Syllabus

Paper Title : Software Engineering
Paper Code : PGD – 2103

Max. Marks : 60   Time : 3 Hrs.

Course Duration: 60 Lectures

Note :

(i) *The Question Paper will consist of Four Sections.*

(ii) *Examiner will set total of* **NINE** *questions comprising* **TWO** *questions from each Section and* **ONE** *compulsory question of short answer type covering whole syllabi.*

(ii) *The students are required to attempt ONE question from each Section and the Compulsory question.*

All questions carry equal marks unless specified.

SECTION – A

1. Software Engineering Fundamentals: Characteristics, Components, Applications, principles of software engineering, skills of software engineer.

2. Software Process Models: Software Development Life Cycle, Waterfall Life Cycle Model, Boehm's Spiral Life Cycle Model, Win Win Spiral Model

SECTION – B

3. Software Project Management: Software Project management Plan (SPMP), Project scheduling Techniques- Work Breakdown Structure (WBS), Project Evaluation Review Technique (PERT), Gantt Charts, Critical path method (CPM)

4. Software Project Estimation and Risk Management: Problem-based estimation, Process based estimation, Cost Estimation Model – COCOMO Model, Software Risks, Software Risk management, Risk Management activities- Risk Assessment and Risk Control, Benefits of Risk management, SRS

SECTION – C

5. Software Design: Software Design Process, Design Failures and Remedies

6. Structured Analysis and Design tools: Structured Analysis and Structured Design (SASD)- Goals and Benefits, Data Flow Diagrams (DFD), Data Dictionary (DD), Entity-Relationship diagram (ERD)

SECTION – D

7. Software Testing: Objectives of software Testing, Principles of Software Testing, Software Testing Process, Black Box Testing, White Box Testing

8. Software Quality and Maintenance: Software quality attributes, Factors affecting Software Quality, Aims of Software Maintenance, Types of Software Maintenance, Software Maintenance Costs.