C 46574

Name.....

Reg. No.....

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2008

EE 2K 804/PTEE 2K 702 – POWER SYSTEMS – III

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions*

I. (a) What is arcing ground? What are its disadvantages?

(b) What are volt-time curves? What is their significance in power system studies?

(c) Write a note on Buchholz relay.

(d) State the importance of busbar and name various schemes of busbar protection.

(e) Give the merits and demerits of electric traction over steam engine traction.

(f) What are the applications of dielectric heating?

(g) In India what are the measures taken for energy conservation?

(h) What are the factors to be considered for good lighting?

(8 × 5 = 40 marks)

II. (a) Give the properties of SF6 and explain the construction and working principle of SF6 circuit breaker with a neat diagram.

Or

(b) What is the need for protecting electrical equipment against traveling waves and discuss about various protective devices used for protection of equipment against such waves.

(15 marks)

III. (a) Explain the principle of Merz-price system of protection of transformer and what are its limitations?

Or

(b) Explain about various types of the distance relay with corresponding R-X diagram.

(15 marks)

IV. (a) Write a short notes on the following :–

(i) Mechanism of train movement.

(ii) Speed-time curve in respect of train motion.

(5 + 10 = 15 marks)

Or

(b) With necessary figures, explain the processes of carbon arc welding and metallic are welding.

(15 marks)

V. (a) (i) Write a short notes on THD.

(ii) Briefly explain about the different methods of mitigation.

(5 + 10 = 15 marks)

Or

(b) Discuss the various methods adapted for designing passive filter. Mention its advantages and disadvantages.

(15 marks)

[4 × 15 = 60 marks]