

PRINCIPLES OF SOFTWARE ENGG.

Paper-CSE-302-E

Time allowed : 3 hours] [Maximum marks : 100

Note : Attempt any five questions. All questions carry equal marks.

1. (a) What is meant by the term 'Software process' and 'Software product' ? Explain. 10
(b) Explain the Spiral Model in detail with their advantages and disadvantages. 10
2. (a) What is the importance of metrics in software engineering ? 8
(b) What are project metrics ? Differentiate between size oriented metrics and function oriented metrics. 12
3. (a) Give a brief description of prototyping. 6
(b) Write a detailed note on SRS. 6

- (c) What is an ER-diagram ? Where can it be used ?
What symbols are used in drawing an ER-diagram ? 8
4. (a) Explain the complete architectural design process. 8
- (b) Describe the difference between cohesion and coupling. Explain various types of cohesion. Which one is best and which one is worst ? 12
5. (a) What is software testing ? Explain various levels of testing and what types of faults are detected at each level. 10
- (b) Define the following terms :
- (i) Error
 - (ii) Bug
 - (iii) Fault
 - (iv) Defect
 - (v) Failure. 10
6. (a) What is software reliability ? Explain any one reliability model in detail. 6

(b) Explain SQA activities in detail. 4

(c) Write short notes on : 10

(i) Software Configuration Management

(ii) ISO Quality Standard.

7. (a) Describe CASE (Computer Aided Software Engineering) tools and their utility in detail. 10

(b) How CASE tools support software life cycle ? 10

8. Explain the following terms : 20

(a) Risk Analysis

(b) Software crisis

(c) Data dictionary

(d) High level and low level design

(e) Debugging.