Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

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	Answer the following questions: i. Which state in India is having highest AT&C loss? ii. Which state in India is having lowest AT&C loss? iii. Where the largest solar power plant in India is located? iv. Where the largest Hydro plant in India is located? v. Which country first implemented deregulation in Power sector? vi. Where the largest Hydro power plant located in the world? vii. Which city's electricity distribution in India does Torrent Power look after? viii. Name the distribution companies of Delhi. ix. Name the regulatory body that looks after electricity regulation of Goa. x. What is the full form of DSM?	**20**	**CO1**

SECTION B (answer any 2 Questions)

Q1	Explain Single buyer model, Wholesale and Retail market in electricity?	**10**	**CO2**
Q2	What is Distribution Franchise Model? Explain any one model of your choice	**10**	**CO2**
Q3	From below, mentioned data find out the total energy change by finding out Activity effect, Structural effect and energy intensity change.	**10**	**CO3**

	Year	Sector 1		Sector 2		
		GDP	Energy Use	GDP	Energy Use	
	2017	140	350	200	500	
	2018	260	550	350	900	

SECTION C (Attempt any 3 Questions)

Q1	How does Real Time market in Electricity will work?	**10**	**CO2**
Q2	What DSM, ABT and UI and explain all the terms?	**10**	**CO2**
Q3	Calculate net present value for an investment towards a Compact Fluorescent Lamp (CFL). The following table gives investment and cash flow. (Assume discount rate is 10% and life of the CFL is 2 years). Investment Rs.400/- Savings in year Cash flow, Rs Year # 1 Rs.1000 Year # 2 Rs. 1000	**10**	**CO2**
Q4	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.	**10**	**CO3**

	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
Temp.	33	35	32	32	32	30	29	25	21	19	20	22

<table>
<tr>
<td>Q5</td>
<td>Find out the ATC, MC and AVC from the below mentioned data. Also draw a graph showing AFC, AVC, ATC and MC
<table>
<tr><th>Quantity</th><th>Fixed Cost</th><th>Variable Cost</th><th>Total Cost</th></tr>
<tr><td>0</td><td>5</td><td>0.00</td><td>0</td></tr>
<tr><td>1</td><td>5</td><td>0.30</td><td>5.3</td></tr>
<tr><td>2</td><td>5</td><td>0.80</td><td>5.8</td></tr>
<tr><td>3</td><td>5</td><td>1.50</td><td>6.5</td></tr>
<tr><td>4</td><td>5</td><td>2.40</td><td>7.4</td></tr>
<tr><td>5</td><td>5</td><td>3.50</td><td>8.5</td></tr>
<tr><td>6</td><td>5</td><td>4.80</td><td>9.8</td></tr>
<tr><td>7</td><td>5</td><td>6.30</td><td>11.30</td></tr>
<tr><td>8</td><td>5</td><td>8.00</td><td>13</td></tr>
<tr><td>9</td><td>5</td><td>9.90</td><td>14.90</td></tr>
<tr><td>10</td><td>5</td><td>12.00</td><td>17</td></tr>
</table>
</td>
<td>10</td>
<td>CO3</td>
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<tr>
<td colspan="4">SECTION-D</td>
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<tr>
<td>Q1</td>
<td>In order to meet emission reductions requirements, you argue that we must reduce electricity demand along with transitioning to low- and zero-carbon sources. How important is reducing demand in comparison to implementing renewables? Explain.</td>
<td>30</td>
<td>CO2,CO3,CO4</td>
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