Avinashilingam Institute for Home Science and Higher Education for Women
[Deemed to be University] Coimbatore-641 043

Bachelor's Degree Examination – November 2018

III Semester

Class : II UG **Time: 3 hours**
Major : Biochemistry and Biotechnology **Max. Marks: 100**

15BBTC05 Microbiology

Part-A **10 x 1=10**
Choose the correct answer

1. The resolving power of an optical microscope is ----------
   a. 0.2µm b.0.2 A° c. 0.2nm d. 0.2mm

2. The purpose of swan necked flasks that designed by Louise Pasteur to disproves the spontaneous generation is to ----------
   a. Allow the multiplication of microbes in the broth.
   b. Implicate the role of flies in the development of maggots on rotting meat
   c. Prevent air from entering the flask
   d. Trap the microbes and prevent them from reaching the broth

3. Which of the following structure is absent in gram positive bacteria?
   a. Cell wall b. Teichoic acid c. Murein d. Outer membrane

4. Bacteria with a tuft of flagella found at one of the cell pole is called ----------
   a. Monotrichous b. Lophotrichous c. Peritrichuos d. Amphitrichous

5. Agar melts at ----------
   a. 40°C b. 50°C c. 100°C d.70°C

6. Mac Conkey agar is a ----------
   a. Assay Medium b. Enriched Medium
   c. Selective – differential d. Routine Laboratory

7. Which of the following is most effective to sterilize mattresses and plastic petriplates ?
   a. Chlorine b. Ethylene oxide c. Glutaraldehyde d. UV radiation

8. Pasteurization eliminates ----------
   a. Non Spore forming Bacteria b. Spore forming bacteria
   c. Both a & b d. None of these

9. All of the following are enveloped except ----------
   a. Hepatitis A Virus b. Hepatitis B Virus
   c. Hepatitis C Virus d. Hepatitis D Virus

10. One of the common fungal disease of man is -------
    a. Cholera b. Ring worm c. Plaque d. Typhoid

Part – B **5x6= 30**

Answer the following

Answer should not exceed 400 words or two pages

11.a. Highlight the contributions of below mentioned scientists.

i. Louis Pasteur ii Robert Koch

(or)

11.b. Discuss the working principle of fluorescence microscopy with neat sketch.

12.a. Describe in detail about the five kingdom concept.

(or)

12.b. Illustrate the ultrastructure of flagella and its arrangements with neat diagram.

13.a. Explain the principle and procedure of gram staining.

(or)

13.b. What is media? Name different types of media used for the microbial growth.

14.a. How will you sterilize the glasswares in laboratory?

(or)

14.b. Write a short note on filters and its types used for sterilization.

15.a. Give a detailed account on life cycle of malarial parasite.

(or)

15.b. Highlight the clinical features and laboratory diagnosis of mumps virus.

Part – C **5x12= 60**

Answer the following

Answer should not exceed 800 words or four pages

16.a. Write an essay on scope of Microbiology

(or)

16.b. Elaborate the working principle of TEM

17.a. Discuss on size and shape of Bacteria.

(or)

17.b. Explain in detail about the cell wall structure of Gram positive organisms

18.a. Discuss the four different phases of bacterial growth curve.

(or)

18.b. Which staining is preferable for *M.tuberculosis*, *Klebsiella* sp. elaborate the principle and procedure.

19.a. Explain the concepts of chemical sterilization.

(or)

19.b. What is meant by Physical sterilization and add a note on Moist heat and Ultra sonication.

20.a. Interpretate the pathogenicity, laboratory diagnosis and treatment of *M.tuberculosis*

(Or)

20.b. Explain the disease cycle, pathogenesis and symptoms of Dengue fever.