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C/19/MSc/4/SEM/BML-401/6

2019

MSc

4th Semester Examination

**Bio Medical Laboratory Science & Management
(Theory)**

PAPER - BML_401 (Theory)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

(Turn Over)

Answer Q. No. 1 and any *THREE* from the rest

1. Answer all the questions by choosing right one:

1×10=10

- A) Normal urine primarily consist of :
- Water, protein, and sodium
 - Water, urea, and protein
 - Water, urea, and sodium chloride
 - Water, urea, and bilirubin
- B) Patient with diabetes mellitus have urine with:
- Decreased volume and decreased specific gravity
 - Decreased volume and increased spccific gravity
 - Increased volume and decreased specific gravity
 - Increased volume and increased specific gravity
- C) Cessation of urine flow is defined as:
- Azotemia
 - Dysuria
 - Diuresis
 - Anuria
- D) Upon standing at room temperature a urine pH typically:
- Decreases
 - Increases
 - Remains the same
 - Changes depending on bacterial concentration
- E) Calibration of refractometers is done by measuring the specific gravity of:
- Distilled water and protein
 - Distilled water and glucose
 - Distilled water and sodium chloride
 - Distilled water and urca

- F) A 17- year-old girl decided to go on a starvation diet. After 1 week of starving herself, what substance would most likely be found in her urine?
- Protein
 - Ketones
 - Glucose
 - Blood
- G) Which of the following crystals may be found in acidic urine?
- Calcium carbonate
 - Calcium oxalate
 - Calcium phosphate
 - Triple phosphate
- H) Which of the following is an abnormal crystal described as a hexagonal plate?
- Cystine
 - Tyrosine
 - Leucine
 - Cholesterol
- I) Which of the following cells is the largest?
- Glitter
 - WBC
 - Transitional epithelial
 - Renal epithelial
- J) Urinary calculi most often consist of :
- Calcium
 - Uric acid
 - Leucine
 - Cystine

2. Discuss about different types of urinary casts along with its diagram and mention the clinical significance of the casts.

Briefly state the justification of any two preservatives used for 24 hour urine sample. **7 + 3**

3. Mention the names of different urinary specimen. How do you collect urine from male and female infants? How do you collect urine specimen from an adult unable to micturate urine?

Discuss the characteristic features of urine specimen of an UTI patient and make a model report of this examined urine. **2+2+2+4**

4. Mention the features of stool samples with different types of abnormalities.

State the basic principle of chemical test of specific gravity measurement. What is the difference between transudate and exudate? **4+3+3**

5. Define mucin clot test mentioning the principle and clinical significance. Enumerate different types of joint disorders and diseases that reflect the changes in the composition of 'Sinovial fluid'.

Diagrammatically show the techniques of detecting urinary arsenic or mercury by HGAFS. **3+3+4**

6. Write short notes on any two: **5 + 5**

- Dope test of urine specimen
- Interpretation of CSF test
- Sputum examination