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Total Pages : 4

Roll No.

MCS-503

Software Engineering

(MCA/MSCT)

1st / 3rd Semester Examination, 2023 (June)

Time : 2 Hours]

Max. Marks : 70

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

SECTION-A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Answer the following:

- (a) What is SRS? Why it is used? Identify three important parts of an SRS document. (6)

- (b) Without developing an SRS document an organization might face severe problems. Identify those problems. (6)
- (c) Identify the non-functional requirement-issues that are considered for any given problem description ? (7)

2. Answer the following:

- (a) Identify the aim of the structured analysis activity. Which documents are produced at the end of structured analysis activity? (6)
- (b) Write down some essential activities required to develop the DFD of a system more systematically. (6)
- (c) What does the term "balancing a DFD" mean? Give an example to explain your answer. (7)

3. Answer the following:

- (a) What is the difference between an operation and a method in the context of object-oriented design technique? (5)
- (b) What does the association relationship among classes represent? Give examples of the association relationship. (5)
- (c) What does aggregation relationship between classes represent? Give examples of aggregation relationship between classes. (5)
- (d) What are the primary objectives of a CASE tool? (4)

4. Answer the following:

- (a) What is a coding standard? Identify the problems that might occur if the engineers of an organization do not adhere to any coding standard. (7)
- (b) What is the difference between coding standards and coding guidelines? Why are these considered as important in a software development organization? (6)
- (c) Write down five important coding standards. (3)
- (d) Write down five important coding guidelines. (3)

5. Answer the following:

- (a) List the major responsibilities of a software project manager. (3)
- (b) Write down the major differences between expert judgement technique and delphi cost estimation technique. (4)
- (c) What is egoless programming? How can it be realized? (2)
- (d) Differentiate among release, version and revision of a software product. (3)
- (e) How can the reliability of a software product be increased? (2)
- (f) What are the different types of maintenance that a software product might need? Why are these maintenances required? (5)

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. Explain exploratory program development style.
2. Explain the problems that might be faced by an organization if it does not follow any software life cycle model.
3. What is the purpose of a use case? How to identify use cases of a system?
4. What is meant by domain modeling?
5. What is the difference between a mode-based interface and a modeless interface?
6. Compare the relative advantages of textual and graphical user interfaces.
7. Explain Norden's model in the context of staffing requirements for a software project.
8. Discuss the types of organizations to which different types of ISO standards are applicable.