**Lesson Plan for B.A. Ist English 2022-23**

Manju Bala

Assistant Professor of English

CMG GCW Bhodia Khera, Fatehabad

Section: B.A. IIndC,2ndSem

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| **Month** | **Nomenclature** | **Remarks** |
| **February** | 4th Week | Pigeons at the DaybreakThe Sentences |  |
| **March** | 1st Week | With the PhotographerTenses | Assignment-I |
| 2nd Week | The JourneyTag Questions |
| 3rd Week | The RefugeesSubject Verb Agreement |
| 4th Week | Bellows for the BullockChange of SentencesTranscription |
| **April** | 1st Week | Revision,. TestNarration | Assignment-II & Unit Test |
| 2nd Week | PanchlightVerb and Auxiliaries |
| 3rd Week | The ChildPunctuation |
| 4th Week | Revision Unit TestVoice |
| **May** | 1st Week | The Blind DogSynonyms and Antonyms from the textTranscription | Class Test |
| 2nd Week | Homonyms, Homophones and HomographsVerb PatternTranscription |
|  | Revision |

**Lesson Plan for B.A. IInd English 2022-23**

Manju Bala

Assistant Professor of English

CMG GCW Bhodia Khera, Fatehabad

Section: B.A. IInd b, 4thSem

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| **Month** | **Nomenclature** | **Remarks** |
| **February** | 4th Week | Introduction to the One Act plays The Envoy text |  |
| **March** | 1st Week | The Envoy textDialogue writing | Assignment-I |
| 2nd Week | The Envoy- Themes and Character Analysis |
| 3rd Week | Monkeys Paw Introduction of the Play |
| 4th Week | E- MailTranscriptionMonkeys Paw |
| **April** | 1st Week | Before Breakfast Synonyms and Antonyms from the textPrefixes and Suffixes | Assignment-II & Unit Test |
| 2nd Week | RevisionTestE-Mail, Dialogue writing |
| 3rd Week | Before Breakfast Unit Test |
| 4th Week | SleepwalkersResume Writing |
| **May** | 1st Week | The SleepwalkersTranscriptionE- Mail | Class Test |
| 2nd Week | Revision and TestVerb PatternTranscription |
|  | Revision |
|  |  |

**Summary of Lesson Plans of College Faculty**

**Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academicsession**: 2022-23 **Class/Semester:**B.Sc.IIIrdYear(VSem.)

**Month:August ,September Name of Assistant Professor:** Mrs. Minakshi

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| --- | --- | --- | --- | --- |
| Sr. No.  | Subject  | Topics/ Chapters to be covered | Academic Activity to be organized  | Topic of Assignment/ Tests to be given to the students  |
| 1 | Physics |  |  |  |
|  | Quantum mechanics | Overview, scale of quantum physics boundary between classical and quantum phenomena, Photon, Photoelectric effect, Compton effect (theory and result), Frank-Hertzexperiment de-Broglie hypothesis. Davisson and Germer experiment, G.P.Thomson experiment. Phase velocity, group velocity and their relation. Heisenberg's uncertainty principle. Time energy and angular momentum position uncertainty. Uncertainty principle from de Broglie wave. (Wave-particle duality). Gamma Ray Microscope, Electron diffraction from a slit. Derivation of 1-D time-dependent Schrodinger wave equation (subject to force, free particle). Time-independent Schrodinger wave equation, eigen values, eigen functions wave functions and its significance. Orthogonality and Normalization of function, concept of observer and operator, Expectation values of dynamical quantities, probability current density.Free particle in one-dimensional box (solution of Schrodinger wave equation, eigen functions, eigen values, quantization of energy and momentum, nodes and anti nodes, zero point energy. | Problems of the chapter will be discussed  | Test of basics  |

**Summary of Lesson Plans of College Faculty**

**Name of college:** CMG GCW Bhodia khera, Fatehabad

**Aacademic session**: 2022-23 **Class/Semester:**B.Sc. IIIrd Year (V Sem.) **Month:October,November Name of Assistant Professor:** Mrs. Minakshi

