

2016

M.Sc.

1st Semester Examination

BIO-MEDICAL LABORATORY SCIENCE & MANAGEMENT

PAPER—BLM-102

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.

Answer Q. No. 1 and any *three* questions of the following.

1. Answer any *ten* of the followings : 10×1

(a) Calibration of micropipette should be performed by using :

- (i) deionized water ;
- (ii) Hg ;
- (iii) BaCl₂ ;
- (iv) All of the above.

(Turn Over)

- (b) Technical competence implies :
- (i) Precision of work properly ;
 - (ii) Educational background of a worker ;
 - (iii) Data analysis ;
 - (iv) Technical knowledge to repair instruments.
- (c) A Biomedical Laboratory should have the special provision of following category of staff apart from general staff category :
- (i) Supervisor ;
 - (ii) Administrator ;
 - (iii) SO and PRO ;
 - (iv) Both (ii) and (iii).
- (d) Manual pipetting with glass pipette requires —
(tick the incorrect statement) :
- (i) Requires mouth pipetting ;
 - (ii) Does not require calibration ;
 - (iii) Requires use of index finger ;
 - (iv) All are incorrect.
- (e) The objective of ISO : 9000 family of quality management is :
- (i) Customer satisfaction ;
 - (ii) Doctors satisfaction ;
 - (iii) Recruitment of skilled workers ;
 - (iv) Recruitment of highly educated workers.

(n) Specimen transport is under :

- (i) pre-analytical variable ;
- (ii) analytical variable ;
- (iii) post analytical variable ;
- (iv) None of the above.

2. Describe the different elements of TQM. 10

3. (a) What is meant by PDCA cycle — justify the cycle.

(b) Discuss the guideline of WHO regarding external quality control.

5+5

4. (a) Elaborate preventive and retrospective phase of quality control.

(b) In a community, the specificity of ELISA is 99% and sensitivity is 99%. The prevalence of the disease is 5/1000. Calculate predictive values of the test.

5+5

5. (a) Discuss the different segments of cost of conformance.

(b) HIV test kit has a sensitivity of 0.9 and specificity of 0.90. A single test is applied to each population is 10%. What is the probability that a person positive and negative to this test ?

6+4

6. (a) How do you prepare a control serum ?
- (b) Blood glucose (mo/dl) control serum shows 80, 65, 90, 85, 82, 86, 75, 81, 67, 92. Calculate CV and interpret the result by Cusum Chart.

3+7