



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 4th Semester Examination, 2022

**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.*

**GROUP-A**

1. Answer any **four** questions from the following: 2×4 = 8
- (a) What do you mean by Software engineering?
  - (b) What do you mean by LOC?
  - (c) What is the difference between validation and verification?
  - (d) Describe test case generation.
  - (e) What is the need for cyclomatic complexity?
  - (f) What is meant by software project management?
  - (g) What do you understand by Software Quality assurance?

**GROUP-B**

- Answer any four questions from the following** 8×4 = 32
2. List the various phases of spiral model. Why spiral model is called meta model? 6+2
3. Explain the following term “software engineering: a layered technology”. What are the functional and nonfunctional requirements? 4+4
4. (a) Discuss top down and bottom up approach of software design. 5+3 = 8  
(b) Indicate different categories of software development projects according to COCOMO estimation model.
5. (a) Compare and contrast the ideas of coupling and cohesion. 3  
(b) What is user acceptance testing? Explain different testings on user acceptance testing. Why is it necessary? 1+2+2

6. Illustrate the prototyping model of software development. Discuss the drawback of waterfall model. 6+2
7. Write a C function to interchange values of two variable, without using a third variable. Draw the flowchart of the said function. Also find its cyclomatic complexity using possible methods. 3+3+2
8. Write short notes on: (any *two*) 4+4
- (a) SRS
  - (b) DFD
  - (c) Software reliability
  - (d) Black-box testing.

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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