

Duration: 3 Hrs

Total marks: 75

N.B.: 1. All questions are compulsory.  
2. Figures to right indicate full marks

**Q. I Choose appropriate option for the following multiple-choice-based questions.** 20

- 1 Lifecycle Management falls under which ICH guideline?
  - a. Q3
  - b. Q9
  - c. Q10
  - d. Q12
- 2 \_\_\_\_\_ help the managers to make salary revisions, allowances and other benefits related to salaries.
  - a. Master records
  - b. Personal records
  - c. Deviation records
  - d. Audit records
- 3 The vital link between all elements of TQM is \_\_\_\_\_
  - a. Leadership
  - b. Communication
  - c. Recognition
  - d. Training
- 4 Water attack test is performed on \_\_\_\_\_ glass
  - a. Type I
  - b. Type II
  - c. Type III
  - d. Type IV
- 5 The buildings used for the manufacture of drugs should conform to all the conditions laid down in \_\_\_\_\_.
  - a. Pharmacy Act
  - b. Factories Act
  - c. Drug and Cosmetic Act
  - d. Companies Act
- 6 Prospective validation is performed on at least \_\_\_\_\_ successive batches.
  - a. Seven
  - b. Three
  - c. Five
  - d. Ten



- 42  
-1111 6  
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- 7 The following is verified during operational qualification of an equipment.
- Equipment is installed and calibrated
  - Equipment operates consistently within operational limit
  - Equipment shows satisfactory performance over long period.
  - Equipment is installed and connected to utilities
- 8 Complaint investigation is the responsibility of \_\_\_\_\_.
- Marketing department
  - Quality Assurance department
  - Quality Control department
  - Production department
- 9 Quality by Design" is associated with which of these following ICH guidelines?
- Development & Manufacture of Drug substance
  - Analytical Procedure Development
  - Pharmaceutical Development
  - Specifications
- 10 Approval of release of finished product is the responsibility of \_\_\_\_\_.
- Head of Stores
  - Head of Quality Control
  - Head of Quality Assurance
  - Head of Production
- 11 Cobb test measures the \_\_\_\_ of paper and board
- Ink absorbency
  - Water absorbency
  - Acid absorbency
  - Alkali absorbency
- 12 The principles of GLP applies to \_\_\_\_\_.
- Conduct of clinical studies
  - Conduct of nonclinical studies
  - Conduct of analytical studies
  - Conduct of microbiological studies
- 13 \_\_\_\_\_ is a process that demonstrates a particular instrument produces results within specified limits, as compared to those produced by a traceable standard.
- Validation
  - Qualification
  - Calibration
  - Verification



- 14 As per USFDA GLP guidelines, Subpart F is \_\_\_\_\_.
- Facilities
  - Equipment
  - Records and Reports
  - Test and Control Articles
- 15 Room classification tests in the "at-rest" condition should be carried out \_\_\_\_\_.
- With the equipment installed, HVAC operational, but without any operators
  - In the empty room, in the absence of any equipment or personnel
  - During the normal production process with equipment operating under normal conditions.
  - With the normal number of personnel present in the room.
- 16 In the test for volatile sulphides in rubber closure, \_\_\_\_\_ paper is used.
- Litmus paper
  - Starch paper
  - Lead acetate paper
  - Mercuric chloride
- 17 Self-sealability test is intended for \_\_\_\_\_.
- Rubber closures of single dose container
  - Rubber closures of multi dose containers
  - Plastic closures of single dose containers
  - Plastic closures of multidose containers
- 18 Corrections to the final report by study director are in the form of \_\_\_\_\_.
- Revised edition
  - Oral communication
  - Amendment
  - Revised Version
- 19 The efficiency of HEPA filters should be \_\_\_\_\_ at 0.22micron particle size.
- 95.55%
  - 99.99%
  - 93.22%
  - 90.99%
- 20 Bracketing design for stability testing includes \_\_\_\_\_.
- Testing samples of all design factors at all time points
  - Testing samples of extreme design factors at all time points
  - Testing samples of all design factors at half time points
  - Testing samples of extreme design factors at half time points



- Q. II Answer any two questions. (Any 2)** 20
- 1 Elaborate on stability guidelines for new drug substances. 10
  - 2 Define GLP. Write in brief about disqualification of testing facility. 10
  - 3 What is Complaint? Discuss the steps involved in handling of complaints in a pharmaceutical company. 10
- Q. III Answer any seven questions (Any Seven)** 35
- 1 Define QbD. Elaborate on tools of Qbd. 5
  - 2 Discuss the quality control tests for plastic containers. Enlist the tests, procedure for each test with limit 5
  - 3 Discuss Quality Review and Quality documentation in pharmaceutical industry. 5
  - 4 What is NABL accreditation and its benefits? Discuss its process. 5
  - 5 Explain in detail the equipment selection and maintenance of stores for raw materials 5
  - 6 Enlist the types of process validation. Explain the process for calibration of pH meter. 5
  - 7 Discuss "Quality audit" in pharmaceutical industry. 5
  - 8 Write a note on utilities and maintenance of sterile areas. Illustrate a layout of Tablet manufacturing unit. 5
  - 9 Define Validation. Give the process for qualification of UV-visible spectrophotometer. 5