Printed Page:- Subject Code:- ACSBS0304

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B,Tech.

SEM: III - THEORY EXAMINATION (2022 - 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. 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-b. SDLC stands for (CO1) 1

(a) Software Development Life Cycle

(b) System Development Life cycle

(c) Software Design Life Cycle

(d) System Design Life Cycle

1-c. How many types of COCOMO models are there? (CO2) 1

(a) one

(b) two

(c) three

(d) four

1-d. During project estimation, project manager estimates following (CO2) 1

(a) Project cost

(b) Project duration

(c) Project effort

(d) all of the above

1-e. In ISO 9126, time behavior and resource utilization are a part of (CO3) 1

(a) maintainability

(b) portability

(c) efficiency

(d) usability

1-f. Quality also can be looked at in terms of user satisfaction which includes (CO3) 1

(a) A compliant product

(b) Good quality output

(c) Delivery within budget and schedule

(d) All of the mentioned

1-g. The SRS document is also known as _____ specification. (CO4) 1

(a) black-box

(b) white-box

(c) grey-box

(d) none of the mentioned

1-h. What is the first step of requirement elicitation ? (CO4) 1

(a) Identifying Stakeholder

(b) Listing out Requirements

(c) Requirements Gathering

(d) All of the mentioned

1-i. Which is not a principle of software testing (CO5) 1

(a) Early testing

(b) Pesticide paradox

(c) Identify Critical Path

(d) Absence of errors fallacy

1-j.	Functional Testing is also refered as (CO5) (a) White Box Testing (b) Sand Box Testing (c) Maintinance testing (d) Black Box Testing	1

2. Attempt all parts:-

2.a.	'Software does not wear out'. Justify (CO1)	2
2.b.	What Is SDLC? (CO2)	2
2.c.	Explain stress testing, load testing and volume testing? (CO3)	2
2.d.	Define non-functional requirements. (CO4)	2
2.e.	What is modularity? (CO5)	2

SECTION B 30

3. Answer any five of the following:-

3-a.	Explain the term Comparison of constructing a bridge vs writing a program. (CO1)	6
3-b.	What are the advantages of iterative development? Compare iterative development with Incremental delivery approach. (CO1)	6
3-c.	What is Feasibility Study? (CO2)	6
3-d.	Briefly Explain graph in COCOMO Models- (i) Efforts Versus Product Size (ii) Development Time Versus Size (CO2)	6
3.e.	List out various tools required to support testing during development of the application? (CO3)	6
3.f.	What are the 5 stages of requirement gathering? (CO4)	6
3.g.	Explain bottom up design with example. (CO5)	6

SECTION C 50

4. Answer any one of the following:-

4-a.	Explain the framework of software process? (CO1)	10
4-b.	Explain Principles of Software Design & Concepts in Software Engineering? (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.	Quality and reliability are related concepts but are fundamentally different in a number of ways. Discuss them. (CO3)	10

7. Answer any one of the following:-

7-a.	Explain metrics for specifying non-functional requirements? IEEE standard software requirement document? (CO4)	10
7-b.	How do you gather requirements from stakeholders? (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