

13. a) Explain the main features of CANDU reactor and elaborate the arrangement of calandria in a CANDU reactor with a neat sketch. 13,K2,CO

OR

- b) Draw the Layout diagram of Hydro Power Plant and also explain the components and working of Hydro power plant? 13,K2,CO
14. a) What is the principle of tidal energy? State its advantages and disadvantages. Describe a two-pool tidal plant 13,K2,CO4

OR

- b) Explain in detail how power is produced in a Solar Photo Voltaic power plant and List out the advantages and disadvantages. 13,K2,CO4
15. a) (i) Explain the terms peak load, demand factor, load factor and plant use factor. 6,K2,CO5
(ii) What are load curves and load duration curves? Discuss their utility in the economics of generation. 7,K2,C

OR

- b) Discuss various pollution control techniques used in coal based thermal Power Plants. 13,K2,CO6

PART C (1 × 15 = 15)

16. a) The maximum demand of a power station is 80,000 kW and daily load is described as follows

Time (hrs)	0-6	6-8	8-12	12-14	14-18	18-22	22-24
Load (MW)	40	50	60	50	70	80	40

- (i) Determine the load factor of power station and draw load duration curve. 7,K2,CO5
(ii) What is the load factor of standby equipment rated at 25 MW that takes up all loads in excess of 60 MW? 8,K2,CO5

OR

- b) You have been appointed as Advisor to Government of India, in the year 2050. What type of power plant will you suggest to GOI? Limit your answer to 250 to 300 words. 15,K3,CO6