INFO5990 Professional Practice in IT

THE UNIVERSITY OF SYDNEY · POSTGRADUATE · SEMESTER 2, 2026

Full guide + ask Sia about INFO5990

SIDE 1/2 WHAT MUST BE IN YOUR HEAD · definitions → evidence → mechanism → judgement CLOSED-BOOK MEMORY SHEET **Priority:** final-exam reasoning · comparison · qualified action

01 · Exam map COURSE DATA · BRIEF

Final 50 | V 10 | 5 | Team 35

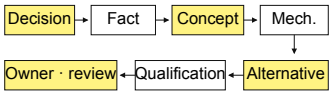
ASSESSMENT	WEIGHT	FORM
Final Exam	50%	Supervised written exam
Oral/Viva based Evaluation	10%	Tutorial viva on earlier topics
Early Semester Feedback Task	5%	Individual auto-graded quiz
Team Report	35%	Incremental group report on technology implementation in organisations

PERMITTED MATERIALS · INFO5990 WEEK 01 INTRODUCTION SLIDES · SEMESTER 2 2026

"Closed book supervised Exam"

The final is the largest assessment. Rehearse **definitions, changed-case application and justified comparison**; a weight alone does not reveal complete task scope or marking basis.

02 · Universal answer engine ALL CHAPTERS



Answer route: classify the fact, expose the link, test an alternative, then close responsibly.

PASS	WHAT THE SENTENCE MUST DO
1 Scope	State the decision; define the starting concept without importing the conclusion.
2 Evidence	Select only facts that activate or challenge the second concept.
3 Mechanism	Explain the intermediate step; expose the first unsupported move.
4 Transfer	Change one nearby condition; say whether the result remains, narrows or reverses.
5 Close	Name the uncertainty, responsible actor, action, retained evidence and review trigger.

RECALL CHECK *Can every claim point backwards to a fact and a concept? If not, repair the earliest broken link before adding prose.*

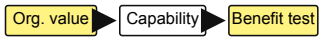
KEEP CLAIM TYPES SEPARATE

Definition	Classifies the decision object; it does not decide the case.
Observation	States what the case supplies as fact.
Assumption	Names what the mechanism needs but the facts do not establish.
Judgement	Chooses a qualified action inside the evidence boundary.

MARKER-VISIBLE DISCIPLINE

One sentence per claim type. Then the first unsupported inference is easy to locate and repair.

03 · Value before technology C1 GUIDE



Source decision ladder: outcome → repeatable ability → testable causal claim.

TERM	RECITE EXACTLY	USE
Organisational value	Beneficial organisational outcome expected to be enabled by a technology investment, not the technology output itself.	Name outcome and owner.
Business capability	Repeatable organisational ability supported by people, process, information and technology.	Explain the enabling mechanism.
Benefit hypothesis	Testable claim linking an IT change to a valued outcome under stated assumptions.	Expose assumptions and disproof evidence.
Professional context	Duties, stakeholders, constraints and consequences surrounding an IT practitioner's decision.	Bound the action and review.

BOUNDARY THAT EARNS THE JUDGEMENT MARK

Feature ≠ value. State the causal route and responsible owner.

04 · Output / capability / outcome C1 WORKED

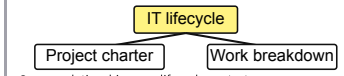
LAYER	QUESTION	EVIDENCE SOUGHT
Technology output	What was delivered?	Observable feature or system change.
Capability	What can people and processes now do repeatedly?	Change across people, process, information and technology.
Outcome/value	Which beneficial organisational condition changes?	Measured outcome, causal link and owner.
Hypothesis	Under which assumptions should the outcome follow?	Test and fact that would require revision.

When to use: any case that sells a platform, feature or delivery milestone as a benefit. Separate observation, assumption and judgement into different sentences.

APPLICATION LINE *"The platform is an output; value requires evidence that it changes a repeatable capability and thereby enables the stated outcome under explicit assumptions."*

AUDIT THE VALUE CASE BACKWARDS

05 · Lifecycle + authorised scope C2 GUIDE



Source relationship map: lifecycle context governs authorisation and scope decomposition.

TERM	DEFINITION	EXAM JOB
IT lifecycle	Connected stages through which a system is conceived, developed, operated, changed and retired.	Locate the decision and evidence horizon.
Project charter	Authorising statement aligning purpose, scope, authority and high-level constraints.	Fix the first authorised delivery boundary.
Work breakdown structure	Hierarchical decomposition of deliverable scope into manageable work components.	Turn authorised scope into work.
Delivery risk	Uncertain event or condition that can change objectives, timing, cost or quality.	Qualify control and review.

