



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 4th Semester Examination, 2020

**CMSACOR09T-COMPUTER SCIENCE (CC9)**  
**SOFTWARE ENGINEERING**

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** questions from the following: 2×4 = 8
- (a) Define software engineering.
  - (b) How is system analysis different from system design?
  - (c) Why feasibility analysis is important?
  - (d) What is COCOMO model?
  - (e) Define alpha testing.
  - (f) Why *stub* is important in testing?
  - (g) What do you mean by prototyping?

**GROUP-B**

- Answer any four questions from the following** 8×4 = 32
2. Describe the differences between a program and software? Why Software engineering is important? What do you mean by software development life cycle? 2+3+3
3. What is the importance of SRS? What is the necessity of designing test cases? Differentiate between verification and validation. 3+2+3
4. Compare the advantages and the disadvantages of Water fall model and spiral model. Describe any two feasibility studies that needs to be performs before development of any software? Differences between DFD and ERD. 4+2+2
5. What is Software Metrics? Suppose a project was estimated to be 400 KLOC. Calculate the effort and development time for each of the three model i.e., organic, semi-detached & embedded. 2+6

6. Differentiate Black Box and White Box testing. Explain any two types of white box testing with example. 2+6
7. Why quality is important for software? Describe the McCall's quality factors of software. 2+6
8. Explain following testing (a) unit testing (b) system testing (c) acceptance testing and (d) regression testing. 2+2+2+2

**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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