

Time: 2½ hrs.

Note:

1. All questions are compulsory with internal choice.
2. Draw neat diagrams wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** **Answer the following (any three)** (15)
- (a) Define software engineering. Explain the need for Software Engineering.
 - (b) Explain the Software Development Life Cycle (SDLC) with the help of a diagram.
 - (c) Write a short note on Spiral Model
 - (d) Explain the structure of the SRS document.
 - (e) What are the functional and nonfunctional requirements?
 - (f) Describe 12 principles of the Agile Model.
- Q.2** **Answer the following (any three)** (15)
- (a) What are the requirement engineering tasks?
 - (b) Define the critical system and its type.
 - (c) Explain the system engineering process in detail.
 - (d) Write a short note on ER Diagram .
 - (e) Explain the layered approach in socio-technical systems.
 - (f) Describe different types of models.
- Q.3** **Answer the following (any three)** (15)
- (a) What is the User interface? Explain Principles of it.
 - (b) Explain software project management briefly.
 - (c) Explain project Scheduling in detail.
 - (d) Write a short note on Risk Management Process.
 - (e) Explain OSI model in detail.
 - (f) Write a short note on Organizational model.
- Q.4** **Answer the following (any three)** (15)
- (a) Write a short note on Verification and Validation.
 - (b) Define Testing. Explain Black box and White box testing..
 - (c) explain test case design in brief.
 - (d) explain the level of Testing.
 - (e) Define Testing. Explain the types of system testing.
 - (f) Explain the inspection process in brief.
- Q.5** **Answer the following (any three)** (15)
- (a) Write a short note on COST i.e. Commercial off the shelf.
 - (b) Write a short on Software as a service.
 - (c) Explain software reuse with its types
 - (d) Describe Client server computing architecture.
 - (e) What are the architectural patterns for distributed systems? Explain Master-Slave architecture.
 - (f) Describe the Classification of process.