Name: Enrolment No:	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Program: BA(Hons.) Economics (Spz in Energy Eco.) **Semester –** V
Subject (Course): Electricity Market **Max. Marks: 100**
Course Code : ECON3006 **Duration: 3 hrs**
No. of page/s: 3

SECTION A

		Marks	CO
Q 1	Which electricity distribution company in India is having highest AT&C loss?	2	CO1
Q2	Which electricity distribution company in India is having lowest AT&C loss?	2	CO1
Q3	Where the largest wind power farm in India is located?	2	CO1
Q4	Where the first Hydro plant in India is located?	2	CO1
Q5	Name the distribution company of Uttarakhand.	2	CO1
Q6	Name the Transmission Company of Uttarakhand	2	CO1
Q7	Name the regulatory body that looks after electricity regulation of Chandigarh.	2	CO1
Q8	What is the full form of DSM?	2	CO1
Q9	Where the largest solar power plant located in the world?	2	CO1
Q10	Which country first implemented deregulation in Power sector?	2	CO1

SECTION B

Q1	Explain Single buyer model, Wholesale and Retail market in electricity?	5	CO2
Q2	What is Distribution Franchise Model?	5	CO2
Q3	What is TAM, DAM and RTM?	5	CO2
Q4	What are the Energy Storage Technologies available in the Market?	5	CO2

SECTION C

Q1 From below, mentioned data find out the total energy change by finding out Activity effect, Structural effect and energy intensity change.

Year	Sector 1		Sector 2	
	GDP	Energy Use	GDP	Energy Use
2017	150	350	100	300
2018	300	550	250	500

10 **CO2**

Q2 What Demand Side Management? What are the tools used by policy makers for Demand Side Management in India?

10 **CO2**

Q3 Find out the MCP and MCV from the following data:

Buyers: A- 100 MW @Rs.7.5, B- 200 MW @ Rs. 6.5, C- 250 MW@ Rs. 6, D- 150 @Rs. 5, E- 100 MW @ Rs. 4

Sellers: X- 200 MW @ Rs. 3.5, Y- 200 MW @ Rs. 4, Z- 200 MW @ Rs. 4.5, V- 200 MW @ Rs. 5.5, W- 200 MW @ Rs. 6

or

Find the simple linear equation with the following data for the state of Uttarakhand. Demand is the dependent variable and temperature is the independent variable.

	April 2017	May 2017	June 2017	July 2017	Aug 2017	Sep 2017	October 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	March 2018
UK Demand (MW)	1917	1992	2027	1971	1987	2033	1920	1886	2025	2149	2134	1886

10 **CO3**

	Temp.	33	35	32	32	32	30	29	25	21	19	20	22		
SECTION-D															
Q1	How Retail market in India can be applied. Explain with one example from any country for your reference.													**15**	**CO4**
Q2	From the following details find out the following value from a Thermal Power plant. a. RoE b. O&M Cost c. Depreciation d. Auxiliary Power Consumption e. Fixed Cost Tariff													**15**	**CO4**

S no.	Particulars	Normative Parameters
1	Capacity of Plant	130
2	Capital Cost	Rs. 5.63 Cr/ MW
3	Debt: Equity Ratio	70:30
4	Return on Equity	15.5%
5	Interest on Loan	11.5%
6	Interest on working Capital	11.5 %
7	Depreciation Rate	5.28%
8	Operation and Maintenance cost	13 Lakhs/MW
9	Plant Load Factor (PLF)	80%*
10	Plant Availability Factor	85%*
11	Auxiliary Power Consumption	6.50%*

Showing steps can help you in getting the step marks if the answer is wrong also.