

UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE AND ENGINEERING
APS112 TERM TEST – March 28th 1:30pm-2:30pm
60 Minutes. 15% of APS112 Grade.

INSTRUCTORS: T. Kostas, T. Nolan, K. Plataniotis, P. Sheridan, C. Variawa

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****DO NOT REMOVE THE STAPLE****

Do not begin this test unless asked to do so. Do not continue writing once the time is complete. Disregarding these rules will constitute an academic violation.
No unauthorized aids.

PLEASE WRITE CLEARLY AND LEGIBLY

- Students are wholly responsible for the content and quality of this submission.
- Do not separate the pages.
- This is an independent, closed-book assessment.
- Writing in black or blue pen is encouraged.
- Students must input answers on the separate bubble sheet at the end of the exam to be graded. Any other work will not be graded (no exceptions).
- No textbooks, notes, or other aids.

Time allotted: **60min**

Part	Type	Maximum Mark
1	True/False	10 marks (1 mark per question, 10 questions)
2	Multiple Choice	10 marks (1 mark per question, 10 questions)
3	Multiple Choice	10 marks (2 marks per question, 5 questions)
Total		30

THIS PAGE IS NOT GRADED AND CAN BE USED FOR ROUGH NOTES

PART 1. [10 marks] – True/False

ALL QUESTIONS MUST BE ANSWERED ON THE BUBBLE SHEET ATTACHED TO THE END OF THIS EXAM PACKAGE.

Instructions: **Students MUST write their correct response on the final page of the test** (the “bubble sheet”) for their grade to be valid. Do not write your answer on this question sheet as it will not be graded. We are not responsible for students failing to do this.

Important note for Part One: this is the True/False part of the test. Please review your question(s) carefully, and **submit only one (1) most-appropriate response**. Each correct response is worth one (1) mark.

**If you select TRUE, select “A” on the answer sheet.
If you select FALSE, select “B” on the answer sheet.
You can ignore C, D, and E for Part 1 of this test.**

P1 Q1:

Below is a list of key safety terms, as mentioned in-lecture. There may or may not be errors in this list.

- Safety: Protection from hazards
- Acceptable Risk: Risks are judged to be acceptable
- Risk analysis: Statistical tool for determining risk
- Probability: Chance of hazard being released
- Accident: Unexpected exposure to a hazard

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q2:

Universal Design Principles include the following:

- Low Physical Effort
- Physical Accessibility - appropriate learning space
- Flexibility in Use – multi-modal
- Diversity
- Perceptible Information – transparency
- Intuitive to Use
- Supportive Environment - tolerance for minor error

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q3:

“By the end of the first client meeting, remain open to the client and the project: be prepared to confirm assumptions or to change directions based on new information.”

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q4:

In preparing a presentation based on a design project, a main claim must be developed before sub-claims can be composed.

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q5:

In regard to multimodality and presentations, integration refers to the how easily different simultaneously occurring modes of communication can be understood by the audience

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q6:

One use of the introduction to a Service Environment section can be to indicate how you decided to include or not include certain content in that section.

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q7:

Using emojis to convey meaning is helpful in both text messages and professional emails to the client. There are many emojis available on different platforms, and therefore sender should use as many emojis as possible in a message to ensure their intention is clear.

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q8:

When engaging in team conflict, the ideal type of conflict focuses on issues with the project and the organization of the work, but does not focus on whether people feel respected in the team.

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q9:

Bolton and Bolton Work Styles are helpful to know about when working in teams because they give you indicators of reactions to stress that others may have that are different than your own.

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

P1 Q10:

When planning how to allocate the work for the CDS, it would be better for a team to have a structured meeting than a decision meeting as it will allow for clarification of assignment instructions.

Please select: the statement above is correct (**True [a]**), or incorrect (indicate **False [b]**).

PART 2. [10 marks] – Multiple Choice [1-mark each]

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Important note for Part Two: this is the Multiple Choice part of the test. Please review your question(s) carefully, and **submit only one (1) most-correct response**. Each correct response is worth one (1) mark.

Please select either “A”, “B”, “C” or “D” on the answer sheet.

P2 Q11:

Your IT project has ten team members, and you recently hired three more database developers. You are using a type of bar chart that displays activity start dates, end dates, duration, and dependencies.

