



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL

B.A. Honours 1st Semester Examination, 2022

CC2-PHILOSOPHY

WESTERN LOGIC-I

Time Allotted: 2 Hours

Full Marks: 60

The figures in the margin indicate full marks

SECTION-I

1. Answer any **four** questions from the following: 3×4 = 12
- (a) What is copula? Answer with an example.
 - (b) Distinguish between 'exclusive' and 'inclusive' sense of 'or' with examples.
 - (c) State the obverse of the following:
 - (i) No organic compounds are metals.
 - (ii) Some soldiers are not officers.
 - (iii) Some saints were martyrs.
 - (d) What is Opposition of Proposition? Answer with example.
 - (e) Why three circles are required for determining validity or invalidity of syllogistic argument with the help of Venn-diagram?
 - (f) What is existential import of Proposition?

SECTION-II

2. Answer any **four** questions from the following: 6×4 = 24
- (a) What is distribution of terms? Which term or terms is/are distributed in which Proposition? Answer with examples. 2+4
 - (b) Explain Contradictory and Sub-Contrary opposition of Propositions with examples. 3+3
 - (c) Determine the nature of the following statement forms as tautologous or self-contradictory or contingent with the help of truth table: 3+3
 - (i) $p \equiv [p \cdot (p \vee q)]$
 - (ii) $p \supset [p \supset (\sim q \cdot q)]$
 - (d) Determine the validity or invalidity of the following argument/argument forms with the help of syllogistic rules: 3+3
 - (i) AEE-1st figure.
 - (ii) Some conservatives are not advocates of high tariff rates, because all advocates of high tariff rates are republicans, and some republicans are not conservatives.
 - (e) (i) Define immediate inference. 2+2+2
 - (ii) Obvert the following:
All that glitters are not gold.
 - (iii) Convert the following: Some soldiers are cowards.

- (f) Prove the validity of the following by applying the method of Reductio Ad Absurdum: 3+3
- (i) $A \supset (B \cdot C)$
 $(B \vee D) \supset E$
 $D \vee A / \therefore E$
- (ii) $(H \supset I) \cdot (J \supset K)$
 $(I \vee K) \supset L$
 $\sim L / \therefore \sim (H \vee J)$

SECTION-III

Answer any two questions from the following

12×2 = 24

3. What is analogical argument? What are the criteria for the appraisal of analogical argument? Discuss. 4+8
4. Construct formal proof of validity of the following: 4+4+4
- (i) $(A \supset B) \cdot (A \vee C)$
 $(C \supset D) \cdot (C \vee A) / \therefore B \vee D$
- (ii) $A \supset \sim B$
 $\sim (C \cdot \sim A) / \therefore C \supset \sim B$
- (iii) If the litmus paper turns red the solution is acid. Hence if the litmus paper turns red, then either the solution is acid or something is wrong somewhere. (R, A, W).
5. Determine the validity or invalidity of the following argument/argument form with the help of Venn-diagram. 4+4+4
- (i) EIO-4th figure
- (ii) AAA-2nd figure
- (iii) All underwater crafts are submarines; Therefore no submarines are pleasure vessels, since no pleasure vessels are underwater crafts.
6. (a) Distinguish between argument and argument form. 4+4+4
- (b) Use truth table to determine the validity or invalidity of the following argument forms:
- (i) $(p \supset q) \vee (\sim p \cdot \sim q)$
 $\sim (\sim p \cdot \sim q)$
 $\therefore p \supset q$
- (ii) $(\sim p \cdot \sim q) \supset (\sim q \vee p)$
 $\sim (\sim p \cdot \sim q) / \therefore \sim (\sim q \vee p)$

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