

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086  
(For candidates admitted during the academic year 2019 – 2020 & thereafter)

SUBJECT CODE: 19SC/ME/LS45

B.A. DEGREE EXAMINATION APRIL 2022  
BRANCH III-SOCIOLOGY  
SIXTH SEMESTER

COURSE : MAJOR ELECTIVE  
PAPER : LOGIC AND SCIENTIFIC METHODS  
TIME : 3 HRS

MAX. MARKS: 100

SECTION– A

ANSWER ALL QUESTIONS EACH ANSWER SHOULD NOT EXCEED 50 WORDS

(10X 2 = 20)

1. What is Logic ?
2. What is Acategorematic word?
3. Explain Denotation and Connotation.
4. What kind of a term is 'blind' ?
5. When is a term equivocal?
6. Convert the following into logical propositions:
7. a) A camel is a herbivorous animal  
b) Not a single member of the crew was saved.
8. Parsi are Indians. Identify the genus of Parsi
9. Identify the fallacy/rule violation in the following definition  
Tin is a metal lighter than gold.
10. Identify the following divisions  
a) Plants into poisonous and non-poisonous  
b) Trees into branches, stem and roots

SECTION– B

ANSWER ANY FIVE QUESTIONS EACH ANSWER SHOULD NOT EXCEED 250 WORDS

(5 X 8 = 40)

11. Draw and explain traditional classification of propositions
12. Explain the two principal types of propositions.
13. Give the valid moods of Figure III with suitable examples
14. Explain the types of Hypothetical syllogism.
15. What is denotation and connotation of terms? Explain their relationship.
16. Differentiate 'take the dilemma by the horns' and 'To escape between the horns of dilemma'
17. If ABC are true statements and XYZ are false determine the truth value of the following propositions:  
a)  $\{(C \cdot X) \supset Y\} \supset (\sim A \supset \sim Y)$   
b)  $\sim(A \cdot B) \cdot \sim(X \vee A)$
18. Examine the logical status of the following propositions forms:  
a)  $(p \vee q) \supset (q \cdot p)$   
b)  $(p \cdot q) \supset \{ (p \vee q) \cdot p \}$

SECTION– C

ANSWER ANY TWO QUESTIONS EACH ANSWER SHOULD NOT EXCEED 1200 WORDS

(2 X 20 = 40)

19. Draw and explain opposition of Propositions.
20. Explain fallacies of language and arguments with examples
21. Draw and explain logic gates.
22. Explain Mill's method of scientific enquiry.

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