD 313	CCC	CHILDHOOD PSYCHOPATHOLOGY-LABORATORY WORK	2	00	00	3	00	3
	HHD S02	OSC	INTELLECTUAL PROPERTY, HUMAN RIGHTS & ENVIRONMENT: BASICS	6	4	3	00	3	00
	HHD C01	ECC/CB	TRIBAL STUDIES	6	4	3	00	3	00
			Anthropological & Cross-Cultural Perspectives in Human Development						
TOTAL= 33									

M. Sc. in HOME SCIENCE (HUMAN DEVELOPMENT)
FOURTH SEMESTER (EVEN SEMESTER)

FACULTY OF SCIENCE

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs)	
					L	T	P	Thy	P
Allow appearing in the Third semester examination irrespective of any number of back/ arrears papers	HHD 401	CCC	METHODS OF STUDYING HUMAN DEVELOPMENT	5	4	2	00	3	00
	HHD 411	CCC	METHODS OF STUDYING HUMAN DEVELOPMENT-LABORATORY WORK	2	00	00	3	00	3
	HHD 402	CCC	PERSONS WITH DISABILITIES	5	4	2	00	3	00
	HHD 412	CCC	PERSONS WITH DISABILITIES-LABORATORY WORK	2	00	00	3	00	3
	HHD 403	CCC	STUDY OF FAMILY IN SOCIETY	5	4	2	00	3	00
	HHD 413	CCC	STUDY OF FAMILY IN SOCIETY-LABORATORY WORK	2	00	00	3	00	3
	HHD 404	SSCPRI	DISSERTATION AND CURRENT TRENDS IN RESEARCHES IN HUMAN DEVELOPEMENT	6	00	00	9	00	4
	HHD 405	ECCICB	STATISTICS AND COMPUTER APPLICATION	6	4	3	00	3	00
				TOTAL=					
				33					

UNIT-3 18 Hours	Important domains in study of Cultural Psychology Socialization: Cross-cultural approaches to child rearing Language: Modes of representation, speech, communication and art. Semantics of culture: critical words, meaning making. Personality: Culture and personality Cognition: Perception, memory
UNIT-4 18 Hours	
UNIT-5 18 Hours	Socio-historical approach Personal and Collective culture: Individual, other groups, humanity theoretical and Methodological issues in the study of and Psychology/theoretical and Methodological issues in the study and Psychology
SUGGESTED READINGS	<ol style="list-style-type: none"> 1. Conservation Biology in Theory and Practice, Caughley, G., and A. Gunn. Blackwell Science, Cambridge, Massachusetts, U.S.A., 1996. 2. Conservation Biology: Concepts and Applications., Cox, G. W. McGraw-Hill, Dubuque, Iowa, U.S.A., 2005 3. Wildlife Biology, 2nd ed. John Wiley & Sons, Dasmann, Raymond Fredric, NY, 1981. Conservation and Biodiversity. Scientific American Library, Dobson, A. P. New York, New York, U.S.A., 1996. 4. Fundamentals of Conservation Biology, Blackwell Science, Malden, Massachusetts, U.S.A. 5. Biodiversity and Conservation, Jeffries, M. J., Routledge, New York, New York, U.S.A., 1997.

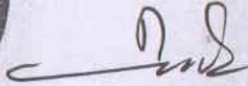
BOTANY
SANT GAHIRA GURU VISHWAVIDYALAYA
Sarguja Ambikapur (C.G.)

CHOICE BASED CREDIT SYSTEM
(CBCS)

SYLLABUS
M.Sc. BOTANY

SEMESTER SYSTEM
SESSION 2018-19




Deputy Registrar
Sant Gahira Guru Vishwavidyalaya
Sarguja, Ambikapur (C.G.)

