

(2½ Hours)

[Total Marks: 75]

- N. B.: (1) **All** questions are **compulsory**.  
 (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.  
 (3) Answers to the **same question** must be **written together**.  
 (4) Numbers to the **right** indicate **marks**.  
 (5) Draw **neat labeled diagrams** wherever **necessary**.  
 (6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt any three of the following:** 15
- Briefly explain the different phases of project management life cycle.
  - What is project charter in software project management? What are the elements of project charter?
  - What is project portfolio management? Explain the key aspects of project portfolio management.
  - Define the following terms:  
 i) Net profit    ii) Return on Investment    iii) Payback period    iv) Net present value  
 v) Internal rate of return
  - What is a project product? Explain Product Breakdown Structure with the help of example.
  - What do you mean by scope and objective of a project? List the activities involved in identifying project scope and objective.
2. **Attempt any three of the following:** 15
- What do you understand by the term 'ceremonies' in a scrum project? Explain the different types of ceremonies that are observed in a Scrum project and their significance.
  - List the advantages and disadvantages of software prototyping.
  - Explain the five major components of Albrecht Function Point Analysis.
  - What are effort multipliers in COCOMO II model? List the effort multipliers used at early design.
  - Explain eight core principles of Dynamic Systems Development Method.
  - State Capers Jones rules of thumb for software estimation.
3. **Attempt any three of the following:** 15
- With the help of example explain forward pass and backward pass to calculate activity duration in network diagram.
  - Define the following terms  
 i) Critical path    ii) Float    iii) Free float    iv) Interfering float    v) Hammock activity
  - Explain Boehm's top ten software project risks and the different strategies for reducing it.
  - Write short note on Project Evaluation and Review Technique.
  - Explain the different categories of cost incurred in a software project.
  - What is resource smoothing? Explain two different ways of prioritizing activities for resource allocation.

[TURN OVER]

**4. Attempt any three of the following:**

**15**

- a Explain review process model with the help of diagram.
- b What is meant by software configuration management? Explain the two principal activities of configuration management.
- c Explain the main sections in a requirement document for contract placement.
- d What is fixed price contract? List the advantages and disadvantages of fixed price contract.
- e What are three important categories of stress management techniques?
- f Explain Vroom's expectancy theory of motivation.

**5. Attempt any three of the following:**

**15**

- a Explain the advantages of a functional organization over project organization.
- b List the obstacles to good group decision making. Also explain Delphi decision making process.
- c Write short note on SEI capability maturity model.
- d What is reliability growth model? Explain any two reliability growth models.
- e What are the steps of conducting a post implementation project review?
- f Explain the different reason for which a project may need to be terminated.