



DOON UNIVERSITY, DEHRADUN
End Semester Examination, Third Semester, 2023
Academic Year 2023-24 (Odd Semester)
School of Technology, Department of Computer Science
B.Sc. Hons with Research (Computer Science)
CSC-203: Software Engineering

Time Allowed 3.00 Hours

Maximum Marks: 50

SECTION: A

Attempt all the questions

1. What is the difference between black-box testing and white -box testing. (1 marks)
2. In software design the outcome of low-level design is called _____. (1 marks)
3. What is debugging? Differentiate between Brute-force method and Backtracking. (2 marks)
4. If two modules share some global data items, then the modules are _____ coupled. (1 marks)
5. If a module contains functions that are related by the fact that all the functions must be executed in the same time span, the module is said to exhibit _____ cohesion. (1 marks)
6. List the characteristics of a good SRS document. (2 marks)
7. Explain Software maintenance and its types. (2 marks)

SECTION: B

Attempt all the questions

(5 marks each)

8. What is the difference between equivalence class partitioning and boundary value analysis? Explain with the help of suitable examples.
9. Write a short note on system testing and its types. What do you understand by error seeding? Explain in detail.
10. What is the difference between functional and non-functional requirements? Explain the functional requirements of 'Withdraw cash from ATM' function.
11. What are the different ways of analysing and representing complex logic? Explain with suitable example.

SECTION: C

Attempt all the questions

12. What do you understand by CASE tool? Explain the CASE environment in detail. (6 marks)
13. Differentiate between Coupling and Cohesion. Discuss the classification of both with suitable example. (8 marks)
14. The following table indicates the various tasks involved in completing a software, the corresponding activities and the duration for each task is given.

<i>Activity no.</i>	<i>Activity name</i>	<i>Duration (in weeks)</i>	<i>Immediate predecessor</i>
1.	Obtain Requirements	4	-
2.	Analyse operations	4	-
3.	Define subsystems	2	1
4.	Develop database	4	1
5.	Make decision analysis	3	2
6.	Identify constraints	2	5
7.	Build model 1	8	3,4,6
8.	Build model 2	12	3,4,6
9.	Build model 3	18	3,4,6
10.	Write report	10	6
11.	Integration and test	8	7,8,9
12.	Implementation	2	10,11

- (a) Draw the Activity network representation of the tasks.
- (b) Determine ES, EF and LS, LF for every task using CPM.
- (c) Show the critical path using CPM.

(6 marks)