

Question Paper Code : 8376

B.Tech. (Semester-V) Examination, 2021

SOFTWARE ENGINEERING

[Paper : CS-503]

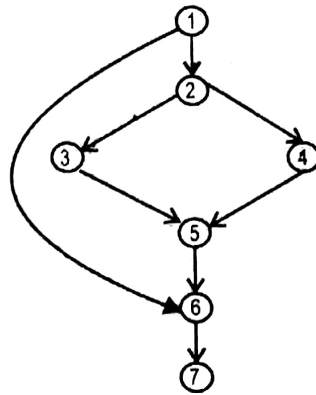
Time : Three Hours]

[Maximum Marks : 70

Note : Attempt any five question. All questions carry equal marks.

1. • Explain prototype model. Differentiate between prototype and spiral model. [14]
2. • Draw an ER Diagram for an 'Airline Reservation System'. Explain its components. [14]
3. ✕ Explain :
 - (a) SEI-CMM model [7]
 - (b) ISO 9000 [7]
4. ✕ Explain requirement engineering process and analysis. [14]
5. Draw a use case diagram for an ATM system. Explain its components. [14]

6. Consider the following diagram :



Control Flow Graph

(a) Find cyclomatic complexity. [7]

(b) Calculate the independent path. [7]

7. Compare :

(a) Top-Down and Bottom Up Testing. [7]

(b) Regression and Acceptance Testing. [7]

8. Explain static testing strategies. Elaborate various types of testing techniques used in this. [14]

9. Elaborate :

(a) COCOMO model [7]

(b) Software Re-Engineering Process. [7]

10. Explain :

(a) CASE tools [7]

(b) Software Quality Attributes. [7]

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8. Define Basic building blocks of a structure chart and construct a structure chart for "Student fee payment".
9. Explain top down strategy for software testing with suitable diagram.
10. Design and explain software re-engineering process model.

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**B. Tech. (Reg./Back) Vth Semester
Examination, 2022-23**

SOFTWARE ENGINEERING

Paper : CS-503

20001313 9/24

Time : 3 Hours]

[M.M. : 70

Note :- Answer any five questions. All questions carry equal marks.

1. (a) Differentiate between Water Fall Model and Prototyping Model.

(b) What are the characteristics of Software ?
Explain in detail.

(c) What is SRS ? Explain the characteristics of a good SRS.

5,5,4

8376 / 4

(4)

K-130

8376 / 4

(1)

K-130 Turn Over



2. (a) Explain in brief about the following terms :

- (i) Walkthrough
- (ii) Code inspection

(b) Explain in brief about the following terms :

- (i) Formal Technical Review
- (ii) System Testing

(c) Explain the term modularity in designing with example. 5,5,4

3. (a) Draw Level-0 and Level-1 DFD for student admission system.

(b) Write down a short note on Coupling and Cohesion.

(c) Explain Halstead's software design parameters with reference to program volume, program level, program length and efforts. 5,5,4

4. (a) Write a short note on cyclomatic complexity.

(b) What do you mean by regression testing and when is it required ?

(c) Explain advantages of code inspections in detail. 5,5,4

5. (a) Explain the importance of software maintenance.

(b) Write a short note on software reverse engineering.

(c) What is software configuration management and its activities ? 5,5,4

6. Explain Spiral model in detail with neat sketch along with its advantages.

7. Explain software requirement elicitation process in detail.

FACULTY OF ENGINEERING, UNIVERSITY OF LUCKNOW

Mid-Term Test - II

B.TECH. SEMESTER - V, 2022-23

Branch: CSE

Student's Roll No.

Subject Code: **Subject Title: SOFTWARE ENGINEERING**

Time: 1 Hrs.

Full Marks: 20

Note: Attempt questions from each section as per instructions. The symbols have their usual meaning.

SECTION A

1. Attempt all parts of this question. Each part carries 1 mark. (1 x 5 = 5)

- What do you understand by Unit testing?
- Write the difference between Alpha testing and Beta testing
- Give the differences between White box and Black box testing.
- Write down a short note on Coupling and Cohesion.
- Write a short note on criteria for Quality Software design.

SECTION B

Attempt any THREE questions of the following. Each question carries 5 marks. (5 x 3 = 15)

- Write a short note on Cyclomatic Complexity? What are its formulas? Explain regression Testing.
- Discuss in detail about Structured Software design. Explain Top down and Bottom up design strategy.
- Describe Driver and Stub modules in context to integration and Unit testing of software product. Explain Acceptance testing.
- Explain in brief about the following terms.
(i) Walkthrough (ii) Code inspection (iii) Formal Technical Review
(iv) System Testing (v) Modularity in designing.

