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Subject Code:- ACSBS0304

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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: III - CARRY OVER THEORY EXAMINATION - APRIL 2023

Subject: Software Engineering

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C.** It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right -hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION A

20

1. Attempt all parts:-

- 1-a. Efficiency in a software product does not include _____(CO1) 1
- (a) Responsiveness
 - (b) Licensing
 - (c) Memory utilization
 - (d) Processing time
- 1-b. The reason for software bugs and failures is due to (CO1) 1
- (a) Software companies
 - (b) Software Developers
 - (c) Both Software companies and Developers
 - (d) All of the mentioned
- 1-c. Which of the following is not project management goal? (CO2) 1
- (a) Keeping overall costs within budget
 - (b) Delivering the software to the customer at the agreed time
 - (c) Maintaining a happy and well-functioning development team

- (d) Avoiding customer complaints
- 1-d. CASE Tool is (CO2) 1
- (a) Computer Aided Software Engineering
 - (b) Component Aided Software Engineering
 - (c) Constructive Aided Software Engineering
 - (d) Computer Analysis Software Engineering
- 1-e. Which one of the following is not a software quality model? (CO3) 1
- (a) ISO 9000
 - (b) McCall model
 - (c) Boehm model
 - (d) ISO 9126
- 1-f. Which level of CMM is for process management? (CO3) 1
- (a) Initial
 - (b) Repeatable
 - (c) Defined
 - (d) Optimizing
- 1-g. Which of the following property does not correspond to a good Software Requirements Specification (SRS) ? (CO4) 1
- (a) Verifiable
 - (b) Ambiguous
 - (c) Complete
 - (d) Traceable
- 1-h. How many Scenarios are there in elicitation activities ? (CO4) 1
- (a) One
 - (b) Two
 - (c) Three
 - (d) Four
- 1-i. How many types of test plans are available for software testing (CO5) 1
- (a) 4
 - (b) 3
 - (c) 2
 - (d) 5
- 1-j. Maintenance Quality metrics defines Characteristics that can be used to 1

improve the development and maintenance activities of the software (CO5)

(a) TRUE

(b) FALSE

2. Attempt all parts:-

- | | | |
|------|--|---|
| 2.a. | Why is it difficult to improve software process? (CO1) | 2 |
| 2.b. | Explain Low Level Or Detailed Design concerning SDLC (CO2) | 2 |
| 2.c. | Explain stress testing, load testing and volume testing? (CO3) | 2 |
| 2.d. | Draw the DFD for the following (i) External entity (ii) Data items (CO4) | 2 |
| 2.e. | What is modularity? (CO5) | 2 |

SECTION B

30

3. Answer any five of the following:-

- | | | |
|------|---|---|
| 3-a. | What is a myth? Give a focus on various software myths regarding Management and Practitioner? (CO1) | 6 |
| 3-b. | Explain software project failure? What is recoverable and unrecoverable failure? (CO1) | 6 |
| 3-c. | What is Feasibility Study? (CO2) | 6 |
| 3-d. | Explain the term lack of knowledge in risk management? (CO2) | 6 |
| 3.e. | Explain what are test driver and test stub and why it is required? (CO3) | 6 |
| 3.f. | List down few process and product metrics.(CO4) | 6 |
| 3.g. | Explain object oriented design concept with example.(CO5) | 6 |

SECTION C

50

4. Answer any one of the following:-

- | | | |
|------|--|----|
| 4-a. | Write the similarity and difference between software engineering process and conventional engineering process. (CO1) | 10 |
| 4-b. | What is Software Requirements Specification? (CO1) | 10 |

5. Answer any one of the following:-

- | | | |
|------|--|----|
| 5-a. | What are the limitation of Prototype models? Explain with all phases of prototype model? (CO2) | 10 |
| 5-b. | Explain the Software Maintenance Process? (CO2) | 10 |

6. Answer any one of the following:-

- | | | |
|------|--|----|
| 6-a. | Describe the following terms: i) Operational Profile ii) Input space iii) MTBF iv) MTTF v) Failure intensity (CO3) | 10 |
| 6-b. | What do you mean by software quality standards? Illustrate their essence as | 10 |

well as benefits. (CO3)

7. Answer any one of the following:-

- 7-a. Explain various cost estimation models and compare.(CO4) 10
- 7-b. Describe two metrics which are used to measure the software in detail. Discuss clearly the advantages and disadvantages of these metrics. (CO4) 10

8. Answer any one of the following:-

- 8-a. Explain the concept of object and classes in line with software engineering. (CO5) 10
- 8-b. Explain significance of unit testing. Explain various steps involved in it. (CO5) 10

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