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Azara Hatkravapara,
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B.Pharm. 6th Semester End-Term Examination

PHARMACEUTICAL QUALITY ASSURANCE (THEORY)

Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following (MCQ) : (20 × 1 = 20)
- (i) Precision is calculated by
- (a) Standard deviation (b) Mean
(c) Mode (d) Median
- (ii) The concept covering all the aspects that influence quality of a product is
- (a) Quality control (b) Good Laboratory Practice
(c) Quality Assurance (d) All of the above
- (iii) The key element of TQM is
- (a) Focus on the customer (b) Continuous improvement
(c) Employee involvement (d) All the above
- (iv) SOP denotes
- (a) Standard Operating Procedures
(b) Standard Operating Principles
(c) Standard of Processes
(d) Standard Operation Procedure
- (v) An established documented evidence which provides a high degree of assurance that a specific process will consistently produce a product meeting its predetermined specifications and quality attributes is called as
- (a) Validation (b) Equipment validation
(c) Cleaning validation (d) Analytical validation

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- (vi) In USA, the GLP regulations was incorporated into the national legislation under
- Code of pharmaceutical regulations
 - Code of federal regulations
 - Code of economic regulations
 - Code of industry regulations
- (vii) Repeatability also called as
- Intra assay precision
 - Inter assay precision
 - Assay precision
 - Intermediate precision
- (viii) OECD stands for
- Organization for economic cooperation and development
 - Organization for economic commerce and development
 - Organization for education cooperation and development
 - None of the above
- (ix) ISO 9000 was issued in which year
- 1987
 - 1997
 - 1967
 - 1989
- (x) Analytical method validation is mention in _____ guidelines.
- EMEA
 - ICH
 - WHO
 - GMP
- (xi) GLP is a type of which system
- Quantity system
 - Quality system
 - Both (a) and (b)
 - None of the above
- (xii) NABL stands for
- National Accreditation Board for Testing and Calibration Laboratories
 - National Acceleration Board for Testing and Calibration Laboratories
 - Numerous Accreditation Board for Typing and Calibration Laboratories
 - Numerous Accreditation Board for Typing and Medical Laboratories
- (xiii) The GLP principles were published in which year?
- 1982
 - 1971
 - 1981
 - 1991

- (xiv) TQM is used to satisfy which people
- (a) Customers (b) Government
(c) National regulatory body (d) ISO standards
- (xv) TQM approach originated in which year?
- (a) 1950's (b) 1960's
(c) 1970's (d) 1980's
- (xvi) The _____ of an analytical procedure expresses the closeness of agreement between the value which is accepted either as a conventional true value or an accepted reference value and the value found.
- (a) Accuracy (b) Precision
(c) Specificity (d) Reproducibility
- (xvii) _____ is an internally approved document that describes, in clear and concise wording, the general expectations, intentions, methods and approach to be used during the entire validation effort.
- (a) Qualification (b) Validation Master Plan
(c) Calibration Master Plan (d) None of the above
- (xviii) TQM stands for
- (a) Total quantity management
(b) Total quality management
(c) Total quantity maintenance
(d) Total quality middle management
- (xix) The OECD principles of good laboratory practice is incorporated under the membership of
- (a) European Directive 87/18/EEC
(b) American Directive 87/18/EEC
(c) European Directive 88/18/EEC
(d) European Directive 87/18/ECE
- (xx) Which of the following expression is correct for detection limit?
- (a) $DL = 3.3 S/\sigma$ (b) $DL = 3.3 \sigma/S$
(c) $DL = 4.3 \sigma^2/S$ (d) $DL = 3.3 \sigma^2/S$

2. Answer any seven questions : (7 × 5 = 35)
- (a) Give a brief overview of QSEM, with special emphasis on Q-series guidelines.
 - (b) Give a detailed account on Quality control test for containers, rubber closures and secondary packing material.
 - (c) Briefly describe about Good Warehousing Practice.
 - (d) Write in details about Purchase specifications and maintenance of stores for raw materials.
 - (e) Write in brief about NABL accreditation.
 - (f) Discuss in detail about the General principles of Analytical Method Validation.
 - (g) Write short note on : (i) SOP (ii) Quality Audit.
 - (h) Briefly explain about the Protocol for conduct of a Nonclinical laboratory study.
 - (i) Write in detail about complaints and evaluation of complaints.
3. Answer any two questions : (2 × 10 = 20)
- (a) Elaborately explain about Good Laboratory Practices.
 - (b) Write an explanatory note on: Total Quality Management (TQM).
 - (c) Discuss in brief :
 - (i) Batch Formula Record
 - (ii) Validation Master Plan.

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