MCS 4204 Software Project Management and Quality Assurance

Comprehensive MCQ Practice Sets

Topics 1-3: Introduction, Integration Management, and Scope Management

Total Questions: 50 | Practice for 15-minute In-Class Test

SET 1: INTRODUCTION TO SOFTWARE PROJECT MANAGEMENT

1.

What is a Project?
A project is a temporary endeavour undertaken to:

A. Create routine business operations

B. Create a unique product, service, or result

C. Maintain existing systems indefinitely

D. Perform regular maintenance activities

Answer: B

2.

Which of the following is NOT a characteristic of a project?

A. Temporary nature with defined start and end

B. Unique deliverables

C. Ongoing routine operations

D. Specific objectives to be met

Answer: C

3.

Project termination occurs when:

A. The project manager leaves the organization

B. Objectives have been achieved OR cannot be met OR need no longer exists

C. The budget is exhausted

D. Only when objectives have been achieved

Answer: B

4.

Which factor makes software projects more complex than other projects?

A. Visibility of progress

B. Stable requirements

C. Invisibility, conformity, complexity, and flexibility

D. Physical constraints

Answer: C

5.

An example of an objective-based project is:

A. A payroll system for a business organization

B. An on-line voting system for general public to select the most popular sportsman

C. A generic accounting software package

D. A standard word processing software

Answer: B

6.

The difference between compulsory user-based and voluntary user-based projects is:

A. The complexity of the system

B. Whether users are forced to use the system or choose to use it

C. The size of the development team

D. The technology platform used

Answer: B

7.

Which of the following is an embedded system project?

A. Stock control system

B. Payroll management system

C. A system to control air conditioning equipment in a building

D. Customer relationship management system

Answer: C

8.

Project management involves all of the following activities EXCEPT:

A. Planning what is to be done

B. Monitoring progress

C. Developing the actual software code

D. Controlling and taking corrective actions

Answer: C

9.

The project constraints triangle includes:

A. Scope, cost, time

B. Quality, resources, risks

C. Both A and B are major constraints

D. Only scope and cost

Answer: C

10.

A portfolio refers to:

A. Projects and programs managed as a group to achieve strategic objectives

B. A single large project with multiple phases

C. Documentation of project requirements

D. The project manager's collection of skills

Answer: A

SET 2: PROJECT INTEGRATION MANAGEMENT

11.

Project Integration Management includes processes to:

A. Only coordinate different project phases

B. Identify, define, combine, unify, and coordinate various processes and activities

C. Manage only the technical aspects of the project

D. Handle only stakeholder communications

Answer: B

12.

The seven processes of Project Integration Management are:

A. Develop Charter, Develop Plan, Direct Work, Manage Knowledge, Monitor, Control Changes, Close

B. Plan, Execute, Monitor, Control, Close, Review, Document

C. Initiate, Plan, Execute, Monitor, Control, Close, Evaluate

D. Charter, Scope, Time, Cost, Quality, Risk, Procurement

Answer: A

13.

The primary purpose of the project initiation phase is to:

A. Complete all project deliverables

B. Align stakeholder expectations with project purpose and obtain authorization

C. Develop detailed project schedules

D. Assign all project team members

Answer: B

14.

A Business Case document:

A. Is prepared after project completion

B. Justifies the start-up of a project and provides cost-benefit analysis

C. Contains only technical specifications

D. Is used only for risk management

Answer: B

15.

Which of the following is NOT typically included in a Business Case?

A. Description of business problem or opportunity

B. Detailed programming code

C. Cost-benefit analysis of alternative solutions

D. Risk assessment

Answer: B

16.

A feasibility study is conducted to:

A. Document the final project results

B. Identify likelihood of solutions meeting business requirements

C. Train project team members

D. Create user manuals

Answer: B

17.

The three types of project assessment are:

A. Technical, Economic, Social

B. Strategic, Technical, Economic

C. Financial, Technical, Operational

D. Internal, External, Stakeholder

Answer: B

18.

Net Present Value (NPV) calculation considers:

A. Only the total costs of the project

B. The profitability of a project and timing of cash flows

C. Only the benefits without considering costs

D. The number of project team members

Answer: B

19.

