

PVG's
Muktangan English School & Jr. College, Pune - 9
Preliminary Examination (2024-25)
STD XII

Subject : Biology
Date : 09.01.2025

Marks - 70
Time : - 8.15 - 11.15 am

Note :

1. All sections (A, B, C, D) are compulsory
 2. Figures to the right indicate full marks
 3. Draw neat, labelled diagrams wherever necessary
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Section A

Q.1 Select and rewrite the most appropriate answer from the given alternatives from each sub-question (10)

- I) Male & Female gametes are involved in _____ .
- a) Sexual reproduction b) budding
c) Grafting d) fragmentation
- II) Wings of birds and insects are the examples of _____ organs.
- a) analogous b) homologous
c) vestigial d) respiratory
- III) The duration of light on flowering is known as _____ .
- a) photosynthesis b) photoperiodism
c) vernalization d) mineralization
- IV) _____ is the autosomal dominant trait.
- a) Widow's peak b) PKU
c) Sickle Cell Anaemia d) Cystic Fibrosis
- V) _____ phase is the shortest phase of menstrual cycle.
- a) Mentrual b) Follicular
c) Ovulatory d) Sensory

Section - B

Answer the following in short (Any 8)

(16)

- Q.3** Sketch and label “ Structure of Human Sperm”
- Q.4** Write a note on “ Complete Sex Linkage”.
- Q.5** What is “ Lac Operon”? Give its components
- Q.6** Sketch and label “ Structure of guard cells in Monocots”.
- Q.7** Explain the terms i) Ammonification
 ii) Sedimentation
- Q.8** List the advantages of “ Biogas”
- Q.9** Write a note on “ Larynx”
- Q.10** Draw “ Pyramid of Biomass”.
- Q.11** What is “ Ex - Situ” conservation?
- Q.12** Write a note on “ Pioneer species”
- Q.13** Write a note on “ Angina Pectoris”
- Q.14** What is IVF? Explain in short

Section C

Answer the following (Any 8)

(24)

- Q.15** Write a note on “ Hydrophily”
- Q.16** Explain “ Cohesion tension theory”
- Q.17** List the application of “ Auxins”
- Q.18** Give the functions of a) Leydig’s cells b) sertoli cells c) Epididymis
- Q.19** Describe the valves of Human heart.
- Q.20** Write a note on “ Pleiotropy”.
- Q.21** Describe the composition of Blood Plasma.
- Q.22** Sketch and label “ T S of Spinal Cord”.

- Q.23** i) What is biofortification?
ii) Name the microbe used as SCP
iii) Name the insect that produces Lac

Q.24 Define i) Mortality ii) Realized Natality iii) Emigration

Q.25 Sketch and label “ Structure of Antibody”

- Q.26** i) Name the 3 ear ossicles
ii) Give the role of cones in human eye
iii) Give the function of Iris

Section D

Answer in detail (Any 3)

(12)

Q.27 What is Endosperm? Describe the types of Endosperms.

Q.28 Explain the functional areas of Cerebrum.

Q.29 Describe the steps involved in DNA fingerprinting.

Q.30 Describe Urey and Miller experiment

Q.31 Explain the types of Restriction enzymes commonly used in r DNA technology.

