Internal Exam Math (General) - SEM-III

paper code - SEC-I

Time: One hour

F.M - 18

Grp-A

4×2 = 8

1) Answer the following questions:

(i) Define prime numbers with example.

(ii) Find a solution of the equation $15x \equiv 3 \pmod 8$

(iii) If x, y, z are three switches, draw the circuits for the following expression: $x + x'y$.

(iv) Define partial order relation in a Boolean algebra.

Grp-B

2) Answer the following questions:

(i) Show that $2 \cdot 7^n + 3 \cdot 5^n - 5$ is divisible by 24. [5]

(ii) (a) Define Boolean algebra. [3]

(b) In a Boolean algebra, find the complements of [2]
$(x+y)(x'+y)(x'+y')$.