

**2012**

**M.Sc.**

**1st Semester Examination**

**BIO-MEDICAL LABORATORY SCIENCE AND MANAGEMENT**

**PAPER— BLM-102 (UNIT—4)**

*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.*

*Answer all questions.*

**Module—I**

**(Hormone assay technique)**

[Marks : 20]

1. Answer any *five* of the following : 1×5
- (a) Write the names of any two radioactive elements used in labelling purpose of antigen in RIA.
  - (b) What do you mean by Scintillator?
  - (c) Write the full form of FIA and EIA.
  - (d) What do you mean by liquid phase immuno assay?
  - (e) Why ELISA is known as end-point assay?
  - (f) Write the name of any one chromogen used in ELISA.

*(Turn Over)*

(g) Write the full form of NRS and ARGG.

(h) What do you mean by B/Bo%?

2. (a) Describe the 'Scintillation Counter' with labelled diagram.

(b) How 'Best biting curve' is drawn?

(c) Draw the standard curve of c-ELISA and s-ELISA.

(d) Write the name of one enzyme and its substrate used in s-ELISA. (2+1)+2+1+2

Or

(a) Write the steps of any one hormone assay through s-ELISA.

(b) What do you mean by cross reaction in immunoassay?

(c) Why polyclonal antibody is not used for coating the microwell in ELISA?

(d) What do you mean by Conjugate? 4+1+2+1

3. (a) State the protocol for attachment of monoclonal antibody at the bottom surface of microwell.

(b) Write the causes of interassay and interassay variation.

(c) State the precautions you will follow for hormone assay through ELISA. 3+2+2

Or

(a) Write the steps of  $C^{14}$  labelling of Cortisol.

(b) Write the fundamental basis of competitive immunoassay.

- (c) What do you mean by fluorescence molecule ?
- (d) Why CLIA is preferred immunoassay technique at present ? 3+2+1+1

**Module—II**  
**(Pathophysiology of Endocrine Glands)**  
**[Marks : 20]**

4. Answer any five of the following : 1×5
- (a) Define goitre.
  - (b) Write any two causes of secondary hypertension.
  - (c) What do you mean by cranial diabetes insepitus ?
  - (d) Write the basic difference of urine of the patients suffering from diabetes mellitus and diabetes insepitus.
  - (e) What do you mean by Positive feedback system in endocrine axis ?
  - (f) Write the full form of NIDDM and IDDM.
  - (g) What do you mean by obesity ?
  - (h) What do you mean by secondary hypogonadism ?
5. (a) Write the main causes of Primary male hypogonadism.
- (b) State the sensorp for the assessment of primary male hypo gonadism.

(c) Why plasma C-peptide instead of insulin level is considered for assessment of  $\beta$ -cell activity?

(d) Write the full form MIT and DIT.

$3+1\frac{1}{2}+1\frac{1}{2}+2$

Or

(a) Why diabetes mellitus is known as syndrome?

(b) State operational activity of pituitary-thyroid axis in presence of goitrogens.

(c) Describe the pituitary-testicular axis activity in primary hypogonadism.

$3+2+3$

6. (a) Write the principle of Clomiphene citrate test.

(b) Describe the steps adopted in the test for the assessment of pituitary-ovarian axis.

(c) Write the causes of IDDM.

$2+3+2$

Or

(a) Write the symptoms of Goitre.

(b) State the thyroid profile in Goitre.

(c) Describe dwarfism with special reference to its causative factors.

$2+2+(1+2)$

