WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 4th Semester Examination, 2024

CMSACOR09T-COMPUTER SCIENCE (CC9)

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.

GROUP-A

1. Answer any *four* from the following: 2×4 = 8

   (a) What is the importance of software design?

   (b) What is unit testing?

   (c) What is the prime objective of software engineering?

   (d) Define DFD.

   (e) Distinguish between an error and a failure.

   (f) Distinguish between Software Verification and Software Validation.

GROUP-B

Answer any *four* questions from the following 8×4 = 32

2. (a) What are the characteristics of Spiral model? 4

   (b) Explain why the spiral life cycle model is considered to be a meta-model. 2

   (c) How do the prototyping model and the spiral model compare with each other with respect to their risk-handling capabilities? 2

3. Software engineering can be viewed as a layered technology. — Explain. Why COCOMO is called heuristic estimation technique? Discuss the roles of 'stubs' and 'drivers' in integration testing. 3+2+3

4. Differentiate between equivalence class partitioning and boundary value analysis. Describe quality assurance and quality control. 4+2+2

5. (a) What do you mean by structural testing? How is it different from functional testing? 4

   (b) What is cyclomatic complexity? Explain with the help of an example. 4

6. Explain the differences between white box and black box testing. Describe top-down and bottom-up strategies of integration testing. Define CASE. 3+3+2

7. What are the different attributes of project planning? What are the characteristics of a good SRS? What are Coupling and Cohesion? 3+3+2

——×——

4060 1