

Instructions:

- All questions are compulsory
- Draw diagrams wherever necessary
- Answers of Questions and Sub-questions must be written strictly according to serial order of question paper.
- MCQ has to be answered in theory answer book
- Please write MCQ answer neatly and in serial order with black or blue pen in brackets; for example: - 1. (a) 2. (c)
- MCQ has to be answered only once, any kind of repetition or cutting or erasing or whitener will be considered as malpractice, such answers will not be counted in marks and action will be taken according to UFM rules of university.
- Subjective answer should be answered in up to 30 words per marks. For example, if a question having 2 marks should answered in up to 60 marks.

Q1. Total MCQs: 10

10 x 1 = 10

1. Bacterial capsules can be demonstrated by:			
(a) Albert's stain	(b) Indian ink	(c) Ziehl-Neelsen stain	(d) All of these
2. Lecithinase production on egg yolk agar is a characteristic feature of:			
(a) Clostridium botulinum	(b) Clostridium tetani	(c) Clostridium perfringens	(d) Clostridium difficile
3. The following substances can be added to produce an anaerobic environment EXCEPT:			
(a) Ascorbic acid	(b) Glutathione	(c) Glycerol	(d) Cysteine
4. Who is a paradoxical carrier:			
(a) A carrier who acquires the pathogen from a patient	(b) An individual who is a carrier for less than six months	(c) A carrier who acquires a pathogen from another carrier	(d) An individual who is a carrier for more than six months
5. Infection resulting from any investigative or treatment procedure is known as:			
(a) Secondary infection	(b) Latent infection	(c) Iatrogenic infection	(d) Cross-infection
6. A nine-year-old girl presented with fever and sore throat. Group A streptococci were cultured from her throat. Three weeks later, she developed pain and tender swelling of both knees and ankles; a palpable effusion of the right knee was drained, which yielded straw-colored fluid. Culture of the aspirate was negative. Subsequently, the girl began experiencing shortness of breath. Which of the following is a minor Jones diagnostic criterion used by the pediatrician to diagnose acute rheumatic fever:			
(a) Carditis	(b) Chorea	(c) Subcutaneous nodules	(d) Raised ASO titre
7. Phage mediated transfer of DNA from one bacterium to another bacterium is known as:			
(a) Transmission	(b) Transformation	(c) Transduction	(d) Conjugation
8. Toxic shock syndrome is caused by:			
(a) Staphylococcus	(b) Micrococci	(c) Gonococci	(d) Pneumococci
9. Which of the following acts as an anaphylatoxin:			
(a) C4b	(b) C3a	(c) C2a	(d) C3b
10. Traveller's diarrhoea is caused by:			
(a) EnteroPathogenic E.coli	(b) EnteroToxigenic E.coli	(c) EnteroHemorrhagic E.coli	(d) EnteroInvasive E.coli

- a. Enumerate Ag & Ab reactions. Define Agglutination reaction and describe types of agglutination tests with their application.
- b. Enumerate Microorganisms causing hepatitis. Discuss in detail morphology, pathogenesis and laboratory diagnosis of Hepatitis B virus infection.

Q3. Brief Answer Questions

6 x 05 = 30

- a. Describe the etiopathogenesis of infective endocarditis.
- b. Laboratory diagnosis of urinary tract infection.
- c. Mycoplasma pneumoniae
- d. Bacterial Flagella
- e. Type-IV hypersensitivity
- f. Laboratory diagnosis of Enteric Fever

Q4. Short Answer Questions

10 x 2 = 20

- a. Enumerate Anaerobic culture methods
- b. Toxins produced by Staphylococcus aureus
- c. Enumerate transfusion transmitted Infections.
- d. Enumerate blood parasites.
- e. Draw a labelled diagram of IgM Immunoglobulin.
- f. Glassware is widely used in the Clinical Microbiology and allied laboratories in the hospital as glass is inert and does not react or inhibit any reactions. How is glassware sterilised for repeated use in the hospital? What quality checks are performed to ensure the success of the procedure
- g. CAMP test
- h. Write 4 differences between N.meningitidis and N.gonorrhoeae.
- i. Enumerate difference between classical and El tor Vibrio.
- j. Enumerate agents having potential for use in bioterrorism