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SA-1484

P. G. D. M. L. T. Examination

March / April – 2011

Clinical Biochemistry

Time : **3** Hours] [Total Marks : **70**

Instruction :

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :
☛ P. G. D. M. L. T.

Name of the Subject :
☛ CLINICAL BIOCHEMISTRY

☛ Subject Code No. : 1 4 8 4 ☛ Section No. (1, 2,.....) : 1&2

Seat No. :

Student's Signature

SECTION - I

1 Answer any **three** of the following : **9**

(a) Define : Bias, Correlation coefficient (r) and Efficiency of test.

(b) Which precautions will you follow to prevent transmission of pathogens in a laboratory ?

(c) How will you derive a normal reference range ?

(d) What are kinetic assays ? What do you mean by positive kinetics and negative kinetics, give examples ?

2 Answer any **two** of the following : **8**

(a) Enlist the various types of supporting media used in electrophoresis. Describe any two of them with their advantages.

(b) State the principle of Ion selective electrodes and describe the operation of a Ion selective electrode in a clinical laboratory.

(c) What are the specifications preferred for the selection of a photometer ? What are the advantages and disadvantages of single cell photometer ?

3 Answer any **two** of the following : **10**

(a) What is normal range and how do you prepare a Levey Jenning Chart ? Name two centres which are coordinating the external quality control programme.

(b) How will you start and maintain a radioisotope laboratory ? What are the precautions to be taken for handling radioactive spills ?

(c) Give a detailed account of the automation of a analytical process. What are the advantages and disadvantages of automation ?

4 Write notes on any **two** of the following : 8

(a) Applications of computer in a clinical laboratory.

(b) Discuss the application of ultracentrifuge in a research set up and clinical set up.

(c) State the principle of Flame photometry. Enlist the various components of a Emission Flame photometer. What is the application of Atomic absorbtion Flame photometer ?

SECTION - II

5 Give principle and signification of estimation of any **two** of the following : 8

(a) Serum proteins by electrophoretic method.

(b) Creatine phosphokinase.

(c) Serum urea by kinetic GLDH method.

6 Answer any **two** of the following : 8

(a) Explain renal function tests in detail.

(b) Estimation of total and direct bilirubin by Diazo method.

(c) Estimation of tri-iodothyroxine by the ELISA method.

7 Answer any **two** of the following : **10**

(a) Classification of carbohydrates. Describe glucose tolerance test.

(b) Immunoglobulins and their classification.

(c) Classification of lipids and explain essential fatty acids.

8 Write short notes on any **three** of the following : **9**

(a) Uric acid and gout

(b) Ratios of lipid profile and their importance

(c) Acidosis and Alkalosis

(d) Phosphatases.
