

Total number of printed pages-4

53 (IT 605) SWEN

2018

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) What is software development life cycle model ? 5
- (b) Briefly discuss about the different phases of waterfall model of software development. 10
- (c) Why waterfall model is not used by software industries ? 5

Contd.

2. (a) Briefly discuss about basic COCOMO. 8

(b) What do you mean by software crisis?
How can you address the issue of software crisis? 6+6=12

3. (a) State the difference between — 10

(i) black box testing and white box testing techniques

(ii) α -testing and β -testing.

(b) Draw a System Sequence diagram for the examination system of the CIT Kokrajhar. 10

4. (a) How a program written during your B.Tech course is different from software development in a company? 10

(b) What is Data Flow Diagram (DFD)? Explain in details, what are the steps that follow in transforming a DFD model into structural chart. 10

5. (a) Consider the following program which takes three integer value and determine their maximum:

```
int find Max (int a, int b)
{
    if (a > b)
        max = a;
    else
        max = b;
    else if (b > c)
        max = c;
    else
        max = c;
    return max;
}
```

(i) Draw a Control flow graph. 5

(ii) Determine cyclomatic complexity and possible linearly independent paths. 10

(iii) Prepare Test case. 5

6. (a) Discuss about the different standards that should be adopted during coding. 10

(b) With example discuss on any one software testing technique. 10

7. Write short notes on : **(any four)**

5×4=20

- (a) Function Point
- (b) Cyclomatic Complexity
- (c) System Testing
- (d) Software Maintenance
- (e) Top-down and Bottom-up integration testing.