UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course: Power Pricing & PPA   **Semester: III**
Program: MBA Power Management   **Time   : 03 hrs.**
Course Code: PIPM-8003   **Max. Marks: 100**
Set – 1st
Instructions:

SECTION A
10Qx2M=20Marks (Answer All Question)

S. No.		Marks	CO
Q 1	What is the Gross Calorific Value? Please define.	2	CO1
Q 2	What is the PPA? Why it is called as PPA not PSA or PS&PA?	2	CO1
Q 3	Explain PLF, PAF & CUF with stating relationship among them.	2	CO1
Q 4	Name Minister of Coal and Minister of New & Renewable Energy for India.	2	CO1
Q 5	What do you mean by Depreciation? Explain.	2	CO1
Q 6	Name 2 Power Exchange of India.	2	CO1
Q 7	Write full form of CTUI, PTCUL, PGCIL & POSOCO.	2	CO1
Q 8	What is secondary fuel in TPP based on coal? Give maximum quantity per unit of generation (KWh) one can use for 500 TPP Unit as per CERC order.	2	CO1
Q 9	What is FSA? Explain.	2	CO1
Q 10	Explain Force Majeure.	2	CO1

SECTION B
4Qx5M= 20 Marks

Q 1	What are major components of Capacity and Energy Charge of Tariff for a Coal based TPP.	5	CO2
Q 2	What is the significance of Working Capital in Biomass Projects? Explain with writing major components of it for calculation of Biomass Project in any state of India.	5	CO2
Q 3	Describe the Power Sector value Chain.	5	CO2
Q 4	Why Solar Price is coming down? Give at least five major reasons.	5	CO2

SECTION-C
3Qx10M=30 Marks

Q 1	What are main components of PPA for any Discom taking Electricity from TPP for 25 years with needful explanations?	10	CO3
Q 2	Analyze the India ambitious growth plan for non-fossil fuel up to 2030 with suggestions for better implantation.	10	CO3

Q 3	Differentiate among Grey Hydrogen, Blue Hydrogen and Green Hydrogen. Critically analyze Green Hydrogen Policy/Mission in India.	10	CO3

SECTION-D
2Qx15M= 30 Marks

	Calculate the Tariff for Solar Plant of 100 MW capacity with help of Following parameters: 1. Capital Cost = Rs. 4 Crores per MW 2. Interest on debt = 10 % per Annum 3. Interest on working capital= 10 % per Annum (Assume working capital as 10% of Capital Cost) 4. CUF= 20 % and Depreciation= 6 % per annum 5. RoE= 14 % per annum 6. O&M Cost – 5 Lakhs per MW per Year		
Q1	Calculate the Tariff for Solar Plant of 100 MW capacity per KWh.	15	CO4
Q 2	How you can bring down this tariff to Rs. 2-3 per Kwh. Please suggest with explanations.	15	CO4