PGDCA 2nd Semester

(2042)

SOFTWARE ENGINEERING

Paper : PGD-2103

Time Allowed : Three Hours]   **[Maximum Marks : 60**

Note :— There are total *nine* questions. Select *one* question from each section. In Section A all questions are compulsory. Total *five* questions are to be attempted.

SECTION—A

1. (a) What is data dictionary ?   2

   (b) Define software risk management.   2

   (c) Why is spiral model named so ?   2

   (d) Name the white box testing methods.   2

   (e) What is software project management plan ?   2

   (f) Differentiate between coupling and cohesion.   2

SECTION—B

2. (a) Which SDLC models are used in large size projects ? Explain all the merits and demerits of each and discuss the methods along with diagrams.   8

   (b) Explain the skills of a software engineer.   4

3. (a) Explain the components and applications of software engineering. 6

(b) What are software process models ? Explain the software development life cycle in detail. 6

SECTION—C

4. What are project scheduling techniques ? Explain all the project scheduling techniques with example. 12

5. (a) Discuss and compare the problem based and process based estimation. 6

(b) Define software risk. What is software risk management ? Discuss the risk management activities.

6

SECTION—D

6. Write short notes on the following concepts of software design :

(a) Abstraction

(b) Information hiding

(c) Functional independence

(d) Structural partitioning. 12

7. (a) Explain the software design failures and remedies. 6

(b) Explain the structured analysis and structured design.

6

SECTION—E

8. (a) Discuss the following methods of testing :

    (i) Basis path testing

    (ii) Equivalence testing

    (iii) Boundary value testing.   6

   (b) Define software maintenance. What is the need of software maintenance ? Enumerate and describe the various types of software maintenance.   6

9. (a) What is software testing ? What are the objectives of software testing ? Discuss the principles of software testing.   8

   (b) Discuss the various software quality attributes.   4