

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

SUBJECT CODE: 11SC/ME/LS63

B.A. DEGREE EXAMINATION, APRIL 2016
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. Define Term.
2. Give an example for quantitative proposition.
3. Draw the Square of Opposition.
4. What are valid moods according to Classical Logic?
5. State any two uses of Brackets.
6. Write the truth table for Disjunctive Propositions.
7. Draw the graphical symbol of OR Gate.
8. Write the algebraic function of AND operators.
9. Identify the missing number at the end of the series.
 - a) 66, ?, 38, 24, 10, ?
10. Arrange the words given below in a descending 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 note on traditional Classification of Propositions.
12. Draw and explain the square of oppositions.
13. Explain fallacies of language with examples.
14. Explain the basic Truth Tables for all connectivity.
15. If A=F, B=F, C=T, find the validity of

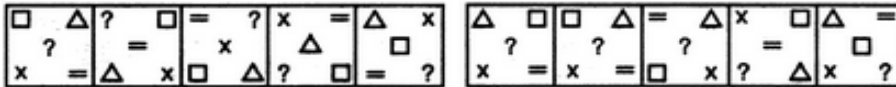
$$[A \cdot (\sim B \cdot C)] \equiv [(A \cdot \sim B) \cdot C]$$

16. Design a simple switching circuit using AND gates.
17. Write the algebraic structure and the basic truth table of NOR Gate.
18. Select amongst the Answer which will continue the same series as established series.

a) **Problem Figures:** **Answer Figures:**

20,30,25,35,30,___ 40,45,35,60,65

b) **Problem Figures:** **Answer Figure**



SECTION – C

ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1200 WORDS

(2 X 20 = 40)

19. Explain the modern classification of propositions.
20. What are the valid moods for first and second figure .
21. Explain the importance of automatic computation.
22. Arrange the words given below in a meaningful sequence.

a)

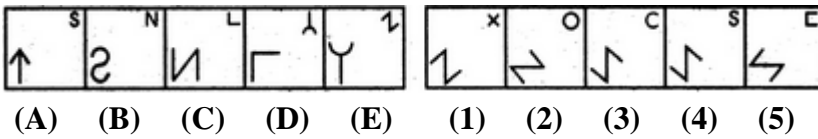
Grandson	Grand grand father	father	Son	Grandfather
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b) Service, Application, Interview, Selection, Appointment, Retirement

c)

Problem Figures:

Answer Figures:



d)

Problem Figures:

Answer Figures:



e)

Problem Figures:

Answer Figures:

