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Reg. No. :

Code No. : 30724 E Sub. Code : EEMI 31

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2025.

Third Semester

Microbiology

CLINICAL LABORATORY TECHNOLOGY

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. State the primary purpose of using personal protective equipment (PPE) in infection control?
 - (a) To protect the environment
 - (b) To protect the healthcare worker
 - (c) To protect the patient
 - (d) To reduce waste

2. Trace the most important measure of standard precautions?
 - (a) Hand washing
 - (b) Isolation
 - (c) Disinfection of equipment
 - (d) Environmental disinfection
3. _____ cell present in normal CSF.
 - (a) Plasma cell
 - (b) Neutrophils
 - (c) Lymphocytes
 - (d) Monocytes
4. Identify the following is a suitable transport media for stool specimens?
 - (a) Buffered glycerol saline
 - (b) Cotton swab
 - (c) Dry container
 - (d) Simple staining
5. _____ staining method used in histopathology.
 - (a) Haematoxylin and eosin staining
 - (b) Negative staining
 - (c) Gram staining
 - (d) Simple staining

6. Select the embedding medium is the most common in histological studies.

- (a) Agar (b) Resin
- (c) Gelatin (d) Paraffin

7. Name the following plasma protein involved in coagulation of blood?

- (a) Albumin (b) Globulin
- (c) Fibrinogen (d) Amylase

8. _____ laboratory test is commonly used to monitor the extrinsic pathway of the coagulation cascade.

- (a) Prothrombin time
- (b) Activated thromboplastin time
- (c) Partial thromboplastin time
- (d) Thrombin time

9. Identify the following certification system used for laboratory accreditation services to laboratories?

- (a) ISO (b) WHO
- (c) NABL (d) GMP

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10. COLA stand for _____.

- (a) Commission on Office Laboratory Accreditation
- (b) Common on Office Laboratory Accreditation
- (c) Commission on Office Laboratory Analysis
- (d) Both (a) and (c)

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) State the code of conduct for medical laboratory personals.

Or

(b) Describe the organization of clinical laboratory and its importance.

12. (a) Explain the procedure for separation of serum from the whole blood.

Or

(b) Interpret the handling procedure of specimens in the laboratory.

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13. (a) Choose the procedure for preparation of paraffin blocks.

Or

- (b) Write a short note on embedding of tissue specimens.

14. (a) Explain the principles of coagulation test.

Or

- (b) Appraise the principle of partial thromboplastin time for bleeding and clotting disorders.

15. (a) Select the function of ISO in health laboratories.

Or

- (b) Recommend the post analytical procedures in laboratory.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Enumerate the basic clinical laboratory principles and the role of medical laboratory techniques.

Or

- (b) Observe the maintenance of hygienic conditions and guidelines for infection control in clinical laboratory.

17. (a) Explain the blood specimen collection, transportation and processing procedures.

Or

- (b) Discuss the steps involved in the collection and preservation procedure of clinical specimens.

18. (a) Determine the types and properties of fixatives.

Or

- (b) Illustrate the principle and procedure of hematoxylin and eosin staining.

19. (a) Select the various laboratory test used to evaluate the blood coagulation mechanisms

Or

- (b) Analyze the principle and procedure of fibrinogen estimation.

20. (a) Predict the functions and responsibilities of National Accreditation Board for testing and calibration laboratories.

Or

- (b) Recommend the requirements of College of American Pathologists standards in health laboratories.
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