INTERNATIONAL UNIVERSITY

SCHOOL OF LANGUAGES

MIDTERM EXAMINATION – SAMPLE TEST

Date: _____, 2022   Duration: **90 minutes**

Closed book exam   **Classroom test**

SUBJECT: Critical thinking (ID: PE008IU) – INDEX 1	
Approval by the School of Languages Signature Full name: Nguyễn Huy Cường (Ph.D)	**Lecturer:**
Proctor 1 Signature Full name:	**Proctor 2** Signature Full name:

STUDENT INFORMATION
Student name: **Student ID:**

INSTRUCTIONS (100-point scale, equivalent to 30% of the course)

1. *Purposes:*
   - Test your understanding of general concepts of the critical thinking, specifically the standards of and the barriers to critical thinking (CLO 1)
   - Test your ability to identify elements of an argument, construct, and evaluate deductive and inductive arguments (CLO 2)
   - Test your ability to test the validity of categorical logic using Venn diagram and propositional logic using truth tables (CLO 3)

2. *Requirements:*
   - **ONLY ONE HAND-WRITTEN A4 NOTE** allowed
   - No talking or sharing materials during the exam time
   - No mobile phone or other electronic devices during the exam time

Total pages: 12 (including this page)

QUESTIONS

1. **Which of the following is the BEST definition of an *unwarranted assumption*?**
   a) A proposition which always has a False value
   b) A statement agreed on by the general public
   c) A claim which is supported to a certain extent
   d) A belief taken for granted without good reason

2. Foreigner: *I love Vietnam so much. Your country is wonderful.*
   Nam: *Could you please tell me in what ways you find my country wonderful?*
   Nam's question seeks the information for which standard of critical thinking?
   a) Logic
   b) Precision
   c) Consistency
   d) Accuracy

3. Cheerful: *Wow, I assumed the test would be challenging, but it turned out to be a piece of cake!*
   Gloomy: *So you feel free to enjoy that piece of cake. I'm too fat to have more carbohydrates.*
   Which standard of critical thinking may be missing in the conversation above?
   a) Clarity
   b) Logical correctness
   c) Fairness
   d) Relevance

4. U.S. Declaration of Independence: *We hold these Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the Pursuit of Happiness.*
   Which standard of critical thinking can be observed in the U.S. Declaration of Independence?
   a) Accuracy
   b) Consistency
   c) Fairness
   d) Completeness

5. "*Cambodians and some other Asian countries eat insects as a delicacy. How disgusting!*"
   Which barrier to critical thinking can be observed in the text above?
   a) Cultural relativism
   b) Self-serving bias
   c) Conformism
   d) Wishful thinking

6. A: *You must give the evidence about your report on Tom's cheating.*
   B: *Why must I? I would declare Tom cheated because I believe he cheated.*
   Which barrier to critical thinking can be observed in the conversation above?
   a) Group bias
   b) Self-interest thinking
   c) Stereotype
   d) Tribalism

7. **Which of the following is NOT correct about an *argument* in critical thinking?**
     a) It is an opinion supported with evidence.
     b) It includes some propositions which lack logical correctness.
     c) Its conclusion is supported by one or more premises.
     d) It contains a claim defended with reasons.

8. Elon Musk: *You could warm Mars up, over time, with greenhouse gasses*.
   Which of the following is correct about Elon Musk's saying?
     a) It is a suggestion.
     b) It is a fact.
     c) It is an opinion.
     d) It is an explanation.

9. Kaito Kid: *Smiles and laughter are always good.*
   Which of the following is correct about Kaito Kid's saying?
     a) It is a statement.
     b) It is a proposal.
     c) It is an illustration.
     d) It is an exclamation.

10. Taylor Swift: *To me, Fearless is not the absence of fear. It's not being completely unafraid. To me, Fearless is having fears. Fearless is having doubts. Lots of them. To me, Fearless is living in spite of those things that scare you to death*.
    Which of the following is correct about Taylor Swift's saying?
     a) It contains some unsupported assertions.
     b) It is an argument in which the last sentence is the conclusion.
     c) It is a report.
     d) It is a case of self-serving bias.