SELECTION RULE

Lifecycle label ≠ method choice. Let uncertainty, assurance needs and feedback cadence drive selection.

06 · Artefact decision table C2 FAQ

IF THE QUESTION ASKS...	USE	THEN PROVE
Where is the system now?	IT lifecycle	Stage changes relevant controls and evidence.
What is authorised?	Project charter	Purpose, scope, authority and constraints align.
How is deliverable scope organised?	Work breakdown structure	Components remain traceable to authorised scope.
What may change the objective?	Delivery risk	Uncertainty affects timing, cost, quality or objectives.

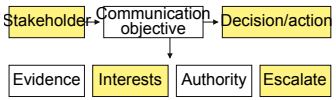
Changed requirements: identify uncertainty first, choose feedback and assurance controls, define the first authorised boundary, then decompose only that deliverable scope.

TRAP *Naming a lifecycle or artefact is not analysis. Show what fact changes the control, who authorises it and when it is reviewed.*

BOUNDARY VARIATION

Uncertainty rises	→ revisit assurance needs and feedback cadence; do not merely rename the lifecycle.
Charter scope changes	→ re-authorise the boundary before revising decomposed work.

07 · Stakeholders + communication C3 GUIDE



Communication route: objective above; evidence, interests, authority and escalation below.

TERM	DEFINITION	USE
Stakeholder	Person or group that can affect, is affected by or perceives itself affected by an IT decision.	Map material interests and effects.
Communication objective	Specific change in understanding, decision or action that communication is intended to produce.	Design the route backwards from the change.
Conflict resolution	Structured process for surfacing interests, testing options and agreeing a workable response.	Compare options under shared criteria.
Team accountability	Clear allocation of responsibility for work, decisions, escalation and follow-through.	Close with owner and next action.

BOUNDARY

Consensus ≠ readiness evidence. Preserve dissent, criteria and ownership in the decision record.

08 · Disagreement audit C3 WORKED

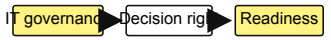
SEPARATE	ASK	RECORD
Evidence	What observed fact bears on launch readiness?	Source, gap, uncertainty.
Interests	Who is affected and how?	Material effect; do not call preference proof.
Authority	Who decides or approves?	Decision owner and boundary.
Escalation	What unresolved condition triggers it?	Trigger, route, follow-through.

APPLICATION LINE *"The objective is a decision on readiness, so the route must expose evidence and dissent to the authorised decision-maker, with an escalation trigger and named follow-through."*

COMMUNICATION QUALITY TEST

Audience named	Necessary, but not enough: show how the stakeholder affects or is affected by the decision.
Message sent	Necessary, but not enough: test the intended change in understanding, decision or action.
Conflict discussed	Necessary, but not enough: surface interests and test options under the same criteria.

09 · Governance → benefits C4 GUIDE



Source decision ladder: allocate accountability, assign authority, then test adoption capacity.

TERM	DEFINITION	EXAM JOB
IT governance	Allocation of decision rights and accountability used to direct and control organisational technology.	Separate directing/controlling from delivery work.
Decision right	Authority to make or approve a defined class of decision.	Name who may approve what.
Change readiness	Practical capacity and willingness of affected groups to adopt and sustain a proposed change.	Test adoption conditions.
Benefit realisation	Managed process of converting delivered capabilities into measured organisational outcomes.	Review outcomes after implementation.

BOUNDARY

Delivery completion ≠ benefit realisation. Review adoption and outcome evidence after implementation.

10 · Delivery / adoption / benefit C4 FAQ

CLAIM	WHAT IT PROVES	WHAT IT DOES NOT PROVE
Software delivered on time	A delivery condition was met.	Adoption, sustained use or outcome.
Groups can and will use change	Evidence of readiness.	Measured organisational benefit.
Capability is adopted	A mechanism is operating.	Outcome until measured.
Outcome evidence reviewed	Basis for benefit judgement.	Universal success beyond stated horizon.

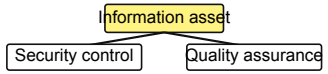
Weak adoption: identify the governing decision, assign its decision right, diagnose capacity and willingness, retain readiness evidence, and define the outcome measure and review trigger.

