

2023

Time - 3 hours

Full Marks - 60

*Answer **all groups** as per instructions.*

Figures in the right hand margin indicate marks.

Draw labelled diagrams wherever necessary.

GROUP - A

1. Fill in the blanks by choosing correct answer. [1 × 8]

(a) Genetic material of TMV is _____.

(i) ss RNA

(ii) ds RNA

(iii) ss DNA

(iv) ds DNA

(b) Chlamydomonas has _____ shaped chloroplast.

(i) Spiral

(ii) Cup

(iii) Star

(iv) Girdle

(c) Reserve food of fungi is mainly _____.

(i) Starch

(ii) Inulin

(iii) Glycogen

(iv) Fat

[2]

(d) Coralloid root is found in _____.

(i) Cycas

(ii) Pinus

(iii) Gnetum

(iv) Ginkgo

Express in one word :

(e) Plant body of algae without definite root, stem and leaves.

(f) Two organisms live together and mutually help each other.

(g) Central cylinder of the plant body including vascular bundles, pith, pericycle and endodermis _____.

(h) Production of two different types of spores i.e. smaller microspores and larger megaspores by the same plant.

GROUP - B

2. Answer any eight of the following within two or three sentences each. [1½ × 8

(a) What is bacteriophage ?

(b) What are bacilli ?

(c) What is coenobium ?

(d) What is heterothallism ?

(e) What is protonema ?

[3]

- (f) What are rhizoids ?
- (g) Why pteridophytes are called as vascular cryptogams ?
- (h) What is basidiocarp ?
- (i) What is heterocyst ?
- (j) What is protostele ?

GROUP - C

3. Write notes on any eight of the following within 75 words each.

[2 × 8

- (a) TMV
- (b) Binary fission in bacteria
- (c) Transduction
- (d) Palmella stage
- (e) Cell wall composition of fungi
- (f) Lichens
- (g) Gemma
- (h) Funaria sporophyte
- (i) Rhynia
- (j) Eustela

P.T.O.

[4]

GROUP - D

Answer **any four** questions within 500 words each.

4. Describe the lytic life cycle of bacteriophage. [6]
5. Describe the economic importance of bacteria. [6]
6. Give an account of the range of thallus structure in algae. [6]
7. Describe the life cycle of Rhizopus. [6]
8. Describe the life cycle of Funaria. [6]
9. Give an account of heterospory and seed habit in Selaginella. [6]
10. Describe the life cycle of Cycas. [6]