



Name:

Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023
SET 1

Course: Analytics and Big Data
Program: MBA DB
Course Code: DSBA 7012

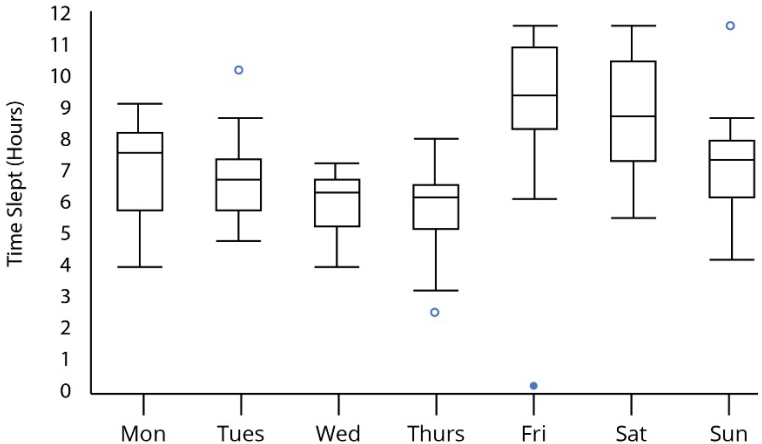
Semester: II
Time : 03 hrs.

Max. Marks: 100

Instructions:

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO
Q 1	Attempt all questions. Mention True/false/ Options		
I	Discrete data is a whole number that can't be divided or broken into individual parts, fractions or decimals.	2	CO1
II	Prescriptive analytics assists users in finding the optimal solution to a problem or in making the right choice/decision among several alternatives.	2	CO1
III	Gross domestic product (GDP), and Gini index, are examples of cross-sectional data	2	CO1
IV	What type of chart is used to display the distribution of a categorical variable? A. Histogram B. Bar chart C. Scatter plot	2	CO1
V	What type of scale is used for variables that have a defined order or ranking, such as education level or star rating? A. Nominal scale B. Ordinal scale C. Ratio scale D. Interval scale	2	CO1
VI	Can you perform mathematical operations, such as addition and subtraction, with ordinal scale variables? A. Yes B. No	2	CO1
VII	In a box plot, an observation beyond $Q3 + 1.5 IQR$ is (A) A potential outlier (B) Maximum value (C) Mode (D) Median	2	CO1
VIII	In kurtosis, Leptokurtic is having very long and skinny tails, which means there are more chances of outliers.	2	CO1
IX	What is the main challenge associated with big data? a) Storing the data	2	CO1

	b) Processing the data c) Analyzing the data d) All of the above		
X	This method eliminates the effects of group potential dominance of the most vocal members A. Consultancy B. Delphi C. Surveys	2	CO1
SECTION B 4Qx5M= 20 Marks			
	Attempt any four questions		
Q 2	What is predictive analytics and how is it used in business?	5	CO2
Q3.	What are the various data scales?	5	CO2
Q4.	Descriptive, Predictive, and Prescriptive Analytics why they are different?	5	CO2
Q5	How can kurtosis and skewness be used to inform data-driven decision making	5	CO2
Q6	In what context panel data could be used for business analytics?	5	CO2
SECTION-C 3Qx10M=30 Marks			
	Attempt any three questions		
Q7	How can you use business analytics to improve customer experience and engagement? What data sources can be leveraged to gain insights into customer behavior and preferences?	10	CO3
Q8	Explain the roadmap for analytics capability building	10	CO3
Q9	Create a 5 point summary for box plot for Thursday as given below. Is there any outliers in the graph ? 	10	CO3
Q 10	What are the main components of time series analysis?	10	CO3

SECTION-D
2Qx15M= 30 Marks

Q	Attempt all the question																						
Q 12	<p>Calculate the semi moving average of the following data and draw the trend line</p> <table border="1" data-bbox="228 432 833 909"> <thead> <tr> <th data-bbox="228 432 483 548">Year</th> <th data-bbox="483 432 833 548">Sales in (Millions)</th> </tr> </thead> <tbody> <tr> <td data-bbox="228 548 483 590"></td> <td data-bbox="483 548 833 590"></td> </tr> <tr> <td data-bbox="228 590 483 632">2016</td> <td data-bbox="483 590 833 632">16</td> </tr> <tr> <td data-bbox="228 632 483 674">2017</td> <td data-bbox="483 632 833 674">18</td> </tr> <tr> <td data-bbox="228 674 483 716">2018</td> <td data-bbox="483 674 833 716">10</td> </tr> <tr> <td data-bbox="228 716 483 758">2019</td> <td data-bbox="483 716 833 758">11</td> </tr> <tr> <td data-bbox="228 758 483 800">2020</td> <td data-bbox="483 758 833 800">23</td> </tr> <tr> <td data-bbox="228 800 483 842">2021</td> <td data-bbox="483 800 833 842">12</td> </tr> <tr> <td data-bbox="228 842 483 884">2022</td> <td data-bbox="483 842 833 884">11</td> </tr> <tr> <td data-bbox="228 884 483 909">2023</td> <td data-bbox="483 884 833 909">10</td> </tr> </tbody> </table>	Year	Sales in (Millions)			2016	16	2017	18	2018	10	2019	11	2020	23	2021	12	2022	11	2023	10	15	CO4
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Q 13	How can you communicate the results of your analysis effectively to stakeholders who may not have a background in data analytics? What techniques can you use to ensure that the insights are clearly understood and acted upon?	15	CO4																				