If the discount rate is 10% and expected return in a year is $1,100, the present value is:

A. $1,000

B. $1,100

C. $1,210

D. $990

Answer: A

20.

Internal Rate of Return (IRR) is:

A. The discount rate that results in NPV of zero

B. Always higher than the market interest rate

C. The total profit of the project

D. The project duration in years

Answer: A

SET 3: PROJECT SCOPE MANAGEMENT

21.

Project Scope Management is primarily concerned with:

A. Managing the project budget

B. Defining and controlling what is and is not included in the project

C. Scheduling project activities

D. Managing project risks

Answer: B

22.

The six processes of Project Scope Management are:

A. Plan, Collect, Define, Create, Validate, Control

B. Initiate, Plan, Execute, Monitor, Control, Close

C. Requirements, Scope, WBS, Quality, Testing, Delivery

D. Analysis, Design, Development, Testing, Implementation, Maintenance

Answer: A

23.

An Affinity Diagram is used to:

A. Calculate project costs

B. Organize a large number of ideas into their natural relationships

C. Create project schedules

D. Assign team responsibilities

Answer: B

24.

A Context Diagram shows:

A. Project timeline and milestones

B. System interactions with external entities

C. Organizational hierarchy

D. Budget allocation across activities

Answer: B

25.

The Scope Baseline includes:

A. Only the project statement

B. Project statement, WBS, and WBS dictionary

C. Only the work breakdown structure

D. Project charter and business case

Answer: B

26.

Work Breakdown Structure (WBS) is:

A. A project organization chart

B. Subdivision of project deliverables into smaller, manageable components

C. A list of project risks

D. A communication plan

Answer: B

27.

In creating a WBS, the correct sequence is:

A. Identify deliverables → Structure WBS → Decompose → Assign codes → Verify

B. Assign codes → Identify deliverables → Structure → Decompose → Verify

C. Decompose → Structure → Identify → Verify → Assign codes

D. Structure → Assign codes → Identify → Decompose → Verify

Answer: A

28.

A Product Breakdown Structure (PBS) differs from activity-based WBS because:

A. PBS focuses on what will be produced, not activities

B. PBS is only used for software projects

C. PBS cannot be used with WBS

D. PBS is more complex than WBS

Answer: A

29.

Validate Scope process involves:

A. Creating the work breakdown structure

B. Formalizing acceptance of completed project deliverables

C. Identifying project requirements

D. Developing the project charter

Answer: B

30.

Control Scope process is performed to:

A. Create the initial project scope

B. Monitor scope status and manage changes to scope baseline

C. Collect initial requirements

D. Validate completed deliverables

Answer: B

SET 4: MIXED CONCEPTS - COMPREHENSIVE REVIEW

31.

Which project management methodology is best when scope, budget, and time factors are known?

A. Scrum

B. Kanban

C. Waterfall

D. Scrumban

Answer: C

32.

The major difference between projects and routine activities is:

A. Projects are permanent, routine activities are temporary

B. Projects are unique and temporary, routine activities are ongoing and repetitive

C. Projects require less planning than routine activities

D. Projects cost more than routine activities

Answer: B

33.

A Project Charter:

A. Is prepared by the project manager

B. Formally authorizes the project and gives authority to the project manager

C. Is created after project completion

D. Contains detailed technical specifications

Answer: B

34.

The project manager's sphere of influence includes:

A. Only the project team

B. Project, organization, industry, professional discipline

C. Only technical aspects

D. Only organizational aspects

Answer: B

35.

Essential skills needed by a project manager include:

A. Only technical project management skills

B. Technical project management, leadership, and strategic business management

C. Only programming and technical skills

D. Only communication skills

Answer: B

36.

Portfolio management focuses on:

A. Doing projects the "right" way

B. Doing the "right" projects at the right time

C. Managing individual project activities

D. Technical implementation details

Answer: B

37.

A project phase:

A. Cannot have entrance and exit criteria

B. Is a collection of logically related activities culminating in deliverable completion

C. Must last exactly one month

D. Can only be performed sequentially

Answer: B

38.

The cost and staffing level curve shows that:

A. Costs remain constant throughout project lifecycle

B. Costs and staffing are typically low at start and end, higher in middle phases

C. Costs increase linearly throughout the project

D. Staffing levels are always constant

Answer: B

39.