TRAP *Do not make the delivery team the implicit owner of every benefit. Governance allocates decision rights and accountability.*

OUTCOME EVIDENCE TRAIL

Decision right	authorises a defined class of decision
Readiness evidence	tests capacity and willingness to adopt and sustain change

11 · Security + quality + duty C5 GUIDE



Source relationship map: classify what has value, then demand risk and assurance evidence.

TERM	DEFINITION	USE
Information asset	Information or supporting resource with organisational value and therefore requiring protection.	Fix the object before choosing protection.
Security control	Safeguard changing the likelihood or consequence of a defined security risk.	Link safeguard to defined risk.
Quality assurance	Planned and systematic activity providing confidence that quality requirements will be met.	Ask what evidence supports confidence.
Professional responsibility	Obligation to exercise competent, honest and accountable judgement regarding clients, users and public interest.	Constrain the release recommendation.

BOUNDARY

Schedule pressure cannot erase professional duty. Describe residual risk and name the authority accepting it.

12 · Release decision audit C5 WORKED

PASS	REQUIRED STATEMENT
Asset	What information or supporting resource has value?
Risk	Which uncertain harm is defined; what is its likelihood or consequence?
Control	How does the safeguard change that risk?
Assurance	Which planned, systematic evidence supports confidence?
Residual	What remains uncertain after the control?
Duty	Who must be informed; who may accept; when is review triggered?

Data-quality weakness before release: classify the affected asset, require control and assurance evidence, state residual risk, inform affected decision-makers and name the acceptance authority.

LAST-LINE TEST *Responsible actor + action + retained evidence + review trigger. Without all four, the recommendation outruns the evidence.*

REVERSE THE RECOMMENDATION

Proceed / pause?	Which quality evidence supports that action?
Control adequate?	How does it change the defined likelihood or consequence?
Risk acceptable?	What remains, and which authority accepts it?

INFO5990 Professional Practice in IT · Self-test drills

FIVE CHANGED CASES · JUDGEMENT CARDS · TRAPS · EXAM-MORNING RECALL

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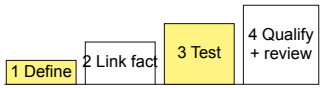
SIDE 2/2 COVER THE ANSWERS · speak the route · reveal · change one fact · repair first weak link

SELF-TEST, DO NOT MERELY REREAD

Finish every answer: actor · action · evidence · review

13 · Four-mark answer frame

WORKED EXAMPLES



Every source worked example follows the same 1 + 1 + 1 + 1 structure.

MARK	SENTENCE FUNCTION	SELF-CHECK
1	Define the starting concept and state the decision boundary.	Did definition classify a fact?
1	Connect material facts to the second concept through an explicit mechanism.	Is the intermediate step visible?
1	Use the third concept to test a credible alternative.	Could the alternative change the action?
1	State qualified conclusion and review condition.	Actor + action + evidence + trigger?
Total 4	Define → connect → test → qualify.	

THIRTY-SECOND ORAL SKELETON

"The decision is __. __ means __. The fact __ activates it because __. Through __, that changes __. If __ changed, the result would remain / narrow / reverse. Therefore __ should __, retain __ and review when __."

14 · Retrieval protocol

STUDY STRATEGY

ROUND	DO WITHOUT NOTES	REPAIR
Recall	Define four terms from one chapter.	Correct the first altered word that changes scope.
Apply	Use an unfamiliar or changed case.	Separate observation, assumption and judgement.
Compare	Test a credible alternative under the same criteria.	Strengthen or remove an alternative that cannot change action.
Transfer	Change one condition only.	Retrace only affected steps; say remains, narrows or reverses.
Close	Name owner, action and review trigger.	Log the earliest unsupported mechanism.

RULE *Rereading hides weak links. Retrieval, changed-case application and an error ledger make them visible.*

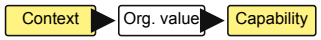
SCORE BY FUNCTION, NOT VOCABULARY

Definition present?	Check that it classifies a supplied fact instead of decorating the opening.
Mechanism present?	Underline the intermediate step between fact and consequence.
Alternative credible?	Circle the condition that could change the preferred action.
Conclusion bounded?	Box uncertainty, actor, action, evidence and review trigger.

15 · Drill A · Customer platform

C1 WORKED · 4 MARKS

Prompt. A service team proposes a new customer platform. Decide which claims are outcomes, which are outputs and what evidence would justify investment.



Source transfer ladder: professional constraints bound the outcome and capability claim.

