

Commission of Education (Meerut Diocese)

Director – Rev. Fr. K. V. George

TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – ENGLISH CORE (301)

M.M – 80

Reading Skills –

- * Factual, Descriptive Or Literary Passage For Reading Comprehension.
- * Case Based Passage For Reading Comprehension.

Writing Skills –

- Notice Writing
- Letter To Editors
- Job Application with Resume
- Article Writing

Literature – Text Books

* *Flamingo*-

Prose –

1. The Last Lesson
2. Lost Spring
3. Deep Water
4. The Rattrap

Poetry –

1. My Mother At Sixty Six
2. Keeping Quiet
3. A Thing of Beauty

* *Vistas* –

1. The Third Level
2. Tiger King
3. Journey to The End of The Earth

Question Paper Pattern

(80 Marks)

Section A – Reading Skills

(22)

1. Unseen Passage To Access Comprehension, Interpretation Inference And Vocabulary (Mcqs And Subjective Questions) 12 Marks
(Factual, Descriptive, Literary)
2. Unseen Case-Based Passage with Verbal/Visual Inputs Like Statistical Data, Charts Etc. (Mcqs, Fill Ups And Objective Type Questions) 10 Marks

Section B – Creative Writing Skills

(18)

3. Notice Writing 3 Marks
4. Letters Based on Application for Job with Bio-Data or Resume. 5 Marks
5. Letters to The Editor 5 Marks
6. Article Writing 5 Marks

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Section C – Literature

(40)

7. One Poetry Extract Out of Two, From the Book Flamingo, To Assess Comprehension, Interpretation, Analysis, Inference and Appreciation. (Multiple Choice Questions And Objective Type Questions) **6x1=6 Marks**
 8. One Prose Extract Out of Two, From the Book Vistas, To Assess Comprehension, Interpretation, Analysis, Evaluation and Appreciation. (Multiple Choice Questions And Objective Type Questions) **4x1=4 Marks**
 9. One Prose Extract Out Of Two From The Book Flamingo, To Assess Comprehension, Interpretation, Analysis, Inference and Evaluation. (Multiple Choice Questions And Objective Type Questions) **6x1=6marks**
 10. Short Answer Type Questions (From Prose and Poetry from The Book Flamingo), To Be Answered In 40-50 Words Each. Questions Should Elicit Inferential Responses Through Critical Thinking. 5 Questions Out of the 6 Given Are to Be Answered. **2x5=10 Marks**
 11. Short Answer Type Questions, From Prose (Vistas), To Be Answered In 40- 50 Words Each. Questions Should Elicit Inferential Responses Through Critical Thinking. Any 2 Out Of 3 Questions To Be Done. **2x2=4 Marks**
 12. One Long Answer Type Question, From Prose/Poetry (Flamingo), To Be Answered In 120- 150 Words. Questions Can Be Based on Incident / Theme / Passage / Extract / Event As Reference Points to Assess Extrapolation Beyond and Across the Text. The Question Will Elicit Analytical and Evaluative Response from The Student. Any 1 Out Of 2 Questions to Be Done. **5 Marks**
 13. One Long Answer Type Question, Based on The Chapters from The Book Vistas, To Be Answered In 120-150 Words, To Assess Global Comprehension and Extrapolation Beyond The Text. Questions To Provide Analytical and Evaluative Responses Using Incidents, Events, Themes, As Reference Points. Any 1 Out Of 2 Questions to Be Done. **5 Marks**
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TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – PHYSICS (042)

M.M – 70

Unit I: Electrostatics

Chapter–1: Electric Charges and Fields

10 Marks

Electric charges, Conservation of charge, Coulomb's law-force between two- point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).

Chapter–2: Electrostatic Potential and Capacitance

10 Marks

Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor (no derivation, formulae only).

Unit II: Current Electricity

Chapter–3: Current Electricity

10 Marks

Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, temperature dependence of resistance, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge.

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Unit III: Magnetic Effects of Current and Magnetism

Chapter–4: Moving Charges and Magnetism

10 Marks

Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight solenoid (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors- definition of ampere, torque experienced by a current loop in uniform magnetic field; Current loop as a magnetic dipole and its magnetic dipole moment, moving coil galvanometer- its current sensitivity and conversion to ammeter and voltmeter.

Chapter–5: Magnetism and Matter

5 Marks

Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines. Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.

Unit IV: Electromagnetic Induction and Alternating Currents

Chapter–6: Electromagnetic Induction

10 Marks

Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.

Chapter–7: Alternating Current

10 Marks

Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer.

