

## CE1.4-R4: PROJECT MANAGEMENT

### NOTE:

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1.

- a) Define the term project. Also list characteristics that distinguish a project from routine tasks.
- b) Define functional requirements of a project. Who decides such requirements?
- c) What are the performance measures and predictive measures?
- d) What is activity network? For what purpose is it used? Explain in brief.
- e) List categories of resources for project development with one line description of each.
- f) Explain in brief an organization structure called 'chief programmer team'.
- g) What is a quality standard? What role does it play? Give an example of software quality standard.

(7x4)

2.

- a) List and explain the three feasibility tests in brief.
- b) Explain in brief the software development cycle by giving its diagram.
- c) What do you mean by Work Breakdown Structure (WBS) in context to software project and product? Discuss with examples.

(6+8+4)

3.

- a) Explain how effort estimation can be done with the help of parameters such as software size.
- b) List in brief the activities in project planning. Explain each activity in brief.
- c) Describe the function point analysis. How function points are used in estimation of cost and efforts using decomposition technique.

(6+8+4)

4.

- a) Explain the forward pass phase while scheduling activities related to the project with the help of network diagram.
- b) Explain COCOMO model for project cost estimation with a suitable example.
- c) As size is the main factor determining the cost of a project, an accurate size can be used to estimate the cost and schedule of the software project. Give your view in favour and in against of the statement.

(6+8+4)

5.

- a) Explain how risks in project development can be managed. Also provide risk engineering task breakdown.
- b) What is earned value analysis? Explain in detail.
- c) Is the critical path important if only one person is working on a software project? Discuss the concept of PERT/CPM in defining an optimal schedule.

(8+6+4)

**6.**

- a) Explain fixed price contracts with its advantages and disadvantages in brief.
- b) What is importance of group decision making in project management? What are the obstacles for such group decision making?
- c) Write a short note on SEI Capability Maturity Model (CMM). How does it differ from ISO9000?

**(6+6+6)**

**7.**

- a) Identify and discuss major risks that could affect the software development process and suggest names of proper risk management techniques.
- b) Discuss in brief quality of a developed project by considering
  - i) product operation qualities
  - ii) product revision qualities
  - iii) product transition qualities

**(9+9)**