

## Second Semester MA Philosophy

### PL010201 - Symbolic Logic

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1. The meaning of Logos  
a) Understanding   b) Knowledge   c) Rational   d) Concept
2. Truth is attributed to-----  
a) Sentence   b) Inference   c) Proposition   d) Argument
3. Validity or invalidity attributed to-----  
a) Proposition   b) Statement   c) Argument   d) Sentence
4. A statement is either-----  
a) True or False   b) Valid or Invalid   c) Correct or Incorrect   d) Determined or Undetermined
5. An argument is-----  
a) True or False   b) Determined or Undetermined   c) Correct or Incorrect  
d) Valid or Invalid
6. Logic is-----  
a) Understanding   b) Reasoning   c) Concept   d) Rationality
7. Premises and conclusion are-----  
a) General term   b) Concrete term   c) Relative term   d) Privative term
8. All argument will have a-----  
a) Conclusion   b) Invalid conclusion   c) Valid conclusion   d) Undetermined conclusion
9. Sound argument is-----  
a) Premises true   b) Conclusion true   c) Argument valid   d) Premises and conclusion true
10. A valid argument may contain-----  
a) False proposition   b) Only true proposition   c) Only valid proposition   d) Only sound proposition
11. Analogy is a method of-----  
a) Logic   b) Metaphysics   c) Epistemology   d) Ethics
12. The conclusion of an argument must be-----  
a) True   b) False   c) True or false   d) Valid
13. -----is a famous logician  
a) Descartes   b) Spinoza   c) George Boole   d) Hume

14. Principia mathematica written by—  
 a) White head    b) Russell    c) Locke    d) Whitehead and Russell
15. Simple statement-----contain component part  
 a) Does    b) Does not    c) May    d) May not
16. The word used for conjunction is-----  
 a) Unless    b) Because    c) Or    d) And
17. the word used for weak disjunction is----  
 a) Either or    b) If then    c) Or    d) And
18. If...then is meant for -----  
 a) Disjunction    b) Tautology    c) Implication    d) Equivalence
19. A conjunction is true when----  
 a) Both conjuncts are true    b) Both conjuncts are false    c) Either conjunct is true  
 d) On conjunct is false
20. A disjunction is true when-----  
 a) Both disjuncts are true    b) Both disjuncts are false    c) Either disjunct is true  
 d) None the above
21. Implication is a-----  
 a) truth functional compound statement    b) simple statement    c) compound statement  
 d)inference
22. A conjunction is false when-----  
 a) both conjuncts are false    b)either conjunct is false    c) both conjuncts are false    d)  
 none the above
23. A disjunction is false when-----  
 a) Both disjuncts are false    b)either disjunct is false    c)both disjuncts are true  
 d)undetermined
24. -----is a truth functional compound statement  
 a)inference    b)logical equivalence    c)tautology    d)disjunction
25. Antecedent part of implication comes-----  
 a)before if    b)after then    c)between if and then    d)none the above
26. consequent part of implication comes-----  
 a)before if    b)after if    c)after then    d)between if and then
27. implication is false when-----  
 a)antecedent true    b)antecedent false    c)consequent false    d)antecedent true  
 and consequent false
28. truth value of a true statement is-----  
 a>false    b>true    c>true and false    d)neither true and false

29. truth value of a false statement is-----  
 a)false            b>true            c)undetermined            d)both true and false
30. curl-is the symbol of-----  
 a)equality            b)negation            c)contradiction            d)material implication
31. Horseshoe is the symbol of-----  
 a)implication            b)material equality            c)tautology            d)condignity
32. The component part of disjunction is called-----  
 a)conjunct            b)antecedent            c)disjunct            d)consequent
33. dot is-----  
 a)connective            b)truth functional connective            c)symbol            d)narrative
34. Wedge is used in-----  
 a)conjunction            b)disjunction            c)argument            d)statement
35. Question  
 a)calculation            b)counting            c)reference            d)decision procedure
36. Arguments containing two simple statements will have-----possible truth values  
 a)four            b)three            c)two            d)six
37.  $p \cdot q$  is a-----  
 a)tautology            b)conjunction            c)disjunction            d)negation
38. how many statements are in the compound statement  $(p \cdot q) \vee r$   
 a)four            b)two            c)three            d)five
39.  $(p \supset q) \cdot p$  is a -----  
 a)conjunction            b)disjunction            c)implication            d)negation
40.  $[(p \cdot q) \vee r] \supset q$  is a-----  
 a)equality            b)conjunction            c)implication            d)disjunction

**If A and B are true statements and C and D are false statements, find the truth value of the following questions from 41 to 50.**

41.  $(A \cdot B) \vee (C \cdot D)$   
 a) True    b) False            c) Unknown            d) None of the above
42.  $\sim (A \cdot C) \cdot (C \vee D)$   
 a) True    b) False            c) Unknown            d) None of the above
43.  $(C \cdot D) \supset (A \vee B)$   
 a) True    b) False            c) Unknown            d) None of the above

