Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

Note: Question No. 1 is Compulsory and attempt two questions from each section. All questions carry equal marks.

1. 
   a) Explain characteristics of a good software
   b) List building blocks of ER diagram
   c) Differentiate between validation and verification.
   d) List various steps involved in requirements gathering.
   e) Explain coupling and cohesion.
   f) Define verifiability.
   g) Differentiate between functional and non-functional requirements.
   h) Explain purpose of data flow diagrams.
   i) Differentiate between failure and fault.
   j) Define software re-engineering.

SECTION - A

2(a) Define software Requirement Specification. Explain its characteristics and role in software development.
(b) Define SDLC. Explain any one software development life cycle model.

3(a) What do you understand by requirements elicitation? Explain any technique.
(b) Write steps for identifying non-functional requirements of a system.

4(a) List and explain the steps involved in project planning.
(b) Explain object oriented methodology of software development in detail.

SECTION - B

5(a) Define software reliability. Write steps to check reliability of a software.
(b) Define software quality. Discuss various software quality models.

6(a) What is black box testing? Explain any one technique in detail.
(b) What is white box testing? How it is different from black box testing? Illustrate the situation where white box testing is performed.

7(a) Define software maintenance. Discuss various maintenance models.
(b) What do you understand by reverse engineering? Explain the scenarios where reverse engineering is helpful in reducing development cost.