BINDURA UNIVERSITY OF SCIENCE EDUCATION

DEPARTMENT OF INTELLIGENCE AND SECURITY STUDIES

BACHELOR OF COMMERCE IN FINANCIAL INTELLIGENCE

FI204 LOGIC

DURATION: 3 HOURS

TOTAL: 100 MARKS

MAR 2023

INSTRUCTIONS TO CANDIDATES

1. Answer any **four** questions.
2. Each question carries 25 marks.
3. Begin each question on a fresh leaf
4. No cell phones are allowed in the examination room.

Question One

Compare and contrast deductive and inductive reasoning. (25 marks)

Question Two

a) Identify the premises and conclusions in the following passages.

i) Since it turns out that all humans are descended from a small number of African ancestors in our recent evolutionary past, believing in profound differences between the races is as ridiculous as believing in a flat earth. (2)

ii) Older women have less freedom to fight sexual harassment at their jobs or to leave a battering husband because age discrimination means they won't easily find other ways of supporting them. (3)

iii) A well-regulated militia being necessary to the security of a free state, the right of the people to keep and bear arms shall not be infringed. (2)

iv) No physical object can travel faster than light. A hydrogen atom is a physical object. Hence no hydrogen atom can travel faster than light. (3)

v) Thomas Aquinas argued that human intelligence is a gift from God and therefore "to apply human intelligence to understand the world is not an affront to God, but is pleasing to him." (2)

vi) On the other hand, mothers who breast feed their infants sometimes have trouble with infections. Consequently, mothers perhaps ought not to nurse their infants. (2)

b) Evaluate the effectiveness of any **two** methods of inductive inference by J S Mills in the investigation of commercial crimes. (11)

[Total 25 marks]

Question Three

a) Explain the importance of the following types of definitions in financial intelligence.

i) Stipulative definitions (4)

ii) Lexical definitions (4)

iii) Precise definitions (4)

b) Explain each of the following verbal disputes:

i) Vee: Hellen lives a long way from campus. I walked out to see her the other day and it took me nearly two hours to get there.

Val: Hellen doesn't live a long way from campus, I drove her last night and we arrived at her place in less than ten minutes. (3)

ii) Vee: Mr Green is a real Christian, he speaks well of everyone and is never busy to give a family assistance to anyone who is in need.

Val: No, I would not call Green a Christian. He spends his Sundays working in his yard, playing out on the golf course, never showing face in church from one end of the year to the other. (5)

iii) Vee: Dick finally got rid of that old Ford of his and bought himself a new car; he is driving a Jeep now.

Val: Dick did not buy himself a new car, that car is a good ten year old. (5)

[Total 25 marks]

Question Four

a) With the aid of examples, explain *an obviously genuine dispute*. (5)

b) Identify and explain the kinds of agreements and disagreements exhibited by the following passages.

i) Vee: It makes but little difference whether you are committed to a farm or a country jail

Val: I know a few things more pleasing to the eyes or more capable of affirming scope and gratitude to a taste for the beautiful than a well situated well cultivated farm. (4)

ii) Vee: Answer a fool according to his folly, lest he be wise in his own concert

Val: Answer not a fool according to his folly lest thou also be like him. (4)

iii) Vee: Absence makes the heart grow fonder
Val: Out of sight, out of mind. (4)

c) With the aid of examples, compare and contrast a fallacy of composition from a fallacy of division. (8)

[Total 25 marks]

Question Five

a) Define the term *argument* as it is used in Logic. (1)

b) Name the form of the following categorical statements, identify the subject and predicate terms and state their quantity and quality.

i) Nothing that is a spider is an insect. (6)

ii) At least one animal is vicious. (6)

c) Identify and explain the language functions exhibited by the following passages:

i) Eternal peace is a dream, and not even a beautiful one. War is a part of God's world order. In it are developed the noblest virtues of man: courage and abnegation,

dutifulness and self-sacrifice. Without war the world would sink into materialism.

(6)

ii) Man scans with scrupulous care the character and pedigree of his horses, cattle, and dogs before he matches them; but when he comes to his own marriage he rarely, or never, takes any such care.

(6)

[Total 25 marks]

Question Six

a) Define the term *logic*.

(1)

b) Write the following syllogistic forms using s and p as the subject and predicate terms and m as the middle term and test their validity by means of venn diagrams.

i)   EEA-1

(3)

ii)   OAO-3

(3)

c) Name the form of the following categorical syllogisms, state the mood and figure then test the validity by means of venn diagrams.

i)   All worshipers of god are spiritual giants' because all worshippers of god are redeemed souls and all redeemed souls are spiritual giants.

(6)

ii)   No criminals were pioneers. For all criminals are unsavoury persons and no pioneers were unsavoury persons.

(6)

iii) Some comedians are poets. Some comedians are prophets. Therefore some poets are prophets.

(6)

[Total 25 marks]

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