

6. Explain the software project planning. Describe the need for detailed cocomo.
7. Explain the product and project related competencies that a project manager needs to know for software project management.
8. Write the importance of functional testing. Explain the various functional testing techniques in detail.
9. What is risk management? What are the objectives of risk management? Explain in details.
10. Write short notes on any two of the following:
- (a) Spiral Model
 - (b) Managerial aspect of software Maintenance
 - (c) Cost estimation techniques
 - (d) Software quality assurance

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MCA(IV)-CS(42)

2018

Time : 3 hours

Full Marks : 80

Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

Answer any five questions, in which Q.No. 1 is compulsory.

1. Choose the correct answer in the following:
- (i) Which of the following is not the characteristic of software?
 - (a) Software does not wear out
 - (b) Software is flexible
 - (c) Software is not manufactured
 - (d) Software is always correct
 - (ii) The primary aim of software engineering is to provide
 - (a) Reliable software
 - (b) According to requirement a complete software
 - (c) Cost-effective software
 - (d) All of the above
 - (iii) A good software requirement specification should be
 - (a) Unambiguous

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- (b) Distinctly specific
 - (c) Functional
 - (d) None of the above
- (iv) Spiral Model was developed by?
- (a) Bev Littlewood
 - (b) Berry Bohem
 - (c) Roger Pressman
 - (d) Victor Bisili
- (v) SDLC stands for ?
- (a) Software design life cycle
 - (b) Software development life cycle
 - (c) System design life cycle
 - (d) System development life cycle
- (vi) is a black box testing method?
- (a) Boundary value analysis
 - (b) Basic path testing
 - (c) Code path analysis
 - (d) None of above
- (vii) The model remains operative until the software is retired?
- (a) Waterfall
 - (b) Incremental
 - (c) Spiral

- (d) None of these
- (viii) Software Quality is
- (a) Conformance to requirements
 - (b) Fitness for the purpose
 - (c) Level of satisfaction
 - (d) All of the above

2. Describe the term Software Engineering and explain its some characteristics and importance. Explain how the uses of software engineering principles help to develop software products cost-effectively and timely.
3. What is a prototype? Explain the prototype model with the help of neat diagram. Under what circumstances is it beneficial to construct a prototype? Does construction of a prototype always increase the overall cost of software development.
4. Explain the types of cohesion and coupling in the context of software design? How are these concepts useful in arriving at a good design of a system?
5. Why is the SRS document also known as the black box specifications of a system? Who are the different categories of users of the SRS document? What are their expectations from the SRS document?

(b) The substitution rate give

- (i) The Number of units of each basic variable that must be removed from the solution if a new variable is entered.
 - (ii) The gross profit or loss given up by adding one unit of a variable into the solution
 - (iii) The net profit or loss that will result from introducing one unit of the variable indicated in that column into the solution
 - (iv) The maximal value a variable can take on and still have all the constraints satisfied
- (c) Which of the following is NOT a property of all linear programming problems?
- (i) The presence of restrictions
 - (ii) Optimization of some objective
 - (iii) The need for a computer program
 - (iv) Alternate courses of action to choose from

10. Write a short note on any two

- (i) Principle of optimality
- (ii) ~~Integer programming~~
LPP.
programming
- (iii) Basic steps in solving Dynamic programming problems.

A B C
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