



UNIVERSITY WITH A PURPOSE

Name:  
Enrolment No:

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**  
**End Semester Examination (Online) – July, 2020**

**Program: BA EE**  
**Subject/Course: Business Analytics (with Excel)**  
**Course Code: DSBA 2001**

**Semester : IV**  
**Max. Marks: 100**  
**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.

**Marks**

**COs**

Q.1

Ram is frequently orders their products and promote their products to target these customers. The company executives are aware of the fact that repeat purchases result in more promotion of sales and involve less cost than getting sales orders from new customers. Till recently, their company had been working on a small scale. They had only isolated within a department and took long time for some information to be shared. Fortunately, for ram an information system with databases and datamining and other up-scale facilities where installed in the recent past. Now this meant that instead of sitting for hours and manually sorting out and marking the names of the customers who order, these activities can be done by a computer terminal using the database of customers in few minutes. Moreover the result are more accurate without the manual errors. The computer applies statistical models to the data available in the data base using the data mining tools the number of people frequently ordering their products can be determined by statistical techniques. Following is the list of customers of the company for the last 1 year.

20

CO<sub>1</sub>

S.No.	Customer Name	Customer City	Date of purchase	Sales in Rs
1	Srikanth	Mumbai	07-12-2014	4000
2	Anil	Delhi	29-12-2014	3500
3	Rahul	Bangalore	14-01-2015	2000
4	Vijay	Kolkata	12-02-2015	2200
5	Srikanth	Mumbai	16-02-2015	4000
6	Vivek	Mumbai	17-03-2015	3000
7	Amar	Hyderabad	14-04-2015	1900
8	Srikanth	Mumbai	16-04-2015	4000
9	Mahesh	Patna	16-05-2015	2200

10	Vinod	Chandigarh	18-06-2015	2000
11	Anil	Delhi	29-06-2015	3500
12	Suresh	Lucknow	15-07-2015	1900
13	Anil	Delhi	29-07-2015	3500
14	Srikanth	Mumbai	27-08-2015	4000
15	Anil	Delhi	25-09-2015	3500
16	Srikanth	Mumbai	21-10-2015	4000
17	Anil	Delhi	29-11-2015	3500

- (a) Find the sales amount of repeated customers
- (b) Find the total sales
- (c) Find the list of repeated customers
- (d) Find the Diwali sales which takes place during the Octobers and Novembers and has a discount of 10% on marked price.

Vijay is in the research and development department of an insurance company ABC. He is give an assignment of finding the satisfaction levels of the customers who bought the insurance pension product ABC Jeevan Shram of his company in the last 3 years. This is the crucial assignment since the results could help the management in taking important decision for future regarding their products. Obviously, Vijay feels the pressure. At first, Vijay feels that it could be a little difficult to make the customers spent time on their survey. So he decides that some intensive could draw the customers to tale the survey. Thus this problem of getting the customers to take the survey seems to be solved. Vijay has the following data of satisfaction level of the product ABC Jeevan Shram of customers of last 3 years.

Customer	Gender	Satisfaction level on a scale of 1 to 10
1	F	7
2	F	8
3	M	6
4	F	9
5	M	5
6	M	7
7	F	8
8	M	9
9	F	7
10	F	8
11	F	7
12	M	8
13	M	6

