LAS101: Critical Thinking, Reading, and Writing
Final Mock Exam

curated by The Peanuts

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Conditions: Closed Book

Directions:

1. This exam has 18 pages (including this page).

2. Write your name clearly at the top.

3. Do NOT use notes, textbooks, ChatGPT, or your friend who claims to be naturally logical.

4. Manage your time wisely. This is a mock exam, but your stress will be very real.

5. If you find yourself committing a fallacy, please correct it immediately. Or blame your subconscious, just identify which fallacy that is.

6. Analogical arguments are allowed. Comparing this exam to a nightmare is valid but unhelpful.

For solution, **click here**.

Part 1: MCQs

1. **Which of the following is an example of a necessary condition?**

   a) Eating junk food will cause weight gain

   b) If you don't have oxygen, you cannot survive

   c) Throwing a stone at a window will break it

   d) Studying hard guarantees getting an A

2. **In an analogical argument, the original analogue being compared to is called:**

   a) Secondary analogue

   b) Primary analogue

   c) Middle term

   d) Target analogue

3. **Which principle strengthens an analogical argument?**

   a) Few primary analogues

   b) Irrelevant similarities

   c) Diversity among primary analogues

   d) Vague conclusion

4. "If you are a SIIT student, then you are a Thammasat University student." This statement represents:

a) A necessary condition

b) A sufficient condition

c) Both necessary and sufficient

d) Neither necessary nor sufficient

5. Mill's Method of Agreement looks for:

a) What things were the same when the effect happened

b) What things were missing when the effect did not happen

c) The difference between two cases

d) Multiple causes for a single effect

6. The "Chicken and Egg" fallacy occurs when:

a) We assume causation from temporal sequence

b) We assume one event causes another just because they occur together

c) We use too small a sample size

d) We ignore disconfirming evidence

7. In a representative sample, the sample should be:

a) As large as possible

b) Similar to the larger population in relevant respects

c) Randomly selected without any criteria

d) Composed of volunteers only

8. **Which pair of sentences expresses the SAME proposition?**

a) "The cat is on the mat" and "The mat is under the cat"

b) "Some students passed" and "All students passed"

c) "Jack is tall" and "Jack is married"

d) "The book is red" and "The book is thick"

9. **"Academic scholars who work as teaching assistants often stay late." This clause is:**

a) Restrictive (no commas needed)

b) Nonrestrictive (commas needed)

c) Neither restrictive nor nonrestrictive

d) Both restrictive and nonrestrictive

10. **In the sentence "Unless it rains, we will play basketball," which propositions are asserted?**

a) It will rain AND we will play basketball

b) It will NOT rain AND we will play basketball

c) IF it does not rain, THEN we will play basketball

d) It might rain OR we might play basketball

11. **"Life is a journey" is an example of:**

a) Literal language

b) A metaphor

c) A connotation

d) A restrictive clause

12. In a Standard Categorical Proposition, the copula must be:

a) A form of "to be" verb

b) An action verb

c) An adjective

d) A quantifier

13. "All whales are mammals." In this proposition, which term is distributed?

a) Only the predicate "mammals"

b) Only the subject "whales"

c) Both subject and predicate

d) Neither subject nor predicate

14. The proposition "Some students are not athletes" is of which form?

a) A (Universal Affirmative)

b) E (Universal Negative)

c) I (Particular Affirmative)

d) O (Particular Negative)

15. In Standard Categorical Propositions, "some" means:

a) Exactly one

b) At least one

c) More than half

d) Almost all

16. **Which quantifier would be used to translate "Every student must attend" into standard form?**

