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(20721)

Roll No. ..

B.Sc.(Com. Sc.)-VI Sem.

## NP-3611 (CV-II)

**B.Sc. (Com. Science) Examination,**

**June - 2021**

**System Analysis and Design**

**(BCS-601)**

*Time : 1½ Hours ]*

*[Maximum Marks : 75*

**Note :** Attempt all Sections as per instructions.

### Section-A

**(Very Short Answer Type Questions)**

**Note :** Attempt any two questions from Question 1 to 5. Each question carries 7.5 marks.  $2 \times 7.5 = 15$

1. Consider the relation R (A,B,C,D,E). With functional dependency  
 $A \rightarrow BC, CD \rightarrow E, B \rightarrow D, E \rightarrow A$   
Find all possible candidate keys in above relation R.

**P.T.O.**

2. Define object oriented meaning, and Encapsulation with example.
3. Give a statement in favour of using spiral model compare to waterfall model, and using waterfall model compare to spiral model.
4. What is E-commerce, give some applications of same.
5. Describe the importance of Software Engineering? What should be steps taken under the process of developing a Software system.

### Section-B

**(Short Answer Type Questions)**

**Note :** Attempt any one question, from 6 to 8. Each question carries 15 marks.

$1 \times 15 = 15$

6. Discuss Porter's value chain model in details.

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7. ✓ What is Requirement analysis? Why it is important? What are the elements of structured analysis and design.

8. Explain the difference between a functional and non-functional requirements.

### Section-C

#### (Detailed Answer Type Questions)

**Note :** Attempt any **two** questions from question 9 to 13. Each question carries 22.5 marks.  $2 \times 22.5 = 45$

9. Elaborate following terms

- (1) Class diagram,
- (2) Activity diagram
- (3) Component diagram
- (4) Deployment diagram
- (5) Sequence diagram. Draw class diagram & Activity diagram for Telephone call.

10. ✓ Define following terms Data Modeling, ER diagram, DFD, and design a Level zero, level one DFD and ER diagram for library management system.

11. ✓ What do you understand by Software and Software Development life cycle (SDLC) Compare Waterfall, Iterative, Spiral, and prototype models.

12. What is database, DBMS? How conventional data storing method is not efficient today? Define Normalization, Need of Normalization in DBMS. What are different form of normalisation, explain in brief. <https://www.ccsustudy.com>

13. Today E-commerce is widely used. Give Scope of E-commerce, Trade cycle in E-commerce. What competitive strategy is followed in E-Commerce along with Competitive advantage.