

SYIT/SEM IV/Reg/SE

Time: 2½ hrs.

Marks:75

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 advantages for Software Engineering.
 - (b) Explain the Software Development Life Cycle (SDLC) with the help of a diagram.
 - (c) Explain the phases of the Waterfall Model with the help of a diagram.
 - (d) Describe the quality criteria of a good SRS
 - (e) What are the functional and nonfunctional requirements?
 - (f) What are the principles of the agile Model?
- Q.2 Answer the following (any three) (15)**
- (a) Draw ER diagram for Blood bank management system.
 - (b) Define the critical system and explain the types of the critical system.
 - (c) Describe the system engineering process in detail.
 - (d) Describe different types of models.
 - (e) Explain the layered approach in socio-technical systems.
 - (f) Describe the process or steps of the requirement engineering process.
- 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 OSI reference model.
 - (d) Write a short note on Risk Management Process.
 - (e) What is the need for Quality assurance?
 - (f) Write a short note on Risk Planning.
- Q.4 Answer the following (any three) (15)**
- (a) Define Verification and Validation in detail .
 - (b) Define Testing. Explain Black box and White box testing..
 - (c) Explain test case design with example.
 - (d) Describe automated testing.
 - (e) Explain the types of system testing.
 - (f) Explain the software inspection process in brief.
- Q.5 Answer the following (any three) (15)**
- (a) Write a short note on COTS i.e. Commercial off the shelf.
 - (b) Write a short on Software as a service.
 - (c) What are the benefits and problems of reusing software?
 - (d) Explain Service oriented software engineering .
 - (e) Explain software measurement .
 - (f) Explain the CMMI process.