

Total No. of Questions : 8]

PA-1192

SEAT No. :

[Total No. of Pages : 2

[5925]-214
S.E. (E & TC)
ELECTRICAL CIRCUITS
(2019 Pattern) (Semester - III) (204183)

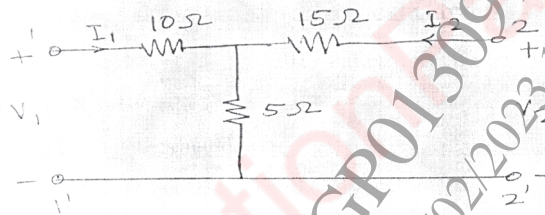
Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagram must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

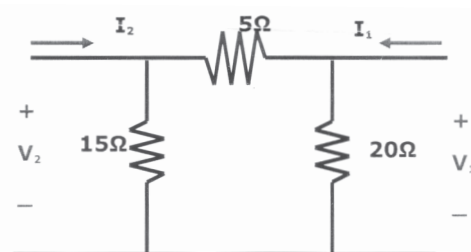
Q1) a) Find the Z Parameters for the Network Shown. [8]



- b) Give basic definition of Y parameters explain why Y parameters are called short circuit admittance parameters. [6]
- c) Explain the condition of Reciprocity & Symmetry by giving Example. [6]

OR

Q2) a) Find Y parameters or the Network Shown. [8]



- b) Give the applications of Two Port Network Parameters. [6]
- c) Explain Network stability. [6]

P.T.O.

- Q3)** a) What is back emf in DC motor? State its significance? [8]
b) Derive torque equation of DC motor? [8]

OR

- Q4)** a) Explain the various methods of speed control of Dc series motor? [8]
b) Draw neat diagram and explain operation of 3 pt. Starter? [8]
- Q5)** a) Explain the construction of three phase induction motor? [8]
b) Explain speed control using v/f method. [8]

OR

- Q6)** a) Derive the torque equation for the three-phase induction motor? [8]
b) Explain Construction and working Principle of single-phase induction motor. [8]
- Q7)** a) Explain the construction and working principle of BLDC motor. Also draw the Speed Torque Characteristics. [10]
b) Write Note on 'Electric Vehicles' [8]

OR

- Q8)** a) Explain the construction and working principle of Stepper motor. Also draw the Speed Torque Characteristics. [10]
b) Explain any Electric vehicle in detail. [8]
