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# MCS 4204 Software Project Management and Quality Assurance

## Interactive Quiz – Static Question Bank (Lectures 1–3)

**Total Questions: 30** | Extracted from `interactive_quiz.html`

Includes stems, options, correct answers, and brief explanations.

### LECTURE 1 — INTRO & FUNDAMENTALS

1.

What is a project in project management terms?

- A. A temporary endeavor undertaken to create a unique product, service, or result
- B. A set of routine operations for ongoing business work
- C. Any task lasting more than six months
- D. A portfolio of unrelated initiatives

**Answer: A**

Projects are temporary and unique; operations are ongoing and repetitive.

2.

Which document authorizes the project and the project manager?

- A. Project charter
- B. Project plan
- C. Business case
- D. Statement of work (SOW)

**Answer: A**

The charter formally authorizes the project and gives the PM authority to apply resources.

3.

Which is NOT a typical constraint in the triple constraint?

- A. Scope
- B. Schedule
- C. Cost
- D. Procurement

**Answer: D**

Scope, schedule, and cost are the classic triple constraints; quality is often central as well.

4.

In predictive (waterfall) life cycles, when is scope defined?

- A. Early in the project and remains stable
- B. Near the end of each iteration
- C. Only after risk analysis
- D. Continuously based on customer feedback

**Answer: A**

Predictive approaches define scope early and manage changes via formal control.

5.

In agile/adaptive life cycles, what is most valued?

- A. Comprehensive documentation
- B. Strict change control
- C. Customer collaboration and responding to change
- D. Big design up front

**Answer: C**

Agile values collaboration and adaptability over heavy upfront planning.

6.

Who are stakeholders?

- A. Only the project team
- B. Persons or organizations that may affect or be affected by the project
- C. Only the sponsor
- D. Only customers

**Answer: B**

Stakeholders have an interest in or are impacted by the project outcomes.

7.

Which statement about a PMO is true?

- A. It always controls projects directly
- B. It may be supportive, controlling, or directive
- C. It only exists in agile organizations
- D. It replaces the role of the sponsor

**Answer: B**

PMOs vary from providing templates to fully directing projects.

8.

Organizational structure with strongest PM authority is:

- A. Functional
- B. Weak matrix
- C. Balanced matrix
- D. Projectized

**Answer: D**

Projectized gives PM full authority; functional gives functional managers the authority.

9.

The business case primarily does what?

- A. Defines WBS
- B. Justifies the project with cost-benefit analysis
- C. Assigns the team
- D. Controls scope changes

**Answer: B**

Business case explains the value and feasibility driving authorization.

10.

Progressive elaboration means:

- A. Reducing scope to meet budget
- B. Incrementally detailing plans as more information becomes available
- C. Adding features without approval
- D. Eliminating documentation

**Answer: B**

Plans evolve as information increases; not scope creep.

## LECTURE 2 — PROCESSES & KNOWLEDGE AREAS

11.

How many PMBOK process groups are there?

- A. 3
- B. 4
- C. 5
- D. 6

**Answer: C**

Initiating, Planning, Executing, Monitoring & Controlling, Closing.

12.

Scope baseline includes:

- A. Scope statement, WBS, WBS dictionary
- B. Scope statement only
- C. Requirements traceability matrix only
- D. WBS only

**Answer: A**

The scope baseline is the approved version including these elements.

13.

What does the schedule baseline represent?

- A. Approved version of the schedule model
- B. Average team velocity
- C. Risk-adjusted plan only
- D. Stakeholder timetable

**Answer: A**

It is the approved schedule used to measure performance.

14.

Which is NOT a tool of Collect Requirements?

- A. Interviews
- B. Delphi technique
- C. Control charts
- D. Facilitated workshops

**Answer: C**

Control charts are quality control tools.

15.

RACI stands for:

- A. Responsible, Accountable, Consulted, Informed
- B. Report, Analyze, Control, Improve
- C. Readiness, Acceptance, Cost, Impact
- D. Risk, Assumption, Constraint, Issue

**Answer: A**

A responsibility assignment matrix type.

16.

Which plan defines how changes are managed?

- A. Scope management plan
- B. Change management plan
- C. Issue log
- D. Communications plan

**Answer: B**

Change management plan is a component of the project management plan.

17.

Earned Value (EV) is best defined as:

- A. Budget at completion
- B. Value of work performed expressed in the approved budget
- C. Actual cost to date
- D. Cost variance at completion

**Answer: B**

EV measures the value of work completed against the budget.

18.

Which is a qualitative risk analysis tool?

- A. Monte Carlo simulation
- B. Probability and impact matrix
- C. Sensitivity analysis
- D. Decision tree with EMV

**Answer: B**

Qualitative uses matrices; Monte Carlo/sensitivity are quantitative.

19.

What is the purpose of a lessons learned register?

- A. List of requirements changes
- B. Record knowledge gained during the project
- C. Track defects
- D. Plan procurements

**Answer: B**

It documents experiences to improve future performance.

20.

Control quality is performed during:

- A. Initiating
- B. Planning
- C. Executing/Monitoring and Controlling
- D. Closing

**Answer: C**

It inspects deliverables to verify they meet quality requirements.

### LECTURE 3 — PLANNING (SCOPE/SCHEDULE/COST/QUALITY)

21.

Which tool sequences activities by identifying dependencies?

- A. WBS
- B. Precedence Diagramming Method (PDM)
- C. Resource histogram
- D. Pareto chart

**Answer: B**

PDM builds a network diagram based on relationships.

22.

Three-point estimate (PERT expected) formula is:

- A.  $(O + P + M) / 3$
- B.  $(O + 4M + P) / 6$
- C.  $(4O + M + P) / 6$
- D.  $(O + 4P + M) / 6$

**Answer: B**

Beta distribution weighting with 4× most likely.

23.

Communications channels formula for n stakeholders is:

- A.  $n^2$
- B.  $n(n-1)$
- C.  $n(n-1)/2$
- D.  $(n+1)!$

**Answer: C**

Unique pairwise channels equals  $n(n-1)/2$ .



24.

Cost baseline includes:

- A. Management reserves
- B. Contingency reserves only
- C. Time-phased budget excluding management reserves
- D. BAC plus profit

**Answer: C**

Management reserves are not part of the cost baseline.

25.

A schedule network path with zero total float is:

- A. On the critical path
- B. Non-critical
- C. Fast-tracked
- D. Crashing required

**Answer: A**

Zero float indicates critical path.

26.

Which is a cost of quality (COQ) prevention activity?

- A. Rework
- B. Inspection
- C. Training
- D. Warranty claims

**Answer: C**

Training prevents defects; rework/warranty are failure costs; inspection is appraisal.

27.

Fast tracking means:

- A. Adding resources to activities
- B. Doing activities in parallel that were originally in sequence
- C. Reducing scope
- D. Using overtime

**Answer: B**

Fast tracking overlaps activities; crashing adds resources.

28.

Which dependency type is most common?

- A. Finish-to-Start (FS)
- B. Start-to-Start (SS)
- C. Finish-to-Finish (FF)
- D. Start-to-Finish (SF)

**Answer: A**

FS is most widely used.

29.

If  $CPI = 0.8$ , your project is:

- A. Under budget
- B. Over budget
- C. On budget
- D. Cannot say

**Answer: B**

$CPI < 1$  means cost efficiency is poor; over budget.

30.

If  $SPI = 1.1$ , your project is:

- A. Ahead of schedule
- B. Behind schedule
- C. On schedule
- D. Over budget

**Answer: A**

$SPI > 1$  means ahead of schedule.