

B. N. BANDODKAR COLLEGE OF SCIENCE, THANE
ADDITIONAL EXAMINATION- MARCH – 2015 (OLD COURSE)
F.Y.B.Sc.
USMB- 201

Duration: 2 hrs 30 min

Total Marks: 75

N. B. 1) All questions are compulsory.

2) Figures to right indicate full marks.

3) Draw neat and labeled diagrams wherever necessary.

Q.1 Answer the following (Any 2 of 4).

20M

1 a Write a note on the chemostat and turbidostat systems of continuous growth.

b Discuss the effect of radiation on growth of microorganisms.

2 a What are the different methods for measuring cell number?

b Explain in detail quorum sensing technique.

3 a Write a note on growth curve.

b Derive the mathematical expression of growth.

4 a Write a note on effect of pH on growth.

b Enlist the different environmental factors that affect the growth of microorganisms. Classify the microorganisms on the basis of their temperature ranges for growth.

Q.2 Answer the following (Any 2 of 4).

20M

1 a Enlist economic importance of fungi.

b Explain the life cycle of yeast.

2 Describe the asexual reproduction in protozoa. Add a note on symbiotic protozoa.

3a With the help of neat, labeled diagram explain internal structure of paramecium.

b Elaborate the applications of algae as food.

4 Discuss the sexual reproduction in fungi.

Q.3 Answer the following (Any 2 of 4).

20M

1a Write a note on general characters of Chlamydiae.

b Write a note on the classification of the archeal groups.

2 a Give an account of structure of T4 phage.

b Diagrammatically explain the lytic cycle of T4 phage.

P.T.O.

- 3 a Give general characters of Rickettsia.
 b Write a note on the diseases caused by Rickettsia.
- 4 a Elaborate on the methods employed in the cultivation of animal viruses.
 b Write a note on the cultivation of bacteriophages and plant viruses.

Q.4 Answer the following.

- a**
- i Explain the term: microaerophiles. **OR** Explain the term: barotolerant organisms. **2M**
- ii Name any two red algae. **OR** Name any two media commonly used for fungal cultivation. **2M**
- iii What is non integrated lysogeny? **OR** Name two suborders of actinomycetes. **1M**
- b**
- i What are extremophiles? **OR** State one reason for the microbial growth curve to enter the stationary phase. **1M**
- ii Give two examples of protozoa. **OR** Which pigments are present in brown algae? **2M**
- iii Give one example of retrovirus. **OR** What is the symmetry of TMV? **2M**
- c**
- i Enlist two methods used for measuring growth of bacteria? **OR** What are halophiles? Name the organism which can be isolated from the Dead Sea. **2M**
- ii What are pseudopodia? **OR** Define: mycology **1M**
- iii Give two examples of viruses having dsRNA as their genome. **OR** Explain the term: prophage **2M**