PATH	ANSWER CONTENT
1 Define	Organisational value is the beneficial outcome expected to be enabled, not the platform itself.
2 Connect	Classify the platform as output; identify the repeatable people/process/information/technology ability it changes.
3 Test	State a benefit hypothesis and the assumption or evidence that could defeat the causal route.
4 Qualify	Require outcome evidence, a responsible owner and a review condition before justifying investment.
Total 4	Output → capability → outcome; never skip the mechanism.

CHANGE ONE FACT

Capability evidence fails	→ revise the benefit hypothesis; do not preserve the outcome claim.
Alternative cannot change action	→ it is not a credible test; strengthen or remove it.
Owner is unnamed	→ conclusion exceeds the value boundary.

CLASSIC TRAP *"The platform creates value" merely relabels delivery. It does not establish an organisational outcome.*

16 · Speak-it check

C1 FAQ

Can you say all four from memory: **organisational value · business capability · benefit hypothesis · professional context**? Then change the nearest assumption and retrace only the affected link.

PROMPT FRAGMENT	REQUIRED MOVE
"New platform"	Classify output; do not call it value.
"Will improve service"	State capability mechanism and outcome measure.
"We expect…"	Expose the benefit hypothesis and assumptions.
"Therefore invest"	Compare an alternative; name owner and review.

Self-test: remove the platform name. If the answer no longer explains a capability and outcome, it was product description rather than value reasoning.

17 · Drill B · Failing workflow

C2 WORKED · 4 MARKS

Prompt. A university service must replace a failing workflow while requirements are still changing. Choose lifecycle controls and define the first authorised delivery boundary.



Source transfer map: risk evidence changes lifecycle controls and the authorised boundary.

PATH	ANSWER CONTENT
1 Define	Locate the system decision within its connected lifecycle; do not let the label decide the method.
2 Connect	Changing requirements create uncertainty; select controls using assurance needs and feedback cadence.
3 Test	Use the project charter to authorise purpose, scope, authority and high-level constraints; test an alternative boundary.
4 Qualify	Decompose only authorised deliverable scope in the work breakdown structure; name owner and risk review.
Total 4	Uncertainty → controls → charter boundary → decomposed work.

JUDGEMENT CARDS

If requirements keep changing	→ foreground uncertainty, assurance and feedback cadence.
If scope is unauthorised	→ return to the project charter before decomposing work.
If a risk changes timing, cost, quality or objectives	→ qualify action and set a review trigger.

CLASSIC TRAP *"Use lifecycle X" is a label, not a reason. The marks sit in the evidence-to-control mechanism.*

18 · Four-way recall

C2 FAQ

Lifecycle	Where in connected system life?
Charter	What is authorised, by whom?
WBS	How is deliverable scope decomposed?
Risk	Which uncertainty changes objectives or delivery?

Backwards audit: start at the recommended control. Identify the risk fact, the lifecycle relevance, the authorising charter statement and the work component that carries it.

CHANGED-CASE COMMAND

Alter one risk condition. Keep unaffected steps fixed; explain exactly why the authorised boundary remains, narrows or reverses.

REPAIR CUE *If project charter and work breakdown structure seem interchangeable, restate one as authorisation and the other as decomposition.*

19 · Drill C · Launch disagreement

C3 WORKED · 4 MARKS

Prompt. A cross-functional team disagrees about launch readiness. Prepare a communication route that distinguishes evidence, interests, authority and escalation.

PATH	ANSWER CONTENT
1 Define	Identify people or groups affecting, affected by or perceiving themselves affected by the launch decision.
2 Connect	Set the communication objective as the required change in understanding, decision or action.
3 Test	Use conflict resolution to surface interests, test options and compare a workable alternative under the same criteria.
4 Qualify	Preserve evidence, dissent, criteria and ownership; assign decision, escalation and follow-through.
Total 4	Agreement is not proof; the record must carry the reasoning.

IF YOU SEE X → DO Y

X IN THE FACTS	Y IN THE ANSWER
Many people agree	→ ask for readiness evidence; do not infer it from consensus.
Groups want different things	→ surface interests, then test options under shared criteria.
No clear decision-maker	→ identify authority; allocate team accountability.
Evidence remains disputed	→ preserve dissent and specify an escalation trigger.
Message has no desired effect	→ rewrite the communication objective as understanding, decision or action.
Everyone was informed	→ ask whether the route changed what the objective required.