For Affiliated Colleges of
SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001

Third Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ABC 301		CCC	6	4	2	0	3	0
2.	ABC 302		CCC	6	4	2	0	3	0
3.	ABC 303		CCC	6	4	2	0	3	0
4.	ABC S02		OSC	6	4	2	0	3	0
5.	ABC A03/B03/C03/D03/E03/F03		ECC	6	4	2	0	3	0
				30					

Fourth Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ABC 401		CCC	6	4	2	0	3	0
2.	ABC 402		CCC	6	4	2	0	3	0
3.	ABC 403		CCC	6	4	2	0	3	0
4.	ABC 421		PRJ/FST/EST	6	4	2	0	3	0
5.	ABC A04/B04/C04/D04/E04/F04		ECC	6	4	2	0	3	0
				30					

XXXII

M.Sc. in Botany
FIRST SEMESTER (ODD SEMESTER)

Bachelor Degree in any Science (Pure & Bioscience)	1) Merit List 2) Entrance Test (written and oral) if decided by the University 3) Observance of Reservation Policy.	MBT101	CCC	CELL AND MOLECULAR BIOLOGY	5	4	2	0	3	0
		MBT111	CCC	CELL AND MOLECULAR BIOLOGY (PRACTICAL)	2	00	00	3	0	3
		MBT102	CCC	GENETICS AND CYTOGENETICS	5	4	2	0	3	0
		MBT112	CCC	GENETICS AND CYTOGENETICS (PRACTICAL)	2	00	00	3	0	3
		MBT103	CCC	PHYSIOLOGY AND BIOCHEMISTRY	5	4	2	0	3	0
		MBT113	CCC	PHYSIOLOGY AND BIOCHEMISTRY (PRACTICAL)	2	00	00	3	0	3
		MBT S01	OSC	RESEARCH METHODOLOGY & COMPUTER APPLICATION: BASICS	6	4	3	00	3	00
		MBT A01	ECC/CB	CONSTITUTIONALISM & INDIAN POLITICAL SYSTEM	6	4	3	00	3	00
		MBT A02	ECC/CB	RECOMBINANT DNA TECHNOLOGY AND PROTEOMICS	6	4	3	00	3	00
				TOTAL=	33					

IVTH SEMESTER	
COURSE CODE: MBT301	COURSE TYPE: CCC
COURSE TITLE: IN VITRO TECHNOLOGIES AND INDUSTRIAL APPLICATIONS	
CREDIT: 7	HOURS: 135
THEORY: 90	PRACTICAL: 45
MARKS	
THEORY: 100 (20*80)	PRACTICAL: 33
OBJECTIVE : This course is aimed towards generating fundamental knowledge, concepts and dimensions of Botany/Plant Science.	
UNIT-1 18 Hours	To provide students with an overview of plant tissue culture techniques, their potential in the production of propagative material and interaction with industries) Micropropagation (via organogenesis and embryogenesis) of floricultural, agricultural and pharmaceutical crops: Orchids, Chrysanthemum, Gerbera, Carnation, Anthurium, Bamboos, Splanthes, Stevia, Psoralea, Chickpea and elite tree species of national importance
UNIT-2 18 Hours	Production of virus free plants through meristem culture in orchids and fruit trees. Germplasm conservation <i>in vitro</i> . Germplasm conservation <i>in vivo</i>
UNIT-3 18 Hours	Variations: Somaclonal and gametoclonal variations, spontaneous, genetic and epigenetic variations. Culture systems: Differentiated, undifferentiated, physiological, biochemical and molecular role of minerals and growth regulators in understanding differentiation of organs under <i>in vitro</i> conditions.
UNIT-4 18 Hours	Problems in Plant Tissue Culture: contamination, phenolics, recalcitrance. Problems in establishment of regenerated plants in nature: hardening, association of mycorrhiza and rhizobia. Factors responsible for <i>in vitro</i> and <i>ex vitro</i> hardening.
UNIT-5 18 Hours	Use of bioreactors in secondary metabolite production and scale up automation of plant tissue culture. Recent applications of tissue culture techniques and biotechnology in the introduction of economically important traits in horticultural, agricultural and medicinal plants. Interactions, training and workshops in Biotech industries and placements.

