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Question Paper Code : 40769

B.E./B.Tech DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Seventh Semester

Computer Science and Engineering

IT 8075 – SOFTWARE PROJECT MANAGEMENT

(Common to Industrial Engineering/ Mechatronics Engineering/ Information Technology)

(Regulations 2017)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Point out the characteristics of software project planning.

2. Compare program managers and project managers.

3. State the use of Rapid Application Development (RAD) model.

4. Formulate the function point Mark II model of transaction.

5. Compare work breakdown structure and Product break down structure.

6. Enumerate the factors involved in risk planning.

7. Identify the outcome of contract management.

8. List the advantages of fixed priced contracts.

9. Identify the methods to improve motivation.

10. Quote: Maslow's hierarchy of need.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Discuss the different ways of categorizing software projects in detail. (5)

    (ii) Elaborate on the steps in project planning. (8)

    Or

    (b) Examine in detail about various cost benefit analysis techniques with examples.

12. (a) (i) Describe the water fall model in detail with neat diagram. (7)

       (ii) Examine the spiral software development life cycle model with diagrammatic illustration. (6)

Or

(b) (i) Outline the extended function point analysis in detail with an example. (7)

       (ii) Describe the expert judgment and estimation by analogy in detail. (6)

13. (a) Identify the various network planning model and make a comparison between them. Explain rules for constructing precedence network with an example.

Or

(b) (i) Examine the Monte Carlo Simulation with an example. (6)

       (ii) Elaborate Risk Planning and steps followed in Risk Planning. (7)

14. (a) Illustrate the various types of contracts with example. Summarize the advantages and disadvantages of each type.

Or

(b) (i) Summarize the various steps involved in change control procedure. (9)

       (ii) Formulate the process of prioritizing monitoring. (4)

15. (a) (i) Explain Ethical and Professional concern. (6)

       (ii) Illustrate the project and functional organization structure and list out the advantages of functional team format. (7)

Or

(b) (i) Summarize the factors to be considered in the Oldham-Hackman job characteristic model. (7)

       (ii) Write about the characteristics of Dispersed Team and Virtual Team. (6)

PART C — (1 × 15 = 15 marks)

16. (a) Consider a software project with 5 tasks T1 to T5. Duration of the 5 tasks in weeks are 3, 2, 3, 5, 2 respectively. T2 and T4 can start when T1 is complete. T3 can start when T2 is complete. A T5 can start when both T3 and T4 are complete. Draw the CPM network representation of the project. When is the latest start date of the task T3? What is the float time of the task T4? Which tasks are on the critical path?

Or

(b) Formulate with your own example how the earned value chart depicts scheduled progress, actual cost and actual progress (earned value) to allow the determination of spending, schedule and time variances. Illustrate in detail.

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