Software Project Management - Oct 2022 Exam

Instructions: Answer Q1 or Q2, and Q3 or Q4. Draw neat diagrams where necessary.

# Original Question Paper

Q1) a) What is project? Why is software project management important. [5]

Q1) b) How plans, methods and methodologies differ from each other? [5]

Q1) c) Describe contract management in detail. [5]

Q2) a) Identify the management responsibilities of the manager in view of software project management. [5]

Q2) b) Explain traditional project management and modern project management. [5]

Q2) c) Define business case and explain the concept of business case. [5]

Q3) a) Draw the activity diagram in reference to online shopping system. [5]

Q3) b) Explain GQM paradigm. [5]

Q3) c) Enlist the techniques of process analysis and explain in brief. [5]

Q4) a) Draw the use case diagram in reference to online shopping system. [5]

Q4) b) What is project evaluation? Explain its importance. [5]

Q4) c) Describe "Return on Investment" cost-benefits evaluation technique with example. [5]

# Detailed Answers

## Q1) a) What is project? Why is software project management important.

A project is a temporary endeavor undertaken to create a unique product, service, or result. Software project management is important to ensure timely delivery, quality, cost control, risk management, and resource optimization.

## Q1) b) How plans, methods and methodologies differ from each other?

Plans are detailed schemes for schedules and tasks, methods are procedures to perform specific tasks, and methodologies are comprehensive frameworks combining multiple methods for managing projects.

## Q1) c) Describe contract management in detail.

Contract management involves managing agreements, negotiations, execution, compliance monitoring, risk and vendor management throughout the project lifecycle.

## Q2) a) Identify the management responsibilities of the manager in view of software project management.

Responsibilities include planning, team leadership, project execution, stakeholder communication, quality assurance, and risk mitigation.

## Q2) b) Explain traditional project management and modern project management.

Traditional project management is linear with detailed upfront planning; modern (Agile) is iterative, adaptive, and collaborative.

## Q2) c) Define business case and explain the concept of business case.

A business case is a document justifying the project by outlining costs, benefits, risks, and strategic alignment to support decision-making.

## Q3) a) Draw the activity diagram in reference to online shopping system.

Activity diagram for online shopping shows workflow from browsing, adding to cart, checkout, payment, and order confirmation.

Figure: [Insert relevant UML diagram here]

## Q3) b) Explain GQM paradigm.

GQM (Goal-Question-Metric) is a measurement approach defining goals, questions, and metrics to assess software quality and project success.

## Q3) c) Enlist the techniques of process analysis and explain in brief.

Process analysis techniques include process mapping, gap analysis, value-added analysis, root cause analysis, and process mining to improve efficiency and quality.

## Q4) a) Draw the use case diagram in reference to online shopping system.

Use case diagram shows actors (customer, admin) interacting with system functionalities like browsing, ordering, payment.

Figure: [Insert relevant UML diagram here]

## Q4) b) What is project evaluation? Explain its importance.

Project evaluation assesses project effectiveness and impact for performance measurement, accountability, learning, and decision-making.

## Q4) c) Describe "Return on Investment" cost-benefits evaluation technique with example.

Return on Investment (ROI) measures profitability as (Net Benefits / Cost) x 100%. Example: ROI of 42.9% shows financial gain over costs.