

B.Sc Semester-6 Examination

CC 307

Computer Science

April-2024

Time : 2-30 Hours]

[Max. Marks : 70

- Q1(A) Discuss the concept of object-oriented programming (OOP). Explain the fundamental principles of OOP, such as encapsulation, inheritance, and polymorphism, with examples. (7)
- Q1(B) Describe the purpose and usage of arrays in programming. Explain how arrays are declared, initialized, and accessed in various programming languages. (7)
- OR
- Q1(A) Discuss the importance of debugging in coding. Outline common debugging techniques and strategies programmers use to identify and fix errors in their code. (7)
- Q1(B) Explain the role of libraries and modules in programming. Discuss how libraries facilitate code reuse and modularity, providing examples of popular libraries in different programming languages. (7)
- Q2(A) Explain the importance of software testing in the software development life cycle. How does it contribute to the overall quality of the software product? (7)
- Q2(B) Discuss the differences between static testing and dynamic testing methods in software testing. Provide examples of each. (7)
- OR
- Q2(A) Explain the concept of equivalence partitioning in software testing. How can it be applied to improve test efficiency? (7)
- Q2(B) Discuss the advantages and disadvantages of manual testing compared to automated testing. In what scenarios would each approach be most appropriate? (7)
- Q3(A) Explain the concept of software project management and why it is essential in the software development process. Provide examples to illustrate your answer. (7)
- Q3(B) Discuss the key differences between traditional project management and software project management. How do these differences impact the management of software projects? (7)
- OR
- Q3(A) Define the term "software development life cycle (SDLC)" and describe its phases. How does understanding SDLC help in effective software project management? (7)
- Q3(B) Discuss the importance of project planning in software project management. Outline the key components of a software project plan and explain how they contribute to project success. (7)
- Q4(A) Discuss the difference between risk identification and risk assessment in the context of risk management. How do these processes complement each other in mitigating potential threats to an organization? (7)
- Q4(B) Describe the role of risk tolerance and risk appetite in risk management. How can organizations establish and maintain appropriate levels of risk tolerance and appetite to achieve their strategic objectives? (7)

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OR

Q4(A) Discuss the importance of risk communication in effective risk management. How can organizations ensure transparent and timely communication of risks to stakeholders? Provide examples of successful risk communication practices. (7)

Q4(B) Compare and contrast qualitative and quantitative risk assessment techniques. What are the advantages and limitations of each approach, and how can organizations determine the most suitable method for their risk management needs? (7)

Q5 MCQ Attempt any seven out of twelve.(2 Marks each) (14)

- 1) What is risk management?
A) Avoiding all risks B) Identifying, assessing, and mitigating risks
C) Ignoring potential risks D) Embracing uncertainty
- 2) Which of the following is not a step in the risk management process?
A) Risk avoidance B) Risk identification C) Risk acceptance
D) Risk amplification
- 3) Why is risk management important for organizations?
A) To eliminate all uncertainties. B) To increase operational costs
C) To minimize potential losses D) To discourage innovation
- 4) Which of the following is an example of a financial risk?
A) Cybersecurity breach B) Market volatility C) Employee turnover
D) Natural disaster
- 5) What is the primary goal of risk management?
A) To eliminate all risks B) To maximize profits
C) To minimize the impact of risks on objectives
D) To discourage innovation
- 6) What is software testing?
A) The process of finding bugs in software
B) The process of ensuring software meets requirements and works correctly
C) The process of writing code
D) The process of documenting software features
- 7) Which of the following is not a primary goal of software testing?
A) Ensuring software quality
B) Verifying that the software works as intended
C) Finding every single bug in the software
D) Reducing risks associated with software failure
- 8) Which of the following is NOT a type of software testing?
A) Unit testing B) Integration testing C) Regression testing
D) Hardware testing
- 9) What is the purpose of unit testing?
A) To test the entire system
B) To test individual components or modules in isolation
C) To test the integration of multiple modules
D) To test the user interface
- 10) What is the purpose of acceptance testing?
A) To verify if the software meets business requirements
B) To find bugs in the software
C) To test individual components of the software
D) To ensure proper integration of modules
- 11) Which testing technique involves executing a program with the intent of finding defects?
A) Black-box testing B) White-box testing C) Grey-box testing
D) Ad-hoc testing
- 12) Which type of testing focuses on the functionality of the software without consideration of its internal structure?
A) White-box testing B) Black-box testing C) Grey-box testing D) Unit testing

BEST OF LUCK