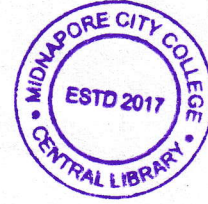


**2023****BCA 4th Semester Examination****Software Engineering**

PAPER — 2204

Full Marks : 100

Time : 3 hours



*The figures in the right-hand margin indicate marks.*

*Candidates are required to give their answers  
in their own words as far as practicable.*

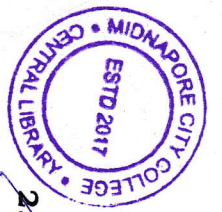
*Illustrate the answers wherever necessary.*

Answer Question No. **1** and *any four* from  
the rest.

1. (a) Explain the waterfall model with its advantages and disadvantages. 5
- (b) Describe system architectural modelling with an example. 5
- (c) Compare logical and physical DFD with examples. 4

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( Turn Over )



( 2 )

2. (a) Explain the Prototyping model. 5  
(b) Explain two types of prototyping with advantages and disadvantages. 5  
(c) What do you mean by structured analysis? 4
3. (a) Explain the evolutionary and incremental model. What are the advantages and disadvantages? 10  
(b) Write down the expressions to find out development effort and time in the case of organic, semidetached and embedded type projects according to COCOMO. 4
4. (a) What is SRS? Why do we need SRS? 4  
(b) Explain the characteristics of a good as well as bad SRS. 6  
(c) Write the organization of the SRS document. 4
5. (a) What do you mean by the term Cohesion and Coupling in the context of software design? 3  
(b) Enumerate the different types of Cohesion and Coupling that a module or two modules in a design might exhibit. 6+5=11

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(Continued)

( 3 )

6. (a) Define the terms testing, test case, test suite, test scenario and test script. 5  
(b) Why do we need to design test cases? 3  
(c) Explain the different levels of testing that a large-sized software may undergo during its development. 6
7. Write short notes on the following :
- (a) Characteristics of good software design 4  
(b) Control flow structure of a program 4  
(c) Software reliability 6

[ Internal Assessment : 30 Marks ]

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