2068 I

Attempt any ten questions. **(10x6=60)**

1. Differentiate between software process and software process model.
2. What are the key challenges facing in Software Engineering? Explain.
3. Explain the system design process.
4. Why program are developed using evolutionary development are likely to be difficult to maintain? Explain.
5. What is the critical distinction between a milestone and deliverable? Explain.
6. Why elicitation and analysis is a difficult process in requirement engineering process? Explain.
7. Explain the rapid prototyping techniques with example.
8. What do you mean by formal specification? Explain.
9. Explain the control models and its types.
10. Explain the use case diagram with example.
11. Explain the verification and validation planning.
12. Write short notes on (any two):
    (a) Data flow models
    (b) COCOMO model
    (c) Security assessment

2068 II

Attempt any ten questions. **(10x6=60)**

1. Explain the software engineering and its role in Nation Development.
2. Explain the waterfall model with its merits and demerits.
3. What are the important activities that are carried sot during the feasibility study phase? Explain.
4. What are the different categories of software development projects according to the COCOMO estimation model? Explain.
5. What are the five desirable characteristics of a good software requirements specification (SRS) document?
6. What are the main advantages of using an object-oriented design approach over a function-oriented approach? Explain.
7. Differentiate between black box testing and white box testing.
8. What do you mean by functional and non-functional requirements? Explain.
9. Explain the rapid prototyping techniques.
10. Differentiate between interface specification and behavioral specification.
11. Explain class diagram with example.
12. Write short notes on(any two):
    a. Software inspection
    b. Software validation
    c. Reverse Engineering

2069

Attempt any ten questions. **(10x6=60)**

1.) Explain the software and it's characteristics.
2.) Explain the prototyping model of software development.
3.) Define the COCOMO model with example.
4.) Why an evolutionary prototyping is used in software development ? Explain.
5.) What do you mean by behaviourial specification?
6.) Why modular decomposition is used in architectural design ? Explain.
7.) Explain the sequence diagram with example.
8.) Explain the clean room software development with example.
9.) What are the types of software testing? Explain.
10.) Explain the reliability validation with example.
11.) What is USE CASE diagram? Explain with example.
12.) Write short notes on (any two) :-
    a.) User Interface Prototyping
    b.) Software Inspection
    c.) Source Code Translation

2071

Attempt any ten questions. **(10x6=60)**

1.) What is software ? Discuss generic products and bespoke products with example. Discuss functional and non-functional system properties with example.
2.) What is software process model ? Discuss reuse-oriented development in detail.
3.) Discuss the importance of project management. What are the different sections of project plan?
4.) Discuss requirements elicitation and analysis activity of requirements engineering process.
5.) Discuss evolutionary prototyping and throw-away prototyping in the software process.
6.) Why do we need formal specification ? Discuss behaviorial specification in detail.
7.) What are the advantages of designing and documenting software architecture? What is repository model?
8.) Discuss the use of control models. Differentiate between centralized control and event based control.
9.) Discuss sequence diagram with suitable example.
10.) What is verification and validation ? briefly explain verification and validation planning.
11.) What is integration testing? Differentiate between top-down and bottom-up integration testing.
12.) Write short notes on :
    a.) Functional Point
    b.) Source Code Translation

Tribhuvan University

Bachelor of Computer Science and Information Technology

Course: **Software Engineering**

Course No.: CSC-351

2071 (II)

Time : 3 hrs.

Full Marks: 60

Pass Marks: 24

Attempt 10 Questions Only (10*6=60.)

1.) What are the different phases in software development life cycle? Explain.
2.) Explain the software process model with example.
3.) Explain the software specification , software validation and software evolution with example.
4.) What do you mean by project management? Explain the project planning and project scheduling with example.
5.) What do you mean by software requirement? Explain the requirements engineering process with example.
6.) Define formal specification. Explain the formal specification method used in software process.
7.) Explain the software maintainance and its types.
8.) Explain the clean room software development with example.
9.) Explain the validation planning steps.
10.) Explain the security assessment.
11.) Explain the software quality standard with example.
12.) Write short notes on (any two) :
    a.) CASE tools
    b.) Reverse Engineering
    c.) Reliability validation