

Post Graduate Diploma in Management (Hospital & Health Management)

PGDM – 2024-2026 Batch

2nd Year – 4th Semester End Examination

Subject & Code : Software Quality Assurance (SQA)-HIT 714

Reg. No.:

Semester & Batch : IV, 2024-2026

Date : 09-03-2026

Time & Duration : 10:30 A.M.-01:30 P.M. (3 Hrs.)

Max. Marks : 70

Instructions:

- Budget your time as per the marks given for each question and write your answer accordingly.
 - Don't write anything on the Question Paper except writing your Registration No.
 - Mobile Phones are not allowed even for computations.
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Part A: Q.1 to Q.10 all questions are compulsory (10 X 2 Marks = 20 Marks)
One liner, MCQs, True/False

- Q1. List the major SQA activities and two key issues in achieving zero-defect software?
- Q2. Differentiate between walkthrough and software inspection in SQA techniques?
- Q3. Differentiate black-box from white-box testing techniques and its advantages?
- Q4. Differentiate dynamic coupling from dynamic cohesion with an example?
- Q5. State the primary goals of software testing with an example?
- Q6. Discuss two types of structural measures in software engineering with an example?
- Q7. Discuss and define verification vs. validation with suitable example?
- Q8. Define Six Sigma and its DMAIC framework with an example?
- Q9. State the five maturity levels in Capability Maturity Model (CMM) with suitable example?
- Q10. List four types of system testing using an example?

Part B: Q.11 to Q.15 attempt any four questions (4 X 5 Marks = 20 Marks) - Short Notes

- Q11. What is FURPS? And explain the importance of FURPS in software quality Assurance mechanisms?
- Q12. Describe configuration audits and document verification as SQA techniques, with a healthcare example?
- Q13. Outline the software testing life cycle (STLC) with key phases using examples from healthcare software?
- Q14. Explain how ISO 9001 ensures quality management in software processes with an example?
- Q15. Explain the steps involved in implementing Continuous Quality improvement cycle (CQIC)?

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Part C: Q.16 to Q.19 attempt any three questions (3 X 10 Marks = 30 Marks) - Long Notes

- Q16. Critically analyze metrics measurement (functionality, structural/dynamic aspects) with suitable examples? Also, design a metrics framework for evaluating HIS modularity and cohesion in hospital software?
- Q17. Compare ISO 9001, Six Sigma, and CMM for software quality assurance. Evaluate their application in healthcare software (HIS) projects?
- Q18. Evaluate the software quality control vs. assurance framework, including major SQA activities/issues? Also, design a process flow for technical reviews and configuration audits in a healthcare software project aiming for zero defects?
- Q19. Evaluate the Software Quality Assurance components and explain each in detail?