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No.  | Subject  | Topics/ Chapters to be covered | Academic Activity to be organized  | Topic of Assignment/ Tests to be given to the students  |
| 1 | Physics |  |  |  |
|  | Quantum mechanics |  One dimensional step potential E > Vo (Reflection and Transmission coefficient),One dimensional step potential E < Vo (penetration depth calculation), One dimensional potential barrier, E > Vo (Reflection and Transmission coefficient) One-dimensional potential barrier, E < Vo (penetration or tunneling coefficient), Solution of Schrodinger equation for harmonic oscillator (quantization of energy, Zero-point energy, wave equation for ground state and excited states), Absorption and emission of radiation Main features of a laser: Directionality, high intensity, high degree of coherence, spatial and temporal coherence, Einstein's coefficients and possibility of amplification, momentum transfer, life time of a level, kinetics of optical absorption ((two and three level rate equation, Fuchbauer landerburg formula).population inversion: A necessary condition for light amplification, resonance cavity, laser pumping, Threshold condition for laser emission, line broadening mechanism, homogeneous and inhomogeneous line broadening (natural, collision andDoppler broadening). He-Ne laser and RUBY laser (Principle, Construction and working), Optical properties of semiconductor, Semiconductor laser (Principle, Construction and working),Applications of lasers in the field of medicine and industry | Problems were discussed. | Assignments was assigned |

 **Summary of Lesson Plans of College Faculty**

**Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class / Semester:** B.Sc. IIIrd Year (V Sem.)

**Month:** August.September **Name of Assistant Professor:** Mrs. Rita

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No.  | Subject  | Topics/ Chapters to be covered | Academic Activity to be organized  | Topic of Assignment/ Tests to be given to the students  |
| 1 | Physics  |  |  |  |
|  | Laser physics and Nuclear physics | . Nuclear composition (p-e and p-n hypotheses), Nuclear properties; Nuclear size, spin, parity, statistics, magnetic dipole moment, quadrouple moment (shape concept). Determination of mass by Bain-Bridge, Bain-Bridge and Jordan mass spectrograph. Determination of charge by Mosley Law. Determination of size of nuclei by Rutherford Back Scattering. mass and binding energy, systematic of nuclear binding energy, nuclear stability Alpha-disintegration and its theory. Energetics of alpha-decay, Origin of continuous betaSpectrum (neutrino hypothesis), types of beta-decay and energetics of beta-decay. Nature of gamma rays, Energetics of gamma rays. Interaction of heavy charged particles (Alpha particles); Energy loss of heavy charged particle (idea of Bethe formula, no derivation), Range and straggling of alpha particles.Geiger-Nuttal law. Interaction of light charged particle (Beta-particle), Energy loss of beta-particles (ionization), Range of electrons, absorption of beta-particles. Interaction of Gamma Ray; Passage of Gamma radiations through matter (Photoelectric, Compton and pair production effect) electron-positron annihilation. Absorption of Gamma rays (Mass attenuation coefficient) and its application. | Problems and Discussion was done among students  | Test of the chapters were conducted, assignment was assigned. |

**Summary of Lesson Plans of College Faculty**

**Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**:2022-23 **Class/Semester:**B.Sc.IIIrd Year (V Sem.)

 **Month:**Ocober to December **Name of Assistant Professor:** Mrs. Rita

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| --- | --- | --- | --- | --- |
| Sr. No.  | Subject  | Topics/ Chapters to be covered | Academic Activity to be organized  | Topic of Assignment/ Tests to be given to the students  |
| 1 | Physics  |  |  |  |
|  | Nuclear Physics | .Linear accelerator, Tendem accelerator, Cyclotron and Betatron accelerators. Gas filled counters; Ionization chamber, proportional counter, G.M. Counter (detailed study), Scintillation counter and semiconductor detector.  Nuclear reactions, Elastic scattering, Inelastic scattering, Nuclear disintegration, Photonuclear reaction, Radiative capture, Direct reaction, Heavy ion reactions and spallation Reactions. Conservation laws, Q-value and reaction threshold. Nuclear Reactors, General aspects of Reactor Design. Nuclear fission and fusion reactors. | Problems and Discussion was done among students | Test of the chapters were conducted, assignment was assigned. |