M. Sc. in BOTANY
FOURTH SEMESTER (EVEN SEMESTER)

FACULTY OF SCIENCE

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
After appearing in the Third semester examination irrespective of any number of back/ arrear papers	MBT 401	CCC	IN VITRO TECHNOLOGIES AND INDUSTRIAL APPLICATIONS	5	4	2	00	3	00
	MBT 411	CCC	IN VITRO TECHNOLOGIES AND INDUSTRIAL APPLICATIONS (PRACTICAL)	2	00	00	3	00	3
	MBT 40A2	CCC	REPRODUCTIVE BIOLOGY OF FLOWERING PLANTS	5	4	2	00	3	00
	MBT 412	CCC	REPRODUCTIVE BIOLOGY OF FLOWERING PLANTS	2	00	00	3	00	3
	MBT 403	CCC	MOLECULAR INTERACTIONS OF PLANTS WITH SYMBIONTS, PATHOGENS & PESTS	5	4	2	00	3	00
	MBT 413	CCC	MOLECULAR INTERACTIONS OF PLANTS WITH SYMBIONTS, PATHOGENS AND PESTS (PRACTICAL)	2	00	00	3	00	3
	MBT 421	SSC/PRJ	DISSERTATION	6	00	00	9	00	4
	MBT D01	ECC/CB	ADVANCED GENETICS AND PLANT BREEDING	6	4	3	00	3	00
	MBT D02	ECC/CB	AGRICULTURAL ECOLOGY - PRINCIPLES AND APPLICATIONS						
	MBT D03	ECC/CB	ADVANCED PLANT SYSTEMATICS						
	MBT D04	ECC/CB	CONTEMPORARY CONCEPTS AND METHODS IN CELL BIOLOGY						
	MBT D05	ECC/CB	PLANT PHYSIOLOGY AND BIOCHEMISTRY						
				Total=33					

III RD SEMESTER	
COURSE TYPE: CCC	
COURSE CODE: MBT301	
COURSE TITLE: ALGAE, ENVIRONMENT AND HUMAN WELFARE	
CREDIT:7	
HOURS:135	
THEORY: 5	PRACTICAL: 45
MARKS	
THEORY: 100 (20+80)	
PRACTICAL:33	
OBJECTIVE : This course is aimed towards generating fundamental knowledge, concepts and dimensions of Botany/Plant Science.	
UNIT-1 18 Hours	Diversity and distribution of the algae: Thallus organization, cell structure and reproduction in various groups. Chlamydomonas and Porphyra as modern experimental systems.
UNIT-2 18 Hours	Classification : Molecular taxonomy – recent developments in algal classification, special emphasis on emerging trends in molecular phylogeny and inter relationship of principal groups of algae. The following groups will be covered: Cyanophyta, Chlorophyta, Phaeophyta and Rhodophyta.
UNIT-3 18 Hours	Algal Biotechnology : Historical perspectives, algal culturing techniques in the laboratory, tissue and cell culture studies in seaweeds.
UNIT-4 18 Hours	Cryopreservation, aquaculture (micro and macro algae cultivation), bioremediation, recent developments and future of algal biotechnology: Algal biofuels – algal biodiesel, bio-ethanol and biological hydrogen production; Algae in global warming – carbon capture by algae.
UNIT-5 18 Hours	Industrial Phycology : Products, processes and applications, seaweeds polysaccharides like Agar, Carrageenan and Alginates. Bioactive compounds from algae: Bio-fertilizers; Algae in bioengineering, photo-bioreactors and raceway ponds.

- M. Sc. In BOTANY
- THIRD SEMESTER (ODD SEMESTER)

FACULTY OF SCIENCE

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
After appearing in the Second semester examination irrespective of any number of back/ arrears papers.	MBT 301	CCC	ALGAE, ENVIRONMENT AND HUMAN WELFARE	5	2	00	3	00	00
	MBT 311	CCC	ALGAE, ENVIRONMENT AND HUMAN WELFARE (PRACTICAL)	2	00	00	3	00	3
	MBT 302	CCC	PRINCIPLES OF ECOLOGY	5	4	2	00	3	00
	MBT 312	CCC	PRINCIPLES OF ECOLOGY (PRACTICAL)	2	00	00	3	00	3
	MBT 303	CCC	ADVANCES IN ARCHEGONIATAE	5	4	2	00	3	00
	MBT 313	CCC	ADVANCES IN ARCHEGONIATAE (PRACTICAL)	2	00	00	3	00	3
	MBT 502	OSC	INTELLECTUAL PROPERTY, HUMAN RIGHTS & ENVIRONMENT, BASICS	3	4	3	00	3	00
	MBT C01	ECC/CB	TRIBAL STUDIES	6	4	3	00	3	00
	MBT C02	ECC/CB	MICROBES AND MICROBIAL TECHNOLOGY						
	MBT C03	ECC/CB	EVOLUTIONARY BIOLOGY						
	MBT C04	ECC/CB	BIOINFORMATICS, COMPUTATIONAL BIOLOGY AND BIostatISTICS						
	MBT C05	ECC/CB	GENOMICS AND PROTEOMICS						
	MBT C06	ECC/CB	IMMUNOLOGY						
				TOTAL=	33				

