

SYCS/SEM IV/Software Engineering

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 four) (20)

- (a) Explain the following different Software Application Domains:
- | | |
|-------------------------------------|-------------------------|
| 1) System Software | 4) Application Software |
| 2) Artificial intelligence Software | 5) Embedded Software |
| 3) Web Application Software | |
- (b) Give and explain advantages of Waterfall Model model.
- (c) Explain. Correct, Unambiguous, Complete, Modifiable, Traceable how can they become characteristics of SRS.
- (d) What is class? Explain Attributes and Operations of an class.
- (e) Explain the Incremental Process Model.
- (f) Draw a use case diagram for Appointment System for Hospital where patient make appointment from Management and track the arrangements. Doctor appointment to be scheduled by Management.

Q.2 Answer the following (any four) (20)

- (a) Differentiate between Function Oriented and Oriented Design.
- (b) Define Monitoring & Controlling by using points :
- | | |
|-------------------|--------------------|
| 1) Validate Scope | 4) Control Quality |
| 2) Control Scope | 5) Control Risks |
| 3) Control Costs | |
- (c) Explain COCOMO model.
- (d) Write a note on : Resource Estimation
- (e) What is Cohesion? Explain the following types of cohesion.
- | | |
|-----------------------------|------------------------|
| 1) Logical Cohesion | 4) Temporal Cohesion |
| 2) Procedural Cohesion | 5) Sequential Cohesion |
| 3) Communicational Cohesion | |
- (f) Describe in brief about Project Metrics.

Q.3 Answer the following (any four) (20)

- (a) Which are the top five Business Risks?
- (b) What is Integration testing?
- (c) Describe the SQA actions to achieve a set of pragmatic goals.
- (d) Explain DMAIC of Six Sigma?
- (e) What is Risk Mitigation? Give the steps for mitigating the risks.
- (f) Explain Elements of Software Quality Assurance with the help of following points:
- | | |
|----------------------|------------------------|
| 1) Standards | 4) Change Management |
| 2) Review and audits | 5) Security Management |
| 3) Testing | |

Q.4 Answer the following (any five) (15)

- (a) What are the disadvantages of waterfall model?
- (b) Explain Requirement Engineering – Elicitation.
- (c) What is Effort Distribution?
- (d) What is White Box Testing?
- (e) Explain the terms:
- | | | |
|---------------------|--------------------|-----------------------|
| 1) Master Test Plan | 2) Phase Test Plan | 3) Specific Test Plan |
|---------------------|--------------------|-----------------------|
- (f) What is Risk Refinement?