

2008

M.Sc.

1st Semester Examination

BIO-MEDICAL LABORATORY SCIENCE & MANAGEMENT

PAPER—II (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.

Illustrate the answers wherever necessary.

Module-I

(Hormone Assay Technique)

1. Answer any five : 1×5
- (a) What is meant by Sandwich ELISA?
 - (b) Write the basic difference between ELISA and EIA.
 - (c) What do you mean by chemoluminescence?
 - (d) Write the names of measuring devices used in FIA and CLIA.
 - (e) What do you mean by second antibody?
 - (f) Write the names of any two radioactive tracers.

(Turn Over)

(g) Why serum is preferred over plasma for immunoassay of hormone?

(h) What is logit % curve?

2. (a) Discuss any four factors that influence the quality of ELISA.

(b) State the protocol of ELISA of Insulin assay following sandwich technique. 4+4

Or

(a) Write the advantages of streptavidin Biotin-Antibody Coating over ordinary antibody coating in microwells.

(b) Write the process of radiolabelling of hormone.

3+5

3. (a) Write the fundamentals of RIA.

(b) Give the tabular form of RIA of any steroid hormone.

3+4

Or

(a) Write the fundamental components of CLIA.

(b) Why CLIA is preferred over other immunoassays.

5+2

Module-II*(Pathophysiology of Endocrine Glands)*

4. Answer any five : 1×5
- (a) What do you mean by hypophyseal-hypogonadism?
 - (b) Write the reference value of plasma progesterone at luteal phase.
 - (c) What is renal diabetes insipidus?
 - (d) Write the possible causes of 'Adreno-Cortical Syndrome'?
 - (e) What is sterility?
 - (f) Mention the clinical significance of Hb A_{1C} measurement.
 - (g) What is MODY?
 - (h) What is insulin-glucose axis?

5. (a) Write the principle of clomiphene test.
- (b) How will you conduct the test on female in your laboratory?
- (c) Write the interpretation on the basis of possible results out come. 2+3+3

Or

- (a) What is water deprivation test?
- (b) How will you conduct the test?
- (c) Write the interpretation on the possible results outcome. 2+3+3

6. (a) Why C-peptide assay is preferred over insulin assay to evaluate the status of pancreatic β -cells
- (b) Write the causes of IDDM and NIDDM.
- (c) Why diabetic mellitus patient suffering from polyuria. 3+3+1

Or

- (a) Write the principle of tetracosactrin test.
- (b) State the procedural steps for the conduction of the test. 3+4
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