

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 86
(For candidates admitted from the academic year 2011 – 2012)

SUBJECT CODE: 11SC/ME/LS63

B.A. DEGREE EXAMINATION, APRIL 2014
BRANCH III – SOCIOLOGY
SIXTH SEMESTER

COURSE : MAJOR – ELECTIVE
PAPER : LOGIC AND SCIENTIFIC METHODS
TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS. EACH ANSWER NOT TO EXCEED 50 WORDS:

(10 X 2 = 20)

1. State any two differences between Sentence and Proposition.
2. What is a Intension?
3. Inscribe any two figures of syllogism.
4. Define – ‘Fallacy’.
5. State any two special symbols used in Symbolic Logic.
6. Note down the truth table for conditional proposition.
7. Draw the graphical symbol of AND Gate.
8. Write the algebraic structure of NAND operators.
9. Identify the missing number at the end of the series.
a) 33, ?, 19, 12, 5, ?
10. Arrange the words given below in a meaningful sequence.
(a)Key (b) Door (c) Lock (d) Room (e) Switch on

SECTION – B

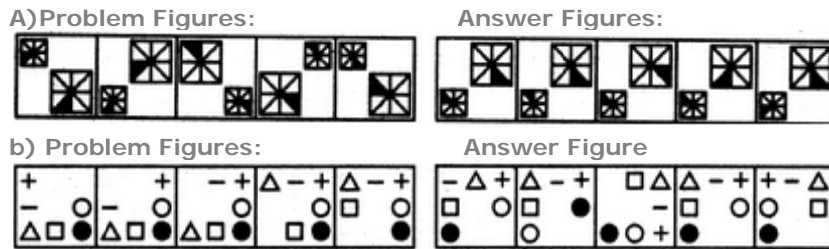
ANSWER ANY FIVE QUESTIONS. EACH ANSWER NOT TO EXCEED 300 WORDS:

(5 X 8 = 40)

11. Give a brief note on Traditional Classification of Propositions.
12. Explain the kinds of dilemma with examples.
13. Describe the Fallacies of argument.
14. Explain the Truth Tables for determining validity.
15. If $A=F$, $B=F$, $C=T$, find the validity of

$$[A \vee (\sim B \vee C)] . [\sim A \supset (\sim B \supset C)]$$

16. Draw and explain the XOR Switching Circuit.
17. Write the algebraic structure and the basic truth table of XOR Gate.
18. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.



SECTION – C

**ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1200 WORDS
(2 X 20 = 40)**

19. Elucidate how modern logician classified Proposition.
20. Explain the valid moods of Categorical Syllogism.
21. Draw and explain the square of opposition. How is opposition useful in determining the validity of immediate inferences?
22. Arrange the words given below in a meaningful sequence.

vegetable	Plant	dish	bill	restaurant
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Service, Application, Interview, Selection, Appointment, Retirement

