# B.C.A. (Part-III) EXAMINATION, 2023
## (Faculty of Science)
### (Three-Year scheme of 10+2+3 Pattern)
### Paper – 302 / 332
# SYSTEM DESIGN CONCEPTS

### Time Allowed: Three Hours

### Maximum Marks – 100

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

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

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

# PART-I

**1.** [2*10=20]

**(i)** What is closed system?

**(ii)** Define iterative cycle.

**(iii)** What is attribute?

**(iv)** What do you mean by structured design?

**(v)** What is testability?

**(vi)** Write any two objectives of testing.

**(vii)** What do you mean by software project planning?

**(viii)** Define cost estimation model.

**(ix)** Write any two characteristics of MIS.

**(x)** Define formal system.

# PART-II

**2.** [4*5=20]

**(i)** What is batch processing?

**(ii)** Explain decision tree.

**(iii)** What do you mean by system implementation?

**(iv)** Explain software design concepts.

**(v)** Discuss structured and un-structured decisions.

**(vi)** What is the purpose of an MIS?

# PART-III

**1.** What do you mean by spiral? Explain spiral model in detail.

**OR**

Explain the following :

**(a)** Data and fact gathering techniques.

**(b)** Feasibility studies.

**2.** What is DFD? Explain DFD with suitable example in detail.

**OR**

Explain the following :

**(a)** Structured English.

**(b)** Structure Chart.

**3.** Define white box testing? Explain various white box testing strategies in detail.

**OR**

Write short notes on the following :

**(a)** Verification and Validation.

**(b)** Validation Testing.

**4.** 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.

5. Explain the following :

**(a)** Components of MIS.

**(b)** Levels of Management.

**OR**

Discuss different types of pitfalls in MIS development.

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