



**College of Humanities and Education
School of Arts and Humanities
Bachelor of Applied Social Science**

Examination Paper

APS502 Critical Thinking, Reasoning, and Biases

Semester 1, 2019

Time: 2 hours 10 Minutes

Total: 100 marks
(50% of the total)

Date of Examination:

Time:

Total No. of Pages: 8

Instructions:

1. There are 7 sections in this paper. Attempt ALL sections. In Section VI (METAPHORICAL THINKING), you are required to choose only one of the given concepts.
2. You are allowed 10 minutes extra to read the examination paper.
3. Write all your answers on the Answer Sheet provided.
4. Please write your **ID number** on the Answer Sheet.
5. Take 10 minutes to check and revise your answers after completing all the sections.

I. TRUE OR FALSE? (25 marks)

If the following statements are true, answer 'T'; if false, answer 'F'.

1. If an argument is sound, it is possible that its premises are true while its conclusion is false.
2. 'If she lives in Suva, she does not live in the US' expresses a conditional sentence, not an argument.
3. Consider the following argument 'If the price of petrol rises, transportation fees will become more expensive. The price of petrol does not rise. So transportation fees will not become more expensive.' This is an instance of the formal fallacy called 'denying the antecedent'.
4. The hidden assumption of the argument 'He is not a FNU student, so he does not care about any changes to the campuses of FNU' is 'If he cares about any changes to the campuses of FNU, he is a FNU student.'
5. 'Would you like a cup of coffee?' is a statement.
6. 'You should not be biased' is a heuristic of critical thinking.
7. Open-mindedness is a habit of mind of critical thinking.
8. 'Mary introduced her brother to Mr. Smith, and he was delighted' is a case of referential ambiguity.
9. 'What a pity!' is a case of expressive use of language.
10. *Reductio ad absurdum* is a valid argument form.
11. Below is a case of informal fallacy called 'straw man' or 'straw person':
A: 'We should clean out the store rooms. They are getting a bit messy.'
B: 'Why, we just went through those store rooms last year. Do we have to clean them out every day?'
12. 'I think she is popular because many people like her' is question-begging.
13. Post-hoc is a kind of *ad hominem*.
14. After having decided what alternative to take to solve a problem, one had better check the fall-back positions, among others.
15. 'Stealing is wrong' is a moral claim.
16. Jane has set up a plan to prepare for her examination. It is a deliberate action, not a routine.
17. 'The task is like a mountain' is a simile.
18. In the sentence 'The foreign workers in that country earn their *bread* with lots of difficulties', a metonymy is used.
19. In the sentence 'Ask the *head* of the company whether they can sell their products to us with discounts', a symbol is used.
20. 'All black people are not good at swimming' is a stereotype.
21. People have a tendency to be strongly affected by, or relied on the first piece of information or some pre-existing reference point in their decision-making process. This tendency is called 'confirmation bias'.
22. Bandwagon effect is concerned with a bias such that one is just blindly influenced by a fad or trend to conform to certain values.
23. A feature of creative thinking is that it is linear.
24. One of the reasons why critical thinking is not separated from creative thinking is that the latter involves not only innovation but evaluation.
25. Creativity is enhanced by the ability to detect connections between ideas.

II. MULTIPLE CHOICE (25 marks)

1. Which of the following sentences has a directive use?
 - a. He is very sad.
 - b. Mary usually gets up early.
 - c. Don't give up!
 - d. $29+71=100$

2. Consider this genus-and-differentia definition of the word 'table': *A table is a piece of furniture with a flat top supported by one or more upright legs.* What is the genus of the definition?
 - a. a flat top
 - b. furniture
 - c. table
 - d. supported by one or more upright legs

3. Which of the following terms has a positive connotation?
 - a. politician
 - b. pedagogue
 - c. bureaucrat
 - d. professional

4. Conclusion signals include:
 - a. insofar as
 - b. thanks to
 - c. since
 - d. so.

5. Premise signals include:
 - a. thus
 - b. as a result
 - c. because
 - d. therefore.

6. Which of the following sets of statements does NOT express an argument?
 - a. Since he works hard, he can succeed. Moreover, his success is also due to the fact that he is willing to improve himself.
 - b. I don't know what she really wants. Anyway, I shall be patient in listening to her.
 - c. Today the weather is fine. Therefore, we go out.
 - d. Europe's economy is getting worse. The reason is that the unemployment rate is rising.

