SREE CHAITANYA MAHAVIDYALAYA
INTERNAL EXAMINATIONS : 2021
B.SC. (GEN) SEMESTER : VI
PAPER CODE : MTMSSEC02M
PAPER NAME : LOGIC & SETS

Time: 60 Min   **Full Marks: 20**

[Answer any <u>Five</u> from Q.No. 1 (2 x 5=10) and any <u>Two</u> from Q.No. 2 (5 x 2=10)]

1. a) Define a bi-conditional proposition.

    b) What do mean by 'Logical Disjunction' ?

    c) Show the 'Truth table' for 'Logical Negation'.

    d) What do you mean by the term 'Contra-positiveness' ?

    e) Show the 'Venn Diagram' for the difference of two sets.

    f) What are 'Countable & Uncountable sets' ?

    g) State all the partitions over the set S = {1, 2, 3}.

    h) Differentiate between 'Equivalence relation & Partial Order relation'.

2. a) State and prove the De' Morgan's laws for logical statements using Truth-table.

    b) Give an example of an 'Equivalence Congruence Modulo relation'.

    c) Find 'Symmetric Difference' & 'Cartesian Product' of two sets A={1,2,3} & B={2,3,4}.

    d) Explain the logic- 'Principle of Induction' by an example.

■■

Click the *Link* below to submit the *Answer Script* (in a single PDF file)

<< https://forms.gle/GDvptzaRdZbqPmz6A >>