This chart is used for tracking progress and reporting to the team. Which tool are you using:

- a. Team Charter
- b. Milestones Chart
- c. Gantt Chart
- d. Estimation Diagram

P2 Q12:

You are the project manager overseeing the implementation of a new computer infrastructure at UofT. Your sponsor has informed you that the existing applications must work in the new infrastructure, and the project should be completed in three months. These are examples of:

- a. Lag
- b. Slack
- c. Constraint
- d. None of the above

P2 Q13:

Which one of the following is FALSE about the critical path:

- a. It is the longest-duration path
- b. It determines the shortest time to complete the project
- c. The activities on the critical path represent the highest schedule risk in project
- d. The activities on the critical path represent critical functionality

P2 Q14:

Unlike Gantt charts, milestone charts show:

- a. Scheduled start or completion of significant deliverables
- b. The activity start and end dates of critical tasks
- c. Expected duration of the critical path
- d. Dependencies between complementary tasks

P2 Q15:

Reverse Engineering a competitor's product can be used to

- a. Identify patent infringement
- b. Identify their trade secret
- c. Avoid seeking permission to use a patented item in your product
- d. Answers (a) and (b)

P2 Q16:

Which of the following is FALSE about analogous estimation

- a. It measures the project parameters such as budget, size, complexity and duration based on parameters of a previous similar project and historical information
- b. It is usually done during the early phase of a project when not much information is available
- c. It only uses a bottom-up approach
- d. It may be used by a manager to develop a project proposal.

P2 Q17:

How does precision in estimation (of resources, cost, and effort) changes as the project progresses?

- a. It typically increases
- b. It typically decreases
- c. It typically is the greatest in the middle
- d. It typically does not change

P2 Q18:

As isometric drawing can be used to

- a. Accurately reproduce an object
- b. Simultaneously illustrate three sides of an object
- c. Accurately show three sides of an object
- d. Replace hand drawn sketches

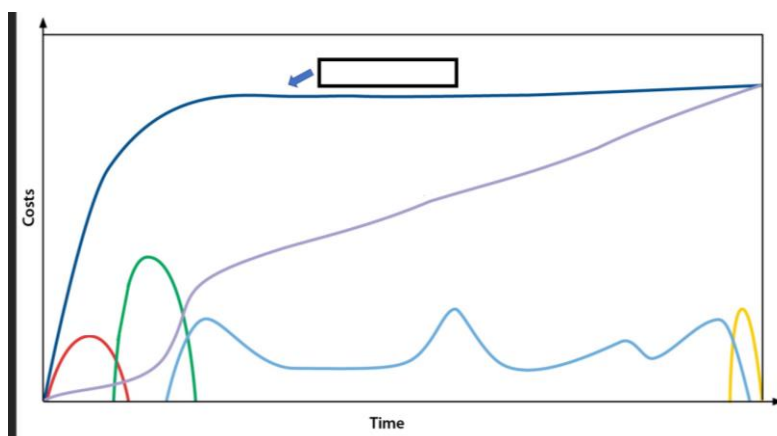
P2 Q19:

A formal mechanical/construction drawing is a visual for

- a. An APS112 Design Review Gateway presentation
- b. An APS112 Status Report
- c. A manufacturing facility
- d. An Executive Summary

P2 Q20:

In the figure below, what is the term that should be in the empty square box?



- a. Investment
- b. Design and planning
- c. Committed costs
- d. Operation and maintenance

PART 3. [10 marks] – Multiple Choice [2-marks each]

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Important note for Part Three: this is also a Multiple Choice part of the test. Please review your question(s) carefully, and **submit only one (1) most-correct response**. Each correct response is worth two (2) marks.

Please select either “A”, “B”, “C” or “D” on the answer sheet.

Please find below a table of project-related tasks. Any dependent task will start immediately after the completion of the appropriate preceding task. You can use any free space in this paper to plan out the sequence of tasks and answer the following questions:

Task	Preceding Task	Duration (in days)
START		0
A	START	3
B	A	3
C	A	4
D	A	5
E	B, C	3
F	B, C, D	6
G	E, F	5
H	G	4
FINISH	H	0

P3 Q21:
What is the minimum number of days required to complete this project?
a. 18
b. 23
c. 30
d. none of the above

P3 Q22:
Which one is the **critical path**?
a. A, D, F, G, H, Finish
b. Start, D, E, F, Finish
c. A, B, C, D, E, F, Finish
d. B, C, D, F, G, Finish

P3 Q23:
What is the **slack** on activity D?
a. 3
b. 4
c. 1
d. 0

P3 Q24:

What is the **earliest day** that you can start activity F?

- a. Day 5
- b. Day 3
- c. Day 8
- d. Day 10

P3 Q25:

What would be the new **end** if task **B** is **increased to seven** days?

- a. Day 22
- b. Day 25
- c. Day 23
- d. Day 24

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DO NOT SEPARATE ANY PAGES.