

Assignment for TEE June 2023 and TEE December 2023

BPYC-133 Logic
(TUTOR MARKED ASSIGNMENT)

Course code: BPYC-133

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. Write a note on inductive reasoning. What are its' limitations? 20

Or

- a) Write a note on "distribution of the terms". 10
- b) State whether the subject and predicate terms in the following propositions are distributed or undistributed. 5*2=10
- i) All lions are animals.
 - ii) All hill stations are hot places.
 - iii) Some tables are wooden things.
 - iv) Some humans are not mortal.
 - v) No hill stations are hot place.

2. Write a note on existential import. Also discuss Boolean interpretation of existential import.20

Or

- a) Write a note on square of opposition. 10
- b) State contrary, contradictory, sub contrary, subaltern and superaltern of the following propositions. 2*5=10
- i) All triangles are polygon.
 - ii) Some Indian citizens are not Indian voter.

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

- a) What is *Pararthanuman*? Elaborate with the help of adequate example. 10
- b) Write a note on mixed hypothetical syllogism. 10
- c) What is a truth table? Test the validity of the following argument with the help of the indirect truth table method. 5+5=10
- $(A \vee B) \cdot (C \supset D)$
 $(D \vee E) \cdot F$
 $\therefore A \cdot F$

- d) Differentiate between, 5+5=10
 i) propositional constant and propositional variable.
 ii) Concrete term and abstract term
4. Answer any **four** of the following questions in about **150 words** each. 4*5=20
- a) Write a note on the relation between truth and validity in Deductive logic. 5
- b) Test the validity of the following arguments with the help of the venn diagram method. $5*2.5=5$
 i) IAA-4
 ii) EIO-3
- c) Write a short note on the concept of proposition in modern logic. 5
- d) Differentiate between *swarthanumana* and *pararthanumana*. 5
- e) Translate the following statements to the standard form propositions. 1*5=5
 i) He does not hate tomato soup.
 ii) Every Indian citizen is a voter.
 iii) All politicians are democratic.
 iv) If it is a lion, then it is an animal.
 v) Unless he gives an application, his request will not be entertained.
- f) Symbolize the following propositions. 1*5=5
 i) Some books are literary books and some books are non-literary books.
 ii) Either Delhi is hot or Hoshangabad is cold.
 iii) All girls are studious and all boys are studious.
 iv) Neither you nor me are trustworthy.
 v) All cities are polluted and overpopulated.
5. Write a short note on any **five** of the following in about **100 words each**. 5*4=20
- a) Logic of Relation 4
 b) Conditional Syllogism 4
 c) Connotation of a term 4
 d) Hasty Generalization 4
 e) *Hetvabhas* 4
 f) Complex Dilemma 4
 g) Modus Tollens 4
 h) *Vyapti* 4