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Roll No.

B. TECH.
(SEM VI) THEORY EXAMINATION 2022-23
SOFTWARE ENGINEERING

Time: 3 Hours

Total Marks: 100

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.   2 x 10 = 20

   (a) What is the prime objective of software engineering?
   (b) What do you mean by spiral model?
   (c) What are the non-functional requirements of software?
   (d) What is data dictionary? How is it used in software engineering?
   (e) Why software architecture is important in a software process?
   (f) How do you evaluate user interface?
   (g) What is stress testing?
   (h) What are the roles of testing tools?
   (i) List out the importance of cost estimation in software development.
   (j) How do you estimate time required for a software development project?

SECTION B

2. Attempt any three of the following: 10x3=30

   (a) List several software process paradigms. Explain how both water fall model and prototyping model can be accommodated in the spiral process model.
   (b) Explain the ways and means for collecting the software requirements and how are they organized and represented?
   (c) Explain data architectural and procedural design for a software.
   (d) What do you mean by integration testing? Explain their outcomes.
   (e) Discuss briefly on software maintenance activities and how do you estimate the cost involved?

SECTION C

3. Attempt any one part of the following: 10x1=10

   (a) Explain the bath tub curve of hardware reliability.
   (b) What is RAD model? Explain it with its advantages and disadvantages in brief.

4. Attempt any one part of the following: 10x1=10

   (a) Discuss the various Mc Call's quality factors with quality triangle.
   (b) Discuss the Data dictionary and decision table with appropriate notations. What is the significance of them in software requirement process?

5. Attempt any *one* part of the following: 10x1=10

(a) Draw the software design framework and discuss the elements of design model.

(b) Define coupling and cohesion with their types.

6. Attempt any *one* part of the following: 10x1=10

(a) Discuss equivalence classes testing method with an example.

(b) Given code:

INPUT A & B

C = A + B

IF C>100

PRINT "ITS DONE"

END IF

IF A>50

PRINT "ITS PENDING"

END IF.

How many test cases would be required for maximum coverage? State the procedure.

7. Attempt any *one* part of the following: 10x1=10

(a) Discuss the various types of software re-engineering approaches.

(b) What are the different types of risks? Discuss the version control.