

CE1.4-R4: PROJECT MANAGEMENT

«srlno»

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 basic, intermediate and detailed COCOMO models in brief.
- b) Briefly describe what are the steps involved in identification of project scope and objective?
- c) Describe what do you mean by "Aids for Risk Identification" with the help of relevant example.
- d) Explain what is meant by Quality control, Quality plan and TQM?
- e) Explain the relationship between Time and cost with respect to project management.
- f) Explain Contract Management and the role of contract manager.
- g) What is strategic assessment? Differentiate between strategic assessment and technical assessment.

(7x4)

2.

- a) Software project planning entails what activities? What are the difficulties faced in measuring the Software Costs?
- b) Net Present Value measures the total value of an investment over its lifetime. Why is it useful to know the Net Present Value of a proposed software development project? How would you calculate the Net Present Value of a proposed project?
- c) Explain the purpose and procedures for operating a configuration management system.

(6+6+6)

3.

- a) Explain in detail about creating the framework for monitoring and control.
- b) Explain the various approaches to controlling changes to a project requirement.
- c) What is ROI? How it is calculated? Calculate the ROI for a software project development, where the net profit is 60,000 and total investment is 3,00,000.

(6+6+6)

4.

- a) Define development costs? What are the steps in cost-benefit analysis?
- b) Define risk analysis and risk monitoring? What things are to be considered in risk management?
- c) What is meant by stakeholder management and describe how the project manager ensures stakeholder co-operation?

(6+6+6)

5.

- a) Describe the following concepts with the help of relevant examples:
 - i) Risk Components and drivers
 - ii) Risk Prioritization

- b) Determine
- network diagram
 - critical path
 - ES, EF, LS and LF
 - free slack for each activity for the project parameters given below:

| Task Number | Description | Duration (days) | Dependent on Tasks |
|-------------|--------------------|-----------------|--------------------|
| T1 | Specification | 15 | -- |
| T2 | Design Database | 45 | T1 |
| T3 | Design GUI | 30 | T1 |
| T4 | Code database | 105 | T2 |
| T5 | Code GUI part | 45 | T3 |
| T6 | Integrate and Test | 120 | T4 and T5 |
| T7 | Write user manual | 60 | T1 |

([4+4]+[3+2+3+2])

6.

- Differentiate between quality assurance and quality control. Are they synonyms? Justify.
- What is CMM? Describe its levels and compare it with ISO 9001.

(9+9)

7.

- Explain the stages and documentation required for an effective change management system.
- A project consisting of 6 activities (A to F), the budgets, the % complete and the actual recorded costs for a specific point in time are as shown below:

| Activity | Budget £ | % complete | Actual Cost £ | Earned Value £ |
|--------------|----------|------------|---------------|----------------|
| A | 70 | 90 | 60 | |
| B | 40 | 80 | 50 | |
| C | 80 | 70 | 75 | |
| D | 60 | 20 | 40 | |
| E | 20 | 10 | 5 | |
| F | 80 | 5 | 10 | |
| <i>Total</i> | 350 | | 240 | |

- Calculate the Earned Value for each activity
- Calculate the overall % of the project
- Calculate the CPI (or efficiency) of the project
- Calculate the estimated final cost

(6+[3+3+3+3])