Q.2

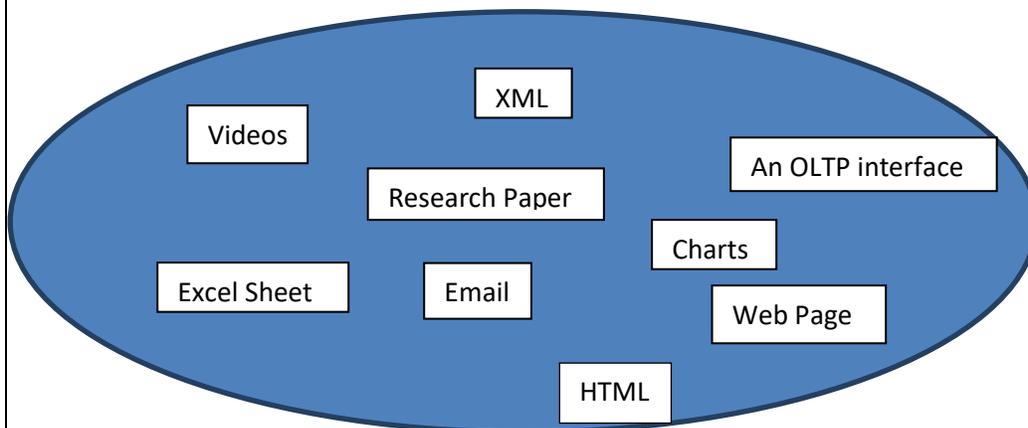
20

CO<sub>2</sub>

14	F	9
15	F	5
16	M	7
17	M	8
18	M	9
19	F	7
20	F	8
21	M	7
22	F	8
23	F	6
24	F	9
25	M	5
26	M	7
27	M	8
28	F	9
29	F	7
30	F	8

- (a) Find the average satisfaction level of customers who bought the company's product ABC Jeevan shram in the last 3 years and the deviation in satisfaction level of a typical customers.
- (b) Compare the average satisfaction level of male and female customers

(i) Classify the given data into three categories: Structured, Semi-Structured and unstructured



Q.3

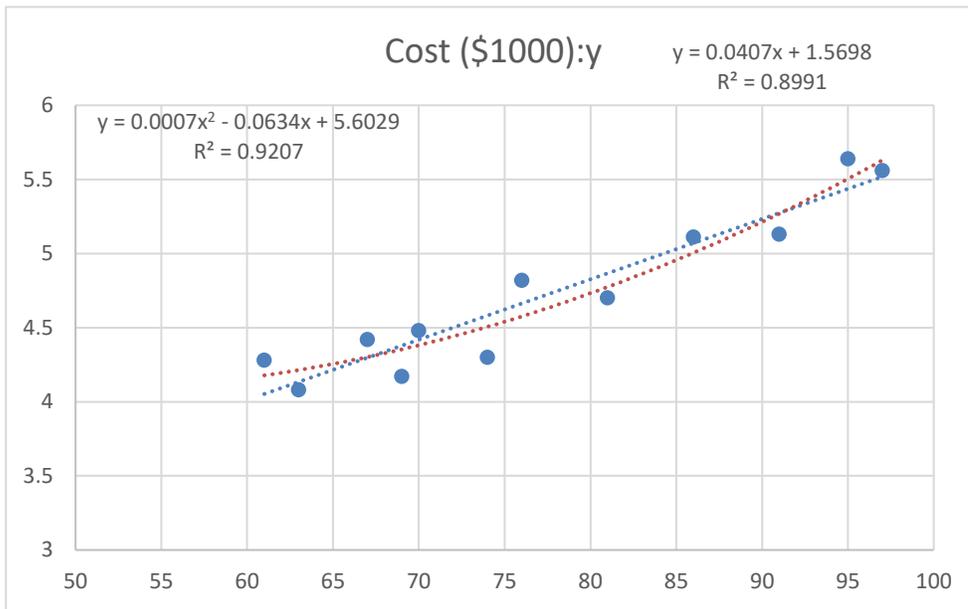
20

CO<sub>3</sub>

(ii) Explain the relationship of BA Process and Organization Decision-Making Process

