

2016

M.Sc. 1st Semester Examination

MICROBIOLOGY

PAPER—MCB-102

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Use separate Answer-scripts for Group-A & Group-B

Group—A

Answer any *two* questions.

1. (a) What are saprophytism ? How do fungi usually obtain their nutrients ?
(b) Describe how a typical zygomycetes reproduces. Write its beneficial uses.

(Turn Over)

(c) What are chytrids ? Discuss their importance.

(1+2)+(3+2)+2

2. (a) What do you mean by Mycorrhizae ? Write its types and importance in plant.

(b) How *Rhizopus* reproduce sexually and asexually ?

(2+1+3)+4

3. Write short notes on any *four* :

(a) Parasexuality in Fungi ;

(b) Truffles ;

(c) Morels ;

(d) Sporangiospore and Conidiospore ;

(e) Imperfect Fungi.

$2\frac{1}{2} \times 4$

Group—B

Answer any *two* questions.

1. (a) Elucidate the principal features of Charophyceae.

(b) How does the Charophycean algae differ from Chlorophyceae ?

(c) Mention the industrial importance of diatoms. 3+4+3

2. (a) Why the division of Pyrrophyta is important in algal kingdom? Mention two toxins produced by dinoflagellates.

(b) Give the principal morphological and chromosomal changes associated with *Fucus* sp. with suitable diagram of its life cycle.

(c) Mention the advances in biofuel research based on algae.

(2+1)+4+3

3. Write short notes on (any four) :

(a) MLS ;

(b) Phragmoplast ;

(c) Auxospore ;

(d) Chromalveolata ;

(e) Gelidium.

4×2 $\frac{1}{2}$