**Summary of Lesson Plans of College Faculty(Physics )**

**Name of Assistant Professor:** Mrs. MINAKSHI **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:** B.Sc. 1st Year (1st Sem.) **Month: August,September**

|  |  |
| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 1: : Classical Mechanics and Theory of Relativity** |
| Classical Mechanics | Unit 1: Basic concepts of Classical mechanics Mechanics of single and system of particles, Conversion law of linear momentum, Angular momentum and mechanical energy for a particle and a system of particles, Centre of Mass and equation of motion, Constrained Motion. Unit2: Generalized Notations Degrees of freedom and Generalized coordinates, Transformation equations, Generalized Displacement, Velocity, Acceleration, Momentum, Force and Potential, Hamilton’s variational principle, Lagrange’s equation of motion from Hamilton’s principle, Linear Harmonic oscillator, Simple pendulum, Atwood’s machine.  |

**Summary of Lesson Plans of College Faculty(Physics)**

**Name of Assistant Professor:** Mrs. Minakshi **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:**B.Sc. 2nd Year (3rd Sem.) **Month: August,September**

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| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 1:** Computer Programming and Thermodynamics |
| Computer ProgrammingApplications of FORTRAN programming |  UNIT-1: Computer organization, Binary representation, Algorithm development, Flow charts and their interpretation. FORTRAN Preliminaries: Integer and floating point arithmetic expression, built in functions, executable and non-executable statements, input and output statements, Formats, IF, DO and GO TO statements, Dimension arrays, statement function and function subprogram. UNIT –2: Algorithm, Flow Chart and Programming for Print out of natural numbers, Range of the set of given numbers, Ascending and descending order, Mean and standard deviation, Least square fitting of curve, Roots of quadratic equation, Product of two matrices, Numerical integration (Trapezoidal rule and Simpson 1/3 rule) . .  |

**Summary of Lesson Plans of College Faculty(Physics)**

**Name of Assistant Professor:** Mrs. Minakshi **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:**B.Sc. 2nd Year (3rd Sem.) **Month: October, November,december**

|  |  |
| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 1:** Computer Programming and Thermodynamics |
| Thermodynamics-IThermodynamics-II | UNIT-3: Thermodynamic system and Zeroth law of thermodynamics. First law of thermodynamics and its limitations, reversible and irreversible process. Second law of thermodynamics and its significance, Carnot theorem, Absolute scale of temperature, Absolute Zero and magnitude of each division on work scale and perfect gas scale, Joule’s free expansion, , Joule Thomson effect, Joule-Thomson (Porous plug) experiment, conclusions and explanation, analytical treatment of Joule Thomson effect. Entropy, calculations of entropy of reversible and irreversible process , T-S diagram, entropy of a perfect gas, Nernst heat law(third law of thermodynamics), Liquefaction of gases, (oxygen, air, hydrogen and helium), Solidification of He below 4K, Cooling by adiabatic demagnetization. UNIT-4: Derivation of Clausius-Clapeyron and Clausius latent heat equation and their significance,specific heat of saturated vapours,phase diagrame and triple point of a substance, development of Maxwell thermodynamical relations. Thermodynamical functions: Internal energy (U), Helmholtz function (F), Enthalpy (H), Gibbs function (G) and the relations between them, derivation of Maxwell thermodynamical relations from thermodynamical functions,Application of Maxwell relations: relations between two specific heats of gas, Derivation of Clausius-Clapeyron and Clausius equation,variation of intrinsic energy with volume for (i) perfect gas (ii)Vanderwall gas (iii)solids and liquids , derivation of Stefans law, adiabatic compression and expention of gas & deduction of theory of Joule Thomson effect. |

**Name of Assistant Professor:** Mrs. Rita **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:**B.Sc. 2nd Year (3rd Sem.) **Month: August,september**

|  |  |
| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 2:** Wave and optics I |
| Interference IInterference II |  Unit-1: Interference by Division of Wave front: Young’s double slit experiment, Coherence, Conditions of interference, Fresnel's biprism and its applications to determine the wavelength of sodium light and thickness of a mica sheet, Lloyd's mirror, Difference between Bi-prism and Llyod mirror fringes, phase change on reflection. Unit 2: Interference by Division of Amplitude: Plane parallel thin film, production of colors in thin films, classification of fringes in films, Interference due to transmitted light and reflected light, wedge shaped film, Newton's rings, Interferometer: Michelson's interferometer and its applications to (i) Standardization of a meter (ii) determination of wavelength. |

