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SEAT No. :

PE-533

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[6578]-6

S.E. (Electrical Engineering) (Insem)
POWER GENERATION TECHNOLOGIES
(2019 Pattern) (Semester - III) (203141)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Solve Q.1 or Q.2, Q.3 or Q.4*
- 2) *Figures to the right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable data if necessary.*
- 5) *Use of non-programmable calculator is allowed.*

Q1) a) Differentiate between fire tube boiler and water tube boiler. Explain electrostatic precipitator with neat sketch. [8]

b) Explain reheat cycle with neat sketch. [7]

OR

Q2) a) Explain working of Thermal power plant with neat sketch. Write Advantages and disadvantages of FBC system. [8]

b) 70 MW captive power plant of chemical plant has a coal fired boiler. The operating data of CPP is as follows: [7]

i) Generator output : 70 MW

ii) GCV of Coal 4200 Kcal/ Kg

iii) Coal Consumption (Tons/Day) : 1000 Tons/day. Find out gross heat rate?

Q3) a) Write site selection factors of nuclear power plant. Explain heat balance sheet in diesel power plant. [8]

b) Explain closed cycle gas turbine plant with neat sketch? [7]

OR

Q4) a) Explain BWR with neat sketch. Write advantages & disadvantage of diesel power plant. [7]

b) Write short note on : [8]

i) Gas Turbine Materials

ii) Co-generation