M.Sc.(BOTANY)		1 ST SEMESTER	
COURSE CODE: MBT202		COURSE TYPE: ECC	
COURSE TITLE: RECOMBINANT DNA TECHNOLOGY AND PROTEOMICS			
CREDIT: 6		HOURS: 90	
THEORY: 6		THEORY: 90	PRACTICAL: 00
		MARKS	
		THEORY: 100 (20+80)	PRACTICAL: 00
OBJECTIVE: This course is aimed towards generating fundamental knowledge, concepts and dimensions of Botany/ Plant Science.			
UNIT-1 18 Hours	Principles and tools of recombinant DNA technology : Restriction and nucleic acid modifying enzymes; restriction mapping.		
UNIT-2 18 Hours	Principles of gel electrophoresis; choice of vectors; plasmids, phages, cosmids, plant viruses, synthetic DNA vectors;		
UNIT-3 18 Hours	DNA and genomic libraries; Isolation of specific genes from bacteria and higher plants; cloning; PCR and its applications; Principles of DNA sequencing.		
UNIT-4 18 Hours	Proteomics : Comparative account of translation in prokaryotes and eukaryotes, post-translational modifications, Use of vectors for over-expression of proteins, Protein extraction/purification techniques etc.,		
UNIT-5 18 Hours	Electrophoresis and column chromatography, Introduction to proteome and proteomics and its relevance/significance in the post genomic era, Proteomics as a tool for plant genetics, breeding and diversity studies.		
SUGGESTED READING	<ol style="list-style-type: none"> 1. Buchanan B, Gruissem G and Jones R (2000). Biochemistry and Molecular Biology of Plants, American Society of Plant Physiologists, USA. 2. Harlow and Lane D (Eds), (1988). Antibodies - A Laboratory Manual; Cold Spring Harbor Laboratory, USA. 3. Lieber DC (2006). Introduction to Proteomics: Tools for New Biology; Humana Press, NJ. 4. Pennington SR, Dunn MJ (Eds.), (2002). Proteomics: From Protein Sequence to Function, BIOS Scientific Publishers, United Kingdom. 5. Sambrook J and Russell DW (2001). Molecular Cloning - A Laboratory Manual, Vols I-III, Cold Spring Harbor Laboratory, USA. 6. Singer M and Berg P (1991). Genes and Genomes: A Changing Perspective; University Science Books, CA, USA. 		

FACULTY OF SCIENCE

M.Sc. in BOTANY
SECOND SEMESTER (EVEN SEMESTER)

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Try	P
After appearing in the First semester examination irrespective of any number of back/ arrears papers			DEVELOPMENTAL BIOLOGY	6	4	2	00	3	00
	MBT201	CCC	DEVELOPMENTAL BIOLOGY (PRACTICAL)	2	00	00	3	00	3
	MBT211	CCC	PATHOGENS AND PESTS OF CROP PLANTS	5	4	2	00	3	0
	MBT202	CCC	PATHOGENS AND PESTS OF CROP PLANTS (PRACTICAL)	2	00	00	3	00	3
	MBT212	CCC	PLANT BIOTECHNOLOGY AND RESOURCE UTILIZATION	5	4	2	00	3	0
	MBT203	CCC	PLANT BIOTECHNOLOGY AND RESOURCE UTILIZATION (PRACTICAL)	2	00	00	3	00	3
	MBT213	CCC	SOCIAL OUTREACH AND SKILL DEVELOPMENT	6	00	00	6	00	4
	MBT 221	PR/JPST/EST	ENVIRONMENTAL AND FOREST LAWS	6	4	3	00	3	00
	MBT B01	ECC/CB	SYSTEMATICS, EVOLUTION AND ENVIRONMENTAL SCIENCE	TOTAL = 33					
	MBT B02	ECC/CB							

न्यू
सामग्री
सॉस के लिए
● ५-६ फॉक
पीज्जा के लिए
कर सुखाये
● ५-६ ऑर्गो
● नमक

स्वाद और सेहत का भरपूर
मजा, परेशिये न्यूट्रला सोसा
का हेल्दी पीज्जा.

M.Sc. Home Science (Food & Nutrition)
SANT GAHIRA GURU VISHWAVIDYALAYA
Sarguja Ambikapur (C.G.)

