GGS COLLEGE OF MODERN TECHNOLOGY, KHARAR

DEPARTMENT OF

ELECTRICAL ENGINEERING

Question Bank

Power Generation and Economics

Subject code – BTEE-602-18

6th Semester B.Tech.

1 Define economic dispatch problem

2 Define incremental cost?

3 Define base point?

4 Define participation factor?

5 What are the two basic types of steam turbines?

6 How can steam turbines be classified?

7 Besides lubrication, which are two functions of lubricating oil in some turbines?

8 Do the radial axial-bore cracks occur in the LP rotor/shaft alone?

9 How do the problems of vibration and fatigue arise with steam turbine blades?

10 What is the purpose of a turning gear?

11 What is the principle of a steam turbine?

12 What is the function of a gland drain?

13What is the difference between partial and full arc admission?

14 What is the cause of circumferential cracking?

15 What is meant by the water rate of a turbine?

PART – B (LONG ANSWER QUESTIONS)

16.Explain briefly the following : i) Capital cost ii) Operational cost

17 Enumerate and explain briefly various methods used to calculate the depreciation cost.

18 Discuss the selection of power plant equipments. What are the selection criterion for selection them

19 Describe the economics of steam plant, I.C. engine plants, gas plants, hydro plants, diesel plant and hydro steam plants

20 What do you mean by depreciation? How will you calculate depreciation in power plant?

21 Derive an expression for cost of electrical energy for power plants. Explain how the cost of unit energy generated by a generating unit is estimated.

22 Discuss about economics in plant selection and explain the economics of different types of generating plants.

23 Explain various techniques for power plants cost analysis with suitable example.

24 What is depreciation reserve? Discuss the methods to calculate depreciation charges.

25 Explain the components which constitute the fixed and operating cost of power plant.

PART – C (SHORT ANSWER QUESTIONS)

26 Define Unit commitment?

27 What is the thermal unit constraint?

28 Define minimum up time?

29 Define minimum down time?

30 Define crew constraints?