B.Tech. SEM -IV Electrical 2014 Course (CBCS) : SUMMER - 2019

SUBJECT: GENERATION, TRANSMISSION AND DISTRIBUTION

Day: Thursday
Date: 30/05/2019

S-2019-2610

Time: 10.00 AM TO 01.00 PM
Max. Marks: 60

N.B:

1) All questions are **COMUPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if necessary.
4) Use of non programmable of **CALCULTOR** is allowed.

Q.1 **a)** List different Hydro-electric power station in the country. **(05)**
b) Explain functions of each component of Hydro-electric power station. **(05)**

OR

Q.1 **a)** Explain reaction and impulse turbine. **(05)**
b) Draw block diagram of thermal power plant and explain it's working **(05)**

Q.2 **a)** Explain load curve and its importance. **(05)**
b) Explain concept of cogeneration and captive generation. **(05)**

OR

Q.2 **a)** Explain base load and peak load on power station. **(05)**
b) Explain following terms: **(05)**

i) Connected load
ii) Maximum demand
iii) Demand factor
iv) Diversity factor
v) Load factor

Q.3 **a)** Write a note on geothermal energy. **(05)**
b) Explain wind power plant. **(05)**

OR

Q.3 **a)** Explain basic concept of solar power plant. **(05)**
b) Explain Magneto Hydro-Dynamics (MHD) generation. **(05)**

Q.4 **a)** Obtain mathematical expression for string efficiency. **(05)**
b) Explain corona phenomenon and its interference. **(05)**

OR

Q.4 **a)** Explain proximity and Ferranti effect. **(05)**
b) List different types of insulators; explain one of them with neat diagram. **(05)**

Q.5 **a)** What is characteristics impedance? **(05)**
b) Represent performance of short transmission line. **(05)**

OR

Q.5 **a)** Represent π model of transmission line. **(05)**
b) Evaluate and estimate ABCD constants. **(05)**

Q.6 **a)** Classify different types of cable, explain any one in detail. **(05)**
b) What are different causes of failure of cables? **(05)**

OR

Q.6 **a)** Obtain expression for insulation resistance of single core cable. **(05)**
b) Explain classification of distribution system. **(05)**

* * * * *