**Name of Assistant Professor:** Mrs. Rita **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:**B.Sc. 2nd Year (3rd Sem.) **Month: October,November,december**

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| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 2:** Wave and optics I |
| Diffraction IDiffraction II |  Unit- 3: Fresnel’s diffraction: Fresnel’s assumptions and half period zones, rectilinear propagation of light, zone plate, diffraction at a straight edge, rectangular slit and circular aperture, diffraction due to a narrow slit and wire. Unit -4: Fraunhoffer diffraction: single-slit diffraction, double-slit diffraction, N-slit diffraction, plane transmission granting spectrum, dispersive power of grating, limit of resolution, Rayleigh's criterion, resolving power of telescope and a grating. Differences between prism and grating spectra. |

**Summary of Lesson Plans of College Faculty(Physics )**

**Name of Assistant Professor:** Mrs. MINAKSHI **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:** B.Sc. 1st Year (1st Sem.) **Month: October,November,December**

|  |  |
| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 1: : Classical Mechanics and Theory of Relativity** |
| Classical Mechanics | Unit 3: Frame of reference, limitation of Newton’s law of motion, Inertial frame of reference, Galilean transformation, Frame of reference with linear acceleration, Classical relativityGalilean invariance, Transformation equation for a frame of reference- inclined to an inertial frame and Rotating frame of reference, Non-inertial frames-The accelerated frame of reference and rotating frame of reference , Effect of centrifugal and coriolis forces due to Earth’s rotation, Fundamental frame of reference, Michelson- Morley’s experiment, concept of Einstein’s relativity. Unit 4: Special theory of relativity, Lorentz co-ordinate and physical significance of Lorentz invariance, Length Contraction, Time Dilation, Twin Paradox, Velocity addition theorem, Variation of mass with velocity, Mass energy equivalence, Transformation of relativistic momentum and energy, relation between relativistic momentum and energy, Mass, velocity, momentum and energy of zero rest mass. |

**Summary of Lesson Plans of College Faculty(Physics )**

**Name of Assistant Professor:** Dr. Rita **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:** B.Sc. 1st Year (1st Sem.) **Month:august,september**

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| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 2: Electricity, Magnetism and Electromagnetic theory** |
| Vector background and Electric fieldMagnetismElectromagnetismA. C. Analysis | Unit 1: Gradient of a scalar and its physical significance, Line, Surface and Volume integrals of a vector and their physical significance, Flux of a vector field, Divergence and curl of a vector and their physical significance, Gauss’s divergence theorem, Stoke’s theorem. Derivation of electric field E from potential as gradient, Derivation of Laplace and Poisson equations, Electric flux, Gauss’s Law, Mechanical force of charged surface, Energy per unit volume. Unit 2: Magnetic induction, Magnetic flux, Solenoidal nature of vector field of induction, properties of (i) , (ii) , Electronic theory of dia and paramagnetism, Domain theory of ferromagnetism (Langevin’s theory), Cycle of magnetization- hystresis loop ( Energy dissipation, Hystresis loss and importance of Hystresis Curve) Unit 3: Maxwell equations and their derivations, Displacement current, Vector and Scalar potentials, Boundary conditions at interface between two different media, Propagation of electromagnetic wave (Basic idea, no derivation), Poynting vector and Poynting theorem. Unit 4: A.C. circuit analysis using complex variable with (a) Capacitance and Resistance (CR) (b) Resistance and Inductance (LR) (c) Capacitance and Inductance (LC) and (d) Capacitance, Inductance and Resistance (LCR), Series and parallel resonance circuit, Quality factor (sharpness of resonance). |

**Summary of Lesson Plans of College Faculty(Physics )**

**Name of Assistant Professor:** Dr. Rita **Name of college:** CMG GCW Bhodia khera, Fatehabad

**Academic session**: 2022-23 **Class/Semester:** B.Sc. 1st Year (1st Sem.) **Month:October,November,December**

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| --- | --- |
| Subject**Physics** | Topics/ Chapters to be covered**Paper 2: Electricity, Magnetism and Electromagnetic theory** |
| ElectromagnetismA. C. Analysis | Unit 3: Maxwell equations and their derivations, Displacement current, Vector and Scalar potentials, Boundary conditions at interface between two different media, Propagation of electromagnetic wave (Basic idea, no derivation), Poynting vector and Poynting theorem. Unit 4: A.C. circuit analysis using complex variable with (a) Capacitance and Resistance (CR) (b) Resistance and Inductance (LR) (c) Capacitance and Inductance (LC) and (d) Capacitance, Inductance and Resistance (LCR), Series and parallel resonance circuit, Quality factor (sharpness of resonance). |

