

2021

Microbiology

[HONOURS]

(CBCS)

(B.Sc. Third Semester End Examination-2021)

PAPER-GE3T

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

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

Illustrate the answers wherever necessary

Group-A

Answer any five from the following:

5x2= 10

1. Define Commensalism. Give example. 1+1
2. State the difference between dark field and bright field microscope. 2
3. What causes botulism in canned food? 2
4. What are Koch's Postulates? 2
5. Why the moist heat is more effective than dry heat in killing microorganism? 2
6. Define biopesticide. Give one example of bacteria used as biopesticide. 1+1
7. Virus is an intermediate between living and non-living, why? 2

(2)

8. Write four differences between Scanning Electron Microscope (SEM) and Transmission Electron Microscope(TEM). 2

Group-B

Answer any four from the following: 4x5 = 20

1. Write the Whittaker's five kingdom concept. What is SCP? 4+1
2. Write the differences between light microscope and electron microscope. Define resolution of a microscope. 3+2
3. Define mutualism and parasitism with example. Name one N₂ fixing organism. (2+2)+1
4. Distinguish algae and fungi. Write down on different components of a bioreactor. Define Pasteurization. 2+2+1
5. What is antibody? Briefly describe different classes of antibodies. 1+4
6. What are primary and secondary metabolites? Give examples. What are meant by active and passive immunity? 3+2

Group -C

Answer any one of the following : 10x1 = 10

- 1) a) Write down the principle and application of phase contrast microscope.
b) Define fermentation.
c) What are probiotics? Give examples.

(3)

- d) What is salmonellosis? (2+2)+2+(2+1)+1
- 2) a) Write down the contribution of Louis Pasteur in the field of microbiology.
b) What is prion?
c) Give two examples of microorganisms associated with food spoilage.
d) What is biofertilizers? Name two. 4+2+1+(2+1)
