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5861

Your Roll No

B.Sc. (Hons.)/II

J

MICROBIOLOGY – Paper VII

(ALGAE & FUNGI)

(Admissions of 2004 & after)

Time 3 Hours

Maximum Marks 60

*(Write your Roll No on the top immediately
on receipt of this question paper)*

*Attempt five questions in all, selecting at
least two questions from each section Attempt
sections A and B on separate answer books*

All questions carry equal marks

SECTION – A

(Algae)

1 (a) Define any **eight** of the following

- (i) Stephanokont
- (ii) Raphe
- (iii) Synzoospore
- (iv) Unilocular Sporangia of *Ectocarpus*
- (v) Zooxanthella
- (vi) Fucosan vesicle

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- (vii) Amylum stars
 - (viii) Parasitic algae
 - (ix) Chromatic adaptation (1×8=8)
- (b) Give **one** example of each of the following
- (i) Siphonaceous green algae
 - (ii) Biofertilizer from a brown algae
 - (iii) Agarophytes
 - (iv) Algae with peridinin (1×4=4)
- 2 (a) Draw well labelled diagrams of the following **(any two)**
- (i) A typical dinoflagellate cell structure
 - (ii) Phaeoplast
 - (iii) Heterocyst (3)
- (b) Briefly explain the following terms **(any three)**
- (i) False branching
 - (ii) Hologamy
 - (iii) Diplodiplohaplontic life history
 - (iv) Auxospore (3×3=9)
- 3 (a) Justify the taxonomic position of *Chara* (3)
- (b) Differentiate between the following
- (i) Spermocarp and Cystocarp
 - (ii) Macrandrous and Nannandrous (6)

- (c) With diagrams only explain how sexual reproduction occurs in *coleochaete scutata*

(3)

SECTION - B
(FUNGI)

- 4 (a) Explain/Define the following terms -

(i) Rhizomorph

(ii) Cleistothecium

(iii) Spitzenkorper

(iv) Dimorphism

(v) Appressorium

(vi) Sorocarp

(vii) Muriform spore

(1×7=7)

- (b) What is spore printing? How is it useful? (2)

- (c) Explain how hyphal growth occurs? (3)

- 5 Differentiate between any six of the following -

(a) Budding and Binary fission

(b) Phragmobasidium and Holobasidium

(c) Pseudoplasmodium and plasmodium

(d) Autoecious rust and Heteroecious rust fungi

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- (e) Holocarpic and Eucarpic fungi
- (f) Gametangial contact and gametangial copulation
- (g) Bipolar and tetrapolar heterothallism (2×6=12)
- 6 (a) Classify and write the economic importance of **any three** of the following fungi –
- (i) *Peronospora*
 - (ii) *Ustilago*
 - (iii) *Candida*
 - (iv) *Eurotium* (2×3=6)
- (b) Give the contributions of the following mycologists (**attempt any three**) –
- (i) Blakeslee
 - (ii) A Millardet
 - (iii) Burgeff
 - (iv) De Bary (1×3=3)
- (c) Write a note on heterokaryosis (3)