Benefit Map helps to:

A. Calculate exact project costs

B. Map organization's business strategy with benefits derived from project outputs

C. Create detailed project schedules

D. Assign team member responsibilities

Answer: B

40.

Which is NOT a typical component of risk evaluation?

A. Identifying risks and quantifying effects

B. Preparing a risk matrix

C. Developing detailed programming code

D. Classifying risks by impact and likelihood

Answer: C

SET 5: ADVANCED CONCEPTS AND CALCULATIONS

41.

If a project has the following cash flows: Year 0: -$100,000, Year 1: $30,000, Year 2: $40,000, Year 3: $50,000, what is the payback period?

A. 2.4 years

B. 2.6 years

C. 3.0 years

D. 2.0 years

Answer: B (Explanation: 100,000 - 30,000 - 40,000 = 30,000 remaining; 30,000/50,000 = 0.6; Total = 2.6 years)

42.

Strategic Information System Plan (SISP) is used during:

A. Project closure

B. Technical assessment phase

C. Risk evaluation

D. Team formation

Answer: B

43.

In project termination, approval and authorization must be provided by:

A. The project manager only

B. An appropriate authority

C. The development team

D. End users only

Answer: B

44.

The difference between information systems and embedded systems is:

A. Information systems are more complex

B. Information systems enable office processes, embedded systems control machines

C. Embedded systems cost more to develop

D. There is no significant difference

Answer: B

45.

Scrumban methodology:

A. Is identical to Scrum

B. Combines Kanban practices on top of Scrum framework

C. Is only used for small projects

D. Cannot be used for software development

Answer: B

46.

The Project Management Office (PMO) typically handles:

A. Only technical development tasks

B. Organizing meetings, resource allocation, monitoring, and administrative tasks

C. Only financial management

D. Only risk assessment

Answer: B

47.

Requirements Traceability Matrix is used to:

A. Calculate project costs

B. Track requirements from origin through implementation and testing

C. Create organizational charts

D. Develop risk matrices

Answer: B

48.

Product Flow Diagram (PFD) shows:

A. Project timelines

B. How products are created and dependencies between them

C. Cost allocations

D. Team communications

Answer: B

49.

A hybrid approach to creating WBS:

A. Uses only activity-based decomposition

B. Uses only product-based decomposition

C. Introduces additional levels structuring both products and activities

D. Cannot be used effectively

Answer: C

50.

The primary difference between NPV and IRR is:

A. NPV considers time value of money, IRR does not

B. NPV gives absolute return value, IRR gives percentage return rate

C. NPV is more complex to calculate

D. IRR is always more accurate

Answer: B

ANSWER KEY SUMMARY

Set 1 (Questions 1-10): B, C, B, C, B, B, C, C, C, A

Set 2 (Questions 11-20): B, A, B, B, B, B, B, B, A, A

Set 3 (Questions 21-30): B, A, B, B, B, B, A, A, B, B

Set 4 (Questions 31-40): C, B, B, B, B, B, B, B, B, C

Set 5 (Questions 41-50): B, B, B, B, B, B, B, B, C, B

STUDY TIPS FOR YOUR 15-MINUTE MCQ TEST

Focus Areas:

- **Definitions:** Know key terms like project, portfolio, program, WBS, scope baseline
- **Processes:** Integration (7 processes), Scope (6 processes)
- **Calculations:** NPV, IRR, payback period basics
- **Project Types:** Objective vs Product-based, Compulsory vs Voluntary, Information vs Embedded
- **Key Documents:** Project Charter, Business Case, Feasibility Study
- **Methodologies:** Waterfall, Scrum, Kanban, Scrumban differences
- **Assessment Types:** Strategic, Technical, Economic

Common Exam Topics:

- Project definition and characteristics
- Software project vs other project types
- Project management processes and knowledge areas
- Integration management processes
- Scope management processes
- Financial calculations (NPV, IRR)
- Project assessment methods
- WBS creation and types
- Project manager roles and skills

Test-Taking Tips:

- Read each question carefully
- Eliminate obviously wrong answers first
- Look for keywords in questions

- Manage your time - 15 minutes for 10 questions = 1.5 minutes per question
- Don't spend too long on any one question

Good luck with your exam!