  **Lesson Plan (Session 2022-23)**

Name of Deptt. Psychology Name of Teacher: Dr. Nirmala Kaushik

Subject: Applied Class : B.A. 6TH SEM

 Psychology

Month Topics to be taught

March Applied Psychology: Meaning and history.

April Careers in Psychology, Organisational Psychology- Nature,

 Scope, objectives and development.

May Guidance: Objectives, Principles, types of guidance.

 Organisation of guidance programme.

June Counselling: Need, Principles, special areas and types of

 Counselling.

July Revision and tests.

Note: The teaching methodology is used like power point presentation, models, charts, videos etc. The group discussion, tests and quiz etc are also planned.

 Dr. Nirmala Kaushik

 **Lesson Plan (Session 2022-23)**

Name of Deptt. Psychology Name of Teacher: Dr. Nirmala Kaushik

Subject: Develpomental Class : B.A. 4TH SEM

 Psychology

Month Topics to be taught

March Human Development: Concepts and Principals. Biological,

 Social and Cultural factors of Human development.

April Prenatal Development: Stages and determinants. Infancy :

 Characteristics, hazards and adjustment.

May Childhood: Characteristics, Perceptual, Motor and cognitive

 Development. Adolescents: Characteristics, problems and

 Adjustment of adolescents.

June Adulthood: Early adulthood, late adulthood and aging- changing

 Pattern and problems. Measures of Variability: Quartile

 Deviation and standard deviation.

July Revision and tests.

Note: The teaching methodology is used like power point presentation, models, charts, videos etc. The group discussion, tests and quiz etc are also planned.

 Dr. Nirmala Kaushik

**Lesson Plan for B.A. IIlrd English 2022-23**

Kavita

Assistant Professor of English

CMG GCW Bhodia Khera, Fatehabad

Section: B.A. IlIrd C, 6th Sem

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| **Month** | **Nomenclature** | **Remarks** |
| **February** | 4th Week | Drama and it’s TypesLiterary Terms  |  |
| **March** | 1st Week | Introduction to the Dramatist and the Drama (Play)Text Act 1 | Assignment-I |
| 2nd Week | Act 2Transcription  |
| 3rd Week | Act 2 text with Characters of the playOne Word Substitution |
| 4th Week | Act 2Weak forms in EnglishIntroduction to lettersRevision |
| **April** | 1st Week | Act 3 Discussion on Major characters of the play | Assignment-II & Unit Test |
| 2nd Week | Act 4 text with important scenes of the playCharacters of the Novel |
| 3rd Week | Act 5 text with important quotations of the playQuestions Test |
| 4th Week | Act 5Preci writingNovel and it’s type  |
| **May** | 1st Week | Long QuestionsTranscription Letters | Class Test |
| 2nd Week | Short answer type questions or the playsOne word SubstitutionLetters |
| 3rd Week | Revision |

