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1 SEM TDC BOTH (CBCS) C 1

2019

(December)

BOTANY

(Core)

Paper : C-1

(Microbiology and Phycology)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Choose and write the correct answer of the following : 1×3=3
- (i) Water bloom is generally caused by hydrilla/bacteria/blue-green algae/green algae.
- (ii) The algae *Chara* is called 'stonewort' because its plant body is encrusted with calcium oxalate / calcium bicarbonate / calcium carbonate / calcium chloride.

(iii) Cup-shaped chloroplast is present in *Chara/Oedogonium/Chlamydomonas/Fucus*.

(b) Fill in the blanks of the following : $1 \times 2 = 2$

(i) Genetic recombination in bacteria mediated by a virus is known as _____.

(ii) Gram stain was introduced by _____.

2. Write short notes on any three of the following : $4 \times 3 = 12$

(a) Dwarf male of *Oedogonium*

(b) Haplo-diplontic type of life cycle in algae

(c) Nutrition of photosynthetic bacteria

(d) Characteristic features of viruses

3. Give a detailed account of the range of thallus structure in algae with suitable diagrams. $8 + 4 = 12$

Or

Write notes on the following : $6 + 6 = 12$

(a) Asexual reproduction of *Nostoc*

(b) Sexual reproduction of *Fucus*

(3)

4. Describe with diagram the ultrastructure and vegetative reproduction of bacteria.

4+3+5=12

Or

Write on the following :

6+6=12

(a) Mycoplasma

(b) Role of bacteria in agriculture

5. What is bacteriophage? Describe with diagrams the lytic and lysogenic cycle of bacteriophage.

2+5+5=12

Or

What are viroids and prions? Draw and describe the structure of tobacco mosaic virus.

2+2+3+5=12
