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3E1205

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3E1205

B.Tech. III-Sem. (Main/Back) Examination, January - 2025
Artificial Intelligence and Data Science
3AID4-07 Software Engineering
AID, CAI, CS, IT

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates:

Attempt all Ten questions from Part A, five questions out of Seven questions from Part B and Three questions out of Five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No.205)

PART - A

(Answer should be given upto 25 words only)

All questions are compulsory. **(10×2=20)**

1 State any four attributes of good software.

2. Define software quality assurance.

3. Define the term software security.

4. What is prime objective of software engineering.

5. Why accuracy is Important attributes for data dictionaries.

6. Explain the term " Risk analysis"

7. Differentiate object-oriented. Analysis (00A) & Object oriented design (00D)

8. Distinguish process and Method.

9. Define SRS

10. Define software Engineering paradism.

PART - B

(Analytical/Problem Solving questions)

Attempt any Five questions. **(5×4=20)**

1. What is SDLC. Explain MIS Oriented SDLC MODEL.
2. What is UML. How it is Benificial in object oriented Model.
3. Explain water fall model and spiral model with real time example.
4. List and explain the Technique to Enhance software quality and software Reliability.
5. A project size of 200KLoc to be developed. Software development team has average Experience on similar type of project the project schedule is not very tight. Calculate the effort, Development time, average staff size, and productivity of the project.
6. Explain Finite state machine (FSM).
7. What are the approaches of Debugging.

PART - C

(Descriptive/Analytical/Problem Solving/Design question)

Attempt any Three questions. **(3×10=30)**

1. What are the characteristics of a good design? Describe different type of coupling and Cohesion. How is designed per for med?
2. Explain the following
   a) Use case diagram.
   b) State chart diagram
3. Explain control flow diagram (CFD) & data flow diagram (DFD) in Detail.
4. Explain following concept with example modularity and step wise refinement and in formation hiding.
5. Write short notes on
   a) System specification
   b) Software prototyping
   c) Incremental model
   d) V-model