11. *"Never deprive someone of hope (1). Some people face extreme difficulties in their lives and hope might be all they have.(2)"*
    Which of the following is correct about the text above?
     a) It is not an argument; it is an unwarranted assumption.
     b) It is an argument in which (1) is the conclusion and (2) is the premise.
     c) The whole text is a report; therefore, it is a non-argument.
     d) There must be a premise indicator for (1).

12. Bill Gates: *If you think your teacher is tough, wait till you get a boss.*
    Which of the following is correct about Bill Gates's saying?
     a) It is a hypothetical argument.
     b) It is a report.
     c) It is a conditional statement.
     d) It is an explanation.

13. **Which of the following is NOT correct about a *syllogism*?**
      a) It is a deductive argument.
      b) It has three premises and a conclusion.
      c) It is a three-line argument.
      d) Its conclusion can be valid or invalid.

14. *"I don't submit the test early because if I submit the test early, I miss the chance for a good score. And I don't want to miss the chance for a good score."*
    The argument above is a case of _____.
      a) Denying the antecedent
      b) Affirming the consequent
      c) Affirming the antecedent
      d) Denying the consequent

15. *"All IU students are required to take the critical thinking course. Two of my friends are IU students. It logically follows that these friends of mine have to take the critical thinking course."*
    This is a/an _____.
      a) argument from elimination
      b) argument from definition
      c) categorical argument
      d) argument from authority

16. *"There are 120 students taking the test now. Two students in the list of candidates are absent because they are attending their classes. It follows that _____."*
    Which of the following makes a <u>valid and sound</u> conclusion for the argument above?
      a) the list of candidates should include only 118 students
      b) there are 2 students taking their classes now
      c) the full list of candidates for the test is 122 students
      d) 118 students should take their classes, not the test

17. *"Last week I saw Chubby drinking milk tea at KOI Thé. This morning I saw her sipping milk tea at Gong Cha. No doubt that Chubby is a big fan of milk tea."*
    This is a/an _____.
      a) inductive generalization
      b) hypothetical argument
      c) predictive argument
      d) causal argument

18. *"Group 3 and Group 4 consist of 120 students. Most of the students in these two groups are BA majors. It is likely that one in five students in these two groups are BA majors."*
    Which of the following is correct about the argument above?
      a) It is a strong but uncogent argument.
      b) It is a valid but unsound argument.
      c) It is a strong categorical argument.
      d) It is a weak statistical argument.

19. A millionaire: *"I would choose a lazy person to do a hard job. This is because a lazy person will find an easy way to do it."*

Which of the following is correct about the millionaire's saying?

    (a) It is not an argument; it is an unwarranted assumption.
    (b) It is an argument from authority.
    (c) It is a causal argument.
    (d) It is an argument from analogy.

20. *"In Semester 2, my friend insisted on a five-day vacation before the next school year. Now he is taking the summer semester. However, there will be a one-week break after the summer semester's final exam. Chances are that he will take his planned vacation during this break."*

The argument above is a/an _____.

    a) strong inductive generalization
    b) weak argument from analogy
    c) weak causal argument
    d) strong predictive argument

21. In categorical logic, a *copula* is used to _____.

    a) name a class serving as a subject term
    b) indicate a number of class items
    c) link the subject term and the predicate term
    d) name a class serving as a predicate term

22. *"Whoever listens to lofi music is a lover of chill moments."*

Which of the following is the standard form of the categorical statement above?

    a) No lovers of chill moments are listeners of lofi music.
    b) All listeners of lofi music are lovers of chill moments.
    c) All lovers of chill moments are listeners of lofi music.
    d) Everyone who listens to lofi music are lovers of chill moments.

23. *"Every student who retakes the quizzes for revision learns seriously (1).*
There are students who do not retake the quizzes for revision (2).
So, not a student learns seriously (3)."

