

# COOCH BEHAR PANCHANAN BARMA UNIVERSITY

B.A. Honours 4th Semester Examinations, 2022

## PHILOSOPHY

## WESTERN LOGIC-I

### CORE-8

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

- All symbols are of usual significance. Answer any one question from the following:  $15 \times 1 = 15$ (a) Test the validity or the invalidity of the following arguments by the means of  $5 \times 3 = 15$ Venn Diagram: (i) AAA - 3(ii) AAI — 4 (iii) A few Christians are Methodists, for some Christians are not Protestants, and some Protestants are not Methodists. (b) Construct the formal proof of validity of the following:  $5 \times 3 = 15$  $(x)(Jx\supset Kx)$  $(\exists x)(Jx \cdot Lx)/: (\exists x)(Kx \cdot Lx)$ (ii)  $(x)(Fx \supset Dx)$  $(x)(Ex\supset \sim Dx)/: (x)(Ex\supset \sim Fx)$ (iii) None but the brave deserve the fair. Only Soldiers are brave. Therefore, the fair are deserved only by Soldiers. (Dx, Bx, Sx). (c) Distinguish between Induction and Deduction. Explain Induction by Simple 8+7=15enumeration with example. 2. Answer any one question from the following:  $10 \times 1 = 10$
- - (a) Use truth tables to determine the following statement forms as tautology, 5+5=10self-contradictory or contingent.
    - (i)  $p = [p \cdot (p \supset q)]$
    - (ii)  $(p \supset p) \supset (q \sim q)$
  - (b) (i) Give conversion and obversion of the following statements.

 $4 \times 2 = 8$ 

- (I) Rabindranath is the author of Gitanjali.
- (II) Rarely Students are dishonest.
- (ii) What are the exceptions of the Simple conversion of an A Proposition?

### UG/CBCS/B.A./Hons./4th Sem./Philosophy/CCPHIH8/2022

(c) (i) What do you mean by existential fallacy?

5+5 = 10

- (ii) Explain the fallacy of undistributed middle with example.
- 3. Answer any one question from the following:

 $5 \times 1 = 5$ 

(a) Explain the Boolean interpretation of Categorical Proposition.

5

(b) Use Reductio-ad-absurdum method to determine the validity of the following argument:

5

- $(G \vee H) \supset (G \cdot H), \sim (G \cdot H) / :. \sim (G \vee H)$
- 4. Answer any ten questions from the following:

 $1 \times 10 = 10$ 

- (a) What is inference?
- (b) Is Categorical Syllogism a deductive argument?
- (c) What are the different types of Universal Proposition?
- (d) What is a class?
- (e) What is truth function?
- (f) When is an argument valid?
- (g) What is meant by the distribution of terms?
- (h) What do you mean by complementary class?
- (i) Distinguish between mediate and immediate inference.
- (i) What is contraposition?
- (k) What is a variable?
- (1) What is a decisional procedure? Give an example.
- (m) Why the conversion of 'O' Proposition is not valid?

\_\_\_X\_\_\_

4004T

2