

(7 pages)

Reg. No. : .....

Code No. : 5548

Sub. Code : ZMBM 32

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2024.

Third Semester

Microbiology – Core

MEDICAL AND PHARMACEUTICAL  
MICROBIOLOGY

(For those who joined in July 2021 – 2022 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following microorganisms is not responsible for Urinary Tract infection?
- (a) *Proteus mirabilis*
  - (b) *Escherichia coli*
  - (c) *Klebsiella pneumoniae*
  - (d) *Bacteroides fragilis*

2. Which of the following is diagnosed by serologic means?
- (a) Actinomycosis
  - (b) Q-fever
  - (c) Pulmonary tuberculosis
  - (d) Gonorrhoea
3. Diarrhoea is not caused by \_\_\_\_\_.
- (a) *Shigella dysenteriae*
  - (b) *Streptococcus pyogenes*
  - (c) *Clostridium difficile*
  - (d) *Salmonella enteritidis*
4. The coagulase test is used to differentiate \_\_\_\_\_.
- (a) *Staphylococcus epidermidis* from *Neisseria meningitidis*
  - (b) *Staphylococcus aureus* from *Staphylococcus epidermidis*
  - (c) *Streptococcus pyogenes* from *Staphylococcus aureus*
  - (d) *Streptococcus pyogenes* from *Enterococcus faecalis*

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5. Amoebiasis is transmitted by \_\_\_\_\_.
- (a) Direct contact with dirty hands
  - (b) Sexual contact
  - (c) Faecal contamination of drinking water and food
  - (d) All of these
6. Recurring chills and fever in malaria is due to,
- (a) Destruction of micro and macro gametocytes by the WBCs
  - (b) Rupturing of RBCs by rapid multiplication and release of haemozoin
  - (c) Toxins released from trophozoites
  - (d) Sporozoites released from RBCs and are rapidly being killed in the spleen
7. Main cause of hospital acquired infection is \_\_\_\_\_.
- (a) *Clostridium difficile*
  - (b) *Bacillus cereus*
  - (c) *Helicobacter pylori*
  - (d) *Salmonella sps*

8. Shigellosis is caused by *shigella desenteriae* in humans causing fever, abdominal cramps, diarrhoea sometimes blood. The infection is attributed to the \_\_\_\_\_ activity of shiga toxin which increases the severity by tissue invasion in the large intestine.
- (a) Exotoxic
  - (b) Enterotoxic
  - (c) Cytotoxic
  - (d) Neurotoxic
9. Alcohol act as a disinfectant by,
- (a) Producing toxins
  - (b) Protein denaturation
  - (c) Membrane lysis
  - (d) Coagulation
10. The principle in microbiological assay is \_\_\_\_\_.
- (a) At certain range the concentration of growth factor will bear a linear relationship to the amount of nutrients added
  - (b) Concentration of growth factor have a linear relationship with the growth of the organism
  - (c) (a) and (b)
  - (d) None of the above

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Define gastrointestinal infections and add note on pathogenicity and treatment for *E.Coli*.

Or

- (b) List out the clinical manifestations and lab diagnosis of syphilis.

12. (a) Tabulate the distinguishing characters of Dermatophytosis and Candidiasis.

Or

- (b) Define central nervous system infections and Add a note on the symptoms and lab diagnosis of meningitis.

13. (a) Identify the causes of Covid 19 and add note on its history, prevalence and prophylaxis.

Or

- (b) Define Dengue and add note on the transmission and preventive measures.

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14. (a) Define pyrogen testing and add note on sterility toxicity test.

Or

- (b) Explain the drug resistance in microbes with examples.

15. (a) Define sterility testing. Add note on dressing, adsorbable, haemostats and surgical ligatures.

Or

- (b) Write short note on (i) EP and (ii) IP.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)

Each answer should not exceed 600 words.

16. (a) Describe elaborately about the Etiology, transmission, pathogenesis, clinical manifestations, lab diagnosis of streptococcal pharyngitis.

Or

- (b) Write an essay about Bacterial pneumonia.

17. (a) Compare the pyogenic infections, caused by *Staphylococcus* and *Streptococcus*.

Or

- (b) Write an essay about poliomyelitis.

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18. (a) Give a detailed report on the emerging disease – Ebola.

Or

- (b) Explain the etiology, transmission, symptoms, preventive measures, treatments of Chikungunya.

19. (a) Write an essay about disinfectants.

Or

- (b) Enumerate the dose, route, toxicity and combined therapy of drugs.

20. (a) Describe the sterility testing of solid and liquid parental products.

Or

- (b) Write an essay about the sterility, testing of pharmaceutical products.

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