Name:

Enrolment No:

UPES
UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM & ENERGY STUDIES

End Semester Examination (Online) – July, 2020

Program: MBA (Energy Trading) **Semester : 2nd**
Subject/Course: Energy Trading II (Power & Emissions) **Max. Marks: 100**
Course Code: OGET7005 **Duration : 3 Hours**

IMPORTANT INSTRUCTIONS

1. *The student must write his/her name and enrolment no. in the space designated above.*
2. *The questions have to be answered in this MS Word document.*
3. *After attempting the questions in this document, the student has to upload this MS Word document on Blackboard.*

<table>
<tr><th></th><th></th><th>Marks</th><th>COs</th></tr>
<tr><td>Q.1</td><td>M/s Turbulent Wind Farms Limited are operating a Wind Turbine based generating station in the North Indian State of Rajasthan. The Central and the State Governments have been supporting the installation and operation of wind farms in the state. Yet, the demand for renewable energy keeps on fluctuating. In your opinion, what measures need to be adopted to boost the demand for renewable energy?</td><td>20</td><td>CO2, CO3</td></tr>
<tr><td>Q.2</td><td>M/s Central Electricity Supply Company (CESC) and M/s State Power Distribution Company (SPDC) engage in Banking of power.
Period of banking: 1st June 2020 to 31st August 2020
Quantum Banked by CESC:
<table>
<tr><td>01.06.2020 to 15.06.2020</td><td>00.00 to 06.00 & 23.00 to 24.00</td><td>70</td></tr>
<tr><td>16.06.2020 to 30.06.2020</td><td>00.00 to 24.00</td><td>30</td></tr>
<tr><td>01.07.2020 to 12.07.2020</td><td>00.00 to 06.00 & 23.00 to 24.00</td><td>50</td></tr>
<tr><td>13.07.2020 to 31.07.2020</td><td>00.00 to 24.00</td><td>60</td></tr>
<tr><td>01.08.2020 to 31.08.2020</td><td>00.00 to 24.00</td><td>95</td></tr>
</table>
Calculate the volume (in units) and Quantum of Power (MW) returnable under the following condition:
Period of Return: 1st March 2021 to 31st May 2021
Duration of Return of power: 00.00 to 24.00 hrs.
Return has to be:</td><td>20</td><td>CO2, CO3, CO4</td></tr>
</table>

<table>
<tr><td></td><td>1. 90% of the energy banked.
2. 110% of the energy banked</td><td></td><td></td></tr>
<tr><td>Q.3</td><td>Under Bilateral sale of Power, an Application for Advance Scheduling of Bilateral Transactions can be submitted for up to 4 months in advance to the SLDC/RLDC.
In this regard, what are the timelines for submission of the application for the 1st, 2nd, 3rd and 4th month respectively</td><td>20</td><td>CO3,
CO4</td></tr>
<tr><td>Q.4</td><td>M/s Sweet Sugars Ltd (SSL), located in Maharashtra has installed a Captive Power Plant and is connected to 132kV MSETCL Substation. The industry experiences the following production seasons:

<table><tr><th>Production Season</th><th>Duration</th></tr><tr><td>Peak Season</td><td>November to March</td></tr><tr><td>Off-Peak Season</td><td>April to October</td></tr></table>Following is the availability of power during peak and off-peak season along with the cost of generation:

<table><tr><th>Production Season</th><th>Quantum (MW)</th><th>Cost of Generation (Rs/kWh)</th></tr><tr><td>Peak Season</td><td>10</td><td>3.25</td></tr><tr><td>Off-Peak Season</td><td>20</td><td>2.75</td></tr></table>SSL sells the power through power exchange. Power if unsold can be utilized in the sugar plant. MCP of the exchange is as follows:

<table><tr><th>Month</th><th>MCP (Rs/kWh)</th></tr><tr><td>January</td><td>2.99</td></tr><tr><td>February</td><td>3.68</td></tr><tr><td>March</td><td>3.67</td></tr><tr><td>April</td><td>3.18</td></tr><tr><td>May</td><td>3.16</td></tr><tr><td>June</td><td>4.10</td></tr><tr><td>July</td><td>3.18</td></tr><tr><td>August</td><td>3.20</td></tr><tr><td>September</td><td>3.19</td></tr><tr><td>October</td><td>3.21</td></tr><tr><td>November</td><td>3.70</td></tr><tr><td>December</td><td>3.72</td></tr></table>In capacity of the Manager In-Charge for sale of power, which months are suitable to sell the power. Support your answers with detailed calculations.
Applicable transmission charges and losses:
<table><tr><th>Region/State</th><th>Losses</th><th>Charges</th></tr><tr><td>Maharastra</td><td>1.20%</td><td>Rs. 0.09/kWh</td></tr></table></td><td>20</td><td>CO2,
CO3,
CO4</td></tr>
</table>

Withdrawal			
Maharashtra State	2.30%	Rs. 0.22/kWh	
Maharashtra Distribution	10%	Rs. 0.35/kWh	

Q.5	According to the Report on Short-term Power Market in India: 2018-19 published by CERC, following table shows the tariff at which power is traded by Trading Licensees and Power Exchanges. The gap between tariff discovered by Traders and Exchange is constantly reducing.	20	CO2, CO3

Year	**Price of Electricity Transacted through Trading licensees (Rs/kWh)**	**Price of Electricity Transacted through Power Exchanges (Rs/kWh)**
2013-14	4.29	2.90
2014-15	4.28	3.50
2015-16	4.11	2.72
2016-17	3.53	2.50
2017-18	3.59	3.45
2018-19	4.28	4.26

In light of the above information, discuss what are the probable reasons that caused this gap and why this gap is constantly reducing. Suitable assumptions and situations may be considered to support your answer.

ANSWERS