

7. Write short notes on : **(any two)** 5×2=10

- (a) COCOMO
- (b) Prototyping Model
- (c) Spiral Model
- (d) Statement and coverage based testing

Total number of printed pages-4

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2024

SOFTWARE ENGINEERING

Paper : ITB-HC-4026

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

SECTION-A

(Compulsory)

1. (a) Fill in the blanks : 1×2=2
 - (i) DFD stands for _____.
 - (ii) _____ detects defect in any system in the phase where it got detected.
- (b) State True **or** False : 1×3=3
 - (i) Build and fix method of software development causes software virus.

- (ii) The cost of development of any software product only depends upon the line of code.
- (iii) System failure is a symptom of an error.
- (c) Define the following terms : $1 \times 5 = 5$
 - (i) Functional independence
 - (ii) Test suites
 - (iii) Context diagram
 - (iv) Verification and validation
 - (v) Data flow diagram

SECTION-B

(Answer any five)

- 2. (a) What do you mean by software engineering ? Why do we need it ? 5
- (b) What do you mean by software process ? What are the major difference between flow chart and data flow diagram. 5
- 3. Answer **any five** : $2 \times 5 = 10$
 - (a) What are the major characteristics of a good SRS document ?

- (b) Why understandability is the major concern in software design ?
- (c) Define coupling. List different types of coupling.
- (d) What are stubs and drivers ?
- (e) Define unit testing and system testing.
- (f) What is maintenance ? List different types of maintenance.
- 4. (a) What do you mean by black box testing and white box testing ? Explain 5
- (b) What do you mean by internal and external documentation ? Why it is needed ? Explain. 5
- 5. (a) Define cohesion. Explain different types of cohesion briefly. 7
- (b) What is Delphi cost estimation techniques ? 3
- 6. (a) What do you mean by equivalence class partitioning and boundary value analysis ? Discuss. 5
- (b) What is Reverse Engineering ? How it is helpful in software development ? 5