a) Some

b) No

c) All

d) A few

17. **In the Modern Square of Opposition, which relationship is recognized?**

a) Contrary

b) Subcontrary

c) Contradictory only

d) All of the above

18. In a Venn diagram for categorical propositions, shading represents:

a) At least one member exists

b) No members exist in that area

c) All members exist in that area

d) The conclusion of an argument

19. **"No S are P" distributes:**

a) Only S

b) Only P

c) Both S and P

d) Neither S nor P

20. In the proposition "All students are hardworking people,"
which area of the Venn diagram is shaded?

a) The area of S outside P

b) The area of P outside S

c) The overlapping area

d) No area is shaded

21. If "All S are P" is true, then according to the Modern Square
of Opposition, "Some S are not P" is:

a) True

b) False

c) Undetermined

d) Possibly true

22. In a standard categorical syllogism, the middle term:

a) Appears in the conclusion

b) Appears once in each premise but not in the conclusion

c) Appears only in the major premise

d) Appears only in the minor premise

23. A syllogism with mood AEE and Figure 2 has the structure:

a) All M are P; No S are M; No S are P

b) All P are M; No S are M; No S are P

c) All M are P; No M are S; No S are P

d) All S are M; No M are P; No S are P

24. According to the rules of validity, if the middle term is not distributed in at least one premise, the syllogism commits:

a) Illicit major

b) Illicit minor

c) Undistributed middle

d) Negative premise fallacy

25. "Some P are M. All M are S. Some S are P." What is the mood and figure of this syllogism?

a) IAI-1

b) IAI-4

c) AII-2

d) IIA-3

26. Which rule states that "The premises cannot both be negative"?

a) Rule 1

b) Rule 2

c) Rule 3

d) Rule 4

27. In SWOT analysis, "New technology" would be classified as:

a) Strength

b) Weakness

c) Opportunity

d) Threat

28. A commercial shows a student drinking an energy drink, then immediately getting an A on an exam. This advertisement most likely commits which fallacy?

a) Appeal to authority

b) Questionable cause

c) Hasty generalization

d) Circular reasoning

29. The weasel word "virtually" in "Leaves dishes virtually spotless" serves to:

a) Strengthen the claim

b) Make the claim more scientific

c) Weaken the claim while appearing to be positive

d) Provide statistical evidence

30. Which of the following represents a SO (Strength-Opportunity) strategy in TOWS analysis?

a) Using company strengths to take advantage of external opportunities

b) Reducing weaknesses by exploiting opportunities

c) Using strengths to counteract threats

d) Minimizing weaknesses and avoiding threats

Part 2: Constructed Responses

Question 1

A university cafeteria wants to determine what caused a food poisoning outbreak. Below is the data from affected and unaffected students:

Student	Chicken	Salad	Rice	Dessert	Sick?
Student A	Yes	Yes	Yes	No	Yes
Student B	No	Yes	Yes	Yes	Yes
Student C	Yes	Yes	No	No	Yes
Student D	Yes	No	Yes	Yes	No
Student E	No	No	Yes	Yes	No

a) Which Mill's Method would be most appropriate to use here?

I think the best method would be joint method of agreement and difference

b) Based on the data, what is the likely cause of the food poisoning? Explain your reasoning.

The food that's likely to cause food poisoning is salad.

I use method of agreement to see what are the similarities in ones that have food poisoning turns out all people have food poisoning all have salad.

Then, I use method of difference to see what's missing in ones that don't have food poisoning turns out salad is not present in those w/o sickness

c) State whether the identified cause is a necessary condition, sufficient condition, both, or neither. Justify your answer.

I think it is sufficient condition only, because if the condition happens, the outcome always happen. But the outcome can happen without this condition as well.

Question 2

a) Identify whether each pair expresses the SAME or DIFFERENT propositions. If different, explain why.

i. "The students, who study hard, get good grades."
   "The students who study hard get good grades."

Nonrestrictive clause (with commas)
- Says ALL students get good grades
- Also says ALL students study hard
- Make two separate assertions

Restrictive clause (no commas)
- Refer to only to the subset of students who study hard
- Says only THOSE students (who study hard) get good grades
- Makes one assertion about a subset.

ii. "Bob is a policeman." / "Bob is a cop."

Same proposition

"Policeman" and "Cop" are synonyms
They refer to the same concept. While they have different connotations (formal vs informal),
∴ they express the same proposition.

