

TILAK MAHARASHTRA VIDYAPEETH, PUNE
BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)
SPECIALIZATION IN CYBER SECURITY (CS)
EXAMINATION: DECEMBER - 2024
SEMESTER – III

Sub: Software Testing & Quality Assurance/ Software Quality Testing
(BCA –345-18/BCA-345-20/BCA-CS-345-20)

Date : 30/12/2024

Total Marks : 60

Time: 2.00 pm To 4.30 pm

Instructions:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labeled diagrams wherever necessary.

Q.1. Fill in the blanks. (5)

1. SDLC stands for _____.
 a) Software Development Life Cycle b) System Development Life cycle
 c) Software Design Life Cycle d) System Design Life Cycle
2. RAD Model has _____.
 a) 2 phases b) 3 phases
 c) 5 phases d) 6 phases
3. Software mistakes during coding are known as _____.
 a) Bugs b) Errors
 c) Failures d) Defects
4. _____ of the following is not white box testing.
 a) Path testing b) Data flow testing
 c) Statement testing d) State transition testing
5. User acceptance is done at _____ stage.
 a) Manual Stage b) Automatic Stage
 c) Both Manual & Automatic d) None of the above

Q.2. State True/False. (5)

1. Usability testing is the form of functional testing.
2. Dynamic testing is performed first.
3. Validation plan describes the approach, resources and schedule used for system validation.
4. Requirement and Analysis, Design, Development or Coding, Testing and Maintenance is called as Software Development Life Cycle (SDLC).
5. Software costs less to maintain than it does to develop.

Q.3. Answer the following. (Solve any 5) (10)

1. What is security testing?
2. Define LOC and KLOC.
3. Define reliability measures.
4. Define unit testing.
5. Define QA and QC.
6. What is a defect?

Q. 4. Answer the following in detail. (Solve any 6) (30)

1. Explain performance testing categories.
2. Explain security testing in detail.
3. Describe CMMI.
4. Describe quality factors in order to gain good software quality.
5. Explain black box testing with example.
6. Write a note on Six Sigma.
7. Explain tester's workbench concept with diagram.

Q. 5. Answer the following in detail. (Solve any 1) (10)

1. Explain the following review techniques:
 - i) Informal Review
 - ii) Technical or Peer Review
 - iii) Walkthrough
 - iv) Inspection
 2. Explain ISO in detail
-