

IMRS Sem.-1 (Rep) Examination  
Logic & Critical Thinking-I  
January-2024

Time : 2-30 Hours]

[Max. Marks : 70

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Instructions:

1. The figures on right hand side indicates marks.
2. Use of calculator is NOT allowed

**Question 1:** Explain truth of propositions and validity of arguments giving examples of all seven possible cases which may arise from true/ false of propositions and valid/ invalid arguments? [14 marks]

Or

**Question 1 (A):** Explain briefly the term critical thinking and enlist the steps of critical analysis? [7 marks]

And

**Question 1 (B):** Explain Deductive Argument with example [7 marks]

**Question 2:** Draw and explain Venn diagram for four types of categorical statements and the modern square of opposition [14 marks]

Or

**Question 2 (A):** Enlist the seven different thinking habits according to California Critical thinking Disposition inventory [7 marks]

And

**Question 2 (B):** Explain Quality and Quantity of Propositions along with examples? [7 marks]

**Question 3:** Explain traditional square of opposition, along with contradictories, contraries, sub-contraries and sub-alteration [14 marks]

Or

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**Question 3 (A):** What are the ten data design do's and don'ts?

[7 marks]

And

**Question 3 (B):** Explain in brief the framework for ethical decision making

[7 marks]

**Question 4:** Explain what is a truth table and what are the steps of making a truth table with at least two examples.

[14 marks]

Or

**Question 4 (A):** Enlist and explain in brief the methods of Qualitative data analysis

[7 marks]

And

**Question 4 (B):** Enlist and briefly explain the ten rules for ethical arguments

[7 marks]

**Question 5: Answer the following MCQs** (Attempt Any 14 out of 16)

[14 marks]

**Mention True or False**

- All reasoning is mental activity but all mental activity is not reasoning
- The four mental processes are Imagining, Daydreaming, Reasoning and Remembering
- Interrogative and Exploratory sentences are not propositions because they cannot be affirmed, denied or judged to be true or false
- All sentences are propositions but every proposition is not a sentence
- "Bring a glass of Water" is a proposition
- A logician studies "actual mental processes"
- A logician is interested in "how and why do we reason"
- Pathos is used to convey the writer's credibility and authority.
- Ethos is the appeal to emotion

**Fill in the blanks with correct words from the following:** (biconditional, conditional, disjunction, conjunction, negation, form and matter)

- The statement  $\sim A$  is called a \_\_\_\_\_.
- The statement  $D \bullet C$  is called a \_\_\_\_\_.
- The statement  $P \vee E$  is called a \_\_\_\_\_.
- The statement  $W \supset F$  is called a \_\_\_\_\_.
- Lastly,  $B \equiv R$  is called a \_\_\_\_\_.
- The content of the argument is \_\_\_\_\_
- The order in which the content is arranged is \_\_\_\_\_

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