

Name:
Enrolment No:



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

Course: Power Sector Structure & Functioning
Program: MBA Power Management
Course code: PIPM - 7002
Instructions:

Semester: I
Time: 03 Hours
Max. Marks: 100

SECTION A

| | | Marks | CO |
|------|---|-------|------|
| Q 1 | The Electricity Act 2003 is not in vogue in -----. | 2 | CO 1 |
| Q 2 | What is Distribution Franchisee? Explain. | 2 | CO 2 |
| Q 3 | What is the full form of UDAY & IPDS? Explain anyone of them in brief. | 2 | CO 2 |
| Q 4 | National Electricity Policy 2005 was notified by ----- | 2 | CO 2 |
| Q 5 | What is "content and carries" concept in Indian Power Sector? | 2 | CO 3 |
| Q 6 | Critically evaluate the concept of AT & C losses in India power sector. | 2 | CO 2 |
| Q 7 | What do you mean by power theft and UUE? Differentiate. | 2 | CO 1 |
| Q 8 | Name power minister of Govt. of India and state of Uttrakhand. | 2 | CO 1 |
| Q 9 | Give full form of FSA and R-APDRP. | 2 | CO 1 |
| Q 10 | National Tariff Policy 2006 was notified by ----- | 2 | CO 1 |

SECTION B

Attempt any two from given questions in Section B

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| Q 11 | Critically evaluate the Energy Conservation Act 2001 implementation after explaining it. | 10 | CO 3 |
| Q 12 | Describe power value-chain with a neat diagram from generation to the consumer's-end. | 10 | CO 3 |
| Q 13 | What is World Bank's four main suggestions for power reforms in the developing countries? Critically evaluate them as per Indian needs. | 10 | CO 3 CO 4 |

SECTION-C

Attempt any two from given questions in Section C

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| Q 14 | Calculate tariff for 1000 MW coal based thermal power plant (TPP) in Chhattisgarh assuming all norms and standards as per CERC | 15 | CO 5 |
| Q 15 | Power Sector is moving from monopoly to competition – critically evaluate this statement with 3-4 examples. | 15 | CO 4 |
| Q 16 | Distribution reforms are need of hour in India – critically evaluate working of Power DICOMs in India and suggest few measures for improvements with reasons. | 15 | CO 5 |

Section D (30 marks) Case Study

Power Trading in India

In India, while there is a huge section of consumers, who are power deprived, there are a lot of Captive Power Plants (CPPs) that are under-utilized and a lot of merchant capacity also expected to be added in the near future, there is a need to encourage the peaking power plants and bring the surplus captive generation in the grid.

The Electricity Act, 2003, mandated development of power markets by appropriate commissions through enabling regulations. This paved the way for the new trends to emerge like Open Access and the one in February, 2007, when the Central Electricity Regulatory Commission (CERC) issued guidelines for grant of permission for setting up operation of power exchanges within an overall regulatory framework. The emerging trends will help in proper flow of power from surplus regions to deficit regions and thus try to bring about a balance in the power sector.

The National Electricity Policy, pronounced in February 2005, stipulated that enabling regulations for inter-and-intra-state trading, and also regulations on power exchange, shall be notified by the appropriate Commissions within six months.

On 6th February 2007, the Central electricity Regulatory Commission (CERC) issued guidelines for grant of permission for setting up and operation of power exchanges within an overall regulatory framework. Private entrepreneurship is allowed to play its role. Promoters are required to develop their model power exchange and seek permission from CERC before start of operation.

Inter State Trading of Electricity

The Central Electricity Regulatory Commission (CERC) has issued final Regulations for Inter-State Trading of Electricity after taking into account the suggestions and comments received from the stakeholders. The Electricity Act, 2003, recognizes trading as an independent activity and accordingly prescribes issue of trading licenses by the CERC for inter-state trading. The Commission earlier received applications from various companies for issue of trading licenses immediately after the enactment of the Electricity Act, 2003 and the Commission had permitted all of them to continue trading till 31.3.2004 or till the issue of Regulations by the Commission whichever was earlier. After Notification of Trading Regulations, the interested parties could file fresh applications before CERC, seeking inter-state trading licenses, in accordance with these Regulations.

The Commission is also initiating actions for preparation of Regulations for establishment of a market mechanism for electricity. The Regulations for market mechanism will be done after following a transparent process as is the normal practice of the Commission.

The highlights of the final Regulations for inter-state trading are as follows:

1. The Regulations provide for trading carried out bilaterally between the generating company including captive generating plant, distribution licensee and electricity trader on the one hand and the electricity trader and the distribution licensee on the other.
2. The Inter-State Trading License shall be granted for 25 years.
3. The Regulation prescribes the application form for trading license. The application fee is Rs.1.00 lakh which is subject to adjustment after the same is prescribed by the Central Government. A model license document is also appended to the Regulations.
4. The Regulations also specify the methodology for publication of the license application. The application shall be published in at least two national English daily newspapers including one economic newspaper and two local newspapers falling within the areas of trading, one of which shall be in vernacular. The entire application shall also be posted on the website.
5. The applicant for the license shall file his comments on the objections or suggestions received in response to the public notice.
6. The technical requirements for being an electricity trader stipulates having at least one full time professional each with experience in
 - i) Power System Operations and commercial aspects of Power Transfers and
 - ii) Finance, Commerce and Accounts.
7. Capital adequacy requirement for various categories has been stipulated.

REGULATORY ROLE

Central and State regulatory Commissions have been formed with a view to placing greater emphasis on meeting future electric needs at least cost. The Commissions would become involved in conservation also if International experience was any guide. They might reflect preference for renewable energy and emphasize 'integrated' or non-traditional supply options like conservation and other Demand side management (DSM), the development of technology like 'waste to watt' electricity generation.

Under the Electricity Act-03 Regulators have been mandated to develop energy markets. Energy efficiency initiative is the proactive approach to Market Transformation Program (MTP). The MTP focuses on longer-term strategies for delivering more resource-efficient goods and services, primarily through policy measures that drive innovation and competition. For example, policies such as energy labeling, product standards development and voluntary agreements with industry are especially powerful in influencing manufacture, design, market and produce in volume the more efficient products where needed. Indeed, with increasing globalization, our ability to deliver more and

more efficient products to the global market will depend on the ability to meet global expectations. It is necessary to initiate energy conservation measure subject to regulatory oversight.

Regulatory policies determine the level of investment in energy efficiency. The policies are pushed through regulation, incentives and specific programs. Such policies are pursued for societal benefits, minimization of power shortage, reduce environment degradation and overall economic efficiency. Governments set the standards for building codes, appliances.

Under Integrated Resource Planning (IRP) the utility will have many options for meeting future needs. The latest idea of conservation is an additional option. The idea is that instead of meeting future demands through building more generation –transmission-distribution, facilities can be dampened making new facilities unnecessary. One of the primary means of dampening the future demand is through energy conservation that would include better energy information dissemination on consuming equipment like energy labeling.

The strategies emerging are combination of financing energy efficient technologies and financing market development policy initiatives and detailed disclosures about energy. The regulatory strategies can be designed to increase the participation of various stakeholders, notably credit providers, equipment vendors, utilities and technological service providers etc.

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| Q17 | State problems in power trading in India as per this text. | 10 | CO 5 |
| Q 18 | Analyze regulatory framework for power trading. | 10 | CO 5 |
| Q 19 | Suggest remedial actions for betterment of power trading in India. | 10 | CO 5 |