

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May-June 2021

Program: MBA Power Management

Semester – IInd

Subject (Course): Power Sector Automation & Smart Grid

Max. Marks: 100

Course Code : PIPM7009

Duration: 3 hrs

No. of page/s: 2

SECTION A

1. Each Question will carry 5 Marks

2. Attempt all Questions

		Marks	CO
Q 1	Complete the Abbreviations 1. SMQTT 2. MDMS 3. PPP 4. DSM 5. EIA	5	CO1
Q2	Name the characteristics of Big Data.	5	CO1
Q3	Name any 3 Data Protocols.	5	CO1
Q4	Name the 7 layers in OSI.	5	CO1
Q5	Name 4 steps that should be undertaken to create modern Grid.	5	CO2
Q6	What are the important steps that should be undertaken before creating any Bidding documents?	5	CO2

SECTION B

1. Each question will carry 10 marks

2. Instruction: Write short / brief notes

Q7	Name any 10 technologies available that can be implemented within a Smart Grid and explain the standards developed by CEA.	10	CO2
Q8	What are the KPIs for assessing performance of a DISCOM? How will you increase the performance index	10	CO3
Q9	What are the open source tools and technologies available for Smart Grid? Critically analyze the HDFS and Map Reduce function of HADOOP for Big data analysis	10	CO3

Q10	<p>There are 5 Business Models mentioned under NSGM. Which business model will you suggest implementing (say you are a consultant to a DISCOM) and explain with proper arguments for the following Smart Grid Technology? (Explain anyone)</p> <p>a) Prepaid Metering b) Peak Load Management c) Renewable Energy Integration d) Energy Efficiency</p>	10	CO2
Q11	Write Short note on Data Protocols with examples	10	CO3

SECTION-D

Question carries 20 Marks.

Q12	<p>6 keywords are the objectives of Ministry of Power. They are “Reliability, Safety, Accessibility, Quality, Affordability and Availability”. How Smart Grid implementation can help in achieving the objectives mentioned in quotes with suitable example?</p> <p>Or</p> <p>The case on AMI rollout implemented in Ajmer (Rajasthan) with the consumers of Ajmer Vidyut Vitran Nigam Limited (AVVNL) is designed to establish the AMI linked benefits and rollout strategies. The main functionalities proposed for the pilot are AMI installation and loss reduction analytics. The project is being implemented applying pay for service approach (entire implementation is treated as a service and no direct payment for advance meters are required).</p> <p>As per the model, the vendor provides equipment including meters and supporting software, along with a remuneration of monthly service charge. The charges are fixed to cover the capital expenditure of the vendor for a period of four to five years.</p> <p>Critically analyze the Economic/Financial Benefits, Revenue potential and Challenges of the following Smart Grid Technologies</p> <p>a. Automated Distribution Network. b. Smart Meter.</p>	20	CO4
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