(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**

a. What is project? Explain the various characteristics that distinguish project from routine jobs.
b. How are objectives and sub-objectives identified for a project?
c. Explain the various bidding techniques along with their implications and applicability.
d. Explain the various sections contained in a typical business case document.
e. Suppose a software development company has undertaken a project that is expected to cost £160,000 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?
f. Explain in detail Step 5 of the Step wise framework.

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

a. How uncertainty can be associated with products, processes or resources of a project?
b. Explain the one-shot process model.
c. Discuss the important characteristics of agile method in detail.
d. Explain the reasons why estimates are carried out at various stages of a software project.
e. Explain the major shortcomings of the SLOC measure.
f. What are the ways to determine the staffing requirement of a software project?

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

a. Briefly explain the objectives of activity planning.
b. Create a precedence activity network using the following details:

Activity	Depends on	Duration (days)
A		5
B	A	7
C	B	6
D	A	5
E	D	10
F	B	15
G	B	8
H	G	8
I	C	4
J	G	4
K	E,F	5
L	I,H	3

Calculate the earliest and latest start and end dates and the float associated with each activity. From this identify the critical path.

c. Explain with a neat diagram the components in Lyytinen-Mathiassen-Ropponen risk framework.
d. Briefly explain Monte Carlo simulation approach.
e. What is resource? Explain the categories of resources.
f. How is successful project scheduling achievable?

4. Attempt *any three* of the following: **15**

a Explain the partial completion reporting scheme with respect to collecting the project data.
b Suppose a project is budgeted to cost £150,000. The project is to be completed in 18 months. After two months, the project is 10% complete at an expense of £25,000. It was planned that after 2 months, 15% of the project work should have been completed. Compute the cost performance index and the schedule performance index. Interpret these values to assess the progress of the project.
c What is fixed price per unit delivered contracts? List the advantages and disadvantages of this approach.
d Explain the steps involved in producing an evaluation plan describing how each proposal will be checked against the selection criteria.
e Explain with a neat diagram hierarchy of needs according to Abraham Maslow.
f How health and safety issues have prominent impact in ICT development.

5. Attempt *any three* of the following: **15**

a. Who are the different types of people according to Meredith Belbin needed in order to create a balanced team?
b. Explain chief programmer team and also state its advantages and disadvantages.
c. Explain the quality attributes according to McCall's software quality model.
d. Differentiate between product versus process quality management.
e. Why are projects not closed properly?
f. Briefly explain the steps involved in conducting a post implementation project review.
