



**CHRISTIAN SERVICE UNIVERSITY COLLEGE
KUMASI**

**FACULTY OF HEALTH & APPLIED SCIENCE
DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

End of First Semester Examination - 2018/2019 Academic Year

LEVEL 400

BSIT 406: SOFTWARE QUALITY ASSURANCE

May, 2018

70 Marks

Time Allowed: 2Hours

GENERAL INSTRUCTIONS TO CANDIDATES

- i. Answer all the questions in section A
- ii. Answer section **A** on the question paper by **circling** the correct answer. Unless otherwise stated, make only one choice throughout as two choices would be marked wrong.
- iii. Write your **index number** on top of each page of the question paper

Examiner: Emmanuel Abaidoo



SECTION A

This paper consists of two sections, section **A** and section **B**. Section **A** is made up of **fifty (50) objective** questions. You are to **ANSWER ALL** questions in this section. **One (1)** mark for each **correct** answer.

1. The IEEE 829 test plan documentation standard contains all of the following except
 - a) Test items
 - b) Test deliverables
 - c) Test specifications
 - d) Test tasks

2. Which of the following is true?
 - a) Component testing should be black box, system testing should be white box.
 - b) The more tests you run, the more bugs you will find.
 - c) The fewer bugs you find, the better your testing was
 - d) If you find a lot of bugs in testing, you should not be very confident about the quality of software

3. The primary objective of formal technical reviews is to find _____ during the process so that they do not become defects after release of the software.
 - a) errors
 - b) equivalent faults
 - c) failure cause
 - d) none of the mentioned

4. A deviation from the specified or expected behavior that is visible to end-users is called:
 - a) An error
 - b) A failure
 - c) A fault
 - d) A defect

5. Code Coverage is used as a measure of what?
 - a) Defects
 - b) Trends analysis
 - c) Test Effectiveness
 - d) Time Spent Testing

6. Evaluating testability of the requirements and system are a part of which phase
 - a) Test Analysis and Design
 - b) Test Planning and control
 - c) Test Implementation and execution
 - d) Evaluating exit criteria and reporting

7. Which of the following techniques is **NOT** a black box technique?
- a) State transition testing
 - b) LCSAJ (Linear Code Sequence and Jump)
 - c) Syntax testing
 - d) Boundary value analysis
8. When reporting faults found to developers, testers should be:
- a) As polite, constructive and helpful as possible
 - b) Diplomatic and sensitive to the way they may react to criticism
 - c) Firm about insisting that a bug is not a “feature” if it should be fixed
 - d) All of the above
9. The later in the development life cycle a fault is discovered, the more expensive it is to fix. Why?
- a) The documentation is poor, so it takes longer to find out what the software is doing.
 - b) The fault has been built into more documentation, code, tests, etc.
 - c) Wages are rising
 - d) None of the above
10. What is the main reason for testing software before releasing it?
- a) To decide when the software is of sufficient quality to release
 - b) To show that system will work after release
 - c) To find as many bugs as possible before release
 - d) To give information for a risk based decision about release
11. Which of the following is **NOT** included in the Test Plan document of the Test Documentation Standard?
- a) What is not to be tested
 - b) Schedules and deadlines
 - c) Quality plans
 - d) Test environment properties
12. Which statement about expected outcomes is **FALSE**?
- a) Expected outcomes are defined by the software’s behavior
 - b) Expected outcomes may include timing constraints such as response times
 - c) Expected outcomes should be predicted before a test is run
 - d) Expected outcomes are derived from a specification, not from the code



13. Which one of the following describes the major benefit of verification early in the life cycle?
- a) It allows the identification of changes in user requirements.
 - b) It reduces defect multiplication.
 - c) It facilitates timely set up of the test environment.
 - d) It allows testers to become involved early in the project.
14. Which of the following is **NOT** included in failure costs?
- a) rework
 - b) repair
 - c) failure mode analysis
 - d) none of the mentioned
15. Which requirements are the foundation from which quality is measured?
- a) Hardware
 - b) Software
 - c) Programmers
 - d) None of the mentioned
16. Which of the following is **NOT** a SQA plan for a project?
- a) evaluations to be performed
 - b) amount of technical work
 - c) audits and reviews to be performed
 - d) documents to be produced by the SQA group
17. The degree to which design specifications are followed in manufacturing the product is called
- a) Quality Control
 - b) Quality of conformance
 - c) Quality Assurance
 - d) None of the mentioned
18. Which of the following is **NOT** included in External failure costs?
- a) testing
 - b) help line support
 - c) warranty work
 - d) complaint resolution
19. Which of the following is not an appraisal cost in SQA?
- a) inter-process inspection
 - b) maintenance
 - c) quality planning
 - d) testing



