C9-R3: ADVANCED SOFTWARE PROJECT MANAGEMENT

NOTE:

1. **Answer question 1 and any FOUR questions from 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 software project management aspects so far as the risk analysis is concerned in the software development process.
b) What is ROI? Give a method to estimate ROI for a project?
c) Differentiate among “error”, “fault” and “failure” as applied to software.
d) What is Earned Value Analysis? Give its utility.
e) What are the advantages of networks over Gantt charts? Can a Gantt chart be created from a network? Explain.
f) Discuss reasons, why the project manager frequently resists changes project?
g) What is the relationship between phases of the project life cycle and cost escalation?

(7x4)

2.

a) How are projects initiated? Describe the process.
b) Define the concept of Managing Risk and discuss its major components.
c) Define the resource allocation and its nature with the help of the detail diagram.

(6+6+6)

3.

a) Describe the process of developing user requirements and system specification? What problems are associated with requirement specifications? What are the ways to minimize these problems?
b) What is a responsibility matrix and what function does the responsibility have in project control?

(9+9)

4.

a) Construct a Gantt chart using the following data:

Task	Start Time (wks.)	Duration (wks.)
A	0	5
B	6	3
C	7	4
D	7	9
E	8	2
F	9	8
G	12	7

When will the last task be completed?

b) How will the above Gantt chart changed if you were told that C and D could not begin until B was completed and that G could not begin until C was completed? What happens to the project completion time? Is the Gantt chart an adequate tool for planning and controlling small projects?
c) Why is it vital to know the critical path? Explain the different ways the critical path is used in network analysis and project planning.

(6+6+6)

5.

a) What is work breakdown structure? What is its use? Illustrate by a simple example.

b) Explain the concept of configuration management. How is it useful for quality assurance?

c) What are the various limitations of the cost estimation models?

(6+6+6)

6.

a) What are the different types of risks in software projects? Enumerate the risk management activities involved in software project management?

b) Why Pareto 80/20 rule should be applied to software risk analysis. What is RMMP Risk Monitoring?

(10+8)

7.

a) Discuss the importance of communication and information exchange to project success. What are the crucial features and elements of effective communication and information exchanges in successful projects?

b) What are the sources of conflict between parties in the project organization? What are the negative consequences of conflict in project? Explain why some conflict is natural and beneficial? Explain the ways of dealing with conflict?

(8+10)