7. Which of the following remarks about an argument is correct?
 - a. An argument must have 3 statements.
 - b. An argument must have a conclusion.
 - c. An argument must have at least 2 premises.
 - d. An argument must have true statements.

8. Which of the following arguments (not all of them having a correct argument form) is an instance of *modus ponens*? (Note: (i) *modus ponens* is a correct argument form, (ii)

its form should be 'If p , then q . p . Therefore, q .' (iii) universal statements (those with 'every' and 'all', etc.) can be rewritten into an if-then statement.)

- a. If there is no water, then flowers cannot grow.
There is water.
-

Therefore, flowers can grow.

- b. All roses are beautiful.
This (flower) is a rose.
-

Therefore, this (flower) is beautiful.

- c. Every cat chases mice.
Lulu does not chase mice.
-

Therefore, Lulu is not a cat.

- d. If you smile more often, you can get more friends.
You can get more friends.
-

Therefore, you smile more often.

9. Which of the following arguments is an instance of *hypothetical syllogism*? (Note: (i) its form should be 'If p , then q . If q , then r . Therefore, if p , then r .' (ii) universal statements [those with 'every' and 'all', etc.] can be rewritten into an if-then statement.)

- a. All FNU students can speak English. If a person can speak English, he or she can communicate with many people from all over the world. So all FNU students can communicate with many people from all over the world.
- b. If you love Singapore, then you should like to work in Singapore. If you love Singapore, then you should like to live in Singapore. Therefore, if you love Singapore, then you should like to work and live in Singapore.
- c. Every living thing needs food. If a living thing does not have food to eat, it will die. But a living thing does not want to die.
- d. If you travel, you can learn a lot. If you have no money, you do not travel. So if you are poor, you cannot learn a lot.

10. In deductive logic, we assess an argument's

- a. accuracy.
b. explanatory power.
c. validity.
d. inductive strength.

11. Which of the following arguments is deductive?

- a. Chickens can get a cold, and many cases show that their diseases can infect us very seriously. So we should kill the chickens to prevent from being infected by their illness.
- b. A university found that 70% of their sample population would like the university to build a student hostel. Therefore, the university believes that, very likely, 70% of the university's students would support the building of a student hostel.
- c. This painting is like that one in the following respects: created by Picasso, full of vigour, and praised by most critics. If that one can be sold at the price of 1 million, then we expect this one can also be fixed at such a high price.

- d. If the water of Navua River can be improved, we can have a swimming competition there. If we can have a swimming competition there, there will be more tourists. Consequently, if the water of Navua River can be improved, there will be more tourists.
12. Which of the following arguments is a case of formal fallacy?
- If you really want to be healthy, you should stop smoking. You do not stop smoking. Therefore, you do not really want to be healthy.
 - Either it rains, or we go for a picnic. It does not rain. Therefore, we go for a picnic.
 - Every person's life is important. So David's life is important.
 - If you go abroad, then you must not be able to take care of your parents. You do not go abroad. So you must be able to take care of your parents.
13. How can we achieve the objectivity of fair-minded, multi-dimensional thinking?
- Based on intellectual humility.
 - Consider the other points of view in addressing the relevant questions, problems, and issues of significance.
 - Identify the strength and weakness of various standpoints.
 - All of the above
14. What do critical consumers of news do?
- They assess news stories for their clarity, accuracy, relevance, depth, breadth, and significance.
 - They follow the social conventions and taboos in defining issues and problems.
 - They interpret news according to their pre-existing beliefs.
 - None of the above.
15. In evaluating a hypothesis, we compare it with other hypotheses, and consider its clarity, testability, plausibility and
- explanatory power.
 - soundness.
 - validity.
 - psychological persuasiveness.
16. What kind of informal fallacy does the following case of reasoning commit?
'If you don't agree with our ideas, you may be fired.'
- Ad hominem*
 - Appeal to force
 - Appeal to authority
 - Red herring
17. What kind of informal fallacy does the following case of reasoning commit?
'A: Death penalty is wrong, since, except in the case of self-defence or of a just war, taking the life of a person is uncivilised.
B: Every day we kill chickens, pigs and cows, etc., so we are uncivilised, according to you. Killing need not be uncivilised, and death penalty is not wrong.'
- Straw person
 - Post hoc
 - Appeal to popularity
 - Appeal to common practice

