

**BACHELOR OF MEDICAL LABORATORY TECHNOLOGY
FOURTH SEMESTER
PATHOLOGY IV
BMLT – 405 [REPEAT]
[USE OMR SHEET FOR OBJECTIVE PART]**

**SET
A**

Duration: 3 hrs.

Full Marks: 70

[Objective]

Time: 30 min.

Marks: 20

Choose the correct answer from the following:

1×20=20

- Who developed the Pap stain?
 - Rudolf Virchow
 - George Papanicolaou
 - Louis Pasteur
 - Wilhelm Roentgen
- What is the primary purpose of exfoliative cytology?
 - To collect cells from deep tissue layers
 - To analyze blood samples
 - To perform surgical biopsies
 - To diagnose conditions based on cellular morphology
- Triple CVE smear contains sample from
 - Ectocervix
 - Endocervix
 - Vagina
 - All of these
- Which of the following statements regarding interventional cytopathology is true?
 - It involves the removal of large tissue samples for analysis.
 - It is primarily used for non-diagnostic purposes.
 - It allows for rapid on-site evaluation of cellular samples.
 - It is not suitable for evaluating deep-seated lesions.
- Which of the following statements about exfoliative cytology is true?
 - It involves the removal of tissue using a biopsy needle.
 - It is primarily used for evaluating tissue architecture.
 - It relies on the examination of cells shed from body surfaces.
 - It is only applicable for diagnosing skin disorders.
- Which of the following is a characteristic feature of malignant cells in cytopathology?
 - Uniform nuclear size
 - High nuclear-to-cytoplasmic ratio
 - Well-defined cell borders
 - Low mitotic activity
- What is a limitation of exfoliative cytology in diagnosing certain conditions?
 - Inability to obtain sufficient cellular material
 - Risk of tissue damage during sample collection
 - Requirement for general anaesthesia
 - High cost of equipment

8. What is the optimal time required for fixation in cytology?
 - a. Overnight fixation
 - b. 15-30 seconds
 - c. 15-30 minutes
 - d. 24 hours
9. What is the total volume of CSF in an adult?
 - a. 1.5 ml
 - b. 15 ml
 - c. 150 ml
 - d. 1500 ml
10. 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
11. 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
12. Which of the following is a common indication for performing a fine needle aspiration (FNA) in cytopathology?
 - a. Routine health screening
 - b. Diagnosing cardiovascular diseases
 - c. Evaluating suspicious breast lumps
 - d. Monitoring blood glucose levels
13. Which component of the Pap stain helps to highlight acidic structures within the cells?
 - a. Eosin
 - b. Acetic acid
 - c. Hematoxylin
 - d. Lithium carbonate
14. Which of the following is not a biological hazard?
 - a. Infections agents
 - b. Air borne organisms
 - c. Toxic chemicals
 - d. Blood borne organisms
15. Which of the following conditions is commonly associated with pericardial effusion?
 - a. Chronic kidney disease
 - b. Congestive heart failure
 - c. Rheumatoid arthritis
 - d. Cirrhosis
16. Which technique involves scraping cells from the lining of the bladder for cytological examination?
 - a. Pap smear
 - b. Bladder washings
 - c. Bronchial brushing
 - d. Endometrial biopsy
17. What does MGG stain stand for?
 - a. Methylene Green and Giemsa
 - b. May-Grünwald-Giemsa
 - c. Methyl Green and Gomori's
 - d. Modified Gram's and Giemsa
18. Which of the following is not a primary application of cytopathology?
 - a. Genetic testing for hereditary disorders
 - b. Cancer diagnosis and screening
 - c. Infectious disease diagnosis
 - d. Monitoring treatment response

19. What is the term for an effusion that occurs in the space surrounding the lungs?
- a. Pleural effusion
 - b. Pericardial effusion
 - c. Peritoneal effusion
 - d. None of these
20. What is the primary advantage of using ultrasound guidance for FNAC?
- a. Real-time visualization of the needle during the procedure
 - b. Higher resolution images compared to other modalities
 - c. Lower cost and widespread availability
 - d. None of these

(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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