

**BCA DEGREE END SEMESTER EXAMINATION : OCTOBER 2022****SEMESTER 3 : MOBILE APPLICATIONS AND CLOUD TECHNOLOGY****COURSE : 19U3CRBCA8 : SOFTWARE ENGINEERING***(For Regular - 2021 Admission and Improvement/Supplementary -2020/2019/2018/2017/2016 Admissions)*

Time : Three Hours

Max. Marks: 75

**PART A****Answer All (1 mark each)**

1. Define Unit testing?
2. Define the Software Process.
3. List some of the factors to be considered during system modeling.
4. What is Cyclomatic complexity?
5. Define Data Dictionary.
6. Define program evolution dynamics.
7. Define temporal cohesion.
8. Define Requirement Engineering.
9. Define Software cost estimation.
10. What do you mean by a sub-system?

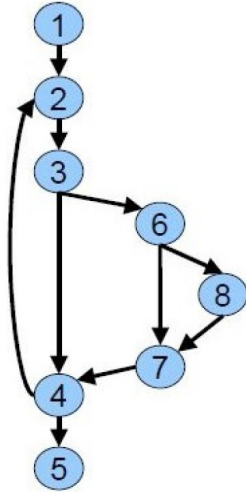
**(1 x 10 = 10)****PART B****Answer any 8 (2 marks each)**

11. What are the Requirement Engineering process functions?
12. What is Delphi Cost estimation technique?
13. What is Orthogonal Array testing?
14. Distinguish between verification and validation.
15. How a physical DFD can be converted into a structure chart?
16. Distinguish between Data Design and Architectural design.
17. What are the drawbacks of the spiral model?
18. Find the difference between DFD and FFBD.
19. Explore the shortcomings of Earned Value Analysis.
20. Distinguish between White box and black box testing.

**(2 x 8 = 16)****PART C****Answer any 5 (5 marks each)**

21. Discuss the fundamental software design concepts.
22. What are the fundamental activities of the software process?
23. Explain the Function point in detail.
24. Explain about Risk Management.
25. Explain the concept of data model.

26. Find the cyclomatic complexity and independent path of the Control Flow Graph.



27. Which is more important the product or process? Justify your answer.

**(5 x 5 = 25)**

#### **PART D**

**Answer any 2 (12 marks each)**

28. Explain in detail the need for a feasibility study and the common factors that should be considered for a feasibility study.
29. Explain the maintenance activities and maintenance problems. How the cost of maintenance is estimated?
30. What are the various testing strategies to software testing? Discuss them briefly?
31. With suitable illustration explain SPIRAL model evolutionary software development.

**(12 x 2 = 24)**