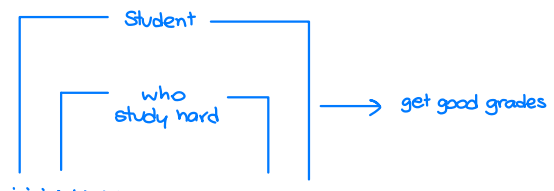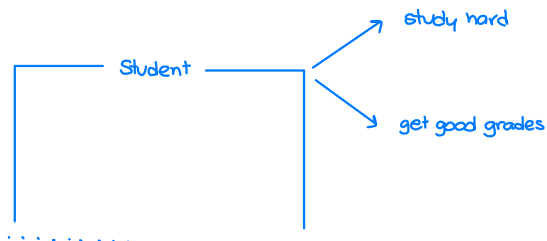iii. "SIIT students are Thammasat students." / "Thammasat students are SIIT students."

Different propositions.

First statement: All SIIT students are TU students (TRUE: SIIT ⊂ TU)
Second statement: All TU students are SIIT student (FALSE: TU has many faculties beside SIIT)
These express different relationships

b) For the *first pair* in part (a), draw diagrams to illustrate the difference between restrictive and nonrestrictive clauses.

study hard

Student

get good grades

Student

who
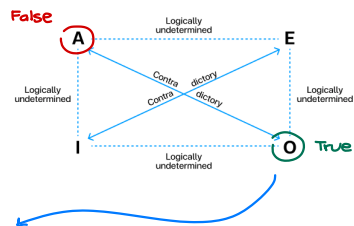study hard

get good grades

Question 3

Reformulate the following statements into Standard Categorical Proposition form. Identify the form (A, E, I, O) and underline the distributed terms.

a) "Most politicians cannot be trusted."

⤷ Some politicians are not <u>people who can be trusted</u>   (O)

b) "It is not true that all students dislike homework."

Some students are not <u>people who dislikes homework</u>   (O)

c) "Every smartphone user faces security risks."

All <u>smartphone users</u> are people who face security risks.   (A)

Using the Modern Square of Opposition, determine if the following immediate inference is valid.

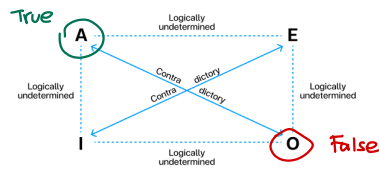**Premise:** "All discounted items are products on sale today."

Conclusion: "Therefore, it is false that some discounted items are not products on sale today."
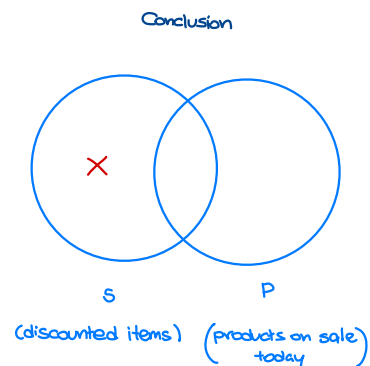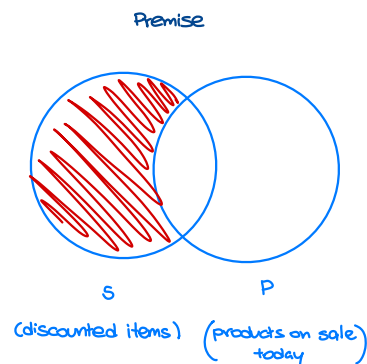
Step 1: Identify the forms of the premise and conclusion

(All) discounted items (are) products on sale today. (A)   True

(Some) discounted items (are not) products on sale today. (O)   False

Step 2: Use the Modern Square to determine validity

1. Both cannot be true   ✓
2. Both cannot be false   ✓
3. Opposite truth value. ✓

∴ Valid

Premise

S
(discounted items)

P
(products on sale today)

Conclusion

S
(discounted items)

P
(products on sale today)

Question 4

Complete the following syllogism using the given terms. Then identify the mood and figure.

Given terms:

- Major term: valuable items

- Minor term: imported products

- Middle term: luxury goods

Required mood and figure: EIO-2

$$P - M$$
$$S - M$$
$$S - P$$

Write your complete syllogism here:

Major Premise: _No valuable items are luxury goods_

Minor Premise: _Some imported products are luxury goods_

Conclusion: _Some imported products are not valuable items_

Analyze the following syllogism for validity.