**LESSON PLAN**

**NAME OF TEACHER : DR. VIJAYANTI JAKHAR**

**SUBJECT : ZOOLOGY**

**CLASS : B.Sc. (MEDICAL) ODD SEMESTER**

**PAPER I (B.Sc II) : LIFE & DIVERSITY OF CHORDATES- I**

**PAPER II (B.Sc II) : MAMMALIAN PHYSIOLOGY- I**

**PAPER II (B.Sc I) : LIFE AND DIVERSITY FROM COELENTRATA TO THE HELMINTHES & CELL BIOLOGY - I**

| **MONTH** | **TOPICS OF BSc. II**  | **TOPICS OF BSc. I**  |
| --- | --- | --- |
| **August 2022** | **PAPER- I**Introduction of Chordata, origin, evolutionary tree and classification, Subphylum Urochordata: characters, classification and affinities **PAPER- II**BONES: Structure and classification of bones, Bone growth and resorption, Bone disorders, Effect of aging on skeletal system | Nucleus |
| **September 2022** | **PAPER- II**MUSCLES : Types of muscles and Ultra structure of Skeletal muscles, Biochemical and physical Events during muscle, Single muscle twitch, Tetanus, Muscle Tone ,Oxygen debt, Cori cycle, Single unit smooth muscle and their physical and functional properties**PAPER- I**Type Study of *Herdmania*, Digestive System of *Herdmania*, Respiratory System of *Herdmania*, Excretory, Nervous System of *Herdmania*, Sense Organs of *Herdmania*, Reproductive System of *Herdmania*, Circulatory System of *Herdmania*, Revision of *Herdmania*Subphylum Cephalochordata: characters, classification and affinities, Type Study of *Branchiostoma*, Digestive System of *Branchiostoma*,Circulatory System of *Branchiostoma*, Excretory System of *Branchiostoma*, Nervous, Reproductive System of *Branchiostoma*, Revision of *Branchiostoma*Assignment Test – 1 and Assignment – 1 Submission | ChromosomesCell ReproductionCancer Biology |
| **October 2022** | **PAPER- I**Class Chondrichthyes: Characteristics, ClassificationClass Osteichthyes: Characteristics, Classification,Type study of *Labeo*, Digestive System of *Labeo*, Respiratory System of *Labeo*, Circulatory System of *Labeo*, Circulatory System of *Labeo*, Nervous System of *Labeo*, Sense Organs of *Labeo*, Urinogenital System of *Labeo*, Pisces in General, Revision of *Labeo***PAPER- II**NUTRITION : Types of nutrition and feeding Digestion of Carbohydrates , Lipids, Digestion of Proteins and Nucleic acids, Symbiotic Digestion, Absorption of nutrients and assimilation, Control of Enzyme secretion. | Cellular Basis of ImmunityGeneral Characters of coelenterate, Classification of Coelenterata, Type Study Of Obelia, Biodiversity & Economic Importance, General Characters & Classification of Platyhelminthes, Assignment Test of Paper-II and Submission of Assignment of Paper- II  |

**LESSON PLAN**

**NAME OF TEACHER : DR. VIJAYANTI JAKHAR**

**SUBJECT : ZOOLOGY**

**CLASS : B.Sc. (MEDICAL) ODD SEMESTER**

**PAPER I (B.Sc II) : LIFE & DIVERSITY OF CHORDATES- I**

**PAPER II (B.Sc II) : MAMMALIAN PHYSIOLOGY- I**

**PAPER II (B.Sc I) : LIFE AND DIVERSITY FROM COELENTRATA TO THE HELMINTHES & CELL BIOLOGY - I**

| **MONTH** | **TOPICS OF BSc. II**  | **TOPICS OF BSc. I**  |
| --- | --- | --- |
| **November 2022** | **PAPER- I**Class Cyclostomes: Characteristics and ecological significance.Type study of *Petromyzon*, Digestive System of *Petromyzon*, Respiratory System of *Petromyzon*, Blood vascular System of *Petromyzon*, Circulatory System of *Petromyzon*, Nervous System of *Petromyzon*, Sense Organs of *Petromyzon*, Excretory System of *Petromyzon*, Reproductive System of *Petromyzon*. Pisces in General, Revision of *Petromyzon*.**PAPER- II**INTRODUCTION TO BIOCHEMISTRY: Carbohydrates and its classification Structure, functions and General properties of Monosaccharides and DisaccharidesLIPIDS: Structure, functions and General properties of Polysaccharides, Lipids and its classification, Structure, functions and General properties of lipids, Structure, functions and general properties of lipids, Introduction to Proteins, Classification of Proteins. Structure of Proteins, Functions of ProteinsCARBOHYDRATES : Introduction to Biochemistry, Carbohydrates and its classification Structure, functions and General properties of Monosaccharides and Disaccharides, Structure, functions and General properties of Polysaccharides Assignment Test –2 and Assignment –2 SubmissionRevision of Important topicsRevision Test | Type Study of Fasciola, General Characters & Classification of Aschelminthes, Biodiversity & Economic Importance, Parasitic Helminthes. |
| **December 2022** | ENZYMES : Introduction and nomenclature of Enzymes, Classification of Enzymes, Mechanism of Enzyme action, Michaelis-Menton Equation, Inhibition of Enzymes, Regulation of Enzyme activityBIOPHYSICS: Transport through Biomembranes, Buffers, Introduction to Nutritional components Viz. Carbohydrates, Fats, Proteins, Vitamins and MineralsRevision Test |  Biodiversity & Economic Importance of Helminthes, Parasitic Helminthes. |
| **January 2023** |  Revision of Important topicsRevision Test | Revision of Important topicsRevision Test |
| **February 2023** |  |  |