Which of the three statements can be translated into the standard form "No S are P"?

    a) Statement (1)
    b) Statement (2)
    c) Statement (3)
    d) None is correct

24. *"Most teenagers love TikTok."*

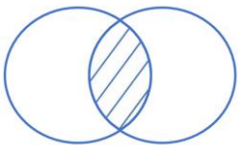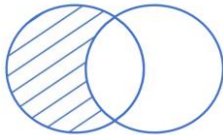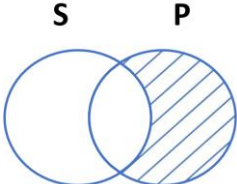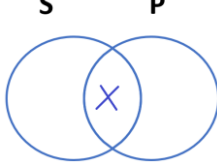**Which of the following has the same standard categorical form as the statement above?**

    a) A few football players break the game's rules.
    b) If you're an American, you eat fast food.
    c) Everyone in this group likes gossiping.
    d) Not a single woman hates shopping.

25. *"Many fans of Minions: The Rise of Gru (F) review the movie on Facebook (R). These reviewers advertise the movie indirectly (A). So if you are a fan of Minions: The Rise of Gru, you must advertise the movie indirectly. "*

Which of the following is the best symbolic form of the argument above?

a) Some F are R. Some R are not A. So, all F are A.
b) Some F are not R. Some R are A. So, all F are A.
c) Some F are R. Some R are A. So, no F are A.
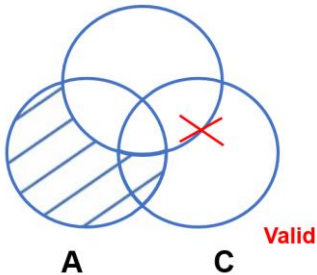d) Some F are R. Some R are A. So, all F are A.
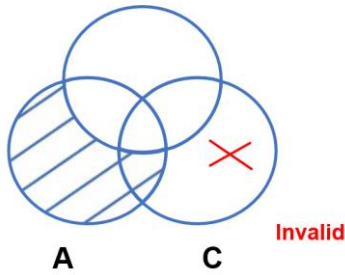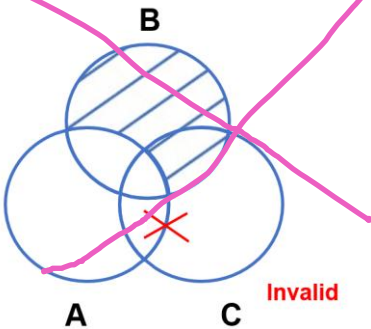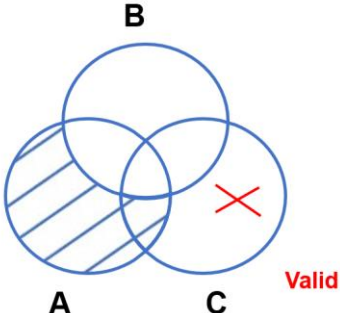
26. Which of the following figures WRONGLY represents the categorical statement above it?

a) **Not a single S is P**	c) **There are some S that are not P**
S P	S P
b) **Every P is an S.**	d) **A few S are P**
S P	S P

27. *"All A are B. Some C are not B. So no A are C."*

Which of the following is the correct Venn diagram and validity of the argument above?

a) Diagram A
b) Diagram B
c) Diagram C
d) Diagram D

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28. *"A number of Covid patients (P) are students (S). All Covid patients (P) are online learners (L). So, there are students who learn online."*

Which of the following is the best Venn diagram and validity of the above argument?

a) Diagram A
b) Diagram B
c) Diagram C
d) Diagram D

A.

Valid

B.

Valid

C.

Invalid

D.

Invalid

29. *"Any person (P) with limited income are budget travelers (T). None of the budget travelers (T) are considered as VIPs (V). So, if a person has limited income, he/she is not a VIP."*

Which of the following is the best Venn diagram and validity of the above argument?

a) Diagram A
b) Diagram B
c) Diagram C
d) Diagram D

A.

Valid

B.

Valid

C.

Invalid

D.

