

This question paper contains 3 printed pages.

Roll No. ....

**B.C.A. (Part-III)**

**Sys. Desi. Con.**

**302**

**B.C.A. (Part-III) Examination, 2021**

(Faculty of Science)

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

**SYSTEM DESIGN CONCEPTS**

**Time Allowed : 3 Hours**

**Maximum Marks : 100**

Answer of all the questions (short answer as well as descriptive) 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 start writing answers of questions.

Question paper consists of three Parts.

All three parts are compulsory.

**PART-I :** (Very Short Answer) consists 10 questions of 2 marks each. Maximum limit for each question is upto 40 words.

**PART-II :** (Short Answer) consists 5 questions of 4 marks each. Maximum limit for each question is upto 80 words.

**PART-III :** (Long Answer) consists 5 questions of 12 marks each with internal choice.

**PART-I**

1. (a) Define System.
- (b) What is SDLC?
- (c) What is structure chart?
- (d) What is use of E-R diagram?
- (e) What is the objective of software testing?
- (f) Define System Implementation.

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- (g) Explain object oriented concepts.
- (h) What is software project planning?
- (i) What is the use of MIS?
- (j) Discuss structured v/s unstructured decision.

### PART-II

- 2. (a) Explain various fact gathering techniques.
- (b) What is data dictionary?
- (c) Explain Documentation.
- (d) What is the use of COCOMO Model?
- (e) Discuss formal and informal system.

### PART-III

3. Explain :

- (a) Spiral Model.
- (b) Waterfall Model.

OR

Define feasibility study. Explain the various types of feasibility study in system design.

4. Explain :

- (a) Decision Tree
- (b) Decision Chart.

OR

Describe DFD in system design.

5. What is testing? Discuss various types of testing in details.

OR

Explain :

- (a) White Box & Black Box Testing.
- (b) Verification & validation.

6. Discuss decomposition technique in detail.

**OR**

Describe various design methodologies are used in software design in detail.

7. Explain MIS in below criteria :

- (a) Characteristics.
- (b) Components.
- (c) Levels of Management.

**OR**

Describe pitfalls in MIS development in detail.

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