

2021

COMPUTER SCIENCE — GENERAL

Paper : SEC-A-2

(Software Engineering)

Full Marks : 80

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer **question nos. 1 and 2** and **any four** questions from the rest.

1. Answer *any ten* questions :

2×10

- (a) What do you mean by software life cycle?
- (b) Differentiate open and closed system.
- (c) What is unit testing?
- (d) Explain Delphi cost estimation.
- (e) What is integration testing?
- (f) What is software quality assurance?
- (g) What is stress testing?
- (h) Define cyclomatic complexity.
- (i) Differentiate between alpha and beta testing.
- (j) What are the limitations of Waterfall model?
- (k) What is quality control?
- (l) What are the different types of software errors?
- (m) What is debugging?
- (n) What is quality assurance?
- (o) What is software verification?

2. Write short notes on *any four* :

5×4

- (a) Spiral model
- (b) Cohesion and coupling
- (c) Decision tree

Please Turn Over

- (d) Black box testing
 - (e) System testing
 - (f) Cohesion and its types.
3. (a) Discuss Prototyping model of SDLC. Discuss its advantages and disadvantages.
(b) How iterative Waterfall model overcomes the drawbacks of the classical Waterfall model? 5+5
4. (a) What are the characteristics of a good SRS document?
(b) Discuss software requirement analysis. 5+5
5. (a) Design a context diagram and level-1 DFD of Library Management System.
(b) Differentiate between DFD and Flow chart. 5+5
6. (a) Discuss control flow graph with an example.
(b) Define attributes of a quality software. 5+5
7. (a) Differentiate White Box and Black Box testing.
(b) Discuss Decision Table. 5+5
8. (a) Discuss Evolutionary model of SDLC.
(b) Discuss various quality assurance techniques. 5+5
9. (a) Discuss equivalence class partitioning and boundary value analysis.
(b) Discuss different types of software faults and errors. 5+5
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