



'समानो मन्त्रः समितिः समानी'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 4th Semester Examination, 2022

**CC9-COMPUTER SCIENCE (42)**

**SOFTWARE ENGINEERING**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
All symbols are of usual significance.*

**GROUP-A**

**Answer any five of the following**

1×5 = 5

1. Define software engineering.
2. What do you mean by SEI-Capability Maturity Model?
3. What do you mean by metrics?
4. What is white box testing?
5. Which software fails?
6. What is cohesion?
7. What is validation in software development?
8. What is client server environment?

**GROUP-B**

**Answer any three of the following**

5×3 = 15

9. What are size metrics? How is function point metric advantageous over LOC metric?
10. How do you assess the quality of software design? Discuss SQA plan.

11. What is meant by modular design? When and how should a modular design be implemented?
12. Write a detailed note on black box testing.
13. Explain in brief about Project scheduling using PERT and GANTT charts.

**GROUP-C**

**Answer any *two* of the following**

10×2 = 20

14. Explain A\* searching technique in detail with an example. Discuss the conditions for optimality of this technique.
15. What are the five levels of CMM? List important features of each of these levels.
- 16.(a) What is the difference between decision table and decision tree?  
(b) What is the difference among formal, semiformal and informal methods of software development?
17. Explain the following Software life cycle models in detail (a) Prototyping Model (b) Spiral Model.

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