

Roll No.

Total Pages : 3

311404

May, 2023

BCA IV SEMESTER

Software Engineering (BCA-17-209)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5) marks each of Part-A in short.*
2. *Answer any four question from Part-B in detail.*
3. *Different sub -parts of a questions are to be attempted adjacent to each others.*

PART-A

1. (a) Explain the significance of software crisis in reference to Software Engineering principles? (1.5)
- (b) Explain the characteristics of software? (1.5)
- (c) Discuss the drawbacks of the spiral model? (1.5)
- (d) What are Halstead Software Science measures? (1.5)
- (e) Differentiate between Cohesion and Coupling. (1.5)
- (f) Why the FP based estimation is becoming acceptable in industry? (1.5)

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- (g) Describe the structure of a test case. (1.5)
- (h) Differentiate between Alpha Testing and Beta testing. (1.5)
- (i) What are the main features of Object-Oriented Design. (1.5)
- (j) Explain the change control process as a part of Software Configuration Management. (1.5)

PART-B

- 2. (a) What is the aim of Software Engineering? What does the discipline of Software Engineering discuss. (10)
- (b) Discuss the four P's in Software Project Management. (5)

- 3. (a) What do you understand by the term Software development life cycle? Why it is important to adhere to a life cycle model while developing a large software product? (5)
- (b) Discuss the prototype model. What is the effect of designing a prototype on the overall cost of a software project? (10)

- 4. Draw the DFD for Result preparation automation system of BCA program of any University. Clearly describe the working of the system. Also mention all assumptions made by you. (15)

5. (a) Differentiate between Design and Data Structure Metrics. (5)
- (b) Differentiate between Reverse Engineering and Re-engineering. (10)
6. (a) What are the difference between white box testing and black box testing techniques? (10)
- (b) Compute the functional point value for a project with the following information domain characteristics.
- No. of User inputs = 30
- No. of User outputs = 42
- No. of User enquiries = 08
- No. of User files = 07
- No. of external interfaces = 06
- Assume all adjustment values are moderate. (5)
7. Is Unit testing desirable in all circumstances? Provide example to justify your answer. Differentiate between integration testing and system testing with suitable example. (15)
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