POWER PLANT DESIGN

(Elective – I)

Course Code: 15CE2108	**L**	**P**	**C**
	3	**0**	**3**

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 (10-Lectures)

POWER PLANTS:

Planning and layout of different types of Powerplants.

CHIMNEYS:

Analysis and Design of Chimneys. IS codal provisions.

UNIT –II (10-Lectures)

COOLING TOWERS: Induced draught and natural draught cooling towers.

UNIT –III (10-Lectures)

FOUNDATION: Machine foundations & Turbo generator foundations.

UNIT –IV (10-Lectures)

INTAKE TOWERS: Dams, wells and Intake galleries

UNIT –V (10-Lectures)

STORAGE STRUCTURES: Analysis and design of warehouse 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 Towerwith 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.