Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2024

Course: Power Transmission and Distribution — **Semester: 2nd**
Program: MBA Power Management — **Time : 03 hrs.**
Course Code: PIPM7003 — **Max. Marks: 100**

Instructions:

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO
Q1.	Write a note on the Power Sector in India.	**2**	**CO1**
Q2.	Which of the following entity is considered to be the Nodal RLDC: a) RLDC of the Exporting entity b) Intervening RLDC c) RLDC of the Importing entity d) Any RLDC can be randomly appointed	**2**	**CO2**
Q3.	What is the importance of Ancillary Services as per the IEGC?	**2**	**CO2**
Q4.	Which is the oldest operating private power distribution company in India?	**2**	**CO1**
Q5.	What is the primary benefit of the Point of Connection Transmission Pricing method over the Postal Stamp Transmission Pricing Method?	**2**	**CO2**
Q6.	Excessive under-drawl of power leads to an unwanted increase in grid frequency. (True/False)	**2**	**CO2**
Q7.	List the various utilities involved in the Transmission of Power.	**2**	**CO1**
Q8.	In the case of intra-state operations, RLDC is considered to be the supreme authority. Comment on the correctness of the statement.	**2**	**CO1**
Q9.	Which of the following activity is not a part of Distribution Operations: a. Demand Forecasting b. Sub Station Operations c. Billing and Payments d. Metering	**2**	**CO1**
Q10.	Transmission of Power in India is a licensed activity. (True/False)	**2**	**CO1**

SECTION B
4Qx5M= 20 Marks

Q11.	Discuss the role and responsibility of the Nodal RLDC in an Open Access Transaction.	**5**	**CO2**
Q12.	Discuss the importance of calculating Levelized Cost of Transmission.	**5**	**CO2**
Q13	What are the challenges of Distribution Companies?	**5**	**CO3**

<table>
<tr><td>Q14</td><td>The Deviation Settlement Mechanism applicable for Unscheduled Interchange is also an effective grid management technique. Comment.</td><td>5</td><td>CO3</td></tr>
<tr><td colspan="4">SECTION-C
3Qx10M=30 Marks</td></tr>
<tr><td>Q15.</td><td>.During day to day operations, Under Drawal by a distribution company is always better and rewarding as compared to Over Drawal. Comment of the statement by considering suitable assumptions.</td><td>10</td><td>CO3</td></tr>
<tr><td>Q16.</td><td>Discuss in detail the objectives of the Revamped Distribution Sector Scheme (RDSS).</td><td>10</td><td>CO4</td></tr>
<tr><td>Q17.</td><td>Discuss the need and importance of submitting an ARR by the distribution company.</td><td>10</td><td>CO3</td></tr>
<tr><td colspan="4">SECTION-D
2Qx30M= 30 Marks</td></tr>
<tr><td>Q18.</td><td>In capacity of the in-charge of Power Purchase for a Distribution Company, you have to purchase 2000 MW power. The following purchase options are available to you:
<table>
<tr><td colspan="3">SGS and ISGS</td></tr>
<tr><td>Source 1</td><td>750 MW</td><td>Rs. 1.30</td></tr>
<tr><td>Source 2</td><td>500 MW</td><td>Rs. 2.00</td></tr>
<tr><td>Source 3</td><td>450 MW</td><td>Rs. 2.80</td></tr>
<tr><td>Source 4</td><td>550 MW</td><td>Rs. 3.60</td></tr>
<tr><td>Source 5</td><td>200 MW</td><td>Rs. 4.50</td></tr>
<tr><td>Source 6</td><td>150 MW</td><td>Rs. 5.00</td></tr>
<tr><td>Source 7</td><td>50 MW</td><td>Rs. 6.00</td></tr>
<tr><td colspan="3">Long Term Open Access</td></tr>
<tr><td>Source 1</td><td>500 MW</td><td>Rs. 2.30</td></tr>
<tr><td colspan="3">Short Term Open Access</td></tr>
<tr><td>Source 1</td><td>60 MW</td><td>Rs. 3.65</td></tr>
<tr><td>Source 2</td><td>50 MW</td><td>Rs. 3.95</td></tr>
</table>
Additionally, the second discom operating in the state has confirmed availability of 20 MW power under Inter Discom Transfer. The prevailing power exchange tariff is Rs. 2.65/kWh.</td><td>15</td><td>CO4</td></tr>
</table>

	Your aim as the in-charge for power purchase is to ensure reliable power supply and minimize the cost. Provide a strategy for power purchase and real time operations. Give valid reasons for your choices.		
Q19	The Electricity Act, 2003 was not less than a revolution in the Indian Power Sector. Comment on the statement by highlighting some of the provisions that in your opinion revolutionized the power sector	**15**	**CO4**