UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2021

Program: MBA (Power Management) **Semester – I**
Subject (Course): Power Generation and Power Station Management **Max. Marks : 100**
Course Code : PIPM 7001 **Duration : 3 Hrs**
No. of page/s: 2

Section – A (2 marks * 10 = 20 Marks)

Fill in the blanks with the most suitable words/figures. Correct filling of each blank will fetch 2 marks. (CO1)

1. In a coal fired thermal power plant, higher specific coal consumption (kg coal per kWh) is an indicator of _____ efficiency.
2. _____ and _____ are two power plants that are capable of managing peak load.
3. _____ and _____ are two power plants that are capable of managing base load.
4. Out of the total target of _____ MW installed capacity from solar, wind, biomass and small hydro to be completed by year 2022 in India, _____ MW and _____ MW are the targeted installed capacities from solar and wind respectively.
5. Combined cycle power generation involves _____ cycle and _____ cycle.

Section – B (5 marks * 4 = 20 Marks)

Briefly explain the following: (CO1)

1. Availability
2. Auxiliary Power Consumption
3. Variable Renewable Energy
4. Sustainable Development

Section – C (10 marks * 3 = 30 Marks)

Answer any three questions from this section: **(CO2)**

1. Why electricity (power) is considered as the most favored form of energy?
2. Discuss the merits and demerits of nuclear power plants.
3. From the perspective of satisfying the electricity needs of a country like India, it is unfair to compare 1 MW of thermal power (coal or gas based) capacity with 1 MW of renewable power (solar or wind) capacity. Justify.
4. Operation of a hydro power plant is simpler than operating a coal fired power plant. Justify.

Section – D (15 marks * 2 = 30 Marks)

Answer any two questions from this section: **(CO3)**

1. Discuss AT&C Losses and its impact on power sector in India.
2. Renewables, electricity storage mechanisms and electric vehicles are changing the landscape of power sector like never before. In light of these technology interventions, discuss the future of Indian power sector.
3. From efficiency, economics and sustainable development perspective, hydro power has a big role to play in Indian power sector. Justify.