

2011

M.Sc.

1st Semester Examination

BIO-MEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER—101 (UNIT—II)

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 coefficient of variation ?

(Turn Over)

- (b) What is NABL ?
- (c) Reference range could be determined by plotting of a
- (i) parabolic curve ;
 - (ii) hyperbolic curve ;
 - (iii) bell shaped curve ;
 - (iv) sigmoid curve.
- (d) Positive Predictive value of test indicates :
- (i) number of patients with abnormal test result who have the disease compared with all patients with an abnormal result ;
 - (ii) number of patients with normal test result who do not have the disease, compared with all patients with a normal result ;
 - (iii) None of the above.
- (e) What do you mean by technical competence ?
- (f) What is the basic difference between OCV and RCV ?
- (g) What is the use of cnsnm chart ?
- (h) Write the name of a statistical procedure which is used for the detection of both random and systematic error.

2. (a) Hb level of 10 consecutive measurement for 10 days are 12.6, 13.0, 15.5, 16.1, 14.2, 12.4, 13.6, 12.9, 11.9, 13.5 gm/dl. Plot a L-J chart and interpret your result.

(b) What is Laboratory precession? (6+1)+1

Or

(a) What is PDCA cycle? Give a very brief idea.

(b) What is the procedure of reference range determination of human biosensors?

(c) What is the impact of problem solving mechanism on quality cost assessment? 2+4+2

3. (a) What is the basic structure of Westguard rule?

(b) What do you mean by 1_{3s} and 2_{2s} rule?

(c) Site an example of each alarming rule and rejection rule. $3+(1+1)+(1+1)$

Or

(a) What are the different types of error generated in biomedical laboratory?

- (b) What do you mean by specificity of a test
- (c) How many types of external quality control pr are available — discuss briefly.

Module—II

(Laboratory Management)

[Marks : 20]

4. Answer any *five* of the following :

- (a) What is performance appraisal ?
- (b) What is motivation ?
- (c) What is network analysis ?
- (d) Mention only one distinguishing feature short-run and long-run cost ?
- (e) What is cost effectiveness analysis ?
- (f) What is the full form PPBS ?
- (g) Write the full form of PERT .
- (h) What is work sampling ?

5. (a) What are the basic objectives of cost accounting?
- (b) What types of criteria you will prefer regarding the recruitment of a staff in a biomedical laboratory — Justify your answer.
- (c) What is necessity of maintaining appraisal cost in a laboratory? 3+2 $\frac{1}{2}$ +2 $\frac{1}{2}$

Or

- (a) State the circumstances where CPM is a better technique of project management than PERT. 3+5
- (b) Assess the contributions of scientific management to the development of management thought. 7
6. (a) Write the uses of input-output analysis in laboratory and hospital.
- (b) State the role of marketing in laboratory management.
- (c) Write a brief note on signage system in the management of location of different sectors of biomedical laboratory. 3+2+2

(a) What are the basic elements of TQM?

(b) Discuss about the foundation part and mortar of the above management system.

2+(2)