National University of Computer and Emerging Sciences, Lahore Campus

Course Name:	Fundamentals of Software Project Management	Course Code:	SE-4002
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Exam Type:	Midterm II		

Student Name _____ Roll No. _____

Instruction/Notes: In MCQ please encircle the correct option. Use a pen and do no overwrite or cut. No marks will be given in case you choose more than one option. No marks will be given for correct answers crossed out. No marks will be given for writing the correct formulae.

Chose the right option for the following

Question 1 (CLO1) 7/10 points

1. What is the primary goal of risk identification in software project management?
   a. To eliminate all project risks.
   b. To assess the impact of known risks.
   c. To create a risk management plan.
   (d) To identify and document potential risks.
2. In project scheduling, what does "float" or "slack" refer to?
   (a) The time available for a task to be delayed without delaying the project.
   b. The extra resources allocated to a task.
   c. The duration of a critical path.
   d. The total project budget.
3. What is the critical path typically used to determine in project scheduling?
   a. Total project duration.
   b. Resource allocation.
   (c) Risk management.
   d. Project quality.

4. Which risk response strategy involves taking proactive measures to reduce the probability or impact o

a. Risk avoidance

b. Risk acceptance

c. Risk mitigation

d. Risk transfer

5. In PERT analysis, what does the term "expected time" represent for an activity?

a. The best-case scenario time for completing the activity.

b. The most likely time for completing the activity.

c. The worst-case scenario time for completing the activity.

d. The average or expected time for completing the activity.

6. What does the "resource calendar" specify in resource allocation?

a. The project schedule.

b. Resource availability over time.

c. The project budget.

d. Project objectives.

7. When assigning resources to project tasks, what should be considered?

a. Resource availability, skills, and task dependencies.

b. The number of project stakeholders.

c. The project budget.

d. The project schedule.

8. Which SCM activity involves recording and reporting the status of configuration items and changes?

a. Configuration identification.

b. Configuration control.

c. Configuration status accounting.

d. Configuration audit.

What is the primary goal of "access control" in SCM

a. To limit access to software repositories.

b. To facilitate open-source development.

c. To increase software development speed.

d. To track software defects.

10. In EVA, what does the "Estimate at Completion (EAC)" represent?

a. The value of work completed at a specific point in time.

b. The budgeted cost for the work scheduled to be completed.

c. The expected total cost of the project at its conclusion.

d. The actual cost incurred.

11. What is the primary advantage of using Earned Value Analysis (EVA) in project management?

a. It provides an accurate estimate of project duration.

b. It allows for real-time tracking of project costs and schedules.

c. It eliminates the need for a project schedule.

d. It focuses on project risks.

12. What does a Schedule Performance Index (SPI) equal to 1 in EVA indicate?

a. The project is ahead of schedule.

b. The project is over budget.

c. The project is on schedule.

d. The project is under budget.

13. In SCM, what is the purpose of a change request?

a. To identify software defects.

b. To request changes to software.

c. To document project milestones.

d. To schedule software testing.

14. In EVA, what does "Actual Cost (AC)" represent?

a. The value of work completed at a specific point in time.

b. The budgeted cost for the work scheduled to be completed.

c. The total project budget.

d. The actual cost incurred.

15. What is the primary advantage of using the PERT technique in risk management and project scheduling?

a. It provides a deterministic and fixed project schedule.

b. It accounts for uncertainty and variability in task durations.

c. It eliminates the need for critical path analysis.

d. It focuses only on optimistic project timelines.

16. What does "Earned Value (EV)" represent in EVA?

a. The value of work completed at a specific point in time.

b. The budgeted cost for the work scheduled to be completed.

c. The total project budget.

d. The actual cost incurred.

17. What is the purpose of a risk assessment matrix in risk management?

a. To identify project stakeholders.

b. To prioritize and assess the significance of project risks.

c. To track project progress.

d. To create a risk management plan

18. In EVA, what is the purpose of "Variance Analysis"?

a. To estimate project costs.

b. To analyze project risks.

c. To compare planned and actual project performance.

d. To create a project schedule

What is the primary goal of resource allocation in project management?

a. To minimize project risks.

b. To reduce project scope.

c. To optimize resource utilization to achieve project objectives.

d. To complete the project ahead of schedule.

20. What is the main purpose of "versioning" in SCM?

X a. To track changes in the project schedule.

b. To identify software defects.

c. To manage different versions of software items.

d. To control project budget.

4/5 points

Question 2 (CLO1)

Answer the following

a. What is Software Configuration Management 1/

Software configuration management is a technique to track and control the versoins of a same software.

→ It includes versoing, configuration, revisions, baseline,

- versoins are state of configuration at certain point of time.
- Baseline is the time when everyone agrees on the requirement.

→ It includes:

- configuration monitoring
- configuration control
- It uses tools like github

b. What is Slack in activity planning? 1.

- Slack is extra days or resources that can be used for resting without delaying the project.

→ For example: if an activity has slack of 2 days then we can delay the activity without affecting the project schedule

- Hence: slack refers to the resource that can be delayed without delaying the whole project.

c. What are three types of contracts? 1

There are these 3 types of Contract:

- Fixed price contract (Requirement are clear, price is fixed and known, supplier highly motivated)
- Time and Material Contract (based on resource, day or person) No fixed price
- Fixed price per delivered Contract (calculated through FPs, clients can compare, high Quality, Leverage on supplier)

d. What is Organizational Behavior? x

Organization behaviour refers to the environments and techniques used for motivating people to work and to eliminate potential risks.
It helps in monitoring and control of projects, activities and tasks.

e. What are different models/theories for motivation for the people working in teams? 1

- Tylorist Model (Best people, best practices, best incentives)
- 'Moscow' theory (Needs are in hierarchy, simple needs, safety needs, social needs self esteem, self actulization)
- Herzberg's Theory (2 factor: Satifaction (feedback/rewards) reduce Dissatisfaction (work environments, cleanliness)
- Expectancy Theory (People knows work hard generate good performance And good performance yeild best results)

- Morever we read about theory X and Y which states people do not want to work and work is as important as rest respectively.

3 (CLO2) 9/10 points

re managing a complex software development project. The project involves multiple tasks that need to be pleted in a specific order. Below is a list of activities along with their order, precedence relationships, and uration:

Activity A - Duration: 2 weeks
Activity B - Duration: 3 weeks (Starts after Activity A is completed)
Activity C - Duration: 4 weeks (Starts after Activity B is completed)
Activity D - Duration: 2 weeks (Starts after Activity A is completed)
Activity E - Duration: 3 weeks (Starts after Activity D is completed)
Activity F - Duration: 5 weeks (Starts after Activity C is completed)
Activity G - Duration: 2 weeks (Starts after Activity B is completed)
Activity H - Duration: 3 weeks (Starts after Activity G is completed)
Activity I - Duration: 4 weeks (Starts after Activity E and Activity H are completed)
Activity J - Duration: 4 weeks (Starts after Activity F is completed)

Your task is to create a Precedence Activity Network (PAN) diagram (using Activity on the node) for this project based on the provided information. Draw the network, indicating the order in which activities must be completed, the precedence relationships. Calculate the total duration of the project, float, earliest start and latest start of each activity, and the critical path of the project.

NOTE: 1 mark will be deducted for every mistake/wrong calculation/answer/output.