S-191 Roll No. ……..

BCA–12

System Analysis and Design

Bachelor of Computer Application

(BCA-11/16/17)

Fourth Semester, Examination, 2018

Time : 3 Hours **Max. Marks : 80**

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Learners are required to attempt the questions contained in these Sections according to the detailed instructions given therein.

Section–A

(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. What is Software ? What are the types of Software ? List characteristics of good software.
2. Explain with suitable diagram software development life cycle. Compare and contrast traditional and non-traditional SDLC with suitable diagram.
3. How DFD; ER diagrams and SRS are helpful in development of software ? Explain requirement analysis using DFD.

4. Compare and contrast structured and unstructured approach of software design. What is abstraction ? What is Object Oriented Design ? How is it different from Function Oriented Design ? Differentiate cohesion and coupling with suitable diagram.

Section–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer *four* (04) questions only.

1. What is the purpose of an information system from a business perspective ? What role does it play in the business information value chain ?
2. Describe various advantages of decision table in software development.
3. What is software security analysis ? What are the major advantages of security analysis ?
4. List and describe the information systems serving each of the major functional areas of a business.
5. How cost quality and time are interdependent in software development ?
6. Why testing is important ? What are testing principles and strategies ?
7. Explain need of Software Maintenance. What are the types of maintenance ?
8. What is software quality assurance ? Compare quality with cost of a software with example.

Section–C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this Section are compulsory.

1. A good specification should be :
   (a) unambiguous
   (b) distinctly specific
   (c) functional
   (d) All of the above

2. Which of the following is not the characteristic of software ?
   (a) Software does not wear out
   (b) Software is flexible
   (c) Software is not manufactured
   (d) Software is always correct

3. Which of the following is not a product matrix ?
   (a) Size
   (b) Reliability
   (c) Productivity
   (d) Functionality

4. Which of the following is not a process metric ?
   (a) Productivity
   (b) Functionality
   (c) Quality
   (d) Efficiency

5. Efforts is measured in terms of :
   (a) Person - Months
   (b) Persons
   (c) Rupees
   (d) Months

6. Infrastructure software are covered under :
   (a) Generic Products
   (b) Customised Products
   (c) Generic and Customised Products
   (d) None of the above

7. Management of software development is dependent upon :
   (a) People
   (b) Product
   (c) Process
   (d) All of the above

8. Milestones are used to :
   (a) Know the cost of the project
   (b) Know the status of the project
   (c) Know the user expectations
   (d) None of the above

9. The term module in the design phase refers to :
   (a) Functions
   (b) Procedures
   (c) Subprograms
   (d) All of the above

10. ..... cannot be grouped together if they have similar functionality, process activities and capability of getting integrated with other tools.

(a) Re-engineering

(b) CASE tools

(c) Functions

(d) Information System