**Office of the Principal CMG, G.C.W Bhodia Khera (Fatehabad)**

**Lesson Plan**

**Session :-** 2022-23

**Class:-** B.Sc. (C.Sc.)V Sem.

**Subject:-** Programming in ‘C++’

**Month of August:-**

Introduction to Programming C++: Object-Oriented Features of C++, Class and Objects,

Data Hiding & Encapsulation.

**Month of September:-**

Structures, Data members and Member functions, Inline Functions, Static Data Members and Member Functions, Friend Functions, Preprocessor Directives, Namespace, Comparing C with C++.

**Month of October:-**

 Constructors & Destructors: Roles and types of Constructors, Roles of Destructors,Dynamic Memory Allocation: Pointers and their Manipulation, new and delete Operators‘this’ Pointer. Console I/O: Formatted and Unformatted I/O, Manipulators

**Month of November:-** Compile-Time Polymorphism: Unary and Binary Operators overloading through Member Functions and Friend Functions, Function Overloading. Inheritance: Types of Derivations, Forms of Inheritance, Roles of Constructors and Destructors in Inheritance.

**Month of December:-**

 Generosity in C++: Template Function, Template Class, Inheritance and Templates. Exception Handling: try, throw and catch constructs, rethrowing an exception, catch all Handlers.

Teacher Name:- Ms. Sona Devi

Deptt.:- Computer Science

**Office of the Principal CMG, G.C.W Bhodia Khera (Fatehabad)**

**Lesson Plan**

**Session :-** 2022-23

**Class:-** B.Sc. C.Sc.)V Sem.

**Subject:-** Introduction to Data Base Systems

**Month of August:-** Basic Concepts – Data, Information, Records and files. Traditional file –based Systems-FileBased Approach-Limitations of File Based Approach, Database Approach-Characteristics ofDatabase Approach,

**Month of September:-** Database Management System (DBMS), Components of DBMS

Environment, DBMS Functions and Components, Advantages and Disadvantages of

DBMS. Roles in the Database Environment - Data and Database Administrator, Database

Designers, Applications Developers and Users.

**Month of October:-** Database System Architecture – Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances. Data Independence – Logical and Physical Data Independence. Classification of Database Management System, Centralized and Client Server architecture to DBMS. Data Models: Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling.

**Month of November:-** Entity-Relationship Model – Entity Types, Entity Sets, Attributes Relationship Types Relationship Instances and ER Diagrams. Basic Concepts of Hierarchical and Network Data Model

**Month of December:-** Relational Data Model:-Brief History, Relational Model Terminology-Relational Data Structure, Database Relations, Properties of Relations, Keys, Domains, Integrity Constraints

over Relations, Base Tables and Views.

Teacher Name:- Sona Devi

Dept.:- Computer Science

**Office of the Principal CMG, G.C.W Bhodia Khera (Fatehabad)**

**Lesson Plan**

**Session :-** 2022-23

**Class:-** B.Sc. (C.Sc.)III Sem.

**Subject:-** Programming in ‘C++’

**Month of August:-**

Introduction to Programming C++: Object-Oriented Features of C++, Class and Objects,

Data Hiding & Encapsulation.

**Month of September:-**

 Structures, Data members and Member functions, Inline Functions, Static Data Members and Member Functions, Friend Functions, Preprocessor Directives, Namespace, Comparing C with C++.

