

**P965**

**[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) Dermatomycetes
- 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

