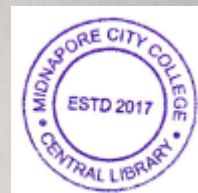


The West Bengal University of Health Sciences
B.Sc. in Medical Microbiology 6th Semester
September-October, 2026 Examination
Subject : Applied Microbiology



Time : 2 hrs.

Full Marks : 50

Attempt all questions

A. Tick the correct answer.

10×1

1. Where does the *Streptococcus mutans* adhere to the body site?
 a) intestinal tract b) tongue c) teeth d) hairs
2. Name a fungus that is a part of the normal flora present in the vagina and is also the common cause of vaginitis?
 a) *Candida albicans* b) *Cryptococcus neoformans*
 c) *Helicobacter pylori* d) *Plasmodium falciparum*
3. Diseases that are always present in a community, usually at a low, more or less constant, frequency are classified as having an _____ pattern.
 a) epidemic b) endemic c) pandemic d) None of the above
4. What are the most common types of Nosocomial infections?
 a) Catheter-associated urinary tract infections (CAUTIs) b) Surgical sites infections (SSIs)
 c) Ventilator-Associated Pneumonia (VAP) d) All of the above
5. The following pathogen is responsible for the common hospital acquired as well as community acquired gastrointestinal infections, it can survive and stay viable in the surface regions for an extended period. The organism consists of spores which is resistant and can withstand thorough cleaning. Name the most likely pathogen:
 a) *Bacillus anthracis* b) *Clostridium difficile*
 c) Methicillin-resistant *Staphylococcus aureus* (MRSA) d) *Penicillium chrysogenum*
6. Which of the following is example of QA?
 a) Validation b) Verification c) Documentation d) Software testing
7. What are the most common laboratory culture media for fungi?
 a) Sabouraud dextrose agar b) Thayer Martin medium c) Cornmeal agar d) None of the above
8. Which of the following method is used for the detection of viral DNA?
 a) Western blotting b) Northern blotting c) Eastern blotting d) Southern blotting
9. Identify the most commonly used diagnostic technique in the virus laboratory:
 a) Virus isolation in cell culture b) Deep sequencing (NGS)
 c) Reverse transcriptase (RT) PCR d) Immuno-serology
10. In which of the following method the antibody is labeled with a fluorophore?
 a) TR-FIA b) PCR c) Dot-blot hybridization d) Alkaline lysis

B. Answer **any four** of the following questions.

4×2

1. Define normal microbiota.
2. What is facultative intracellular pathogen?
3. What is the importance of performing Albert staining?
4. What is β -hemolysis?
5. What is multiplex PCR?
6. Write the full form of RFLP.

C. Answer **any four** of the following questions.

4×4

1. What are the major reservoirs of pathogenic microorganism for infection in human body?
2. Briefly discuss the fungal sample collection procedure from a diseased human.
3. Name the major normal flora present in human mouth.
4. What are the consequences of disturbing the normal human flora?
5. Briefly discuss the LCB mount procedure.
6. How do you test the sterility of a prepared media?

D. Answer **any two** of the following questions.

2×8

1. Briefly discuss the quality control methods in a microbiological laboratory.
2. How do you collect the samples from respiratory tract? What is nosocomial infection?
3. Write short note on: a) Automation in microbiological laboratory b) Real time PCR.

8

6+2

4+4