



Time: 3.00 Hours

Marks: 70

Standard 11
BIOLOGY
Part - I (Bio-Botany)
Section - I

8x1=8**i) Answer all the questions.****ii) Choose the correct answer and write it with option code.**

- 1) Choose the correct statements.
 - i) R-type of Diplococcus pneumoniae are virulent
 - ii) Aspergillus flavus produce carcinogenic substance called aflatoxin
 - iii) Lichen growing on bark are called as saxicolous
 - iv) Reindeer moss is used as food for animals in Tundra

a) i, iii b) i, iv c) ii, iv d) ii, iii
- 2) Find the odd one out

a) Sucker b) Rhizome c) offset d) stolen
- 3) Which of the following is a flowering plant with redules containing filamentous N₂ fixing microorganisms?

a) Casuarina equisetifolia b) Cycas revoluta

c) Cicer arietinum d) croton juncea
- 4) Match and choose the correct sequence

| | |
|--------------------|---|
| A) Golgi apparatus | - i) Spindle formation |
| B) Lysosomes | - ii) Cell plate and cell wall formation |
| C) Peroxisomes | - iii) Phagocytosis |
| D) Centrioles | - iv) Photorespiration & glycolate metabolism |

a) A-iv, B-iii, C-ii, D-i b) A-iii, B-i, C-iv, D-ii

c) A-ii, B-iii, C-iv, D-i d) A-ii, B-iv, C-i, D-iii
- 5) Choose the wrong pair

| | |
|---------------------|---------------------------------|
| a) Collenchyma | - Mechanical support |
| b) Brachy sclereids | - Stonecells |
| c) Phloem fibers | - Dead tissue |
| d) Companion cells | - Gymno sperm and Pteridophytes |
- 6) Munch hypothesis is based on
 - a) Translocation of food due to TP gradient and imbibition force
 - b) Translocation of water due to imbibition force
 - c) Translocation of food due to imbibition force
 - d) Translocation of food due to TP
- 7) Which cell organelles involved in Photorespiration?
 - a) Chloroplast, Golgi apparatus, Peroxisome
 - b) Chloroplast, Peroxisome, mitochondria
 - c) Golgi apparatus, Chloroplast mitochondria
 - d) Peroxisome, Lysosome, Golgi apparatus
- 8) Seed dormancy allows the plant to
 - a) Overcome unfavourable climatic conditions
 - b) develop healthy plants
 - c) reduce viability
 - d) prevent deterioration of seeds.

Section - II**II. Answer any four questions.****4x2=8**

- 9) What is photoperiodism and critical day length?
- 10) How phosphorylase enzyme open the stomata in starch sugar interconversion therapy?
- 11) Draw and label: Structure of Tyloses
- 12) Distinguish between Rough ER and Smooth ER
- 13) Write similarities and differences between Avicennia and Trapa
- 14) What do you infer from the word 'pycroxylic'?

Section - III**III. Answer any three questions. Q.No. 19 is compulsory.****3x3=9**

- 15) What are the merits of five kingdom classification.
- 16) Mention three uses of Herbarium
- 17) Give an account on Go phase
- 18) What are the criteria required for essential minerals?
- 19) Write a note on 'RUBISCO' enzyme.

Section - IV**IV. Answer all the questions.****2x5=10**

20) a) What is Aestivation? Explain the types

(OR)

b) Describe different types of RNA

21) a) Write the types and characteristics of tissue systems

(OR)

b) What is the name of alternate way of glucose break down? Explain the process involved in it.

Part - II (Bio-Zoology)**Section - I****i) Answer all the questions.****8x1=8****ii) Choose the correct answer and write it with option code.**

1) Which of the following is not present in same rank?

a) Primata

b) orthoptera

c) Diptera

d) Insecta

2) Which is the fluid connective tissue?

a) cartilage

b) Bone

c) Blood

d) Muscle

3) The type of vision in cockroach is

a) Mosaic

b) Two dimensional

c) Three dimensional

d) Cockroach do not have vision

4) Erythroblastosis foetalis is due to the destruction of

a) Foetal WBC's

b) Foetal RBCs

c) Foetus suffers from atherosclerosis

d) Foetus suffers from mianmata

5) What is happen of the stretch receptors of the urinary bladder wall are totally removed?

a) Micturition will continue

b) Urine will be continue to collect normally in the bladder

c) There will be micturition

d) Urine will not collected in the bladder

6) Appendicular skeleton is

a) girdles and their limbs

b) Vertebrae

c) skull and vertebral column

d) ribs and sternum

7) Spermetogenesis in mammalian tests is controlled by

a) Lutensising hormone

b) Follicle stimulating hormone

c) FSH and prolactin

d) GH and Prolactin

8) Aquaponics is a technique which is

a) A combination of aquaculture and prawn culture

b) A combination of Vermiculture and hydroponics

c) A combination of aquaculture and hydroponics

d) A combination of aquaculture and fishculture

II. Answer any four questions.**4x2=8**

9) Why mule is sterile in nature?

10) Why earthworms are considered as friends of farmers?

11) Name the respiratory organs of prawn, flatworm, cockroach and cat

12) What are heart sounds? Name the medical instrument used to hear the sounds?

13) Name the three main hormones involved in the regulation of the renal function.

14) List the three main parts of the axial skeleton

III. Answer any three questions. Q.No. 19 is compulsory.**3x3=9**

15) What is epithelium? Name any four types of epithelium

16) Write any three economic importance of frog

17) What is nitrogen narcosis? To whom this condition is common

18) List any three disorders of the circulatory system.

19) Growth hormone is important for normal growth. Justify the statement

IV. Answer all the questions.**2x5=10**

20) Enumerate the characteristic features of the phylum; ctenophora

(OR)

Describe the role of intestinal enzymes in digestion.

21) Differentiate between rod and cone cells

(OR)

Give the economic importance of silkworm and Lac insect.