

(Please write your Exam Roll No.)

END TERM EXAMINATION**FOURTH SEMESTER [BCA] MAY- JUNE 2019****Paper Code: BCA-208****Subject: Software Engineering
(Batch 2011 onwards)****Maximum Marks: 75****Time: 3 Hours****Note: Attempt any five questions including Q.1 which is compulsory.
Select one question from each unit.**

- Q1 Answer all of the following question: (2.5x10=-25)
- What is debugging and why is it so hard?
 - Define Data Structure Metrics.
 - Differentiate between structural and functional testing.
 - Discuss Feasibility Study and its significance.
 - What are requirement elicitation techniques? Discuss any one technique in brief.
 - Differentiate between Software Reverse Engineering and Software Re-Engineering.
 - What is context diagram? How is it different from Level 1 DFD?
 - Discuss cyclomatic complexity and its significance.
 - Discuss various factors of software management dependency.
 - Discuss various size estimation metrics and their significance.

UNIT-I

- Q2
 - Discuss the organization of good SRS along with its characteristics. **(6)**
 - Discuss Prototype Model in detail. What are its various issues How is it different from Evolutionary Model. **(6.5)**
- Q3
 - What is the Software Development Life cycle? List various SDLC models. **(6)**
 - Draw and label and well described Use Case diagram and level 1 DFD for hotel management system. Make assumptions as required. **(6.5)**

UNIT-II

- Q4
 - Discuss COCOMO Model in detail. **(8.5)**
 - An application has the 10 low external inputs, 12 high external outputs, 20 low internal logical files, 15 high external interface files, 12 averages external inquires, and a value of complexity adjustment factor of 1.10. What are the unadjusted and adjusted function point counts? **(4)**
- Q5
 - Using the Watson-Felix model on a software development expected to involving 8 person-years of effort. **(6)**
 - Calculate the number of lines of source code that can be produced.
 - Calculate the duration of the development.
 - Calculate the productivity in LOC/PY
 - Calculate the average manning
 - What is Risk? What are various Risk Management Activities? **(6.5)**

UNIT-III

- Q6 (a) Describe the key features of Object Oriented based software. (6.5)
(b) Write a program to find the maximum of three numbers. Find Halstead token count metrics for this program. (6)
- Q7 Discuss the following:- (4+4+4.5)
(a) Module Coupling and its types
(b) Module Cohesion and its types.
(c) Object Oriented Designing

UNIT-IV

- Q8 (a) Write short notes on following (any two):- (8)
1. DD-Path Testing
2. Boundary Value Analysis
3. **Cause** Effect Graph Testing
- (b) Generate all the **independent paths** required for testing program that finds all even numbers between 1-50. (4.5)
- Q9 (a) What is software maintenance? Discuss its various categories and issue during maintenance. (4.5)
(b) Explain Taute's maintenance model with the help of a diagram. (4)
(c) Discuss Configuration Management in software development. (4)