SAFE CLOSE

"The authorised decision-maker should __ after reviewing __. The record retains __, including dissent. If __ remains unresolved, escalate to __; review when __."

CLASSIC TRAP *Listing stakeholders without connecting their effects, interests or authority to the decision.*

20 · Cross-topic judgement deck

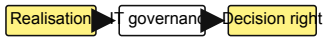
ALL FAQ

IF THE PROMPT SAYS…	REACH FIRST FOR…
"Feature", "platform", "delivered"	Output/capability/outcome separation.
"Changing", "uncertain", "failing workflow"	Lifecycle controls + charter boundary.
"Disagree", "readiness", "escalate"	Stakeholder route + decision record.
"On time", "weak adoption"	Governance + readiness + benefit review.
"Weakness before release"	Asset + control + assurance + duty.

21 · Drill D · Delivered, not adopted

C4 WORKED · 4 MARKS

Prompt. A programme delivered software on time but adoption is weak. Assign governance decisions, diagnose readiness and define a benefit review.



Source transfer ladder: outcome review requires governance and an explicit approval authority.

PATH	ANSWER CONTENT
1 Define	IT governance allocates decision rights and accountability for directing and controlling technology.
2 Connect	Delivery on time establishes only a delivery fact; weak adoption activates change-readiness analysis.
3 Test	Ask whether affected groups have practical capacity and willingness; change that condition and retrace the benefit claim.
4 Qualify	Assign the decision right, action and retained adoption evidence; define measured outcome and review trigger.
Total 4	Delivered capability becomes benefit only through adoption and measured outcome.

CHANGE ONE FACT

Capability exists; willingness does not	→ readiness remains weak; qualify adoption action.
Adoption improves; outcomes unmeasured	→ do not claim realised benefit; schedule review.
Decision right changes	→ reassign who approves action and accepts accountability.

CLASSIC TRAP *Treating "on time" as organisational success, or using governance as a synonym for project delivery.*

22 · Governance recitation

C4 FAQ

Who has the **decision right**? What **readiness** evidence exists? Which delivered **capability** is adopted? Which organisational **outcome** will be reviewed, by whom and when?

WEAK ANSWER	REPAIR
"The project succeeded."	Separate delivery completion from adoption and outcome evidence.
"Users resist change."	Test practical capacity and willingness; identify missing evidence.
"Management should act."	Name the defined decision and the holder of its decision right.
"Review later."	Name the outcome evidence, responsible actor and trigger.

BOUNDARY CHECK *If adoption improves but outcome evidence is still absent, narrow the conclusion; do not upgrade delivery into realised benefit.*

23 · Drill E · Quality weakness

C5 WORKED · 4 MARKS

Prompt. A team discovers a data-quality weakness shortly before release. Decide whether to proceed, what control evidence is required and who must be informed.

Source transfer map: professional duty constrains how asset risk and controls are judged.

PATH	ANSWER CONTENT
1 Define	Classify the affected information or supporting resource as an information asset requiring protection.
2 Connect	Define the risk; show how the proposed safeguard changes likelihood or consequence.
3 Test	Use planned, systematic quality-assurance evidence; change the nearest condition and retrace confidence.
4 Qualify	Describe residual risk, inform the relevant people, name acceptance authority and review trigger.
Total 4	Pressure changes timing, not the professional duty.

CLASSIC TRAPS

"A control exists"	≠ evidence it changes the defined risk.
"Testing was done"	≠ planned, systematic assurance evidence.
"Proceed; risk is acceptable"	→ unacceptable without residual risk and acceptance authority.
"Deadline requires release"	→ schedule pressure cannot erase duty.

24 · Exam-morning plan

STUDY STRATEGY

PASS	CLOSED-NOTES ACTION	DONE WHEN…
1 Terms	Recite the four terms in each of the five chains.	Definition and separate analytical job are clear.
2 Boundaries	Say the five "≠ / cannot" controls.	You can explain the error each prevents.
3 Cases	Give each four-mark path aloud.	All four marks reach a qualified conclusion.
4 Transfer	Reverse one case condition.	You say remains, narrows or reverses and why.
5 Close	Audit actor, action, evidence, review.	No recommendation outruns its evidence.

FIVE BOUNDARIES FROM MEMORY

Feature ≠ value · Label ≠ method · Consensus ≠ readiness evidence · Delivery ≠ benefit · Schedule pressure cannot erase duty.

FINAL RESET *Preserve direction words. Change one assumption at a time. Repair the first unsupported link; do not bury it under more terminology.*