POWER PLANT DESIGN
(Elective – I)

Course Code: **13CE2108**

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Course Outcomes:
At the end of the course the student will be able to
CO1 : Outline the basic knowledge of on different power plant layouts and design of chimneys.
CO2 : Describe different types of cooling towers.
CO3 : Demonstrate knowledge of design and analysis of foundations.
CO4 : Assess the knowledge about intake towers.
CO5 : Explain the knowledge about storage structures.

UNIT –I
POWER PLANTS: Planning and layout of different types of Power plants.
CHIMNEYS: Analysis and Design of Chimneys. IS codal provisions.

UNIT –II
COOLING TOWERS: Induced draught and natural draught cooling towers.

UNIT –III
FOUNDATION: Machine foundations & Turbo generator foundations.

UNIT –IV
INTAKE TOWERS: Dams, wells and Intake galleries

UNIT –V
STORAGE STRUCTURES: Analysis and design of ware house structures.

TEXT BOOKS

1. Vijay K. Puri and Shamsher Prakash, *"Foundations for Machines - Analysis and Design (Series in Geotechnical Engineering)"*, 2nd Edition, John Wiley & Sons, 2000.

2. Krishna Raju N. *"Advanced Reinforced Concrete Design",* 2nd Edition, CBS Publishers and Distributors, 2006

REFERENCES

1. Eldey Mc. K., Naxey Brooke K.K. *"The Industrial Cooling Tower with special reference to design, construction, operation and maintenance of water cooling tower"*, 1st Edition, Elsevier Publishing company, 1990.

2. Smith, Bryan Stafford & Alex C., *"Tall Building Structures & Analysis Design",* 1st Edition, John Wiley, 2011.

3. Srinivasulu, P and Vaidyanathan, G.V., *"Handbook of Machine Foundations",* 2nd Edition, Tata McGraw Hill, 1999.

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