20. Who identifies, documents, and verifies that corrections have been made to the software?
- a) Project manager
 - b) Project team
 - c) SQA group
 - d) All of the mentioned
21. Which one of the following describes the major benefit of verification early in the life cycle?
- a) It allows the identification of changes in user requirements.
 - b) It reduces defect multiplication.
 - c) It facilitates timely set up of the test environment.
 - d) It allows testers to become involved early in the project.
22. Which of the following is a form of functional testing?
- a) Usability testing
 - b) Boundary value analysis
 - c) Performance testing
 - d) Security testing
23. Which of the following should NOT normally be an objective for a test?
- a) To find faults in the software.
 - b) To assess whether the software is ready for release.
 - c) To prove that the software is correct.
 - d) To demonstrate that the software doesn't work.
24. Enough testing has been performed when:
- a) No more faults are found.
 - b) The required level of confidence has been achieved.
 - c) Time runs out.
 - d) The users won't find any serious faults.
25. Which of the following statements are true?
- a) Faults in program specifications are the most expensive to fix.
 - b) Faults in code are the most expensive to fix.
 - c) Faults in designs are the most expensive to fix.
 - d) Faults in requirements are the most expensive to fix
26. When should you stop testing?
- a) When time for testing has run out.
 - b) When the test completion criteria have been met
 - c) When all planned tests have been run
 - d) When no faults have been found by the tests run



27. In which order should tests be run?

- a) The most important tests first
- b) The order they are thought of
- c) The easiest tests first(to give initial confidence)
- d) The most difficult tests first(to allow maximum time for fixing)

28. Which of the following statements is **NOT** true

- a) Test environments should be as similar to production environments as possible
- b) The acceptance test does not necessarily include a regression test
- c) Verification activities should not involve testers (reviews, inspections etc)
- d) Performance testing can be done during unit testing as well as during the testing of whole system

29. When should testing be stopped?

- a) When all the planned tests have been run
- b) When all faults have been fixed correctly
- c) When time has run out
- d) It depends on the risks for the system being tested

30. To achieve quality (i.e., defect free products and services), we require

- a) Close cooperation between management and staff
- b) Commitment
- c) An environment in which quality can flourish
- d) All of the above

31. The effort required for locating and fixing an error in an operational program is known as

- a) Testability
- b) Maintainability
- c) Usability
- d) Efficiency

32. An error that is caused due to time or budget pressures can be classified as

- a) Faulty definition of requirements
- b) Client-developer communication failures
- c) Deliberate deviations from software requirements
- d) Logical design errors



33. Erroneous algorithms in software products are usually classified as
- a) Faulty definition of requirements
 - b) Coding errors
 - c) Non-compliance with documentation and coding instructions
 - d) Logical design errors
34. Erroneous definition of boundary conditions in software products are usually classified as ...
- a) Faulty definition of requirements
 - b) Coding errors
 - c) Non-compliance with documentation and coding instructions
 - d) Logical design errors
35. Omissions of a required software system state in software products are usually classified as
- a) Faulty definition of requirements
 - b) Coding errors
 - c) Non-compliance with documentation and coding instructions
 - d) Logical design errors
36. Omission of definitions concerning reactions to illegal operation of the software system is usually classified as.....
- a) Faulty definition of requirements
 - b) Coding errors
 - c) Non-compliance with documentation and coding instructions
 - d) Logical design errors
37. According to **IEEE**, a software system product comprises
- a) 2
 - b) 3
 - c) 4
 - d) 5
38. According to **IEEE**, which of the following is not a software system component?
- a) Programs that activate the computer to perform the required applications
 - b) The quality of the procedures
 - c) Operating system
 - d) Documentation data



39. Which of the following is **NOT** an appraisal in SQA?

- a) Inter-process inspection
- b) Maintenance
- c) Testing
- d) Quality Planning

40. Which of the following is considered as component testing?

- a) Black box testing
- b) Grey box testing
- c) White box testing
- d) Both a) and b)

A **wrong** answer or option for the following 'True' or 'False' questions (41-50) deducts two (2) marks from your total marks obtained. One must hence, carefully select the option that best fits each question.

41. Software Quality Assurance incorporates all software development processes starting from defining requirements to coding until release.

- a) True
- b) False

42. Software Quality Assurance is a kind of client satisfaction, end user satisfaction or customer satisfaction.

- a) True
- b) False

43. Software Quality means ensuring the correctness of the results and security of the software product as it works without any bug and according to expectations.

- a) True
- b) False

44. Software Quality Assurance consists of the auditing and reporting functions of management.

- a) True
- b) False

45. In Software Quality Assurance, quality is not a long-term strategy.

- a) True
- b) False



46. The development documentation that allows efficient cooperation and coordination among development team members mainly comprises the requirements report, design reports, program descriptions etc,
- a) True
 - b) False
47. Developers are usually interested in software errors and faults, their elimination, and the ways to prevent their generation, however, software users are worried about software failures.
- a) True
 - b) False
48. In many other cases, erroneous code lines will not affect the functionality of the software as a whole
- a) True
 - b) False
49. Software Quality Assurance is used to reduce cost and improve the product time to the market.
- a) True
 - b) False
50. The uniqueness of software quality assurance is due to software product complexity, invisibility of software product and product development and production process
- a) True
 - b) False

