Code:19CS4602C

III B.Tech - II Semester – Regular Examinations – JUNE 2022

SOFTWARE METRICS
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours   Max. Marks: 70

Note: 1. This question paper contains two Parts A and B.
2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
4. All parts of Question paper must be answered in one place.

PART – A

1. a) List the objectives for software measurement from developer perspective.
   b) Recall software product level internal and external attributes.
   c) Define a box plot.
   d) Interpret a cyclomatic number.
   e) Define reliability.

PART – B
UNIT – I

2. a) Analyze direct and derived Measurement.   6 M
    b) Illustrate objective and subjective Measures.   6 M
                            OR
3.   Explain the representational theory of measurement.   12 M

UNIT – II

4. a) Identify measurement for process improvement.   6 M
   b) Classify software measures.   6 M

OR

5. a) Evaluate structural and complexity metrics.   6 M
   b) Develop software measurement validation.   6 M

UNIT-III

6. a) Plan data collection for incident reports.   6 M
   b) Explain hypothesis testing approaches.   6 M

OR

7. Explain analysis of software measurement data.   12 M

UNIT – IV

8. a) Identify functional size measures and estimators.   6 M
   b) Outline any two aspects of structural measures.   6 M

OR

9. Interpret object-oriented structural attributes and measures.   12 M

UNIT – V

10. a) Summarize the software reliability problem.   6 M
    b) Illustrate ISO/IEC 9126-1 and ISO/IEC 25010 Standard Quality Models.   6 M

OR

11. a) Examine any two parametric reliability growth models.   6 M
    b) Identify quality measures based on defect counts.   6 M