

TDC Odd Semester Exam., 2020
held in July, 2021

UNIT—II

PHILOSOPHY

(Honours)

(3rd Semester)

Course No. : PHIH-302

(Logic—I)

Full Marks : 50

Pass Marks : 17

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. (a) Explain briefly the nature of logic. 5
(b) Explain 'truth' and 'validity' with examples. 5
2. (a) What is compound proposition? 2
(b) Explain with example the different kinds of compound proposition. 8

3. (a) What is obversion? State the rules of obversion. 2+4=6
(b) Is material obversion a proper form of obversion? Explain. 4
4. (a) What is contraposition? Explain. 3
(b) Rewrite as directed : $1\frac{1}{2}+1\frac{1}{2}+2+2=7$
(i) All students are intelligent. (Convert)
(ii) All philosophers are not logicians. (Obvert)
(iii) No politicians are perfect. (Contrapose)
(iv) All legislators are citizens. (Contrapose)

UNIT—III

5. (a) What is square of opposition? 2
(b) Discuss the traditional square of opposition. How does it differ from Aristotelian square of proposition? 8

(3)

6. Test the validity or invalidity of the following arguments with the help of Venn diagram : $5+5=10$
- (a) Some snakes are not dangerous animals, but all snakes are reptiles. Therefore, some dangerous animals are not reptiles.
- (b) Some reformers are fanatics, so some idealists are fanatics, since all reformers are idealists.

UNIT—IV

7. (a) What is categorical syllogism? 4
(b) State Copi's six rules of syllogism. 6
8. (a) Write a short note on 'existential fallacy'. 4
(b) Test the following syllogisms, name their figure and mood the fallacy involved, if any : $3+3=6$
- (i) All winged creatures are bipeds for all birds have wings and they are all bipeds.
- (ii) Some good actors are not powerful athletes but all professional wrestlers are powerful athletes. So, all professional wrestlers are good actors.

(4)

UNIT—V

9. (a) What is a set? Explain with examples. 4
(b) Write short notes on the following : $2 \times 3 = 6$
- (i) Empty Set
(ii) Subset
(iii) Set Interaction
10. (a) If
- $A = \{2, 3, 5, 9\}$
 $B = \{5, 7, 9, 11\}$
 $C = \{3, 5, 11\}$
- find—
- (i) $A \cup B$;
(ii) $A - C$;
(iii) $A - (B \cup C)$;
(iv) $A \cap (B \cup C)$. $2 \times 4 = 8$
- (b) Mention one more element for each of the following sets : $1+1=2$
- (i) $\{4, 9, 16, \dots\}$
(ii) $\{3, 7, 11, \dots\}$

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