**Month of October:-**

 Constructors & Destructors: Roles and types of Constructors, Roles of Destructors,Dynamic Memory Allocation: Pointers and their Manipulation, new and delete Operators‘this’ Pointer. Console I/O: Formatted and Unformatted I/O, Manipulators

**Month of November:-**

Compile-Time Polymorphism: Unary and Binary Operators overloading through Member Functions and Friend Functions, Function Overloading. Inheritance: Types of Derivations, Forms of Inheritance, Roles of Constructors and Destructors in Inheritance.

**Month of December:-**

 Generosity in C++: Template Function, Template Class, Inheritance and Templates. Exception Handling: try, throw and catch constructs, dethroning an exception, catch all Handlers.

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**Office of the Principal CMG, G.C.W Bhodia Khera (Fatehabad)**

**Lesson Plan**

**Session :-** 2022-23

**Class:-** B.Sc. (C.Sc.)III Sem.

**Subject:-** **DATA STRUCTURE**

**Month of August:-** The concept of data structure, Abstract data type, data structure operations, algorithms complexity, time-space tradeoff. Introduction to strings, storing strings, string operations, pattern matching algorithms.

**Month of September:-**Linked list: Introduction and basic operations, Header nodes, Doubly Linked List, Circular Linked List, and Applications of Linked List.

**Month of October:-**.Stack: primitive operation on stack, Representation of Stack as Linked List and array, Stacks applications. Introduction to queues, Primitive Operations on the Queues, Circular queue, Priority queue, Representation of Queues as Linked List and array, Applications of queue.

**Month of November:-** Trees - Basic Terminology, Binary Trees, Tree Representations using Array & Linked List, Basic operation on Binary tree, Traversal of binary trees:- In order, Preorder & post order, Applications of Binary tree.

**Month of December:-** Introduction to graphs, Definition, Terminology, Directed, Undirected & Weighted graph, Representation of graphs. Searching: linear search, Binary search, Sorting: Insertion sort, Selection sort, Quick sort, Bubble sort.

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**Lesson Plan**

**Session :-** 2022-23

**Class:-** BA/B.Sc. (C.Sc.)I Sem.

**Subject:-** COMPUTER FUNDAMENTALS

**Month of August:-** Introduction to Information Technology, concept of bit and byte, binary, octal, decimal and hexa-decimal number systems and their conversion

**Month of September:-**

Data representation, complement form, BCD codes, fixed point and floating point representation Computer and its components, minicomputer, micro computer, personal computer, super computer, notebook/ laptop,

**Month of October:-**. Networking of computers, Local Area Network, Metropolitan Area Network, Wide Area Network, network topologies: Bus, Ring, Star, Mesh and Hybrid, Internet and Intranet, modem.

**Month of November:-**

Memory Organization: Memory hierarchy, RAM, ROM, dynamic RAM, flash memory, secondary memory and its characteristics, hard disk drives, cache memory and its organization, floppy drive and

CD/ DVD drive.

**Month of December:-**

Peripheral devices: common input and output devices, printer, plotter, scanner, joy stick, web camera,

Touch panel, light pen and card reader.

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**Lesson Plan**

**Session :-** 2022-23

**Class:-** BA/B.Sc. (C.Sc.)I Sem.

**Subject:-** DIGITAL ELECTRONICS

**Month of August:-**

Information Representation: Number Systems, Binary Arithmetic, Fixed-point and Floating- point representation of numbers, BCD Codes

**Month of September:-** , Error detecting and correcting codes, Character Representation – ASCII, EBCDIC, Unicode Binary Logic: Boolean Algebra, Boolean Theorems, Boolean Functions and Truth Tables, Canonical and Standard forms of Boolean functions, Simplification of Boolean Functions –Venn Diagram, Karnaugh Maps.

**Month of October:-**.

Digital Logic: Basic Gates – AND, OR, NOT, Universal Gates – NAND, NOR, Other Gates – XOR, XNOR etc. NAND, NOR, AND-OR-INVERT and OR-AND-INVERT

**Month of November:-** Implementations of digital circuits, Combinational Logic – Characteristics, Design Procedures, analysis procedures, Multilevel NAND and NOR circuits.

**Month of December:-**

Combinational Circuits: Half-Adder, Full-Adder, Half-Subtractor, Full-Subtractor, Encoders, Decoders, Multiplexers, Demultiplexers, Comparators, Code Converters, BCD to Seven- Segment Decoder.

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