44.  $(A \supset B) \vee (C \supset D)$   
 a) True b) False c) Unknown d) None of the above
45.  $(A \supset C) \vee (B \supset D)$   
 a) True b) False c) Unknown d) None of the above
46.  $\sim (A \supset D) \cdot (A \cdot B)$   
 a) True b) False c) Unknown d) None of the above
47.  $(A \supset C) \supset (B \supset D)$   
 a) True b) False c) Unknown d) None of the above
48.  $\sim (B \vee C) \vee \sim (A \vee D)$   
 a) True b) False c) Unknown d) None of the above
49.  $(C \vee D) \cdot (A \supset C)$   
 a) True b) False c) Unknown d) None of the above
50.  $\sim (A \supset B) \vee (A \vee C)$   
 a) True b) False c) Unknown d) None of the above
51. name the symbol '( )'  
 a) parenthesis b) bracket c) braces d) none the above
52.  $(A \cdot B) \supset (A \vee B)$  is----  
 a) disjunction b) conjunction c) implication d) none the above
53.  $p \supset q$  is an abbreviation of----  
 a)  $\sim (p \cdot q)$  b)  $(p \cdot \sim q)$  c)  $(\sim p \cdot q)$  d)  $\sim (p \cdot \sim q)$
54. common partial meaning of disjunction is-----  
 a) both disjuncts are true b) at least one disjunct is true c) both are false  
 d) one disjunct is false
55. a weak implication symbolized by ' $\supset$ ' is called----  
 a) material equivalence b) biconditional c) material implication d) modus ponens
56. -----form is one that has at least one substitution instance with true premises and false conclusion  
 a) valid argument b) valid statement c) invalid argument d) invalid statement

57. ----- form is one that has no substitution instance with true premises and false conclusion  
 a) true statement      b) false statement      c) invalid argument      d) valid argument
58. modus ponens means-----  
 a) to deny      b) to affirm      c) inconclusive      d) to question
59. the conclusion of modus tollens is-----  
 a) disjunction      b) conjunction      c) negation      d) implication
60. Tollens means-----  
 a) to affirm      b) to deny      c) doubting      d) none the above
61. truth functional connective of hypothetical syllogism is-----  
 a) horseshoe      b) dot      c) wedge      d) negation
62.  $p \supset q$   
 $\sim p / \therefore q$  is a valid form  
 a) true    b) false    c) undetermined    d) none the above
63.  $p \supset q$   
 $\sim p / \therefore q$  is an invalid form  
 a) true    b) false    c) undetermined    d) none the above
64. Specific form of the argument  $A \supset B$   
 $A / \therefore B$  is  
 a) p  
     q  
      $\therefore r$   
 b)  $p \supset q$   
      $\therefore r$   
 c)  $p \supset q$   
     p  
      $\therefore q$   
 d)  $(p \supset \sim q)$   
     p  
      $\therefore q$
65. A statement form that has only true substitution instance is called-----  
 a) biconditional    b) equalence    c) tautology    d) contingent
66. statement form that has only false substitution instance is called-----  
 a) contradictory    b) contingent    c) modus ponens    d) tollence
67. A statement form neither contradiction nor tautology is called-----  
 a) invalid argument    b) true statement    c) contingent    d) tautology
68. Three bar symbol may be read as-----  
 a) if then    b) either or    c) material implication    d) if and only if
69. The pattern  $p \equiv q$  is called -----  
 a) logical equalence    b) biconditional    c) morgans theorm    d) none the above

70.  $p \equiv \sim\sim q$  is-----

- a) negation b) principle of double negation c) material equivalence d) undetermined

71. The principle of double negation can be proved to be-----

- a) contingent b) biconditional c) tautology d) contradiction

72.  $\sim(p \vee q) \equiv (\sim p \cdot \sim q)$  is-----

- a) Russell theorem b) Whitehead theorem c) Euclid theorem d) DeMorgan's theorem

73. Addition is a ----

- a) logical equivalence b) rule of replacement c) biconditional d) rule of inference

74.  $p \cdot q$

$\therefore p$  is -----

- a) conjunction b) addition c) logical equivalence d) simplification

75.  $p$

$q$

$\therefore p \cdot q$  is-----

- a) modus ponens b) disjunctive syllogism c) conjunction d) none of the above

76.  $p \vee q$

$\sim p$

$\therefore q$  is-----

- a) constructive dilemma b) destructive dilemma c) disjunctive syllogism d) conjunction

77. State the number of rules of inference

- a) 8 b) 7 c) 10 d) 9

78. Commutation is a -----

- a) logical theory b) inference c) rule of replacement d) biconditional

79. ----- is exportation

- a) rule of replacement b) a form of inference c) material equivalence d) association

