

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc(SS) DEGREE EXAMINATION DECEMBER 2024
(Ninth Semester)

Branch – SOFTWARE SYSTEMS (Five years Integrated)

DISCIPLINE SPECIFIC ELECTIVE- IV : SOFTWARE METRICS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

- 1 Software engineering focuses on implementing the software in a controlled and
(i) Scientific way (ii) Metrics
(iii) Measures (iv) Technology
- 2 There are on average --- faults in every -----lines of software code.
(i) 53 - 1001 (ii) 55- 1001
(iii) 55 - 1000 (iv) 53 -1000
- 3 What is the full form of the "COCOMO" model?
(i) Cost Constructive Estimation Model (ii) Constructive Cost Estimation Model
(iii) Constructive Case Estimation Model (iv) Constructive Cost Estimating Model
- 4 Size and Complexity are a part of
(i) Product Metrics (ii) Process Metrics
(iii) Project Metrics (iv) All of the mentioned
- 5 Attributes of good software is _____.
(i) Development (ii) Maintainability & functionality
(iii) Functionality (iv) Maintainability
- 6 Number of errors found per person hours expended is an example of a
(i) Measurement (ii) Measure
(iii) Metric (iv) All of the mentioned
- 7 Which of the following is an indirect measure of product?
(i) Quality (ii) Complexity
(iii) Reliability (iv) All of the Mentioned
- 8 In size-oriented metrics, metrics are developed based on the _____.
(i) Number of Functions (ii) Number of user inputs
(iii) Number of lines of code (iv) Amount of memory usage
- 9 How is reliability and failure intensity related to each other?
(i) Direct relation (ii) Inverse relation
(iii) No relation (iv) None of the mentioned
- 10 Statement and branch coverage metrics are part of
(i) Analysis Model (ii) Testing
(iii) Design Model (iv) Source Code

Cont...

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 5 = 25)

- 11 a Classify the measurement in software engineering.
OR
b Discuss the software measurement validation.
- 12 a Explain the applications of size measures.
OR
b Evaluate the aspects of structural measures.
- 13 a Discuss the Littlewood–Verrall Model.
OR
b Determine the Jelinski–Moranda Model.
- 14 a Analyze the good estimate.
OR
b Interpret the importance of making process prediction in resource measurement.
- 15 a Justify the measurement program.
OR
b Explain the role of analysts.

SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

Question No. 16 is Compulsory

- 16 Analyze the scope of software metrics.
- 17 a Explain about modeling software quality.
OR
b Analyze the security measures.
- 18 a Justify the recalibration of software reliability growth predictions.
OR
b Evaluate the parametric reliability growth models.
- 19 a Explain how to deal with problems of current estimation methods.
OR
b Elaborate the models of effort and cost in resource management.
- 20 a Categorize the measurement tools.
OR
b Invent the measurement in practice.

Z-Z-Z

END