53 (IT 605) SWEN

2021

SOFTWARE ENGINEERING

Paper : IT 605

Full Marks : 100

Time : Three hours

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

*Answer **any five** questions.*

1. *(a)* Explain Iterative waterfall model with the help of diagram. 10

   (b) Discuss the benefits of using Prototyping model. 5

   (c) Discuss Spiral model. 5

Contd.

2. The following table indicates the various tasks involved in completing a software project.

Activity	Predecessor	Duration (Month)
A	—	2
B	—	3
C	*A*	4
D	*A*	2
E	*B*	3
F	*B*	5
G	*D, E*	6
H	*F, G*	7

(a) Draw the activity network diagram of the project. 10

(b) Find the critical path. 5

(c) Define Critical Path Method (CPM) and write down the rules for critical path. 5

3. *(a)* What is SRS ? List the characteristics of a good SRS document. 2+6=8

(b) Write an SRS document for Library Management System in details. 12

4. *(a)* Discuss Organisation and Team structure in details. 10

(b) Write down the characteristics of Good Software Engineer. 10

5. *(a)* What do you mean by Cohesion and Coupling? 5

(b) Explain various types of Cohesion and Coupling with the help of examples. 15

6. *(a)* Assume the size of an organic type software product has been estimated to be 32,000 lines of code. Assume that the average salary of software developers is Rs. 15,000 per month. Determine the effort required to develop the software product, the approximate development time and the cost to develop the product. 10

(b) Discuss Delphi Cost Estimation. 4

(c) What do you mean by Organic, Semi-detached and Embedded software type in COCOMO Model? 6

7. Write short notes on the following : 5×4=20
(any four)

(a) Black-box testing and white-box testing

(b) Line of Code and Function Point

(c) Abstraction and Decomposition technique

(d) Classical Waterfall and Iterative Waterfall model

(e) Unit testing and system testing.