PG/IVS/BML/403/24

M.Sc. 4th Semester Examination, 2024

BIO-MEDICAL LABORATORY SCIENCE AND MANAGEMENT

(*Clinical Pathology & Forensic Science*)

PAPER – BML-403

Full Marks : 50

Time : 2 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

GROUP – A

Answer any **four** questions : 2×4

1. What is the application of DNA fingerprinting in forensic science ?

2. What are the indications of mousy smell and fishy smell of urine ?

3. Define anuria and polyuria.

4. What are the causes of the presence of amorphous urates and amorphous phosphates in urine sample ?

5. Differentiate paracentesis and arthrocentesis.

6. State the indications of 'butter stool' and 'sickly sweet odour of stool'.

GROUP–B

Answer any **four** questions : 4×4

7. Discuss about variable colour representation of urine sample. 4

8. How do you collect urine samples from male and female infants ? What is suprapubic collection of urine sample and when will you execute this process ? $2 + 2$

(*Continued*)

9. State the principle of urinometry. How do you correct the temperature fluctuation of urine sample ? 2 + 2

10. Differentiate transudate and exudate. 4

11. When and how will you do the procedure of dark-field microscopy ? 4

12. What are the types of sputum specimen ? Name the different media for Gram staining of sputum. 2 + 2

GROUP – C

Answer any **two** questions : 8 × 2

13. Define cast. Discuss about the different types of casts along with diagram and its pathological relevance. 2 + 6

14. Discuss about clinical implications of mucous in stool. How do you perform collection of stool for investigating ova parasites and enteric pathogen ? 3 + 5

15. What is the application of Rope's test ? How do you perform the test and interpret test results ? Define Ragocyte. How do you interpret the occurence of MSK and CCPD under polarize microscopic birefringence. 1 + 3 + 1 + 3

16. Discuss briefly about the swab collection from a suspected patient of SARS-CoV-2. How do you fix pleural effusion fluid and pericardial fluid ? 6 + 2

[Internal Assessment – 10 Marks]