

**2020/TDC(CBCS)/ODD/SEM/
PHPSEC-301T(H/P)/059**

**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

PHILOSOPHY

(3rd Semester)

Course No. : PHPSEC-301T

(Logical Reasoning)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

**Honours students will answer Group—A and
Pass students will answer Group—B**

GROUP—A

(For Honours Course)

SECTION—A

Answer any *fifteen* of the following questions : $1 \times 15 = 15$

- 1. Is an argument a mere collection of propositions?**

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2. "Logicians are not interested in the actual process of reasoning, but rather with the correctness of the complete reasoning process." Do you consider it to be true?
3. How many parts does an argument have?
4. On what does the validity of an argument depend?
5. How many circles one needs to draw to test a categorical syllogism through Venn diagram?
6. An inductive argument is concerned with both formal and material truth. Is it true?
7. What is syllogism?
8. What is the name of the subject of the conclusion of a syllogism?
9. Which term determines the figure of a syllogism?
10. Name the fallacy which is involved when both the premises of a categorical syllogism are negative.
11. Give an example of fallacy of undistributed middle.
12. What is the fallacy of illicit major?

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13. What is Pakṣata?
14. What is Parāmarśa?
15. What is Sādhya?
16. What is Liṅga?
17. Give an example of Śeṣavat Anumāna.
18. Mention the kinds of Vyāpti.
19. What is truth value?
20. "Every logical connective connects only two propositions." Is it true?
21. Is $(\sim p)$ a truth function?
22. Under what condition a disjunctive function becomes false?
23. What is logical constant?
24. What is conjunct?
25. What is symbol?

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26. What is direct proof?
27. What is indirect proof?
28. What is conditional proof?
29. How many rules of inference are there?
30. Mention one utility of using symbols in logic.

SECTION—B

Answer any five questions

31. What is an argument? 2
32. What is analytical reasoning? 2
33. What are the different kinds of a syllogism? 2
34. What is existential fallacy? 2
35. What is Vyāpti? 2
36. What is Hetvābhāsa? 2
37. What do you mean by truth function? 2

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38. Construct one truth table for conjunctive function. 2
39. Why the procedure of formal proof of validity is called a formal proof? 2
40. Symbolize the following : 1×2=2
 - (a) If it rains, then I shall not go for shopping.
 - (b) You will pass the exam if and only if you work hard.

SECTION—C

Answer any five questions

41. Explain with examples, deductive reasoning and inductive reasoning. 5
42. Test the validity or invalidity of the following argument by means of Venn diagram : 5

Some reformers are philosophers, so, some idealists are philosophers, since, all reformers are idealists.
43. State the rules of categorical syllogism. 5
44. Explain in brief the fallacies associated with the rules of syllogism. 5

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45. Explain the basic truth functions. 5
46. Use truth tables to determine the validity or invalidity of the following argument forms : $2\frac{1}{2} \times 2 = 5$
- (a) $p \cdot q$
 $\therefore p$
- (b) $p \supset q$
 $\therefore \sim q \supset \sim p$
47. Define Anumāna. Distinguish between Svārthānumāna and Parārthānumāna. $1+4=5$
48. Explain in brief the different kinds of Hetvābhāsas. 5
49. What is formal proof of validity? What are the strategies for constructing formal proof of validity? $2+3=5$
50. Construct formal proof of validity for the following arguments : $2\frac{1}{2} \times 2 = 5$
- (a) $A \vee (B \supset A)$
 $\sim A \cdot C / \therefore \sim B$
- (b) $(H \supset I) \cdot (J \supset K)$
 $K \vee H$
 $\sim K / \therefore I$

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GROUP—B

(For General / Pass Course)

SECTION—A

Answer any *fifteen* of the following questions : $1 \times 15 = 15$

1. How many parts does an argument have?
2. Does a true conclusion guarantee validity?
3. How many types of logical reasoning are there?
4. What is sound argument?
5. "Deductive reasoning is mainly a reasoning from the general to the particular." Is it true?
6. How many kinds of oppositions are there in traditional square of opposition?
7. What is analytical reasoning?
8. What is the difference between analytical reasoning and logical reasoning?
9. Define fallacy.

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10. Is there any mechanical test for the fallacies?
11. How many types of fallacies of ambiguity are there in analytical reasoning?
12. Give an example of the fallacy of ambiguous major.
13. What is syllogism?
14. How many figures are there in syllogism?
15. Which term is present in both the premises but absent in the conclusion of a syllogism?
16. Mention the rule of syllogism which is based on the structure of a categorical syllogism.
17. Give an example of a standard form categorical syllogism.
18. Which fallacy occurs when any attempt is made to draw a conclusion from two negative premises?
19. What is a logical diagram?
20. What is Venn diagram?

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21. Name the logician by the name of which Venn diagram technique is developed.
22. How many circles one needs to draw to test a syllogistic argument through Venn diagram?
23. Draw a Venn diagram for an E proposition.
24. How an empty class is indicated in a Venn diagram of a syllogistic argument?
25. What is disjunctive syllogism?
26. Is disjunctive syllogism sound?
27. State the logical form of the rule of inference, called disjunctive syllogism.
28. What are the two main divisions of syllogism?
29. What is dilemma?
30. Give an example of a pure hypothetical syllogism.

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SECTION—B

Answer any five questions

31. What is meant by opposition of propositions? 2
32. Write the name of opposition against each pair of propositions : $1 \times 2 = 2$
- (a) All honest men are pious.
Some honest men are pious.
- (b) Some swans are white.
Some swans are not white.
33. Give an example of equivocation. 2
34. Illustrate an analytical reasoning. Why is it important? $1+1=2$
35. What is figure of a syllogism? 2
36. Define the fallacy of undistributed middle. 2
37. What is the difference between logical diagram and physical diagram? 2

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38. What are the three intersecting circles in a Venn diagram used to represent? 2
39. What are the three types of mixed syllogism? 2
40. Is dilemma a kind of syllogism? Can it be tested? $1+1=2$

SECTION—C

Answer any five questions :

$5 \times 5 = 25$

41. Analyze the structure of an argument.
42. Explain with examples, deductive reasoning and inductive reasoning.
43. Explain in brief, the different kinds of fallacies of ambiguity.
44. How can we avoid fallacies?
45. Elucidate the rules of syllogism.
46. Explain in brief, the fallacies associated with the rules of syllogism.

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47. What are the strategies for drawing a Venn diagram? Explain.

48. Test the validity or invalidity of the following argument by means of Venn diagram :

Some neurotics are not parasites, but all criminals are parasites, it follows that some neurotics are not criminals.

49. Distinguish between disjunctive syllogism and hypothetical syllogism.

50. What are the different kinds of dilemma? Explain with example.
