

B.Sc. Semester - 1 (CBCS) Examination
Nov./Dec. -2018 (Old Course)
MICRO BIOLOGY (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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- Ques.1 A. Answer the following (One mark each) (4)
- 1) What is the contribution of Robert Koch ?
 - 2) Who proposed the kingdom Protista ?
 - 3) Giant puff balls are kind of algae (state True or False)
 - 4) Pasteurization was used by Pasteur for removing unwanted microbes from wine. (state True or False)
- Ques.1 B. Answer in brief (Any one out of two) (2)
- 1) Explain salient features of fungi.
 - 2) What is the contribution of Selman Waksman and Alexander Fleming ?
- Ques.1 C. Answer in detail (Any one out of two) (3)
- 1) Explain Germ theory of diseases.
 - 2) Write a note on Bergy's Manual.
- Ques.1 D. Write a note on (Any one out of two) (5)
- 1) Describe applied areas of microbiology.
 - 2) Give an account on spontaneous generation theory and its elimination.
- Ques.2 A. Answer the following (One mark each) (4)
- 1) Define : Chromophore
 - 2) What is Rhodamine and Fluorescein ?
 - 3) Write full forms of TEM, SEM and STEM.
 - 4) What is a mordant ?
- Ques.2 B. Answer in brief (Any one out of two) (2)
- 1) What is the principle of Phase contrast microscopy ?
 - 2) Explain NA
- Ques.2 c. Answer in detail (Any one out of two) (3)
- 1) Explain differential staining in detail.
 - 2) Discuss the principle of electron microscopy.
- Ques.2 d. Write a note on (Any one out of two) (5)
- 1) Explain stains, mordants and fixatives.
 - 2) Describe Bright field microscopy and Dark field microscopy with their uses.
- Ques.3 A. Answer the following (One mark each) (4)
- 1) Which organelle contains Basal body and Hook ?
 - 2) What is an outer membrane ?
 - 3) Capsules are useful in storing excess nutrients of cells. (Write true or false)
 - 4) What is mesosome ?

- Ques.3 B. Answer in brief (Any one out of two) (2)
- 1) Explain cell inclusion bodies in brief.
 - 2) Discuss prosthacae and stalk
- Ques.3 c. Answer in detail (Any one out of two) (3)
- 1) Explain peptidoglycan composition
 - 2) Explain the functions of capsule
- Ques.3 d. Write a note on (Any one out of two) (5)
- 1) Bacterial cell membrane
 - 2) Importance of sporulation
- Ques.4 A. Answer the following (One mark each) (4)
- 1) What are Halophiles ?
 - 2) What is a selective medium ?
 - 3) What is superoxide dismutase ?
 - 4) Enlist major chemical requirement for growth.
- Ques.4 B. Answer in brief (Any one out of two) (2)
- 1) Explain Psychrophiles, Chemotrophs and Heterotrophs in brief.
 - 2) Define and discuss :Pure culture.
- Ques.4 c. Answer in detail (Any one out of two) (3)
- 1) Explain nutritional types of bacteria
 - 2) What is oxygen toxicity ?
- Ques.4 d. Write a note on (Any one out of two) (5)
- 1) Explain physical requirements for growth.
 - 2) Write a note on bacterial cultural characteristics
- Ques.5 A. Answer the following (One mark each) (4)
- 1) What is Growth rate ?
 - 2) What is budding ?
 - 3) What is reverse log phase ?
 - 4) Define : Continuous culture
- Ques.5 B. Answer in brief (Any one out of two) (2)
- 1) What is transverse binary fission ?
 - 2) Discuss mathematical expression of growth.
- Ques.5 c. Answer in detail (Any one out of two) (3)
- 1) Explain modes of bacterial cell division.
 - 2) Explain synchronous culture in detail
- Ques.5 d. Write a note on (Any one out of two) (5)
- 1) Bacterial growth curve
 - 2) Chemostat and Turbidostat