18. What kind of informal fallacy does the following case of reasoning commit?
'No one can prove that there is no life in other planets. So I can insist that there is life in other planets.'
- False dilemma
 - Arguing from ignorance
 - Post hoc
 - Begging the question
19. A statistical argument does NOT consist of a premise showing:
- a certain percentage of a target population having a target property
 - a certain percentage of a sample population having a target property
 - the accuracy assumption
 - the representativeness assumption
20. What is the conclusion of the following moral argument?
'I don't like dishonest people. Their behaviour often produces harms to other people. Moreover, I think not expressing oneself truthfully is not virtuous.'
- 'I don't like dishonest people.'
 - 'I must be honest.'
 - 'Their behaviour often produces harms to other people.'
 - 'Not expressing oneself truthfully is not virtuous.'
21. 'If a hypothesis is true, then its test should have a positive result. Now this test has a positive result. So this hypothesis *is* true.' This reasoning commits a formal fallacy of:
- affirming the antecedent
 - denying the antecedent
 - affirming the consequent
 - denying the consequent.
22. Which of the following statements below does not indicate a difference between a deductive and inductive argument?
- The premise(s) of a deductive argument entails its conclusion, while the premise(s) of an inductive argument does not.
 - A deductive argument is either valid or invalid, while an inductive argument has only inductive strength.
 - A deductive argument is conclusive, but an inductive argument is not.
 - We infer when we make a deductive argument, but we do not infer when we make an inductive argument.
23. Which of the following expressions is vague?
- His height is 5 feet 8 inches.
 - It is an orange shape.
 - I love romantic atmosphere.
 - Japan is located in Asia.
24. Which of the following values is NOT a value of critical thinking?
- clarity
 - justice
 - truth
 - novelty.
25. Which of the following is NOT a principle of creative thinking:

- a. New ideas are composed of old elements
- b. Not all new ideas are on a par
- c. Creativity is enhanced by the ability to detect connections between ideas
- d. Before drawing a conclusion, check whether you have responded adequately the opinions from the cons side of the issue concerned.

III. MISSING PREMISE OR CONCLUSION (12 marks)

On the answer sheet, write down the missing premise or conclusion of the following arguments:

1. (i) If he has the time and money, he will go to the concert.
 (ii)

Conclusion: Therefore, it is not the case that he has the time and money.

2. (i) If she works hard, then she can understand the lesson well.
 (ii) If she can understand the lesson well, then

Conclusion: Therefore if she works hard, then she can get a good result in the examination.

3. (i) If we advance, we do not drown in the river.
 (ii) If we retreat, we are not killed by machine-gun fire.
 (iii) Either we advance or we retreat.

Conclusion: Therefore, either or

4. (i) All perfect people are understanding.
 (ii) All understanding people can forgive.

Conclusion: Therefore, all can forgive.

IV. VALID OR INVALID? (8 marks)

Evaluate the following arguments by determining whether they are valid or invalid. Just write down 'valid' or 'invalid' on the answer sheet.

- 1. Whenever the stock market goes up, he is happy in spirit and generous in action. The stock market did go up. Therefore, he is happy in spirit and generous in action.
- 2. If the weather is good, then the road will be open. The weather is not good, so the road will not be open.
- 3. If Dorothy was nervous, she skated badly. If she skated badly, she did not win the gold medal. So if she was nervous, she did not win the gold medal.
- 4. Either Peter is having lunch in a restaurant or he is still working in his company. He is not working in his company. Therefore, he is having lunch in a restaurant.

