



- f. The term “iconic interface” is applicable to
- (A) command language-based interface.
  - (B) menu-based interface.
  - (C) direct manipulation interface.
  - (D) none of the above.
- g. Which of the following view captured by UML diagrams can be considered as black box model of a system?
- (A) structural view
  - (B) behavioral view
  - (C) user’s view
  - (D) implementation view
- h. During structured design, if all the data flow into the diagram are processed in similar ways i.e. if all the input data are incident on the same bubble in the DFD, the one have to use:
- (A) transform analysis
  - (B) transaction analysis.
  - (C) combination of transform and transaction analysis
  - (D) neither transform nor transaction analysis
- i. Examples of executable specifications are
- (A) Third generation languages
  - (B) Fourth generation languages
  - (C) Second-generation languages
  - (D) First generation languages
- j. Among all the phases of software life cycle, which phase consumes the maximum effort?
- (A) Design
  - (B) Maintenance
  - (C) Testing
  - (D) Coding

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**Answer any FIVE Questions out of EIGHT Questions.**  
**Each question carries 16 marks.**

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- Q.2** a. Software project planning entails what activities? Explain. (6)
- b. What is software risk? Describe the process of risk management. (6)
- c. Write a brief note on CASE. (4)
- Q.3** a. Write and explain important properties of a good software requirement document. (6)
- b. Show and explain requirements engineering process with the help of a suitable diagram. (4)

- c. What are 'context models'? Show context of an ATM system with the help of a suitable diagram. (6)
- Q.4** a. Differentiate between evolutionary and throw-away prototyping. (4)
- b. Write a brief note on the following:  
(i) Formal specification  
(ii) Behavioural specification  
(iii) Interface specification. (12)
- Q.5** a. Discuss advantages and disadvantages of client-server software products. (6)
- b. Write a brief note on Inter-ORB communications. (4)
- c. What do you mean by domain-specific architecture? Differentiate between two categories domain-specific models- Generic models and reference models. Give an example from each category. (6)
- Q.6** a. Define the term cohesion in the context of object-oriented design. (6)
- b. What do you mean by generator-based reuse of software? (4)
- c. What do you mean by frameworks? Define various framework classes. (6)
- Q.7** a. Explain UI design process using a suitable diagram. (6)
- b. What do you mean by dependability? What are various dimensions to dependability? Define. (5)
- c. What do you mean by the terms 'fault avoidance' and 'fault tolerance'? Define various fault tolerance actions. (5)
- Q.8** a. Assume that the size of an organic type software product has been estimated to be 32,000 lines of source code. Assume that the average salary of software engineers be Rs. 15,000/- per month. Determine the effort required to develop the software product and the nominal development time. (5)
- b. Write down the necessary tasks performed by a project manager in order to perform project scheduling. (5)
- c. Explain Equivalence Class Partitioning and Boundary value analysis. Compare the two. (6)
- Q.9** a. Define the following software product metric  
(i) Fan-in/Fan-out (ii) Length of code  
(iii) Depth of conditional nesting (iv) Fog index (8)
- b. Differentiate between version, variant and release. Explain in brief three basic techniques for component identification. (8)