53 (IT 604) SWEN

2014

SOFTWARE ENGINEERING

Paper : IT 604

Full Marks : 100

Time : Three hours

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

*Answer **any five** questions out of seven.*

1. *(a)* Give a comparision between different life
    cycle models.   7

    (b) What are the relative advantages of using
    either the LOC or the Function Point Metric
    (FPM) to measure the size of software
    product ?   6

    (c) Describe the Basic COCOMO Model.   7

2. *(a)* Is it true that whenever you increase the
    cohesion of your design, coupling in the
    design would automatically decrease ? Justify
    your answer with suitable example.   6

(b) Describe, what are the different team structures that are basically followed in software industries. 4

(c) Explain with example, what are the different types of Cohesion. 10

3. (a) Define the term software reliability and software quality. 2+2=4

(b) Define the *three* (3) matrics to measure software reliability. 6

(c) What are the characteristics of a good SRS document ? 10

4. (a) What is Data Flow Diagram (DFD) ? Explain it with the example of Personal Library System. 6

(b) Explain in details, what are the steps that follow in transforming a DFD model into structured chart. 7

(c) What are the different relationships exist between different classes in an OOD technique ? 7

5. (a) What is collaboration diagram ? Explain with an example. 2+6=8

(b) What are the different types of user interphases ? Explain with example. 8

(c) What is Black-Box Testing ? 4

6. (a) What is a Legacy Software Product ? What is Common Object Request Broker Architecture (CORBA) ? Explain the CORBA architecture. 2+6=8

(b) What do you understand by the term reuse domain ? Explain domain analysis and how domain analysis leads to increased component reusability. 6

(c) Explain how Prieto-Diaz's Scheme can be used for approximate searching. What are the advantages of approximate searching over exact searching ? 6

7. (a) What do you mean by the term software reverse engineering ? Why is it required ? Explain the different activities undertaken during reverse engineering. 6

(b) What is a programing environment ? 2

(c) Schematically draw the architecture of a CASE environment and explain how the different tools are integrated ? What are the advantages of CASE tools ? 6+6=12