

## 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) Explain the phases of a typical project life cycle with a neat diagram. Also mention some of the advantages for developing a project life cycle.
- b) What do you understand by a project close out report? Explain briefly.
- c) Explain what do you understand by risk management plan?
- d) Explain the difference between forward pass and backward pass.
- e) Differentiate between quality assurance and quality control. Are they synonyms? Justify.
- f) How to manage the allocation of resources within programs with examples.
- g) Define contract management? What are the different types of contract?

(7x4)

2.

- a) What is functional point? Mention its importance. Write any three advantages of function point analysis.
- b) Differentiate between groups and teams.
- c) What is risk Identification? What are the three activities of risk assessment?

(6+6+6)

3.

- a) Identify the risks in the following domain:
  - i) software requirement risks
  - ii) software quality risks
  - iii) software scheduling risks
- b) Discuss the tools and techniques that project managers can use to ensure knowledge and lessons learned from previous projects are not lost, and can be shared for the benefit of future projects.

(9+9)

4.

- a) Discuss types and sources of conflicts.
- b) Discuss why is project estimation so hard? Explain in short following project estimation techniques: expert judgement, bottom up and top down

(9+9)

5.

- a) Explain the relationship between Productivity and difficulty.  
b) Assuming that the project team will work a standard working week (5 working days in 1 week) and that all tasks will start as soon as possible, use the information given in table below to answer following questions:

Tasks	Description	Duration (Working days)	Predecessor(s)
A	Requirement Analysis	5	
B	System Design	15	A
C	Programming	25	B
D	Telecoms	15	B
E	Hardware Installation	30	B
F	Integration	10	C, D
G	System Testing	10	E, F
H	Training/Support	5	G
I	Handover and Go-live	5	H

- i) Draw the network diagram.  
ii) Determine the critical path of the project.  
iii) Calculate the planned duration of the project in weeks.  
iv) Identify any non-critical tasks and the float (free slack) on each.

**(6+4+2+3+3)**

6.

- a) Explain the risk management process in details. Also discuss what is risk register or log and what it contains.  
b) Explain the bath tub curve of hardware reliability.  
c) Explain the advantages of working as a team

**(8+5+5)**

7.

- a) What are some techniques a project manager can employ to prioritize and validate user requirements? Identify and describe at least two methods.  
b) Explain what is meant by the following quality terms:  
i) Quality assurance  
ii) Quality systems  
c) Define software reliability. What is the difference between hardware & software reliability?

**(6+6+6)**