

→ Phases of life cycle (Section - A)

SYLLABUS

→ Improving Software Economics

Software Project Management

BCA-16-403

L T P Cr

6 - - 3

Time Duration: 3 Hrs.

External Marks : 65

Internal Marks : 10

Number of Lectures : 60

Objective: To teach the students important concepts, terms related to various phases during the development of a software project. At the end of the course the student will be able to apply software project management techniques to manage a software project.

Note :

- (i) The Question Paper will consist of Four Units.
- (ii) Examiner will set total of **NINE** questions comprising **TWO** questions from each Unit and **ONE** compulsory question of short answer type covering whole syllabi.
- (iii) The students are required to attempt **ONE** question from each Unit and the Compulsory question.
- (iv) All questions carry equal marks unless specified.

UNIT - I

Software Project Management and Process Groups: Introduction to project and project management, role of a project manager in project management, a system view of project management, Stakeholders of Project, Project phases and product life cycles, Evolution of software economics, Improving software economics: reducing product size, software processes, team effectiveness, automation through software environment, Principles of modern software management.

UNIT - II

Project Management Framework : Project Management Framework, Software Tools for Project Management, Issues in Project Staff Acquisition and Team formation and Development, Model based software architectures, Workflows of the process, Checkpoints of the process.

Project Integration: Integration Management: ^{Pg no 7.3} Project selection, ^{Pg no 7.6} project management plans, ^{Pg no 7.9} project execution, ^{Pg no 7.11} project monitoring and controlling, integrated change control; ^{Pg no 7.14}

UNIT - III

Scope Management: ^{Pg no 8.2} Scope Management: ^{Pg no 8.3} project scope statement, ^{Pg no 8.4} Work breakdown structures, ^{Pg no 8.4} Scope verification and scope control, ^{Pg no 9.3} Process instrumentation and seven core metrics.

^(make NOTES)
Software management disciplines: ^{Pg no 10.3} Iterative process planning, ^{Pg no 10.3} Project organizations and responsibilities, ^{Pg no 10.13} Process automation.

UNIT - IV

Project Scheduling: ^{Pg no 12.1} Time Management; ^{Pg no 14.5} Importance of Project Schedules, ^{Pg no 13.5} Sequencing and Scheduling Activity, ^{Pg no 13.5} Project Network Diagrams, ^{Pg no 13.5} PERT/CPM, ^{Pg no 13} Gantt charts, ^{Pg no 12.14} Critical chain scheduling. ^{NOTES}

Cost Management: ^{Pg no 15.4} Project Cost Management – ^{Pg no 15.2} Importance and ^{Pg no 15.8} Principles of ^{Pg no 16.7} Project Cost Management, ^{Pg no 16.7} Resource Planning, ^{Pg no 16.7} Cost Estimating Techniques and Expert Judgment, ^{Pg no 16.8} Estimating by Analogy, ^{Pg no 16.12} COCOMO Model, ^{Pg no 16.12} Cost Budgeting and Control

Chapter - 17.