1. Define Testing !

Testing is the process of evaluating a software application to identifying errors, gaps, or missing requirements.

→ It ensures that the software works as expected and meets the user needs.

2) Explaining Black Box Testing and white Box Testing.

a) Black Box Testing: Testing the the software without knowing internal structure or code. It focus on Inputs and expected outputs.

Advantages:-

• No need to know programming

• Focuses on user experience and system behaviour

Disadvantages:

• Cannot identify internal code issues.

• limited text coverage.

b) White Box Testing: Testing the internal logic, structure, and code of the software. It focuses of paths, loops, conditions

Advantages:

• High code coverage

• Finds hidden logical errors.

Disadvantages:
- Requires programming knowledge
- Not Effective for checking user requirements or UI

③ Explain Risk Management in Software Engineering.

→ Risk Management is the process of identifying, assessing, and mitigating risks that could negatively affect the success of a software project.

Steps:-
1. Risk Identification:-
   - Detect potential risks (e.g., scope creep, delays).
   - Example: "Team lacks Experience with the chosen framework."

2. Risk Analysis:
   - Assess the likelihood and impact of each risk.
   - Use qualitative or quantitative methods.

3. Risk Prioritization:
   - Rank risks based on severity and probability.

4. Risk Mitigation:
   - Define strategies to reduce & avoid risks.
   - Example: Provide training, create backup plans.

5. Risk Monitoring and Control:
   - Continuously monitor risks throughout the project lifecycle.
   - Update plans are necessary.