Unit V: Electromagnetic waves

Chapter–8: Electromagnetic Waves

5 Marks

Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

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TERM – 01 SYLLABUS (2024 – 25)		
CLASS – XII		
M. T. – 3 Hours	SUBJECT – CHEMISTRY (043)	M.M – 70

UNIT 1. Solutions	12 MARKS
UNIT 2. Electrochemistry	15 MARKS
UNIT 3. Chemical Kinetics	13 MARKS
UNIT 4. The d and f block elements	15 MARKS
UNIT 5. Coordination Compounds	15 MARKS

TERM – 01 SYLLABUS (2024 – 25)		
CLASS – XII		
M. T. – 3 Hours	SUBJECT – BIOLOGY (044)	M.M – 70

Unit-VI Reproduction **20 MARKS**

Chapter-2: Reproduction in Flowering Plants **7 MARKS**

Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; out breeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.

Chapter-3: Human Reproduction **8 MARKS**

Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis -spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).

Chapter-4: Reproductive Health **5 MARKS**

Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).

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Unit-VII Genetics and Evolution

30 MARKS

Chapter-5: Principles of Inheritance and Variation

10 MARKS

Heredity and variation: Mendelian inheritance; deviations from Mendelism – incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination - in humans, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

Chapter-6: Molecular Basis of Inheritance

10 MARKS

Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.

Chapter-7: Evolution

10 MARKS

Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy- Weinberg's principle; adaptive radiation; human evolution.

Unit-VIII: Biology and Human Welfare

20 MARKS

Chapter-8: Human Health and Diseases

12 MARKS

Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.

Chapter-9: Microbes in Human Welfare

8 MARKS

Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use

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TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – MATHEMATICS (041)

M.M – 80

Unit-I: Relations and Functions

21 Marks

1. Relations and Functions

12 Marks

Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.

2. Inverse Trigonometric Functions

9 Marks

Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions.

Unit-II: Algebra

27 Marks

1. Matrices

17 Marks

Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operations on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).

2. Determinants

10 Marks

Determinant of a square matrix (up to 3×3 matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

Unit-III: Calculus

32 Marks

1. Continuity and Differentiability

17 Marks

Continuity and differentiability, chain rule, derivative of inverse trigonometric functions, like $\sin^{-1} x$, $\cos^{-1} x$ and $\tan^{-1} x$, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives.

2. Applications of Derivatives

15 Marks

Applications of derivatives: rate of change of quantities, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).

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TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – APPLIED MATHEMATICS (241)

M.M – 80

UNIT	MARKS
1. UNIT-1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS	(20)
2. UNIT-2 ALGEBRA	(20)
3. UNIT- 3 CALCULUS	(25)
4. UNIT- 4 PROBABILITY DISTRIBUTIONS	(15)

TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – PHYSICAL EDUCATION (048)

M.M – 70

Unit 1: Management of Sporting Events	18 MARKS
Unit 2: Children and Women in Sports	10 MARKS
Unit 3 Yoga as preventive measure for lifestyle disease.	18 MARKS
Unit 4: Physical Education & Sports for (CWSN)	10 MARKS
Unit 5: Sports & Nutrition	14 MARKS

TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – ACCOUNTANY (055)

M.M – 80

1. Accounting for Partnership: Basic Concepts 15 MARKS
2. Reconstitution of a Partnership Firm-Admission of a Partner; Change in Profit Sharing Ratio. 20 MARKS
3. Reconstitution of a Partnership Firm-Retirement/Death of a Partner 25 MARKS
4. Dissolution of Partnership Firm 20 MARKS

(NOTE: Accounting for not -for -Profit Organisation is not in the syllabus)

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TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – ECONOMICS (030)

M.M – 80

Part-A: Introductory Macroeconomics	40 MARKS
Unit 1. National Income and Related Aggregates	18 MARKS
Unit 2. Money and Banking	11 MARKS
Unit 4. Government Budget and the Economy	11 MARKS
Part-B: Indian Economic Development	40 MARKS
Unit 6. Development Experience (1947-90) and Economic Reforms since 1991	30 MARKS
Unit 7. Current Challenges facing Indian Economy	10 MARKS
(Chapter: -Human Capital Formation) (only)	

TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – BUSINESS STUDIES (054)

M.M – 80

1. Nature and Significance of Management	12 MARKS
2. Principles of Management	15 MARKS
3. Business Environment	08 MARKS
4. Planning	10 MARKS
5. Organising	12 MARKS
6. Staffing	13 MARKS
7. Directing	10 MARKS

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TERM – 01 SYLLABUS (2024 – 25)

CLASS – XII

M. T. – 3 Hours

SUBJECT – COMPUTER SCIENCE (083)

M.M – 70

CH-1	REVISION TOUR – 01	10 MARKS
CH-2	REVISION TOUR – 02	20 MARKS
CH-3	FUNCTION	10 MARKS
CH-4	FILE HANDLING	15 MARKS
CH-5	STACK	05 MARKS
CH-6	NETWORKING	10 MARKS
