

**AUM SUN PUBLIC SCHOOL**  
**ANNUAL EXAMINATION SYLLABUS (2024-25)**  
**CLASS-12<sup>TH</sup> (PCB)**

**ENGLISH**

**Section A**

**22 Marks**

**Reading Skills**

**I Reading Comprehension through Unseen Passage (12+10 = 22 Marks)**

1. One unseen passage to assess comprehension, interpretation, analysis and inference. Vocabulary assessment will also be assessed via inference. The passage may be factual, descriptive or literary.
2. One unseen **case-based factual** passage with verbal/visual inputs like statistical data, charts etc. to assess comprehension, interpretation, analysis, inference and evaluation.

Note: The combined word limit for both the passages will be 700-750 words.

Multiple Choice Questions / Objective Type Questions and Short Answer Type Questions (to be answered in 40-50 words) will be asked.

**Section B**

**18 Marks**

**Creative Writing Skills**

**II. Creative Writing Skills**

3. Notice, up to 50 words. One out of the two given questions to be answered.  
**(4 Marks: Format :1 / Content: 2 / Accuracy of Spelling and Grammar: 1).**
4. Formal/Informal Invitation and Reply, up to 50 words. One out of the two given questions to be answered.  
**(4 Marks: Format: 1 / Content: 2 / Accuracy of Spelling and Grammar :1).**
5. Letters based on verbal/visual input, to be answered in approximately 120-150 words. Letter types include application for a job with bio data or resume. Letters to the editor (giving suggestions or opinion on issues of public interest). One out of the two given questions to be answered.  
**(5 Marks: Format: 1 / Organisation of Ideas: 1/Content: 2 / Accuracy of Spelling and Grammar :1).**
6. Article/ Report Writing, descriptive and analytical in nature, based on verbal inputs, to be answered in 120-150 words. One out of the two given questions to be answered.  
**(5 Marks: Format: 1 /Organisation of Ideas: 1/Content: 2 / Accuracy of Spelling and Grammar :1).**

**Literature Text Book and Supplementary Reading Text**

**This section will have variety of assessment items including Multiple Choice Questions, Objective Type Questions, Short Answer Type Questions and Long Answer Type Questions to assess comprehension, interpretation, analysis, evaluation and extrapolation beyond the text.**

7. One Poetry extract out of two, from the book **Flamingo**, to assess comprehension, interpretation, analysis, inference and appreciation. **(6x1=6 Marks)**
8. One Prose extract out of two, from the book **Vistas**, to assess comprehension, interpretation, analysis, evaluation and appreciation. **(4x1=4 Marks)**
9. One prose extract out of two from the book **Flamingo**, to assess comprehension, interpretation, analysis, inference and evaluation. **(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. Five questions out of the six given, are to be answered. **(5x2=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 two out of three 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 one out of two questions to be done. **(1x5=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 one out of two questions to be done. **(1x5=5 Marks)**

**PHYSICAL EDUCATION**

UNIT NO.	UNIT NAME	NO. OF PERIODS (190 HRS)	THE WEIGHTAGE (MARKS) ALLOTTED
UNIT 1	Management of Sporting Events	15	05 + 04b*
UNIT 2	Children and Women in Sports	12	07
UNIT 3	Yoga as Preventive measure for Lifestyle Disease	12	06+01 b*
UNIT 4	Physical Education & Sports for (CWSN)	13	04+04 b*
UNIT 5	Sports & Nutrition	12	07
UNIT 6	Test and Measurement in Sports	13	08
UNIT 7	Physiology & Injuries in Sport	13	04+04 b*
UNIT 8	Biomechanics and Sports	18	10
UNIT 9	Psychology and Sports	12	07
UNIT 10	Training in Sports	15	09
PRACTICAL (LAB)#	Including 3 Practical	56	30
TOTAL	Theory 10 + Practical 3	134 + 56 = 190hrs	Theory 70 + Practical 30 = 100

Note: b\*are the Concept based questions like Tactile diagram/data interpretation/case base study for visually Impaired Child

### PHYSICS

		No. of Periods	Marks
<b>Unit-I</b>	<b>Electrostatics</b>	<b>26</b>	<b>16</b>
	Chapter-1: Electric Charges and Fields		
	Chapter-2: Electrostatic Potential and Capacitance		
<b>Unit-II</b>	<b>Current Electricity</b>	<b>18</b>	<b>17</b>
	Chapter-3: Current Electricity		
<b>Unit-III</b>	<b>Magnetic Effects of Current and Magnetism</b>	<b>25</b>	
	Chapter-4: Moving Charges and Magnetism	<b>24</b>	<b>18</b>
	Chapter-5: Magnetism and Matter		
<b>Unit-IV</b>	<b>Electromagnetic Induction and Alternating Currents</b>		
	Chapter-6: Electromagnetic Induction	<b>04</b>	<b>18</b>
	Chapter-7: Alternating Current		
<b>Unit-V</b>	<b>Electromagnetic Waves</b>	<b>30</b>	<b>18</b>
	Chapter-8: Electromagnetic Waves		
<b>Unit-VI</b>	<b>Optics</b>	<b>30</b>	<b>18</b>
	Chapter-9: Ray Optics and Optical Instruments		
	Chapter-10: Wave Optics		

<b>Unit-VII</b>	<b>Dual Nature of Radiation and Matter</b>	<b>8</b>	<b>12</b>
	Chapter-11: Dual Nature of Radiation and Matter		
<b>Unit-VIII</b>	<b>Atoms and Nuclei</b>	<b>15</b>	
	Chapter-12: Atoms		
	Chapter-13: Nuclei		
<b>Unit-IX</b>	<b>Electronic Devices</b>	<b>10</b>	<b>7</b>
	Chapter-14: Semiconductor Electronics: Materials, Devices and Simple Circuits		
<b>Total</b>		<b>160</b>	<b>70</b>

### CHEMISTRY

<b>S.No.</b>	<b>Title</b>	<b>No. of Periods</b>	<b>Marks</b>
1	Solutions	10	7
2	Electrochemistry	12	9
3	Chemical Kinetics	10	7
4	d -and f -Block Elements	12	7
5	Coordination Compounds	12	7
6	Haloalkanes and Haloarenes	10	6
7	Alcohols, Phenols and Ethers	10	6
8	Aldehydes, Ketones and Carboxylic Acids	10	8
9	Amines	10	6
10	Biomolecules	12	7
	<b>Total</b>		<b>70</b>

### BIOLOGY

## Unit-VI Reproduction

### Chapter-2: Sexual Reproduction in Flowering Plants

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

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

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).

## Unit-VII Genetics and Evolution

### Chapter-5: Principles of Inheritance and Variation

**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

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

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**

### **Chapter-8: Human Health and Diseases**

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-10: Microbes in Human Welfare**

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

## **Unit-IX Biotechnology and its Applications**

### **Chapter-11: Biotechnology - Principles and Processes**

Genetic Engineering (Recombinant DNA Technology).

### **Chapter-12: Biotechnology and its Applications**

Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.

## **Unit-X Ecology and Environment**

### **Chapter-13: Organisms and Populations**

Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution. (Topics excluded: Organism and its Environment, Major Abiotic Factors, Responses to Abiotic Factors, Adaptations)

### **Chapter-14: Ecosystem**

Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy (Topics excluded: Ecological Succession and Nutrient Cycles).

### **Chapter-15: Biodiversity and its Conservation**

Biodiversity-Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.