80.  $(p \supset q) \equiv (\sim q \supset \sim p)$  is---

- a) commutation b) association c) distribution d) transposition

**Find the validity or invalidity of the following arguments. Questions from 81 to 85**

81.  $A \supset B$

$A / \therefore B$

- a) Valid b) Invalid c) True d) False

82.  $D \vee C$

$\sim D / \therefore C$

- a) Valid      b) Invalid      c) True      d) False

83.  $A \supset B$

$B \supset C, \therefore A \supset C$

- a) Valid      b) Invalid      c) True      d) False

84.  $A \supset B, \sim A, \therefore \sim B$

- a) Valid      b) Invalid      c) True      d) False

85.  $A \therefore A \vee B$

- a) Valid      b) Invalid      c) True      d) False

**Characterize the following statement form questions from 86 to 90**

86.  $(B \vee \sim B)$

- a) Tautology    b) Contradiction    c) Contingent    d) Bi-conditional

87.  $(B \cdot \sim B)$

- a) Tautology    b) Contradiction    c) Contingent    d) Bi-conditional

88.  $(A \vee B)$

- a) Tautology    b) Contradiction    c) Contingent    d) Bi-conditional

89.  $A \supset (B \supset D)$

- a) Tautology    b) Contradiction    c) Contingent    d) Bi-conditional

90.  $\sim A \supset (B \supset C)$

- a) Tautology    b) Contradiction    c) Contingent    d) Bi-conditional

91. Every argument corresponds a conditional statement

- a) true    b) false    c) relatively true    d) undetermined

92. The rule of conditional proof is based on-----

- a) association    b) commutation    c) distribution    d) principle of exportation

93. Reductio ad absurdum means-----

- a) false conclusion    b) true conclusion    c) invalid conclusion    d) reduces to absurdity

94. The phrase "Given any x" is called-----

- a) existential quantifier    b) instantiation    c) universal quantifier    d) universal generalization

95. Existential quantifier is symbolized as-----

- a)  $(x)$     b)  $(Mx)$     c)  $(Hx)$     d)  $(\exists x)$

96. "Nothing is mortal" may be symbolized as-----

- a)  $(x)Mx$  b)  $(\exists)Mx$  c)  $(x) \sim Mx$  d)  $Hx \supset Mx$

97. "All human are mortal" may be symbolized as-----

- a)  $(x)Mx$  b)  $Hx \supset Mx$  c)  $(x) (Hx \supset Mx)$  d)  $HMx$

98. 'some humans are not mortal' may be symbolized as-----

- a)  $(\exists)Mx$  b)  $(Hx \supset \sim Mx)$  c)  $(\exists x) \sim Hx$  d)  $(\exists x) Hx. \sim Mx$

99. Universal instantiation is a -----

- a) Law b) rule of replacement c) Preliminary quantification rule d) none the above

100.  $\phi v$

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$\therefore (\exists x) (\phi x)$  is

- a) universal instantiation b) universal generalization c) existential generalization d) existential instantiation



**Answer key of II<sup>nd</sup> semester MA philosophy MCQ (Symbolic Logic)**

| Question No. | Answer | Question No. | Answer | Question No. | Answer | Question No. | Answer |
|--------------|--------|--------------|--------|--------------|--------|--------------|--------|
| 1            | c      | 26           | c      | 51           | a      | 76           | c      |
| 2            | c      | 27           | d      | 52           | c      | 77           | d      |
| 3            | c      | 28           | b      | 53           | d      | 78           | c      |
| 4            | a      | 29           | a      | 54           | b      | 79           | a      |
| 5            | d      | 30           | b      | 55           | c      | 80           | d      |
| 6            | b      | 31           | a      | 56           | c      | 81           | a      |
| 7            | c      | 32           | c      | 57           | d      | 82           | a      |
| 8            | a      | 33           | b      | 58           | b      | 83           | a      |
| 9            | d      | 34           | b      | 59           | c      | 84           | b      |
| 10           | a      | 35           | d      | 60           | b      | 85           | a      |
| 11           | a      | 36           | a      | 61           | a      | 86           | a      |
| 12           | c      | 37           | a      | 62           | a      | 87           | b      |
| 13           | c      | 38           | c      | 63           | b      | 88           | c      |
| 14           | d      | 39           | a      | 64           | c      | 89           | a      |
| 15           | b      | 40           | c      | 65           | c      | 90           | a      |
| 16           | d      | 41           | a      | 66           | a      | 91           | a      |
| 17           | d      | 42           | b      | 67           | c      | 92           | d      |
| 18           | c      | 43           | a      | 68           | d      | 93           | d      |
| 19           | c      | 44           | a      | 69           | b      | 94           | c      |
| 20           | c      | 45           | b      | 70           | b      | 95           | d      |
| 21           | a      | 46           | a      | 71           | c      | 96           | c      |
| 22           | b      | 47           | a      | 72           | d      | 97           | c      |
| 23           | a      | 48           | b      | 73           | d      | 98           | d      |
| 24           | d      | 49           | b      | 74           | d      | 99           | c      |
| 25           | c      | 50           | a      | 75           | c      | 100          | c      |