Q.4	<p>The data of an imaginary conglomerate which has a presence in all the industries are given here, find the total revenue from each industries and the grand total? Also suggest in which industry one should invest the money.</p> <table border="1" data-bbox="212 499 748 1402"> <thead> <tr> <th>Industry</th> <th>Sales Unites</th> <th>Sales Price</th> </tr> </thead> <tbody> <tr><td>Agriculture</td><td>5647</td><td>73.5</td></tr> <tr><td>Manufacturing</td><td>2537</td><td>130.84</td></tr> <tr><td>Services</td><td>846</td><td>21.99</td></tr> <tr><td>Manufacturing</td><td>455</td><td>137.39</td></tr> <tr><td>Agriculture</td><td>2467</td><td>7.85</td></tr> <tr><td>Construction</td><td>9345</td><td>280.69</td></tr> <tr><td>Services</td><td>3446</td><td>104.09</td></tr> <tr><td>Agriculture</td><td>8946</td><td>269.09</td></tr> <tr><td>Manufacturing</td><td>7346</td><td>221.41</td></tr> <tr><td>Construction</td><td>2744</td><td>83.29</td></tr> <tr><td>Agriculture</td><td>6957</td><td>208.69</td></tr> <tr><td>Services</td><td>2475</td><td>4.24</td></tr> <tr><td>Manufacturing</td><td>5455</td><td>17.03</td></tr> <tr><td>Construction</td><td>9244</td><td>277.54</td></tr> <tr><td>Agriculture</td><td>1057</td><td>28.41</td></tr> <tr><td>Construction</td><td>7757</td><td>233.33</td></tr> <tr><td>Services</td><td>2257</td><td>68.07</td></tr> <tr><td>Manufacturing</td><td>2055</td><td>62.37</td></tr> <tr><td>Construction</td><td>5657</td><td>168.87</td></tr> <tr><td>Services</td><td>1157</td><td>34.42</td></tr> </tbody> </table>	Industry	Sales Unites	Sales Price	Agriculture	5647	73.5	Manufacturing	2537	130.84	Services	846	21.99	Manufacturing	455	137.39	Agriculture	2467	7.85	Construction	9345	280.69	Services	3446	104.09	Agriculture	8946	269.09	Manufacturing	7346	221.41	Construction	2744	83.29	Agriculture	6957	208.69	Services	2475	4.24	Manufacturing	5455	17.03	Construction	9244	277.54	Agriculture	1057	28.41	Construction	7757	233.33	Services	2257	68.07	Manufacturing	2055	62.37	Construction	5657	168.87	Services	1157	34.42	20	CO <sub>3</sub> & CO <sub>4</sub>
Industry	Sales Unites	Sales Price																																																																
Agriculture	5647	73.5																																																																
Manufacturing	2537	130.84																																																																
Services	846	21.99																																																																
Manufacturing	455	137.39																																																																
Agriculture	2467	7.85																																																																
Construction	9345	280.69																																																																
Services	3446	104.09																																																																
Agriculture	8946	269.09																																																																
Manufacturing	7346	221.41																																																																
Construction	2744	83.29																																																																
Agriculture	6957	208.69																																																																
Services	2475	4.24																																																																
Manufacturing	5455	17.03																																																																
Construction	9244	277.54																																																																
Agriculture	1057	28.41																																																																
Construction	7757	233.33																																																																
Services	2257	68.07																																																																
Manufacturing	2055	62.37																																																																
Construction	5657	168.87																																																																
Services	1157	34.42																																																																
Q.5	<p>The Airline cost data (given in table 1) and regression equation to predict the cost of flying using number of passengers are given in figure 1</p> <p>Interpret the result in terms of association between number of passengers and cost, regression line and information provided by figure 1.</p> <p style="text-align: center;">Table: 1</p> <table border="1" data-bbox="440 1682 1021 1900"> <thead> <tr> <th>Number of Passengers(X)</th> <th>Cost (\$1000):y</th> </tr> </thead> <tbody> <tr><td>61</td><td>4.28</td></tr> <tr><td>63</td><td>4.08</td></tr> <tr><td>67</td><td>4.42</td></tr> <tr><td>69</td><td>4.17</td></tr> </tbody> </table>	Number of Passengers(X)	Cost (\$1000):y	61	4.28	63	4.08	67	4.42	69	4.17	20	CO <sub>4</sub>																																																					
Number of Passengers(X)	Cost (\$1000):y																																																																	
61	4.28																																																																	
63	4.08																																																																	
67	4.42																																																																	
69	4.17																																																																	

70	4.48
74	4.3
76	4.82
81	4.7
86	5.11
91	5.13
95	5.64
97	5.56



**ANSWERS**