

2012

M.Sc.

1st Semester Examination

BIO-MEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER— BLM-101 (UNIT—2)

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

(Quality Control of Laboratory Medicine)

[Marks : 20]

- 1. Answer any five of the following :** 1×5
- (a) What is 'Standard' ?
 - (b) What do you mean by Quality ?
 - (c) What are the elements of five Q-frame work ?
 - (d) What do you mean by reproducible result ?
 - (e) What do you mean by Retrospective phase of IQC ?

(Turn Over)

- (f) Specificity of a diagnostic test means, all except :
- (i) Identifies those without disease ;
 - (ii) True positive ;
 - (iii) True negative.
- (g) If a biochemical test gives the same reading for a sample on a repeated testing, it is indicated the measurement is :
- (i) Precise ;
 - (ii) Accurate ;
 - (iii) Predictive.
- (h) The diagnostic power of a test to correctly exclude the disease is reflected by :
- (i) Sensitivity ;
 - (ii) Specificity ;
 - (iii) Positive productivity.
2. (a) What is the significance of determination of specificity and sensitivity of a diagnostic test ?
- (b) How do you prepare control serum on a laboratory ?
- (c) State the basic rule of IQC checking through LJ plot.

3+3+2

Or

Haemoglobin level of 16 consecutive measures for 16 days are 11, 12, 10, 13, 10, 11, 12, 10, 11, 10, 11, 12, 12, 13, 14, 15 gm/dl. Which type of test would you like to perform to detect the systematic error? Perform the test and interpret your result.

1+6+1

3. (a) How do you check the calibration of a micropipette ?
(b) What do you mean by 'Quality Assurance' ?
(c) What are the different elements of Quality Assurance programme ?

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

Or

- (a) State briefly about the multirule QC procedure.
(b) State R_{4S} and 4_{1S} rule with diagram. $3 + (2+2)$

Module—II
(Laboratory Management)

[Marks : 20]

4. Answer any five of the following : 1×5
- (a) Who are the customers of a Biomedical Laboratory ?
(b) What is integrity ?
(c) Distinguish between controllable and non-controllable costs.
(d) Write any two major purposes of laboratory signage system.
(e) Why publicity is an important part for a biomedical laboratory ?
(f) What are the important features of candidate to be judged before the recruitment of the staff in a laboratory ?

- (g) What do you mean by management by objectives ?
- (h) What is the cost of non-conformance ?

5. (a) How many types of Biomedical Laboratory may be developed according to the need of the diagnostic tests ? Discuss about any one type of these Laboratories.
- (b) Why the selection of a place is very much important before the foundation of the Biomedical Laboratory ?
(2+3)+3

Or

- (a) What are the basic objectives of cost accounting ?
- (b) Write the use of cost-benefit analysis in laboratory and hospital. 3+5
6. (a) Write the uses of PERT and CPM in managerial planning and control.
- (b) How do you distinguish between line and staff functions ? (3+2)+2

Or

- (a) 'External failure cost is the most serious consequence of poor quality' — Elaborate the statement.
- (b) Discuss about the significance of a communication system in a 'laboratory' and how many types of communication system are designed for TQM ?
3+(2+2)