

2209H007

3. Discuss the recombinant genetic engineering techniques and its applications.
4. National AIDS control organization policy of diagnosis of HIV infection. Add a note on HIV vaccines.
5. Discuss in detail about Antibiotic sensitivity testing.
6. Describe the Antigenic variations in orthomyxo viruses and their epidemiological importance.
7. Describe the morphology, cultural characteristics antigenic structure and lab diagnosis of Brucellosis.
8. Describe recent advances in detection of M. tuberculosis?

*****END OF PAPER*****

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BACHELOR OF VOCATION
Medical Laboratory Technology (MLT)
Subject: Applied Bacteriology
Subject Code: MLT-701
Semester: Fifth
September 2022
Theory (External): 35 Marks
Time: 03 Hours

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

Roll Number

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SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x1=10 Marks)

- A. Which phage is used for phage display technique?
a. T7
b. M13
c. λ -phage
d. ϕ 6
- B. The bacterium that infects other gram-negative bacteria is
a. Proteus mirabilis
b. Haemophilus influenza
c. Bdellovibrio
d. Pseudomonas putida
- C. Prokaryotic cells are more resistant to osmotic shock than eukaryotic cells because
a. Their cell wall is composed of peptidoglycan
b. They are selectively permeable
c. They contain osmoregulating porins
d. They block water molecules from entering the cell
- D. Which of the following is a gram-positive eubacterium?
a. Actinomyces
b. Clostridium
c. Rhizobium
d. Clostridium, Actinomyces
- E. The prokaryotic cell membrane
a. Contains metabolic enzymes
b. Is selectively permeable
c. Regulates the entry and exit of materials

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- d. Contains proteins and phospholipids
- F. Which of the following contains structures composed of N-acetylmuramic acid and N-acetylglucosamine?
a. Mycoplasmas
b. Amoeba
c. E.coli
d. Spheroplast
- G. The association of endotoxin in gram-negative bacteria is due to the presence of
a. Steroids
b. Peptidoglycan
c. Lipopolysaccharides
d. Polypeptide
- H. What is gel filtration?
- I. Why are there big holes in 'Swiss cheese'?
- J. Name the class of bacteria found in the sludge of sewage treatment?

SECTION –B (ESSAY TYPE QUESTIONS)
(5x5=25 Marks)

1. Explain the importance of Beragy's Manual in bacterial taxonomy.
2. Define quality assurance. Discuss in detail quality control programmes for clinical microbiology laboratory.