

(Time: 2½ Hours)

[Total Marks: 75]

- N. B.: (1) **All** questions are **compulsory**.  
 (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.  
 (3) Answers to the **same question** must be **written together**.  
 (4) Numbers to the **right** indicate **marks**.  
 (5) Draw **neat labeled diagrams** wherever **necessary**.  
 (6) Use of **Non-programmable** calculators is **allowed**.

1. Attempt **any Three** of the following: 15

- What is project? Explain different phases of project management life cycle.
- What are the characteristics of project? Compare the Modern project management with traditional project management process.
- Describe the business case with its content of business case document.
- Give the brief overview of the Step Wise approach to planning software projects with the help of neat diagram.
- Explain the term risk evaluation and risk management process in project management.
- Suppose a software development company has undertaken a project that is expected to cost £190,000 to execute and the expected inflow is £25,000 per quarter for the first year, £30,000 per quarter thereafter. What is the payback period for the project?

2. Attempt **any Three** of the following: 15

- Explain Atern / Dynamic Systems Development Method.
- Write short note on Agile Methods, Extreme Programming (XP).
- Explain the incremental model with its advantages and disadvantages.
- What is Scrum? Explain it as a fast delivery approach of a project in detail.
- State and explain Capers Jones estimating rules.
- Explain the COCOMO II and discuss the stages of it with suitable example.

3. Attempt **any Three** of the following: 15

- What are the factors considered while allocating tasks to the individuals?
- Draw CPM network using precedence network conventions for the project in table. Also show activities forward and backward pass.

Activity	Duration	Precedents
A	6	-
B	4	-
C	3	A
D	4	B
E	4	B
F	10	-
G	3	E, F
H	2	C, D

- Describe Boehm's top software project risks and different strategies for reducing it.

- d. Suppose four risks namely R1, R2, R3 and R4 have been identified and assigned the probabilities of occurrence of 0.1, 0.2, 0.3 and 0.4 respectively. The likely damages due to the four risks are Rs. 60,000; Rs. 1,00,000; Rs. 70,000; Rs. 80,000 respectively. Calculate the risk exposure of all the risks.
- e. What is activity? What is the necessity of activity planning?
- f. Explain network planning model and the concept of backward pass and forward pass.

4. Attempt any Three of the following:

15

- a. What is RAG reporting? Explain with the help of suitable example.
- b. What is stress at work place? How do you manage the Stress?
- c. What is contract? Explain advantages and disadvantages of price contracts.
- d. Explain Gantt chart and slip chart with the help of suitable diagram.
- e. Explain the expectancy Theory of Motivation (Vroom).
- f. Suppose for a certain project budgeted for Rs. 2,000/-, at certain time during the execution of the project, the project manager determined  $EV = Rs. 500/-$  and  $AC = Rs. 400/-$ . What is the current estimated cost of the project?

5. Attempt any Three of the following:

15

- a. Explain the reasons for premature project termination.
- b. Explain the organization and team structure approach.
- c. What are the different ISO 9126 software qualities? What is the importance of Software quality?
- d. What are the sub-characteristics of Functionality and Reliability?
- e. State and explain different levels of capability maturity model. (CMM)
- f. Explain the Leadership with its types.

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