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D.M.L.T.

BIOCHEMISTRY

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*

Q1) Enumerate renal function tests. Explain the tests based on tubular function. **[15]**

Q2) Explain the principle, components and applications of colorimeter. **[15]**

Q3) Explain quality assurance programme in clinical laboratory. **[15]**

Q4) Define enzymes. Describe factors affecting enzyme action. Write a note on therapeutic use of enzymes. **[15]**

Q5) Write short notes on: (Any Four) **[20]**

- a) Glucose tolerance test.
- b) Laboratory hazards.
- c) Blood buffers.
- d) Lipid profile.
- e) Serum bilirubin.

Q6) Write short notes on: (Any Four) **[20]**

- a) Enumerate plasma proteins and write any four functions of plasma proteins.
- b) Calibration of pipettes and volumetric flasks.
- c) Preparation of normal, molar, percent solution.
- d) Serum electrolytes.
- e) Thin layer chromatography.

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D.M.L.T.

MICROBIOLOGY

(Paper - II)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Draw diagrams wherever necessary.*
- 3) Figures to the right indicate full marks.*
- 4) Your answers will be valued as whole.*

Q1) Draw a neat labeled diagram of a bacterial cell. Discuss various cell structures. **[15]**

Q2) Discuss sample collection, processing of urine sample for laboratory diagnosis of urinary tract infection. **[15]**

Q3) Enumerate antigen antibody reactions. Discuss principles and applications of precipitation reactions. **[15]**

Q4) Name the protozoa causing diarrhea. Describe life cycle, pathogenesis and laboratory diagnosis. **[15]**

Q5) Write short notes on: (Any Four) **[20]**

- a) Coagulase test.
- b) Hot air oven.
- c) Disposal of biomedical waste generated in Microbiology laboratory.
- d) TCBS medium.
- e) Antibiotic susceptibility testing.

Q6) Write short notes on: (Any Four) **[20]**

- a) Cryptococcus neoformans.
- b) Polio vaccine.
- c) LPCB in mycology.
- d) Egg inoculation.
- e) Role of PBS in laboratory diagnosis.

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Total No. of Questions : 6]

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D.M.L.T.

PATHOLOGY

(Paper - III)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*

Q1) What are fixatives? Enumerate different fixatives used in histopathology laboratory. Describe in detail about formalin. **[15]**

Q2) Describe preparation and staining of an ideal P.B.S. Describe the method of reporting of P.B.S. **[15]**

Q3) Describe in detail C.S.F. examination. **[15]**

Q4) Enumerate various transfusion transmitted diseases. How will you investigate a case of transfusion reaction? **[15]**

Q5) Write short notes on: (Any Four) **[20]**

- a) Block making.
- b) Decalcification.
- c) Hematoxyline.
- d) Cross matching.
- e) Bombay blood group.

Q6) Write short notes on: (Any Four) **[20]**

- a) Packed cell volume.
- b) Morphological classification of anemia.
- c) Special stains in hematology.
- d) Fine needle aspiration cytology.
- e) Proteinuria.

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