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Department of Philosophy
2nd Internal Examination CBCS, 2024
Sem-V, Paper Code- PHIADSE01T
Paper title- Elective Logic

Full Marks: - 10

Time: - 30mints

A. Answer the following questions briefly: -

5×2= 10

নিম্নলিখিত প্রশ্নগুলি সংক্ষেপে লেখ:-

1. Define Empty set. What is domain of individual? What is the characteristics of Empty set?

1+1+3=5

Or/অথবা

Are the following assumptions mutually consistent?

2

Some Americans are virtuous.

No virtuous people steal from the poor.

Given:

3

All unicorns are dead.

No unicorns are dead.

Can you infer that there are no unicorns?

2. Use fell swoop to determine whether $p \vee \neg q$ implies $p \rightarrow q$.

2

Use rules of resolution to determine the validity of following schemata.

3

$p \leftrightarrow [(p \vee q) \cdot (p \rightarrow \neg q)]$

Or/অথবা

$A = \{2,0\}$, $B = \{1,X\}$ state the cartesian product of A,B.

a) $V = \{1,2,3,4,5\}$, $A = \{1,2\}$, $B = \{2,3\}$ what are the following?

3X1=3

নিম্নলিখিতগুলি কি হবে?

i) $\sim A \wedge \sim B$, ii) $\sim A \sim (B)$, iii) $\sim A \cup \sim B$

b) Give symbolic definition of:-

2

সাংকেতিক সংজ্ঞা দাও:-

$A=B$

Or/অথবা

which of the following are true for all sets A,B,C?

5x1=5

নিম্নলিখিত বিবৃতিগুলি কোনগুলি সত্য (A,B,C সকল শ্রেণীর ক্ষেত্রে)?

i) $A = B \& B = C \rightarrow A = C$

ii) $A \in B \& B \leq C \rightarrow A \in C$

iii) $A < B \& B \in C \rightarrow A < C$

iv) $A = B \& B \in C \rightarrow A \in C$

v) $A \in B \& B \in C \rightarrow A \in C$