



**BACHELOR OF MEDICAL LABORATORY TECHNOLOGY
FOURTH SEMESTER
PATHOLOGY IV
BMLT – 405**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

- Which of the following is a common indication for performing a fine needle aspiration (FNA) in cytopathology?
 - Routine health screening
 - Diagnosing cardiovascular diseases
 - Evaluating suspicious breast lumps
 - Monitoring blood glucose levels
- Which technique involves scraping cells from the lining of the bladder for cytological examination?
 - Pap smear
 - Bladder washings
 - Bronchial brushing
 - Endometrial biopsy
- What is the primary advantage of using ultrasound guidance for FNAC?
 - Real-time visualization of the needle during the procedure
 - Higher resolution images compared to other modalities
 - Lower cost and widespread availability
 - None of these
- What is the term for an effusion that occurs in the space surrounding the lungs?
 - Pleural effusion
 - Pericardial effusion
 - Peritoneal effusion
 - None of these
- Which of the following is not a primary application of cytopathology?
 - Genetic testing for hereditary disorders
 - Cancer diagnosis and screening
 - Infectious disease diagnosis
 - Monitoring treatment response
- What does MGG stain stand for?
 - Methylene Green and Giemsa
 - May-Grünwald-Giemsa
 - Methyl Green and Gomori's
 - Modified Gram's and Giemsa
- Which of the following conditions is commonly associated with pericardial effusion?
 - Chronic kidney disease
 - Congestive heart failure
 - Rheumatoid arthritis
 - Cirrhosis
- Which of the following is not a biological hazard?
 - Infections agents
 - Air borne organisms
 - Toxic chemicals
 - Blood borne organisms

9. Which component of the Pap stain helps to highlight acidic structures within the cells?
 - a. Eosin
 - b. Acetic acid
 - c. Hematoxylin
 - d. Lithium carbonate
10. Triple CVE smear contains sample from
 - a. Ectocervix
 - b. Endocervix
 - c. Vagina
 - d. All of these
11. Which of the following statements regarding interventional cytopathology is true?
 - a. It involves the removal of large tissue samples for analysis.
 - b. It is primarily used for non-diagnostic purposes.
 - c. It allows for rapid on-site evaluation of cellular samples.
 - d. It is not suitable for evaluating deep-seated lesions.
12. Who developed the Pap stain?
 - a. Rudolf Virchow
 - b. George Papanicolaou
 - c. Louis Pasteur
 - d. Wilhelm Roentgen
13. What is the primary purpose of exfoliative cytology?
 - a. To collect cells from deep tissue layers
 - b. To analyze blood samples
 - c. To perform surgical biopsies
 - d. To diagnose conditions based on cellular morphology
14. Which of the following statements about exfoliative cytology is true?
 - a. It involves the removal of tissue using a biopsy needle.
 - b. It is primarily used for evaluating tissue architecture.
 - c. It relies on the examination of cells shed from body surfaces.
 - d. It is only applicable for diagnosing skin disorders.
15. Which of the following is a characteristic feature of malignant cells in cytopathology?
 - a. Uniform nuclear size
 - b. High nuclear-to-cytoplasmic ratio
 - c. Well-defined cell borders
 - d. Low mitotic activity
16. What is a limitation of exfoliative cytology in diagnosing certain conditions?
 - a. Inability to obtain sufficient cellular material
 - b. Risk of tissue damage during sample collection
 - c. Requirement for general anaesthesia
 - d. High cost of equipment
17. What is the optimal time required for fixation in cytology?
 - a. Overnight fixation
 - b. 15-30 seconds
 - c. 15-30 minutes
 - d. 24 hours
18. What is the total volume of CSF in an adult?
 - a. 1.5 ml
 - b. 15 ml
 - c. 150 ml
 - d. 1500 ml

19. In liquid-based cytology (LBC), cells collected from a specimen are suspended in which solution for processing?
- a. Formalin
 - b. Alcohol
 - c. Saline
 - d. Preservative fluid
20. In imprint cytology, cellular material is transferred onto a slide by
- a. Cutting thin sections of tissue
 - b. Pressing the tissue surface onto the slide
 - c. Scraping the tissue surface
 - d. Dissolving the tissue in a solvent

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(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. a. What is Pap Smear ? 3+7=10
b. Describe the procedure with diagrams
2. Define cytopathology. Explain the branches of cytopathology. 2+3+5
Describe the nuclear criteria of malignancy. =10
3. What are the commonly used processing techniques in cytology. 2+4+4
Explain the procedure of millipore filtration technique and cell =10
block preparation.
4. Describe the various collection techniques for respiratory sample 5+5=10
and gastrointestinal sample in exfoliative cytology.
5. Explain the general procedure of FNAC. Write a short note on the 5+5=10
advantages and complication of FNAC.
6. Describe in detail the numerous applications of diagnostic 10
cytology.
7. Write a short note on imprint cytology. Discuss briefly about 2+8=10
aspiration of specific lesions through FNAC.
8. Discuss briefly about PAP's stain, it's principle and staining 2+3+5
procedure. =10

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