Invalid

30. *"Some people (P) care for their community (C). Many of those community carers do not work as social workers (S). So, some people are social workers."*
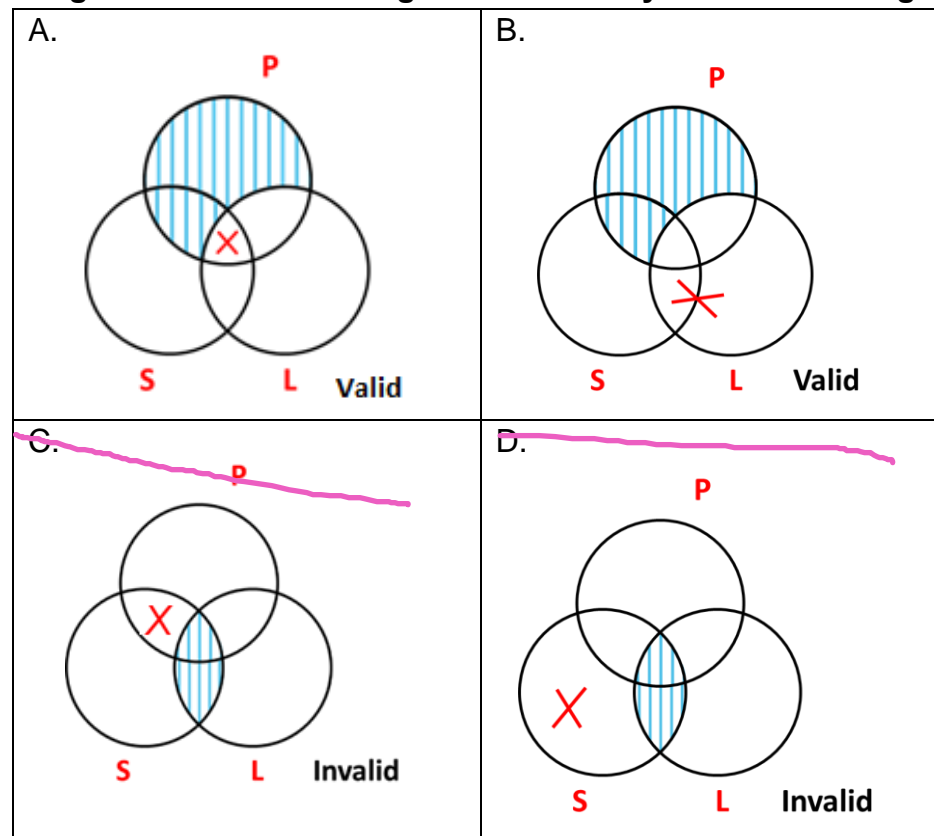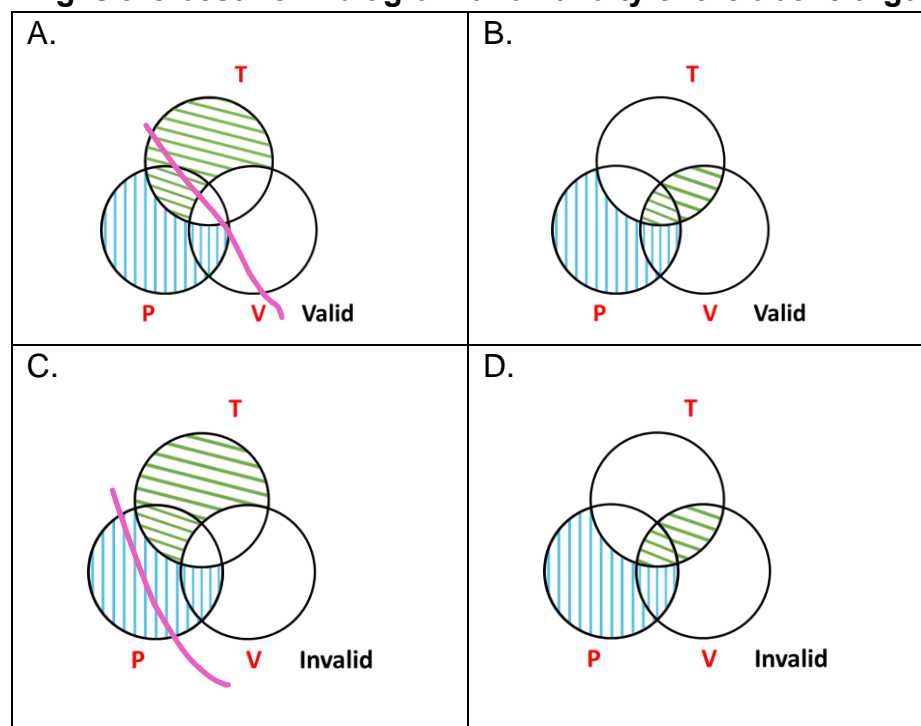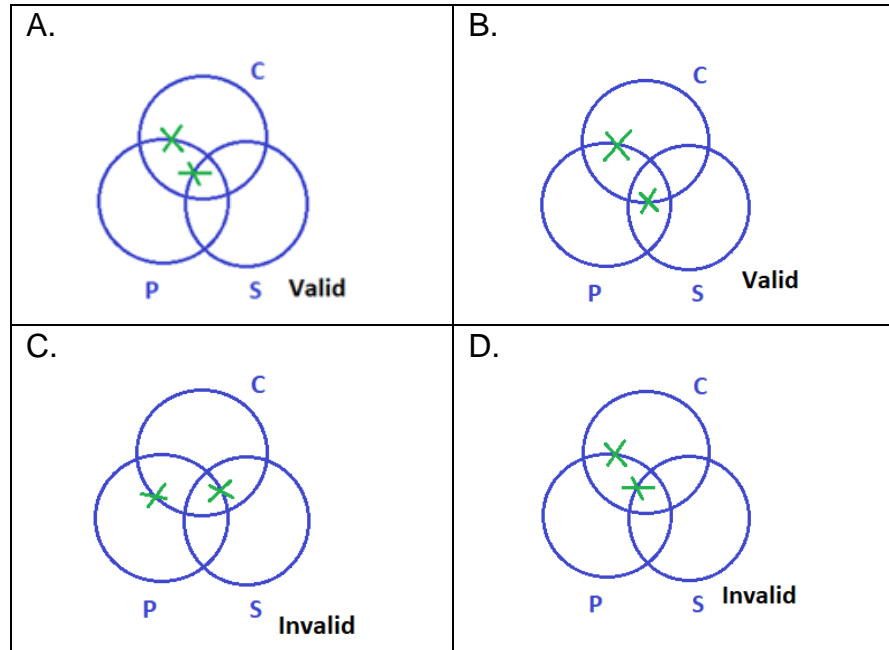
Which of the following is the best Venn diagram and validity of the above argument?