**CHOICE BASED CREDIT SYSTEM
(CBCS)**

SYLLABUS

M.Sc.Home Science (Food & Nutrition)

**SEMESTER SYSTEM
SESSION 2018-19**



[Signature]
Deputy Registrar
Sant Gahira Guru Vishwavidyalaya
Sarguja, Ambikapur (C.G.)

For Affiliated Colleges of
SANT GAHIRA GURU VISHWAVIDYALAYA
Ambikapur (C.G.) -497001

Third Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
1.	ABC 301		CCC	6	4	2	0	3	0
2.	ABC 302		CCC	6	4	2	0	3	0
3.	ABC 303		CCC	6	4	2	0	3	0
4.	ABC S02		OSC	6	4	2	0	3	0
5.	ABC A03/B03/C03/D03/E03/F03		ECC	6	4	2	0	3	0
				30					

Fourth Semester Structure Table

S. No.	Subject Code	Course Title	Course Type	Credit	Contact Hours Per week			EoSE Duration (Hrs.)
					L	T	P	
1.	ABC 401		CCC	6	4	2	0	3
2.	ABC 402		CCC	6	4	2	0	3
3.	ABC 403		CCC	6	4	2	0	3
4.	ABC 421		PRU/FST/EST	6	4	2	0	3
5.	ABC A04/B04/C04/D04/E04/F04		ECC	6	4	2	0	3
				30				

FIRST SEMESTER ODD SEMESTER

Eligibility Criteria (Qualifying Exams)	Admission Criteria	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
						L	T	P	Thy	P
Ment List (1) Entrance Test (written or/and oral) if decided by the University (2) Observation of Reservation Policy. (3)		HSc 101	CCC	PHYSIOLOGY	5	4	2	0	3	0
		HSc 111	CCC	PHYSIOLOGY-LABORATORY WORK	2	00	00	3	0	3
		HSc 102	CCC	FOOD MICROBIOLOGY	5	4	2	0	3	0
		HSc 112	CCC	FOOD MICROBIOLOGY-LABORATORY WORK	2	00	00	3	0	3
		HSc 103	CCC	PROBLEMS IN HUMAN NUTRITION	5	4	2	0	3	0
		HSc 113	CCC	PROBLEMS IN HUMAN NUTRITION- LABORATORY WORK	2	00	00	3	0	3
		HSc S01	OSC	RESEARCH METHODOLOGY & COMPUTER APPLICATION: BASICS	6	4	3	00	3	00
		HSc A01	ECC/CB	CONSTITUTIONALISM & INDIAN POLITICAL SYSTEM	6	4	3	00	3	00
				PUBLIC NUTRITION						
				TOTAL=		33				

SUGGESTED READINGS	UNIT-5- 18 Hours
PREVENTIVE AND SOCIAL MEDICINE - J.E. Park, Universal Publication Public Nutrition MFN - 06 IGNOU Public Nutrition Manual, IGNOU New Delhi	UNIT-V: 12. Communication for Health Education. 13. Health planning in India. 14. Health Care of the Community Concept of health care, health system, level of health care.

M.Sc FEM Second Sem.

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs)		
					L	T	P	Thy	P	
After appearing in the First semester examination, irrespective of any number of back/answer papers	HSc 201	CCC	FOOD SCIENCE	5	4	2	00	3	00	
	HSc 211	CCC	FOOD SCIENCE-LABORATORY WORK	2	00	00	3	00	3	
	HSc 202	CCC	FOOD CHEMISTRY	5	4	2	00	3	0	
	HSc 212	CCC	FOOD CHEMISTRY-LABORATORY WORK	2	00	00	3	00	3	
	HSc 203	CCC	THERAPEUTIC NUTRITION	5	4	2	00	3	0	
	HSc 213	CCC	THERAPEUTIC NUTRITION-LABORATORY WORK	2	00	00	3	00	3	
	HSc 221	PRJ/FST/EST	SOCIAL OUTREACH AND SKILL DEVELOPMENT	6	00	00	9	00	4	
	HSc B01	ECC/CB	ENVIRONMENTAL AND FOREST LAWS	6	4	3	00	3	00	
	HSc B02	ECC/CB	FOOD PROCESSING - I							
	HSc B03	ECC/CB	PROGRAMME PLANNING IN PUBLIC HEALTH NUTRITION							
					TOTAL = 33					

SUGGESTED READINGS

**UNIT-5-
18 Hours**

NUTRITION IN EMERGENCIES AND DISASTERS:

- Natural and manmade disasters resulting in emergency situations
- Nutritional problems in emergencies in vulnerable groups
- Macro and micronutrient deficiencies
- Infection
- Assessment and surveillance of affected population groups – clinical, anthropometric and dietary
- Nutritional relief and rehabilitation – assessment of food needs, food distribution strategy, mass and supplementary feeding, sanitation and hygiene, evaluation of feeding programmes
- Public nutrition approach to tackle nutritional problems in emergencies

Edelstein S. (2006) Nutrition in Public Health. A handbook for developing programmes and services. Second Edition. Jones and Bartlett Publishers.

