

Assignment for TEE June 2026 and TEE December 2026

BPYC-105 Logic

Course code: BPYC-105

Marks: 100

Note:

- 1. Give Answer of all five questions.**
- 2. All five questions carry equal marks.**
- 3. Answer to question no. 1 and 2 should be in about 400 words each.**
- 4. Some questions have more than one section, kindly read such questions carefully and attempt all the sections.**

1. What do you understand by a fallacy? Write a detailed note on the fallacy of ambiguity. 20

Or

Distinguish between deductive and inductive reasoning. What are the limitations of deductive reasoning? 20

2. What is Truth Function? Explain main truth functions in detail with examples. 20

Or

Write a note on the Boolean interpretation of the square of opposition. 20

3. Answer any **two** of the following questions in about **200** words each. 2*10=20

a) State contrary, contradictory, sub contrary, subaltern and superaltern of the following propositions. 5+5=10

i) All triangles are polygon.

ii) Some Indian citizens are not Indian voter.

b) What is the difference between mediate and immediate inference? Elaborate with the help of adequate example. 10

c) Write a note on the relation between truth and validity in Inductive Logic. 10

d) What is propositional logic? 10

4. Answer any **four** of the following questions in about **150** words each. 4*5=20

a) What is truth table? 5

b) Translate the following statements to standard form propositions: 1*5=5

i) Logic problems are difficult.

ii) A fish is not a mammal.

iii) Not a single dog is a cat.

iv) Flowers are beautiful.

v) Any student is eligible.

c) Write a short note on Indian Logic. 5

d) Construct formal proof of validity. 5

1) $(x)[Sx \Rightarrow (Tx \Rightarrow Ux)]$

2) $(x)[Ux \Rightarrow (Vx \wedge Wx)]$

$\therefore (x) [Sx \Rightarrow (Tx \Rightarrow Vx \wedge Wx)]$

e) Check the validity of the following by Indirect truth table method: 5

$(A \vee B) \supset (C \cdot D)$

$(D \vee E) \supset F$

$\therefore A \supset F$

f) Test the validity of the following syllogistic moods using the Venn diagram technique: 2*2.5=5

i) EAE-2

ii) AII-2

5. Write a short note on any **five** of the following in about **100** words each. 5*4=20

a) Hetvabhas 4

b) Obversion 4

c) Tautology 4

d) Quality (Categorical Proposition) 4

e) Constructive Dilemma	4
f) Fallacy of Equivocation	4
g) Vyapti	4
h) <i>petitio principii</i>	4