

**M.Sc. 3rd Semester Examination, 2019**

**BIOMEDICAL LABORATORY SCIENCE  
AND MANAGEMENT**

**PAPER —BLM-303**

*Full Marks : 40*

*Time : 2 hours*

**Answer all questions**

*The figures in the right hand margin indicate marks*

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

*Illustrate the answers wherever necessary*

1. Answer any *four* questions of the following :  $2 \times 4$ 
  - (a) When mousy and fruity smell of urine is found ?
  - (b) What is the reason of cloudy colour of urine ?
  - (c) Define polyuria and anuria.

( Turn Over )

- (d) Mention the area of synovial fluid and CSF collection.
- (e) What is shy bladder urine ?
- (f) Write the normal serum creatinine level in adult male.
- (g) What do you mean by Maximum Acid Out put (MAO) ?
- (h) Write name of any two specific marker for liver function test.

2. Answer any *four* questions : 4 × 4

- (a) How do you collect urine sample from an individual unable to micturate and from an infant ? 2 + 2
- (b) Discuss the characteristic features of MSUD and other crystal, in synovial fluid with special reference to birefringence of polarized light. 2 + 2
- (c) Give comparative statement between transudate and exudate with example. 2 + 2

- (d) Write the name of few preservatives with its use during 24 hr. urine collection. 4
- (e) Write the preparation of protein free blood filtrate. 4
- (f) Given uncorrected specific gravity of an urine sample is 1.022 and the temperature of this urine sample is 100°F. Calculate the actual specific gravity of the sample following temperature correction. 4
- (g) Briefly discuss the pentagastrin stimulation test for stomach function. 4
- (h) What are the differences between double beam and single beam spectrophotometer? 4

3. Answer any *two* questions of the following : 8 × 2

- (a) Define cast. Discuss about two urinary casts and two crystals diagrammatically with its clinical significance. 2 + 6
- (b) Diagrammatically enumerate Rope's test. What is principle of urine specific gravity detection by harmonic oscillation densitometry and refractometry. 3 + 5

- (c) Discuss the principle, procedure and clinical significance of blood creatinine estimation by alkaline picrate method.  $2 + 4 + 2$
- (d) (i) Write the name of any four cardiac markers.
- (ii) Discuss the changes of any two important cardiac marker in Ischemic heart disease.
- (iii) Write the clinical significance of bilirubin.  $2 + (2 + 2) + 2$
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