

2015

M.Sc.

1st Semester Examination

MICROBIOLOGY

PAPER—MCB-102

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Answer any two questions from each group.

Group—A

[Marks : 20]

Answer any two questions.

1. (a) What is unique about the class Deuteromycetes?
Why it is different from other classes of fungi.
Mention the economic importance of this group.

(Turn Over)

- (b) Describe different ways by which fungi reproduce asexually.

1+2+2+5

2. (a) Give an out line of fungal classification (after Alexopoulos) with major distinguishing characters and representative organisms.
- (b) Describe briefly plus and minus strains of *Rhizopus Stolonifer*.

3. Write notes in *any four*

4×2=5

- (a) Symbiotic association of fungi ;
- (b) Parasexual life cycle ;
- (c) VA mycorrhiza ;
- (d) Evolutionary trends in fungi ;
- (e) Slime mold ;
- (f) Method of identification of fungi (molecular approach).

Group—B

[Marks : 20]

Answer any two questions.

1. (a) What are the main morphological characteristics of Red algae ? Mention two industrial uses of red algae .
- (b) Why algal sources of beta carotene is considered better than other sources in India.
- (c) Algae is a better option in harvesting solar energy—explain. (2+1)+3+4

2. (a) Mention the characteristic of super-group affiliation of algae.
- (b) Give the principal features of Sea Lettuce with diagram.
- (c) Mention the importance of two pharmaceutical products obtained from algae. 3+(2+2)+3

3. (a) Elucidate the life cycle of *Entamoeba histolytica* in human.
- (b) Give an idea on “Marine algal culture” citing an example of successful culture of a marine algal species.
- (c) What do you mean “kala-azar”? 5+(2+1)+2