CT 2 Important

Multiple Choice Type Questions

1. Which model helps represent the flow of data in a system?
    1. ER Diagram

■ b) Data Flow Diagram

1. Use Case Diagram
2. State Diagram
3. The Data Dictionary is primarily used to:

■ a) Store metadata

1. Store data values
2. Define code modules
3. Document errors
4. What is the main goal of a Feasibility Study?
    1. Determine cost of hardware

■ b) Evaluate system viability

1. Write system code
2. Test system quality
3. Verification ensures that:
    1. Software meets user needs

■ b) Software is built correctly

1. Software is fully debugged
2. Software is documented
3. Black Box Testing is concerned with:
    1. Logic of the program

■ b) Input/output behavior

1. Source code structure
2. Algorithm complexity
3. System Integration Testing focuses on:
    1. Testing individual units

■ b) Testing combined modules

1. Testing database design
2. Testing code efficiency
3. Structured English is used to:
    1. Model program flow

■ b) Describe logical procedures

1. Write test cases
2. Define entities
3. A Decision Tree helps to:
    1. Document design applications

b) Represent decision paths

1. Create data models
2. Test applications
3. Validation ensures that:

a) Software meets user expectations

1. Code follows standards
2. All errors are fixed
3. Documentation is complete
4. What does SRS stand for in software engineering?

a) Software Requirement Specification

1. System Review Sheet
2. Software Resource Summary
3. System Requirement Summary
4. Which document defines the project scope and objectives?
    1. Test Plan

b) Project Charter

1. Design Document
2. Feasibility Report
3. Which testing method examines internal logic and structure?
    1. Black Box Testing
    2. Regression Testing

c) White Box Testing

d) Load Testing

1. The primary goal of Software Quality Assurance is to:
    1. Detect bugs
    2. Improve reliability

c) Ensure process quality

d) Increase performance

1. Which model is most suitable when requirements are unclear?
    1. Waterfall Model
    2. Spiral Model
    3. V-Model

d) Prototype Model

1. Which term describes the process of combining modules to form a complete system?
    1. Coding

b) Integration

1. Validation
2. Deployment
3. In project management, Gantt Charts are used for:
    1. Testing

b) Scheduling

1. Cost estimation
2. Risk assessment

Question Answers

Explain the significance of Data Flow Diagrams (DFDs) in system analysis.

-
  - DFDs show how data moves through a system.
  - They help understand the input, process, and output of data.
  - DFDs help in finding errors and improving system design.
  - They make communication between users and developers easier.
  - Useful for both designing and documenting systems.

What are the main components of a Feasibility Study?

-
  - Technical Feasibility: Can the system be built with available technology?
  - Economic Feasibility: Is the project cost-effective and profitable?
  - Operational Feasibility: Will the system work well in the real environment?
  - Legal Feasibility: Does it follow laws and regulations?
  - Schedule Feasibility: Can it be completed on time?

Define Structured English and mention its advantages.

-
  - Structured English is a way of writing logic using simple English and programming keywords like IF, THEN, ELSE.
  - Advantages:
  - 1. Easy to understand for both technical and non-technical people.
  - 2. Reduces confusion and mistakes.
  - 3. Helps convert logic into code easily.
  - 4. Useful for documenting business rules.

Describe the purpose of Decision Tables in software project management.

-
  - Decision tables show rules for making decisions based on different conditions.
  - They help handle complex logic clearly.
  - Reduce errors and misunderstandings.
  - Useful in testing and validation of business rules.

Differentiate between Verification and Validation.

Verification	Validation
Checks if the product is made correctly.	Checks if the right product is made.
Done during development.	Done after development/testing.
Ensures process correctness.	Ensures product usefulness.
Example: Code review.	Example: User acceptance testing.

1. **Define System Testing and state its importance.**
    - System testing checks the complete system as a whole.
    - It ensures all parts work together properly.
    - Detects errors missed in earlier tests.
    - Verifies that the system meets all requirements.
    - Helps deliver a reliable final product.

What is the role of a Software Requirement Specification (SRS)?

-
    - SRS is a detailed written document of what a software should do.
    - It defines all functional and non-functional requirements.
    - Acts as a guide for developers, testers, and clients.
    - Reduces misunderstanding and rework.
    - Helps in project planning and validation.

Explain the difference between Black Box and White Box Testing.

Black Box Testing	White Box Testing
Tests software without knowing internal code.	Tests with full knowledge of internal code.
Focus on input and output.	Focus on logic, loops, and code structure.
Done by testers.	Done by developers.
Example: Functional testing.	Example: Unit testing.

1. **What is the importance of project scheduling in software development?**
    - Helps plan and organize project tasks.
    - Ensures work is completed on time.
    - Identifies resource and manpower needs.
    - Helps track progress and avoid delays.
    - Improves team coordination and efficiency.

Define Software Quality Assurance (SQA) and list its

major activities.

- SQA ensures software meets quality standards and prevents problems instead of just finding them.

Major Activities:

1. Process planning and audits.
2. Reviews and testing.
3. Error prevention and correction.
4. Quality measurement and improvement.

What is a prototype model and when is it used?

- The prototype model builds a sample version of software before making the final one.
- Helps users see and give feedback early.
- Used when requirements are unclear.
- Saves time by reducing rework later.
- Useful in systems needing user interaction.

Write short notes on Integration Testing.

- Integration testing checks how modules work together.
- It ensures data flow between modules is correct.
- Finds interface and communication errors early.
- Can be done using top-down or bottom-up approach.
- Ensures the complete system works as expected.