V. DECISION-MAKING (10 marks)

Suppose you want to travel in China after studying a summer programme in Shanghai. However, at this time, an infective disease called H7N9 is affecting a number of cities in China, especially Shanghai; a number of infected patients have been dead. So it will be risky if you go to Shanghai. But if you do not go to Shanghai, you will lose the chance of studying the summer programme there.

1. Define the problem that you face in this situation.
2. What are the pros and cons of the option 1: going to Shanghai? (State two pros and two cons.)
3. What are the pros and cons of the option 2: not going to Shanghai? (State two pros and two cons.)
4. Evaluate further these two options by weighing their pros and cons. (Of course, it depends on different situations. The summer programme might be extremely important or might be not so important. You can imagine how important it is and assign your points to studying a summer programme in Shanghai. But your points must be assigned consistently.)
5. What is the decision you should make according to your calculation?

VI. METAPHORICAL THINKING (10 marks)

1. Using your imagination, give a metaphor to one of the following concepts that indicates your understanding, experience and attitude of the subject matter:

LEARNING
FREEDOM
DEATH
HAPPINESS

- a. To have a metaphor of this concept, suggest one concrete thing you are familiar with that can be compared with one of the above concepts.
The concept you have chosen is: _____

The concrete thing to be compared with this concept is:

- b. Write down three correspondences between the concept you have chosen and the concrete thing you compare with this concept.
- c. To indicate the form of your metaphor, explain why the three aspects you highlight in your comparison (i.e., the correspondences) are connected in a coherent way.
- d. As indicated in your metaphor, what is your attitude towards the concept?

VII. CREATIVITY: RANDOM-WORD METHOD (10 marks)

Suppose you are working for the government of Fiji to improve the public bus system. In order to assist your creative thinking, you use the random-word method, and the random-word, it happens, is 'disease'.

- a. Give one bridging idea that connects 'public bus system in Fiji' and 'disease'.
- b. Give two final, workable, ideas (inspired by the bridging idea) that the present public bus system in Fiji can benefit and put into practice.

END OF PAPER

ANSWER SHEET

APS502 Introduction to Critical Thinking, Reasoning, and Biases
SEMESTER I, 2019
FINAL EXAMINATION

Student ID number:

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ANSWER ALL QUESTIONS. Total: 100 marks

I. TRUE OR FALSE? (25 marks)

Write the answers 'T' or 'F' below.

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
11.	12.	13.	14.	15.
16.	17.	18.	19.	20.
21.	22.	23.	24.	25.

II. MULTIPLE CHOICE (25 marks)

Write the answers 'a', 'b', 'c', or 'd' below.

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
11.	12.	13.	14.	15.
16.	17.	18.	19.	20.
21.	22.	23.	24.	25.

III. MISSING PREMISE OR CONCLUSION (12 marks)

1. _____

2. If she can understand the lesson well, then _____

3. Therefore, either _____ or _____

4. Therefore, all _____ are forgiving.

IV. VALID OR INVALID? (8 marks)

1.	2.	3.	4.
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V. DECISION-MAKING (10 marks)

1. Problem:

2. Option 1: going to Shanghai

PROs	(i)	(ii)
CONs	(i)	(ii)

3. Option 2: not going to Shanghai

PROs	(i)	(ii)
CONs	(i)	(ii)

4. Weighing:

Option 1 (just write down the points below)

PROs	(i)	(ii)	(i)+(ii)
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CONs	(i)	(ii)	(i)+(ii)

Option 2 (just write down the points below)

PROs	(i)	(ii)	(i)+(ii)
CONs	(i)	(ii)	(i)+(ii)

5. Your decision: option 1 or option 2? _____

VI. METAPHORICAL THINKING (10 marks)

1. a. The concept you have chosen is: _____
 The concrete thing to be compared with this concept is:

- b. Three correspondences

The concept you have chosen: _____	The concrete thing to be compared: _____
1.	1.
2.	2.
3.	3.

c. _____

d.

VII. CREATIVITY: RANDOM-WORD METHOD (10 marks)

1.

a. Bridging idea:

b. Final ideas:

(i) _____

(ii) _____

-----END OF PAPER-----