1. a) What are the generic elements that can describe the process models for any software projects minimally?
b) Distinguish between goals, requirements and constraints.
c) What are the features of an effective change control procedure?
d) Distinguish between change control and version control.
e) Write down various methods of estimation and discuss Empirical Estimation Techniques.
f) Explain the key process areas associated with the five levels of CMM.
g) List out any four issues involved in risk analysis and management.

(7x4)

2. a) What are the job responsibilities of a software project manager? Explain any two responsibilities in detail?
b) What are the qualities attributes of well-engineered software?
c) Define the term Software Reliability? Describe the types of uncertainty addressed in software reliability growth models.

(8+6+4)

3. a) What are the steps involved in SPMP? Explain in detail?
b) Explain detail about the metrics used for project size estimation?
c) What are the differences between work break down structures and product break down structure?

(6+6+6)

4. a) What are the problems of a classical waterfall model of software development? Compare the waterfall model with an iterative model and bring out the relative advantages of the iterative model over waterfall model.
b) What are the salient issue involved with regard to Planning, Estimating and Scheduling?
c) Explain the concept of configuration management. How is it useful for quality assurance?

(8+4+6)

5. a) What are the different types of risks in software project?
b) Enumerate the risk management activities involved in software project management?
c) Discuss the risk assessment activities in detail.

(4+6+8)
6.  
a) Briefly, discuss the Function Point model for software sizing highlighting the important elements, the multipliers and the complexity adjustment values.

b) Compute the Function Point value for a software project with the following details:

User Inputs:    12  Number of Files:    6  
User Outputs:   25  External Interfaces:  4
Inquiries:      10  Number of Algorithms:  8

Assume the multiplier at their average values and all the complexity adjustment factors at their moderate to average values.

7.  
a) Explain the usefulness of COCOMO II model over the COCOMO model in light of the traditional estimation techniques used hands-on by project managers.

b) On what artifacts do you have to assess the impact of changes approved by the change control procedure?

c) What do you understand by “playback analysis” in software projects?