

B. N. Bandodkar College of Science, Thane

F. Y. B. Sc. (SemII) Examination – 2013-14

USMB-201

Duration 2 hrs

Total Marks-60

N. B. 1) All questions are compulsory.

2) Figures to right indicate full marks.

3) Draw neat and labeled diagrams wherever necessary.

Q.1 A. Answer the following (Any two)

12

- 1) Write a note on continuous growth.
- 2) What is the effect of radiation and pressure on growth?
- 3) Explain in detail quorum sensing technique.
- 4) Explain how measurement of growth can be done using turbidometric method. Add a note on the measurement of cell constituents.

Q.1 B Answer the following (Any three)

3

- 1) What are psychrophiles?
- 2) What are facultative anaerobes?
- 3) What is the pH range in which acidophiles grow?
- 4) What is oligotrophic environment?
- 5) Define: balanced growth.
- 6) What is the difference between log phase and exponential phase?

Q.2 A. Answer the following (Any two).

12

- 1) Write a note on sexual reproduction in fungi.
- 2) Diagrammatically explain the structure of *Chlamydomonas* cell and add a note on its life cycle.
- 3) Describe briefly the importance of Protozoa.
- 4) Explain different techniques by which *Paramecium* reproduce.

Q.2 B Answer the following (Any three).

3

- 1) What are sterigmata?
- 2) Define: Pseudopodium.
- 3) Give two examples of algae used as food.
- 4) What is plasmogamy?
- 5) Name any two antibiotic producing fungi.
- 6) State the importance of diatomaceous earth.

P.T.O

- Q.3 A Answer the following (Any two)** **12**
- 1) Write a note on classification of viruses.
 - 2) Give general characters of *Rickettsia*.
 - 3) Explain classification of *Archea*.
 - 4) Write a note on general characters of *Chlamydiae*.

- Q.3 B Answer the following (Any three)** **3**
- 1) What is a prophage?
 - 2) What is non integrated lysogeny?
 - 3) What are halobacteria?
 - 4) What is a temperate phage?
 - 5) Name two suborders of *Actinomycetes*.
 - 6) Name the methods of cultivation of animal virus.

- Q. 4 A Answer the following** **12**
- 1) Write a note on log phase and stationary phase of growth curve.
- OR**
- 1) What are the different viable counting methods used for measurement of growth?
 - 2) Describe the structure of fungal hypha.
- OR**
- 2) Explain in detail the importance of various polysaccharides derived from algal cell wall.
 - 3) With the help of a diagram explain the structure of T4 phage.
- OR**
- 3) Write a note on cell wall of *Actinomycetes*.

- Q. 4 B Answer the following** **3**
- 1) How is the measurement of cell mass done?
- OR**
- 1) What are compatible solutes?
 - 2) Define: Hyperparasitism.
- OR**
- 2) State the pigment system present in Class Rhodophyta.
 - 3) State the significance of inclusion bodies.
- OR**
- 3) Name the diseases caused by *Rickettsia*.
