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[3858] - 1
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) Describe glucose tolerance test. Write a note on renal glycosuria. **[15]**

Q2) Explain the principle, types and applications of electrophoresis. **[15]**

Q3) Describe any two methods for blood urea estimation with principle. **[15]**

Q4) Define enzymes. Classify enzymes with examples. Name any four enzymes used for diagnostic purpose. **[15]**

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

- a) Write principle of paper chromatography.
- b) Estimation of blood urea.
- c) Blood buffers.
- d) CSF analysis.
- e) Serum Bilirubin.

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

- a) Urine analysis.
- b) Incubator and oven.
- c) Preparation of normal, molar, percent solution.
- d) Plasma proteins.
- e) Cleaning and calibration of glassware.



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[3858] - 2
D.M.L.T.
MICROBIOLOGY
(Paper - II)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory, total questions 6.*
- 2) Figures to right indicate full marks.*
- 3) Draw diagrams wherever necessary.*
- 4) Your answers will be valued as whole.*

Q1) Define sterilization and disinfection. Enumerate and state principals of chemical disinfectants. Give their uses. **[15]**

Q2) Name organisms causing wound infections. How is pus sample collected, transported and processed in microbiology laboratory? **[15]**

Q3) With a neat labeled diagram of HIV virus discuss transmission and laboratory diagnosis of HIV infection. **[15]**

Q4) Name intestinal nematodes. Describe life cycle and laboratory diagnosis of *Ascaris lumbricoides* infestation. **[15]**

Q5) Write short notes on any four. **[20]**

- a) ZN stain
- b) MacConkey medium
- c) Autoclave
- d) Use of personal protective devices in laboratory
- e) Bacterial growth curve

Q6) Write short notes on any four: **[20]**

- a) Dermatophytes
- b) Hepatitis B virus pathogenesis and prophylaxis
- c) Polio vaccines
- d) Bile stained eggs in stool
- e) Media used in mycology



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[3858] - 3
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) Describe types of microtomes & microtome knives. Add a note on knife sharpening. **[15]**

Q2) Define anemia. Classify them. Describe investigations to confirm the diagnosis of iron deficiency anemia. **[15]**

Q3) Describe physical & chemical examination of urine. **[15]**

Q4) Enumerate criteria for selection of a blood donor & enumerate indications for blood transfusion. **[15]**

Q5) Write short notes on any four. **[20]**

- a) Frozen section
- b) Formalin
- c) Methods of blood grouping
- d) P.A.S. staining
- e) Transfusion transmitted diseases

Q6) Write short notes on any four: **[20]**

- a) Sickling test
- b) Coombs test
- c) Reticulocyte count
- d) E.S.R.
- e) Semen analysis