+ A   All <u>social media influencers</u> are content creators. *(P over influencers, M over content creators)*
− O   Some content creators are not <u>honest advertisers</u>. *(M, S)*
− O   Some honest advertisers are not <u>social media influencers</u>. *(S, P)*
   4

a) Identify the major term (P), minor term (S), and middle term (M). ✓

Major Term (P) = Social media influencers
Minor Term (S) = Honest advertisers
Middle Term (M) = Content creators
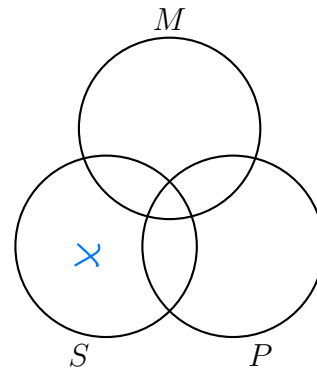
b) State the mood and figure of this syllogism. ✓
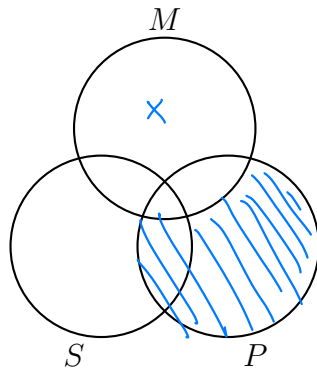
AOO − 4

c) Double-underline all distributed terms. ✓

d) Test the syllogism using the 5 Rules of Validity. List which rules are followed and which (if any) are violated.

Rules Followed	Rules Violated
2, 3, 4, 5	1

e) Draw the Venn diagram for this syllogism. Based on your diagram, is the syllogism valid or invalid? Explain.

M

×

S   P

M

×

S   P

Major Term (P) = Social media influencers

Minor Term (S) = Honest advertisers

Middle Term (M) = Content creators

+ A   All <u>social media influencers</u> are content creators.
– O   Some content creators are not <u>honest advertisers.</u>
– O   Some honest advertisers are not <u>social media influencers.</u>
   ↳

Question 5

Analyze the following advertisement scenario:

A cosmetics company launches an ad campaign featuring a famous actress. The ad shows the actress using their new "Age-Defying Miracle Serum" and claims: "Virtually eliminates wrinkles in up to 4 weeks! 9 out of 10 women saw improvement. Jennifer Lopez trusts this brand - shouldn't you?"

a) Identify and explain THREE logical fallacies or rhetorical devices used in this advertisement.

> 1. Appeal to Inappropriate Authority → Uses famous figure (Jennifer Lopez)
>   She's not dermatologize or skincare expert.
>
> 2. Questionable cause in beauty, ignore other factors like genetics, lifestyle.
>
> 3. Bandwagon appeal (everyone's using it) "shouldn't you" direct appeal to join the group

b) What weasel words are used, and how do they weaken the claims?

> "up to 4 weeks" could mean 4 weeks or 3, 2, 1, or even immediately
> makes a time frame sound specific while completely vague.

c) Suggest how a critical thinker should evaluate this advertisement before making a purchase decision. List at least 3 questions they should ask.

> • How large was the sample size? (10 women total or 1000?)
> • Are there any potential side effects or contraindications?
> • Should I consult a professional before trying anti-aging products?

Reference Tables

Rules of Validity for Categorical Syllogisms

Category	Rule	Violation
Distribution	1. The middle term must be distributed in at least one of the premises.	Undistributed middle term
Distribution	2. If either the major or the minor term in the conclusion is distributed, it must be distributed in the premise in which it occurs.	Illicit major term, illicit minor term
Negation	3. The premises cannot both be negative.	Two negative premises
Negation	4. If either premise is negative, the conclusion must be negative; and if the conclusion is negative, one premise must be negative.	Negative premise, affirmative conclusion OR Affirmative premises, negative conclusion
Quantity	5. If the conclusion is particular, one premise must be particular.	Universal premises, particular conclusion

Figures of Standard Categorical Syllogisms

	1st	2nd	3rd	4th
Major	M — P	P — M	M — P	P — M
Minor	S — M	S — M	M — S	M — S
Conclusion	S — P	S — P	S — P	S — P

Distribution in Standard Categorical Propositions

Form	Structure	Subject Distributed?	Predicate Distributed?
A	All S are P	YES	NO
E	No S are P	YES	YES
I	Some S are P	NO	NO
O	Some S are not P	NO	YES