17220(N)

B. Tech 5th Semester Examination
Software Engineering (CBS)
CS-505

Time : 3 Hours   Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all selecting one question from each of the section A, B, C and D of the question paper and all the subparts of the section E (compulsory).

SECTION - A

1. (a) What is Software Engineering? Explain Software Engineering: A Layered Technology. (6)

   (b) With suitable illustration explain SPIRAL model. (6)

2. a) Explain the software requirement analysis and modeling. (6)

   (b) Differentiate the features of various software lifecycle models highlighting their advantages and disadvantages. (6)

SECTION - B

3. (a) What is project management? Explain in detail. (6)

   (b) What are software metrics and measurements? (6)

4. (a) Explain Software Project Management and W^5HH Principle. (6)

   (b) Discuss project scheduling with the help of bar charts and activity networks. (6)

SECTION - C

5. (a) What is meant by SQA? Discuss in detail SQA activities. (6)

   (b) List the areas covered under ISO 9000 under quality management. (6)

6. (a) What is the necessity of quality assurance in software development? (6)

   (b) What are the various testing strategies to software testing? Discuss them briefly. (6)

SECTION - D

7. (a) Describe software maintenance activities and explain the re-engineering. https://www.hptuonline.com (6)

   (b) What is software maintenance? How to control maintenance cost? (6)

8. (a) Explain Agile Development in detail. (6)

   (b) Difference between reverse engineering and forward engineering. (6)

SECTION - E
(Compulsory)

9. (i) List out the steps involved in real time software design. (2)

   (ii) What is meant by Boundary value analysis? (1)

   (iii) Define the term process maturity. (1)

   (iv) Name any four quality control tools. (1)

   (v) Why testing is important with respect to software? (1)

   (vi) How do you estimate time required for a software development project? (1)

   (vii) Name the task regions of a Spiral model. (1)

   (viii) Compare: Quality Control Vs. Quality Assurance. (1)

   (ix) Explain the different integration testing approaches. (2)

   (x) Explain how software process assessment helps software organizations to improve themselves. (1)