

Total No. of Questions : 6]

SEAT No. :

[Total No. of Pages :2

P4951

**BE/In Sem. - 31
B.E. (Electrical)
POWER QUALITY**

(2012 Course) (Semester - I) (Elective - I) (403143)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Solve Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Use of Calculator is allowed.*
- 5) *Assume suitable data, if necessary.*

- Q1)** a) Explain definition of power quality with reference to each stake holder. **[5]**
- b) Summaries in tabular format the power quality problem characteristics as per IEEE Standard 1159. **[5]**

OR

- Q2)** a) Explain importance of Power Quality in today's context. **[5]**
- b) Discuss best grounding practices to improve the power quality. **[5]**
- Q3)** a) Explain voltage sag characteristics- Magnitude, Duration. **[4]**
- b) Draw and explain ITIC curve. **[6]**

OR

- Q4)** a) Explain in brief the impact of voltage sag on equipments. **[5]**
- b) Explain the use of Ferroresonance transformer to mitigate the voltage sag problem. **[5]**

P.T.O.

- Q5) a)** Discuss the sources of transient over voltage. [6]
- b) Discuss Pst and Plt terms in connection with flicker. [4]

OR

- Q6) a)** Write note on computer tools used for transient analysis. [5]
- b) Discuss in brief flicker mitigation techniques. [5]

