

C9-R3: ADVANCED SOFTWARE PROJECT MANAGEMENT

NOTE:

1. Answer question 1 and any FOUR questions from 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) What are the documentation requirements during the software-testing phase of software project management activities?
- b) Describe various characteristics of software requirements that make requirements analysis one of the most crucial activities in software projects?
- c) Distinguish between goals, requirements and constraints.
- d)
 - i) Activity C has an early start time of 7, an early finish time of 12, a latest start time of 13, and a latest finish time of 18. How much is the slack?
 - ii) An activity has an optimistic time estimate of four days, a most likely time estimate of eight days, and a pessimistic time estimate of fifteen days. What is the expected duration of this activity?
- e) Describe various issues involved in manpower management.
- f) What are the basic propositions of Theory X, Y and Z? How do they apply in managing the human resource aspects of software projects?
- g) How does organizational culture affect the project risks in software development organizations?

(7x4)

2.

- a) What are the basic characteristics of software that makes it unique from a project management viewpoint?
- b) How can you identify different types of software projects?
- c) What are the generic elements that can describe the process models for any software projects minimally?

(8+5+5)

3.

- a) What are the quality-attributes of well-engineered software?
- b) What are the two approaches for identifying the tasks?
- c) What are the differences between work breakdown structure and product breakdown structure?

(6+6+6)

4.

- a) What are the various categories of project estimation approaches? Describe the merits and demerits of Delphi approach.
- b) Distinguish between systems and models v/s. work products.
- c) What do you understand by "playback analysis" in software projects?

(6+6+6)

5.

- a) Explain the usefulness of COCOMO II model over the COCOMO model in light of the traditional estimation techniques used hands-on by project managers.
- b) How can you assess software risk qualitatively?

(10+8)

6.

- a) What are the features of an effective change control procedure?
- b) On what artifacts do you have to assess the impact of changes approved by the change control procedure?
- c) Distinguish between change control and version control.

(6+6+6)

7. Write short notes on the following:

- a) Software reliability metrics
- b) Software Maintenance
- c) Work breakdown structure

(3x6)