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B.A/3rd Sem (G)/PHIL/22(CBCS)

2022

3rd Semester Examination

PHILOSOPHY (General)

Paper : DSC 1C/2C-T

(Logic)

[CBCS]

Full Marks : 60

Time : Three Hours

The figures in the margin indicate full marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any **ten** questions from the following :

2×10=20

1. (a) What is contrary opposition?
- (b) Obvert the following : Roses are fragrant.
- (c) What is variable?
- (d) If $p \vee q$ is false, what will be the value of $p \supset q$?
- (e) Define '⊃'.
- (f) Give Venn Diagram of the following : 'Ghost does not exists'.

P.T.O.

- (g) What is an inductive argument?
- (h) Which rule is violated in case of the simple conversion of 'O' proposition?
- (i) What is existential import of a proposition?
- (j) Which of the 4 valid moods are considered invalid in modern logic?
- (k) What is a complementary class?
- (l) Give the Venn diagram of the following : 'Everything is beautiful'.
- (m) Determine the characteristics of the following statement by means of truth table : ' $p \supset q$ '
- (n) If X is true and Y is false, what will be the truth value of the following : ' $\sim X \supset Y$ '.
- (o) Symbolise the following : It will rain if and only if it is cloudy.

Group - B

Answer any **four** questions from the following :

$$5 \times 4 = 20$$

2. Characterise the following statement forms by means of truth table :

$$2\frac{1}{2} \times 2$$

- (a) $p \supset [(p \vee q) \supset r]$
- (b) $(p \supset q) \supset (\sim p \vee q)$

3. Transform the following sentences into categorical propositions (any *two*) : $2\frac{1}{2} \times 2$

(a) Nothing is both safe and exciting.

(b) He does not see his shadow who faces the sun.

(c) A person is a coward who deserts.

4. Explain the exclusive and inclusive sense of 'or'. 5

5. What is conversion? State the rules of conversion. In what situation simple conversion of 'A' proposition is admitted? $1+2+2$

6. Give contrapositives of the following sentences : $2\frac{1}{2} \times 2$

(a) All are not friends who praise.

(b) Orchids are not fragrant.

7. Distinguish between inductive and deductive argument.

Group - C

Answer any *two* questions from the following :

$10 \times 2 = 20$

8. Test the validity of the following arguments by the means of Venn Diagram (any *two*) : $5 \times 2 = 10$

(a) AAI - 2

(b) Some diamonds are not precious stones. Some carbon compounds are diamonds. Therefore, some carbon compounds are not precious stones.

P.T.O.

- (c) Not all is gold that glitters, for some base metal glitter, and gold is not a base metal.

9. Determine the validity of the following arguments by means of truth table :

(a) $Q \vee (R \cdot \sim R), Q / \therefore \sim (R \cdot \sim R)$

(b) $(G \vee H) \supset I, I \supset (G \cdot H) / \therefore (G \vee H) \supset (G \cdot H)$

- (c) If West Bengal suffers a severe draught, then if Punjab has its normal rainfall, then Haryana's water supply will be greatly reduced. Punjab does not have its normal rainfall. So, if Haryana's water supply is greatly reduced, then West Bengal suffers a severe draught. 3+3+4

10. (a) In what figure or figures, if any, can a valid standard form categorical syllogism have a particular premiss and a universal conclusion?

- (b) What is minor, major and middle term of a categorical syllogism. Explain, how the figure of a categorical syllogism is determined. 5+5

11. What is analogical argument? Discuss the criteria used for the appraisal of analogical arguments. 5+5

- (c) Not all is gold that glitters, for some base metal glitter, and gold is not a base metal.

9. Determine the validity of the following arguments by means of truth table :

(a) $Q \vee (R \cdot \sim R), Q / \therefore \sim (R \cdot \sim R)$

(b) $(G \vee H) \supset I, I \supset (G \cdot H) / \therefore (G \vee H) \supset (G \cdot H)$

- (c) If West Bengal suffers a severe draught, then if Punjab has its normal rainfall, then Haryana's water supply will be greatly reduced. Punjab does not have its normal rainfall. So, if Haryana's water supply is greatly reduced, then West Bengal suffers a severe draught. 3+3+4

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