a) Diagram A
b) Diagram B
c) Diagram C
d) Diagram D

A.	B.
Valid	Valid
C.	D.
Invalid	Invalid

31. In propositional logic, a *compound statement* _____.
   a) contains statements of the same truth values
   b) is always treated as a simple statement
   c) consists of two or more statements
   d) must consist of a conjunction and a negation

32. ~X v Y → Z
   Which of the following is correct about the symbolic form above?
   a) It only includes a disjunction and a conditional statement.
   b) It includes a negation, a disjunction, and a conditional statement.
   c) It is a symbolic argument with three variables.
   d) It is a simple proposition for which we can only generate a truth table.

33. A → ~(B & C)
   ~A v B
   ∴ C v B
   Which of the following is correct about the symbolic form above?
   a) The first line can also be written as A → ~B & ~C
   b) The second line is the symbolic form of a conjunction and a negation.
   c) It is a symbolic form of three compound propositions, not an argument.
   d) It is an argument with three variables, and the conclusion is a disjunction.

34. *"If we take courses in the summer (S), we can graduate sooner (G). It's not the case that we take courses in the summer but we don't graduate sooner."*
   Which of the following is the symbolic form of the given text?

a) S → G	b) S → G	c) S → G	d) S → G
~S & ~G	~S & G	~(S & ~G)	~(S v ~G)

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35. *"If you review the lessons well (R) and do well on the test (D), you will feel happy (F). It's not the case that you don't review the lessons well but you can do well on the test. So, you will feel happy if you do well on the test"*

Which of the following is the symbolic form of the given text?

a) R & D → F
   ~R & ~D
   ∴ D → F

b) R & D → F
   ~(~R & D)
   ∴ D → F

c) R & D → F
   ~(R & ~D)
   ∴ F → D

d) R & D → F
   ~R & D
   ∴ F → D

36. Which column(s) contain(s) wrong value(s)?

a) 1 only
b) 1 and 3
c)   3 only
d) 3 and 4

				1	**2**	**3**	**4**
a	**b**	**~a**	**~b**	**a v ~b**	**b & ~a**	**a → b**	**~a&~b**
T	T	F	F	T	F	T	F
T	F	F	T	T	F	T	F
F	T	T	F	F	T	T	F
F	F	T	T	T	F	T	F

37. Which of the following is the correct Truth table for the proposition ~O v ~P?

a) Table A
b) Table B
c) Table C
d) Table D

A.

