

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 capsule can be best demonstrated by -			
(a) Gram staining	(b) Acid-fast staining	(c) Negative staining	(d) Albert staining

2. Which is NOT DNA virus -			
(a) Parvovirus	(b) Papovavirus	(c) Poxvirus	(d) Rhabdovirus

3. All are true about autoimmune disease EXCEPT -			
(a) T cells recognize self-antigen	(b) Hashimoto thyroiditis is an example	(c) Higher incidence among males	(d) Polyclonal B cell activation

4. Which of the following bacteria can cause rat bite fever -			
(a) Streptococcus moniliformis	(b) L. monocytogenes	(c) Chromobacterium violaceum	(d) Flavobacterium monosepticum

5. Toxic Shock Syndrome is caused by -			
(a) Staphylococcus	(b) Pneumococcus	(c) Streptococcus	(d) Gonococcus

6. Geobacillus stearothermophilus is used as indicator for efficacy of -			
(a) Hot air oven	(b) Autoclave	(c) Filtration	(d) Ultraviolet rays

7. Which is not present in gram negative bacteria -			
(a) Peptidoglycan	(b) Teichoic acid	(c) LPS	(d) Porin Channels

8. Which of the following immunoglobulins can cross placenta efficiently -			
(a) IgG	(b) IgA	(c) IgM	(d) IgE

9. Chinese restaurant syndrome after eating fried rice and vanilla sauce is due to -			
(a) Clostridium perfringens	(b) Bacillus cereus	(c) Staphylococcus epidermidis	(d) Clostridium botulinum

10. After blood transfusion, blood bag will be discarded in which color code dustbin -			
(a) Red	(b) Blue	(c) Yellow	(d) Black

Q2. Long Answer Questions

- a. A 30-year-old man brought to hospital with history of severe watery diarrhea for one day. He gave history of recent visit to Prayagraj for Kumbh mela. On examination, he was afebrile with s/o severe dehydration, no abdominal tenderness. Hanging drop preparation of stool shows darting motile bacteria. With this history, answer the following questions. (2+6+6+6=20)
- I. What is your clinical diagnosis and probable causative agent?
 - II. Describe the epidemiology of this condition.
 - III. Discuss the pathogenesis of this condition.
 - IV. Describe the laboratory diagnosis of this condition.
- b. Enumerate Ag and Ab reactions. Define agglutination reactions and describe types of agglutination tests with their clinical applications.

Q3. Brief Answer Questions

6 x 05 = 30

- a. Enumerate viruses causing hepatitis and tabulate the characteristics of hepatitis viruses.
- b. Explain giving an example, the importance of choosing a right sample, in making a correct Diagnosis.
- c. Draw a well labelled diagram of life cycle of Plasmodium vivax.
- d. Enumerate physical methods of sterilization and describe autoclave in detail.
- e. Write lab diagnosis of acute rheumatic fever.
- f. Differentiate gram-positive and gram-negative bacterial cell wall with the help of suitable diagram.

Q4. Short Answer Questions

10 x 2 = 20

- a. Post Kala Azar Dermal Leishmaniasis.
- b. Biomedical waste management.
- c. Enumerate any four live vaccines.
- d. Write the use and sterilization of Loeffler's serum slope.
- e. Enlist the cause of pyomyositis.
- f. Write the five moments of hand hygiene.
- g. Draw life cycle of Entamoeba histolytica.
- h. Enlist bile-stained eggs.
- i. Complement fixation test.
- j. Pseudomembranous enterocolitis.