2017

M.Sc.

1st Semester Examination

MICROBIOLOGY

PAPER—MCB-102

Subject Code—31

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.

Illustrate the answers wherever necessary.

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

Group—A

[20 Marks]

Answer any *two* questions.

1. (a) What are general charactersitics of fungi ? Briefly discuss the somatic structure of fungi ?

(b) What are different varieties of spares found in fungi ? How do fungi reproduce asexually ?

(c) What are economic importance of fungi ? How yeasts are feneficial for mankind ? (2+2)+(1+2)+(2+1)

2. (a) How does sexual reproduction occurs in fungi ? Discuss various modes of sexual reproduction in fungi.

(b) Briefly discuss classification of fungi and describe important features of main groups of fungi. 5+5

3. Write short notes on any *four* of the following : 4×2½

(a) Evolutionary trend in fungi ;

(b) Identification of fungi ;

(c) Parasitic fungi ;

(d) Penicillium *sp.* in association with Sir Alexander Fleming ;

(e) Sex hormones in fungi ;

(f) Mycorrhiza.

Group—B

[20 Marks]

Answer any *two* questions.

1. (a) Elucidate the salient features of super-group affiliation in algae.

(b) Briefly mention the morphological characterisitcs of Charophyceal.

(c) Describe the life-cycle and unique features of Volvox *sp* (with diagram). 3+3+4

2. (a) Give a brief note on therories pigmentation pattern observed in algal kingdom.

(b) Why the division of Red algae in considued extremely important in Industrial use ? Answer with suitable reasons.

(c) Give any three uses of diatoms. 4+4+2

3. Write short notes on (any *four*) : $4 \times 2\frac{1}{2}$

(a) CCM (Carbob Concentrating Mechanism) ;

(b) Structure of diatom ;

(c) Fucoxanthin ;

(d) Dinofleagellates;

(e) Laminaria *sp.* ;

(f) Micro-algal PUFA.