B. E. Sixth Semester (Computer Technology) Examination

Course Code : CT 1345 / CT 401 /   **Course Name : Software Engineering**
CT 713

Time : 3 Hours]   [Max. Marks : 60

Instructions to Candidates :—

    (1)   All questions are compulsory.

    (2)   All questions carry marks as indicated.

    (3)   Assume suitable data wherever necessary.

    (4)   Illustrate your answers wherever necessary with the help of neat sketches.

1. Solve any **One** :—

    (A)   What is Requirement Engineering ? Explain the different Requirements Engineering tasks.

    (B)   Explain Spiral Model with suitable diagram. Why this model is called as a Meta model ?   8
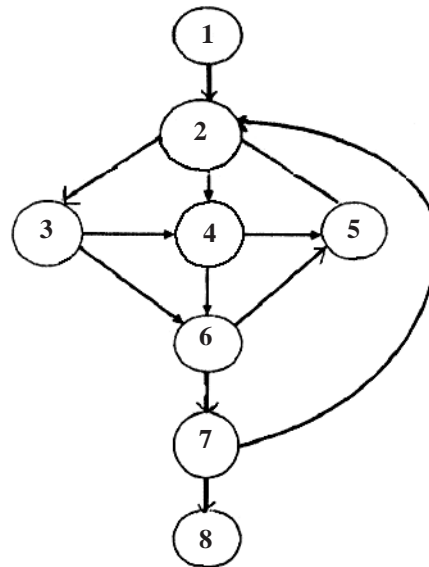
2. Solve any **One** :—

    (A)   Illustrate and explain the elements of Analysis model.

    (B)   Discuss the fundamental design concept of software engineering.   7

3. Solve any **One** :—

    (A)   Elaborate the BVA and Equivalence partitioning techniques of Black Box testing, with a suitable example. Explain Basis Path Testing.

(B) Calculate the Cyclomatic Complexity, find independent paths, of given flow Graph by Edge and node method, Predicate method and Region Method.

7

4. Solve any **One** :—

   (A) What is the roles of Baseline in SCM ? Explain with suitable diagram how the software engineering tasks produce one or more SCI's.

   (B) List the four primary objectives of SCM. Discuss the working of change control process.   8

5. Solve any **Two** :—

   (A) Discuss function point metrics.
   For an Inventory management application the information domain values are :

   (a) No. of inputs = 15

   (b) No. of outputs = 10

   (c) No. of files = 6

   (d) No. of external interfaces = 3

   (e) No. of inquiries = 20

   If we counted 14 algorithms as a basis and complexity adjustment as average. Calculate the value adjusted and unadjusted function point.   7·5

(B) What is proactive and reactive risk ? Discuss risk estimation. 7·5

(C) Define Measure Metrics and Indicator. Elaborate process and project metrics. 7·5

6. Solve any **One** :—

(A) Explain Reverse Engineering Process using suitable block schematic. 7·5

(B) What is version control ? How to use version control ? Explain. 7·5

(C) Discuss Reengineering with its different activities. 7·5