Goyal, Fst. V, Seaman, J. and Geijer, U. (1978) The Management of Nutritional Emergencies in Large Populations, World Health Organization, Geneva.

FAO. (1983) Selecting Interventions for Nutrition Improvement. A Manual Nutrition in Agriculture, No.3.

Gibney M.J., Margrets, B.M., Kearney, J. M. Arab, I., (Eds) (2004) Public Health Nutrition, NS Blackwell Publishing.

Klein, R. E. (Ed) (1979) Evaluating the Impact of Nutrition and Health Programmes. London and New York: Plenum Press.

Owen, A. Y. and Franke, R. T. (1986) Nutrition in the Community. The Art of Delivering Services, 2nd ed. Times Mirror/Mosby.

WFP/ UNHCR (1998) WFP/ UNHCR Guidelines for Selective Feeding Programmes in Emergency Situations. Rome and Geneva: WFP & UNHCR.

Eligibility Criteria
(Qualifying Exams)

Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
				L	T	P	Thy	P
HSc 301	CCC	ADVANCED NUTRITION	5	4	2	00	3	00
HSc 311	CCC	ADVANCED NUTRITION-LABORATORY WORK	2	00	00	3	00	3
HSc 312	CCC	NUTRITIONAL BIOCHEMISTRY- LABORATORY WORK	2	00	00	3	00	3
HSc 303	CCC	METHODS OF INVESTIGATION	5	4	2	00	3	00
HSc 313	CCC	METHODS OF INVESTIGATION-LABORATORY WORK	2	00	00	3	00	3
HSc 02	OSC	Intellectual Property Human Rights & Env. Basics	6	4	3	0	3	00
HSc C 01	ECC/CB	TRIBAL STUDIES	6	4	3	00	3	00
		NUTRITION FOR HEALTH OF WOMEN AND CHILDREN	6	4	3	00	3	00
			TOTAL= 33					

After appearing in the second semester examinations irrespective of any number of papers

SUGGESTED READINGS

Clinical Nutrition- F.P. ANITA
 Hand Book of Food & Nutrition- M. SWAMINATHAN
 Diabetes & Nutrition- DAVIDON, PASSMORE
 Human Nutrition- RAJ LAKSHMI
 Preventive & Social Medicine- J.E.PARK

M.Sc. HOME SCIENCE (FOOD & NUTRITION)
FOURTH SEMESTER (EVEN SEMESTER)

FACULTY OF SCIENCE

Eligibility Criteria (Qualifying Exams)	Course Code	Course Type	Course (Paper/Subjects)	Credits	Contact Hours Per Week			EoSE Duration (Hrs.)	
					L	T	P	Thy	P
After appearing in the Third semester examination irrespective of any number of back/ arrears papers	HSc 401	CCC	NUTRITION FOR HEALTH AND FITNESS	5	4	2	00	3	00
	HSc 411	CCC	NUTRITION FOR HEALTH AND FITNESS- LABORATORY WORK	2	00	00	3	00	3
	HSc 402	CCC	GERIATRIC NUTRITION	5	4	2	00	3	00
	HSc 412	CCC	GERIATRIC NUTRITION-LABORATORY WORK	2	00	00	3	00	3
	HSc 403	CCC	INSTITUTION MANAGEMENT	5	4	2	00	3	00
	HSc 413	CCC	INSTITUTION MANAGEMENT-LABORATORY WORK	2	00	00	3	00	3
	HSc 421	SSC/PRJ	DISSERTATION AND CURRENT TRENDS IN RESEARCHES IN NUTRITION	6	00	00	9	00	4
	HSc D 01	ECC/CB	STATISTICS AND COMPUTER APPLICATION	6	4	3	00	3	00
				TOTAL= 33					