FACULTY OF ENGINEERING & TECHNOLOGY

UNIVERSITY OF LUCKNOW

Mid-Term Examination - 1

B. TECH SEMESTER - V, 2021-22

Student's Name & Roll No.

Subject Code: CS-503

Subject: Software Engineering

Time: 1 Hrs.

Max. Marks: 20

Instruction: Attempt all sections.

Branch: CSE

SECTION A

1. Attempt all parts (1X5 = 5)

- Define Functional requirement of Software.
- What do you mean by Software crisis?
- Define and explain Software Engineering.
- Differentiate between Validation and Verification.
- Discuss briefly about the CASE tools.

SECTION B

Answer any THREE questions. (5X3 = 15)

- Differentiate between Water Fall Model and Prototyping Model
- Explain Spiral Model? Also write its advantages and disadvantages.
- What is SRS? Explain characteristics of a good SRS
- Draw Level-0 and Level-1 DFD for Student admission system

FACULTY OF ENGINEERING & TECHNOLOGY
UNIVERSITY OF LUCKNOW
Mid-Term Examination - 1
B.TECH SEMESTER - V, 2021-22

Student's Name & Roll No. Akanksha & 190013135008

Subject Code: CS-503

Subject: SOFTWARE

Time: 1 Hrs.

ENGINEERING

Instruction: Attempt all sections.

Max. Marks: 20

Branch: CSE

SECTION A

1. Attempt all parts

(1X5 = 5)

- a) Q1.a. what are software components? ✓
- b) Q1.b. what is RAD model? ✓
- c) Q1.c. give different types of requirements? ✓
- d) Q1.d. what is prototyping model? ✓
- e) Q1.e. what is non-functional requirements? ✓

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SECTION B

Answer any THREE questions.

(5X3 = 15)

- 1. Q2. Differentiate between waterfall model and spiral model? & prototype? ✓
- 2. Q3. What are possible solutions to present software crisis? ✓
- 3. Q4. Explain requirement engineering process? ✓
- 4. Q5. Differentiate ISO9001 and SEI-CMM models? ✓

Que 1 Concept of lifecycle model?

Que 1 Explain software characteristics.

Que 1 Equipment process

Que 1 DFD + E-R Diagram

Que 1 Software prototyping

Que 1 Requirement Validation

FACULTY OF ENGINEERING & TECHNOLOGY
UNIVERSITY OF LUCKNOW
Mid-Term Examination - 2
B.TECH SEMESTER - V, 2021-22

Student's Name & Roll No.

Subject Code: CS-503

Subject: SOFTWARE

Time: 1 Hrs.

ENGINEERING

Instruction: Attempt all sections.

Max. Marks: 20

Branch: CSE

SECTION A

1. Attempt all parts

(1X5 = 5)

- a) Q1.a. basic concept of software design? ✓
- b) Q1.b. explain design model in software design? ✓
- c) Q1.c. explain levels of software testing? - ① component ② system ✓
- d) Q1.d. what is validation testing? ✓
- e) Q1.e. what is acceptance testing? ✓

SECTION B

Answer any THREE questions.

(5X3 = 15)

- 1. Q2. Explain design strategies in software design? ✓
- 2. Q3. Differentiate between cohesion and coupling? ✓
- 3. Q4. Explain software testing strategies? ✓
- 4. Q5. Explain static testing strategies? ✓

- ① cohesion ② coupling ③ static strategies, Test ✓
- ④ Testing Design ✓
- ⑤ cyclomatic complexity ✓
- ⑥ Modularity ✓
- ⑦ modularization ✓
- ⑧ Top down & bottom up Testing ✓



FACULTY OF ENGINEERING, UNIVERSITY OF LUCKNOW

Mid-Term Test - I

B.TECH. SEMESTER - V, 2023-24

Branch: CSE, AI

Student's Roll No.....

Subject Code: CS 503

Subject Title: Software Engineering

Time: 1 Hrs.

Full Marks: 20

Note: Attempt questions from each section as per instructions. The symbols have their usual meaning.

SECTION A

1. Attempt all parts of this question. Each part carries 1 mark. (1 x 5 = 5)

- a) Define software engineering.
- b) What do you understand by SDLC?
- c) List all phases of waterfall model.
- d) Explain software crisis.
- e) What is SRS?

SECTION B

Attempt any THREE questions of the following. Each question carries 5 marks. (5 x 3 = 15)

- 2. What is an ER-diagram? Draw one for railway booking system.
- ✓ 3. Explain data flow diagram. Draw one for hospital management system.
- ✓ 4. Explain use case diagram. Draw one for an ATM system.
- ✓ 5. Explain prototype model using an appropriate diagram.