O	P	~O	~P	~O v ~P
T	T	F	F	F
T	F	F	T	T
F	T	T	F	T
F	F	T	T	T

B.

O	P	~O	~P	~O v ~P
T	T	F	F	F
T	F	F	T	T
F	T	T	F	T
T	F	F	F	T

C.

O	P	~O	~P	~O v ~P
T	T	F	F	T
T	F	F	T	T
F	T	T	T	F
T	F	F	T	T

D.

O	P	~O	~P	~O v ~P
T	T	F	F	T
T	F	F	T	T
F	T	T	F	T
T	F	F	T	T

38. *"If you check your answers carefully (C), you will feel confident after your submission (F). Either you check your answers carefully or you will not feel confident after your submission. So you check your answers carefully."*

Choose the correct truth table and validity check based on the argument above.

a) Table A
b) Table B
c) Table C
d) Table D

A.

C → F
C v ~F
∴ C   **Invalid**

C	F	~F	C→F*	C v ~F*	C^C
T	T	F	T	T	T
T	F	T	F	T	T
F	T	F	T	F	F
F	F	T	T	T	F

B.

C → F
C v F
∴ C   **Valid**

C	F	~F	C→F*	C v F*	C^C
T	T	F	T	T	T
T	F	T	F	T	T
F	T	F	T	T	T
F	F	T	T	F	F

C.

C → F
C v ~F
∴ ~C   **Invalid**

C	F	~F	C→F*	C v ~F*	~C^C
T	T	F	T	T	F
T	F	T	F	T	F
F	T	F	T	F	T
F	F	T	T	T	T

D.

C → F
C v ~F
∴ C   **Valid**

C	F	~F	C→F*	C v ~F*	C^C
T	T	F	T	T	T
T	F	T	F	T	T
F	T	F	T	F	F
F	F	T	T	T	F

39. Choose the correct comment about the following symbolic argument.

P → ~Q v R
~R & Q
∴ Q   **Truth table**

P	Q	R	~Q	~R	~Q v R	P → ~Q v R*	~R & Q*	Q^c
T	T	T	F	F	T	T	F	T
T	T	F	F	T	F	F	T	T
T	F	T	T	F	T	T	F	F
T	F	F	T	T	T	T	F	F
F	T	T	F	F	T	T	F	T
F	T	F	F	T	F	T	T	T
F	F	T	T	F	T	F	F	F
F	F	F	T	T	T	T	F	F

Conclusion: INVALID

a) Line of symbolic form (FIRST LINE) has a wrong proposition.
b) The marking (*) of a premise is wrong.
c) Column of **P → ~Q v R** has a wrong value.
d) The conclusion is correct.

40. **Which of the following is the correct symbolic form and conclusion from the argument and the truth table?**

"You can't relax at night (R). If you pay attention in class (A), you don't need to learn the lessons again at night (L). So you can relax at night if you pay attention in class."

R*	A	L	~R	~L	A →L*	A →~L*	A →R^c	R →A^c
T	T	T	F	F	T	F	T	T
T	T	F	F	T	F	T	T	T
T	F	T	F	F	T	T	T	F
T	F	F	F	T	T	T	T	F
F	T	T	T	F	T	F	F	T
F	T	F	T	T	F	T	F	T
F	F	T	T	F	T	T	T	T
F	F	F	T	T	T	T	T	T

a) R	b) ~R	c) R	d) ~R
A → L	A → ~L	A → L	A → ~L
So, R → A	So, A → R	So, A → R	So, A → R
Invalid	**Invalid**	**Valid**	**Valid**

End of the test

ANSWER SHEET

Student name:

Student ID:

INDEX 1:

Select ONLY ONE answer to each question.

