

**302/332**

**B.C.A. (Part-III) Examination, 2023**

(Faculty of Science)

(Three Year Scheme of 10+2+3 Pattern)

**System Design Concepts**

**Paper : 302/332**

**Time Allowed : 3 Hours**

**Maximum Marks : 100**

Answer of all the questions (Short answer as well as are to be given in the main answer-book only. Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before you start writing answers of questions.

Question paper consists of **Three** parts.

**All Three** parts are **Compulsory**

**PART-I :** (Very short answer) consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.

**PART-II :** (Short answer) consists of 5 questions of 4 marks each, Maximum limit for each question is up to 80 words.

**PART-III :** (Long answer) consists of 5 questions of 12 marks each with one question from each unit with internal choices.

**PART-I**

1.  (a) What is Closed System? 10×2=20
- (b) Define Iterative Cycle.
- (c) What is Attribute?
- (d) What do you mean by Structured Design? X
- (e) What is Testability?
- (f) Write any two objectives of Testing.
- (g) What do you mean by Software Project Planning?
- (h) Define Cost Estimation Model.
- (i) Write any two characteristics of MIS.
- (j) Define Formal System.

## PART-II

2. ✓(a) What is Batch Processing? 5×4=20  
✓(b) Explain Decision Tree.  
✓(c) What do you mean by System Implementation? -  
✓(d) Explain Software Design Concepts.  
✓(e) Discuss Structured and Un-structured Decisions.

## PART-III

3. ✓What do you mean by Spiral? Explain spiral Model in detail. 12×5=60

Or

Explain the following :

- (a) Data and Fact Gathering Techniques.  
(b) Feasibility Studies.
4. ✓What is DFD? Explain DFD with suitable example in detail.

Or

Explain the following :

- ✓(a) Structured English  
✓(b) Structure Chart
5. Define White Box Testing? Explain various White Box Testing strategies in detail. 6

Or

Write short notes on the following :

- ✓(a) ✓Verification and Validation  
✓(b) ✓Validation Testing
- ✓6. What do you mean by Decomposition? Explain different types of Decomposition Techniques in detail.

Or

Write short notes on the following :

- ✓(a) ✓Design Methodologies  
✓(b) ✓Object Oriented concepts
- ✓7. Explain the following :
- ✓(a) ✓Components of MIS •  
✓(b) ✓Levels of Management

Or

Discuss different types of Pitfalls in MIS Development.

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