1	a	b	c	d		21	a	b	c	d
2	a	b	c	d		22	a	b	c	d
3	a	b	c	d		23	a	b	c	d
4	a	b	C	d		24	a	b	c	d
5	a	b	c	d		25	a	b	c	d
6	a	b	c	d		26	a	b	c	d
7	a	b	c	d		27	a	b	c	d
8	a	b	c	d		28	a	b	c	d
9	a	b	c	d		29	a	b	c	d
10	a	b	c	d		30	a	b	c	d
11	a	b	c	d		31	a	b	c	d
12	a	b	c	d		32	a	b	c	d
13	a	b	c	d		33	a	b	c	d
14	a	b	c	d		34	a	b	c	d
15	a	b	c	d		35	a	b	c	d
16	a	b	c	d		36	a	b	c	d
17	a	b	c	d		37	a	b	c	d
18	a	b	c	d		38	a	b	c	d
19	a	b	c	d		39	a	b	c	d
20	a	b	c	d		40	a	b	c	d

✗ Selected   ⊗ Unselected   ● Reselected

------- THE END ------

Detailed test structure for the midterm exam

Weighting	Contents	Item specifications	Question
Q1 → Q20: 40 points (2 points/each)	Chapter 1	**1** theoretical question	Q1
		3 standards of critical thinking	Q2-Q4
		2 barriers to critical thinking	Q5-Q6
	Chapter 2	**1** theoretical question	Q7
		2 statements and non-statements	Q8-Q9
		3 arguments and non-arguments	Q10-Q12
	Chapter 3	**1** theoretical question	Q13
		3 deductive arguments	Q14-Q16
		4 inductive arguments	Q17-Q20
Q21 → Q31: 30 points (3 points/each)	Chapter 9	**1** theoretical question	Q21
		3 stylistic to standard propositions (*all, no, some*).	Q22-Q44
		1 translating into symbolic argument	Q25
		1 rule check for Venn diagram	Q26
		1 Venn diagram for standard argument	Q27
		3 Venn diagrams for stylistic arguments	Q28-Q30
Q31 → Q40: 30 points (3 points/each)	Chapter 10	**1** theoretical question	Q31
		2 understanding the symbolic form	Q32-Q33
		1 translating into symbolic proposition(s)	Q34
		1 translating into symbolic argument	Q35
		1 T/F check of all propositions	Q36
		2 truth tables for two variables	Q37-Q38
		2 truth tables for three variables	Q39-Q40
Note: Theoretical questions check random concepts in the chapters.			

ANSWER KEY

1	a	b	c	~~d~~		**21**	a	b	~~c~~	d
2	a	~~b~~	c	d		**22**	a	~~b~~	c	d
3	a	b	c	~~d~~		**23**	a	b	~~c~~	d
4	a	b	~~c~~	d		**24**	~~a~~	b	c	d
5	~~a~~	b	c	d		**25**	a	b	c	~~d~~
6	a	~~b~~	c	d		**26**	a	b	~~c~~	d
7	a	~~b~~	c	d		**27**	a	~~b~~	c	d
8	a	b	~~c~~	d		**28**	~~a~~	b	c	d
9	~~a~~	b	c	d		**29**	a	~~b~~	c	d
10	~~a~~	b	c	d		**30**	a	b	c	~~d~~
11	a	~~b~~	c	d		**31**	a	b	~~c~~	d
12	a	b	~~c~~	d		**32**	a	~~b~~	c	d
13	a	~~b~~	c	d		**33**	a	b	c	~~d~~
14	a	b	c	~~d~~		**34**	a	b	~~c~~	d
15	a	~~b~~	c	d		**35**	a	~~b~~	c	d
16	a	b	~~c~~	d		**36**	a	b	c	~~d~~
17	~~a~~	b	c	d		**37**	~~a~~	b	c	d
18	a	b	c	~~d~~		**38**	~~a~~	b	c	d
19	a	b	~~c~~	d		**39**	a	b	~~c~~	d
20	a	b	c	~~d~~		**40**	a	~~b~~	c	d