

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM & ENERGY STUDIES
DEHRADUN**

End Term Examination – May, 2019

Program/course: BBA(FAS)

Subject: Research Methodology & Report Writing

Code : DSRM2001

No. of page/s: 05

Semester – IV

Max. Marks : 100

Duration : 3 Hrs

SECTION A

(Attempt all questions)

1.	Select the correct answer	Marks	CO
	i. Statistics is used by researchers to a. Analyze the empirical data collected in a study b. Make their findings sound better c. Operationally define their variables d. Ensure the study comes out the way it was intended	2	CO1
	ii. Which one of the following sets is the measure of central tendency? a. Mean, standard deviation, mode b. Mean, median, standard deviation c. Arithmetic mean, median, mode d. Standard deviation, internal validity, mode	2	CO1
	iii. Departmental stores selected to test a new merchandising display system is the example of a. Quota sampling b. Convenience sampling c. Judgmental sampling d. Purposive sampling	2	CO1
	iv. “There is no relationship between higher motivation level and higher efficiency” is an example of which type of hypothesis? a. Alternative b. Null c. Correlation d. Research	2	CO1
	v. What is the first step in research process? (a) Developing hypothesis (b) Collection of data (c) Formulating research problem (d) Developing hypothesis	2	CO1

	<p>vi. A business research report is the _____ stage of a research process.</p> <p>a. First b. Second c. Middle d. Last</p>	2	CO1
	<p>vii. Which of the following research design,discover of ideas & insights is an objective?</p> <p>a. Casual b. Diagnosis c. Exploratory d. Descriptive</p>	2	CO1
	<p>viii. If we took the 500 people attending a school in Dehradun City, divided them by gender, and then took a random sample of the males and a random sampling of the females, the variable on which we would divide the population is called the _____.</p> <p>a. Independent variable b. Dependent variable c. Stratification variable d. Sampling variable</p>	2	CO1
	<p>ix. Let's suppose we are predicting score on a training posttest from number of years of education and the score on an aptitude test given before training. Here is the regression equation $Y = 25 + .5X_1 + 10X_2$, where X_1 = years of education and X_2 = aptitude test score. What is the predicted score for someone with 10 years of education and a aptitude test score of 5?</p> <p>a. 25 b. 50 c. 35 d. 80</p>	2	CO1
	<p>x. How many times the students appear in the research class is the example of _____.</p> <p>a. Intensity b. Space c. Frequency d. Direction</p>	2	CO1
<p>SECTION B</p> <p>(Attempt any Eight questions)</p>			
2.	What do you mean by hypothesis? How you will decide null hypothesis? Explain with example.	5	CO1
3.	What do you mean by sampling frame? How you will decide sampling frame.	5	CO1

4.	You are working as a fund manager at XYZ company. The company wants to launch a new financial product in India, therefore the company needs some information about consumer requirements about new financial product. Suggest a suitable research and research design in this situation with justification.	5	CO1												
5.	When Likert scale is used in research. Frame two questions based on Likert scale?	5	CO2												
6.	What do you mean by descriptive research design and when it is used.	5	CO3												
7.	Suppose we have to prepare a dissertation for the partial fulfillment of BBA degree. How you will choose your dissertation topic. Outline the process involved in selection of topic?	5	CO1												
8.	<p>A small industry is interested in analyzing the effects of advertising on its sales. Over a 5-month period ,it finds the following results:</p> <table border="1" data-bbox="203 682 1291 793"> <tr> <td>X</td> <td>5</td> <td>8</td> <td>10</td> <td>15</td> <td>22</td> </tr> <tr> <td>Y</td> <td>6</td> <td>15</td> <td>20</td> <td>30</td> <td>39</td> </tr> </table> <p>Where X represents the money spent on advertising (in hundreds) and Y represents the total sales(in thousands) . Use these data to determine the correlation coefficient.</p>	X	5	8	10	15	22	Y	6	15	20	30	39	5	CO1
X	5	8	10	15	22										
Y	6	15	20	30	39										
9.	What do you mean by business research process? Draw the layout of business research process.	5	CO1												
10.	Explain the role of literature review in research? What is the basis of setting of research question(s)?	5	CO1												

SECTION-C

(Answer any Four questions)

11.	<p>A study was made by a retail merchant to determine the relation between weekly advertising expenditure and sales. The following data were recorded:</p> <table border="1" data-bbox="203 105 1299 283"> <tr> <td>Advertising cost(Rs)</td> <td>40</td> <td>20</td> <td>25</td> <td>20</td> <td>30</td> <td>50</td> <td>40</td> <td>20</td> <td>50</td> <td>40</td> </tr> <tr> <td>Sales</td> <td>385</td> <td>400</td> <td>395</td> <td>365</td> <td>475</td> <td>440</td> <td>490</td> <td>420</td> <td>560</td> <td>525</td> </tr> </table> <p>(i) Find the regression line to predict weekly sales from advertising expenditures. (ii) Estimate the weekly sales when advertising costs is Rs 35.</p>	Advertising cost(Rs)	40	20	25	20	30	50	40	20	50	40	Sales	385	400	395	365	475	440	490	420	560	525	10	CO3
Advertising cost(Rs)	40	20	25	20	30	50	40	20	50	40															
Sales	385	400	395	365	475	440	490	420	560	525															
12.	<p>The following data summarises the results of survey of 1,000 selected households to know the investment pattern of people in three cities according to their income. Does this survey provide evidence that the investment pattern depends on income ? Use $\alpha=0.10$</p> <table border="1" data-bbox="267 819 1153 1060"> <tr> <td>Cities</td> <td>Below</td> <td>Average</td> <td>Above</td> </tr> <tr> <td>Dehradun</td> <td>63</td> <td>42</td> <td>15</td> </tr> <tr> <td>Delhi</td> <td>58</td> <td>61</td> <td>31</td> </tr> <tr> <td>Kolkata</td> <td>14</td> <td>47</td> <td>29</td> </tr> </table>	Cities	Below	Average	Above	Dehradun	63	42	15	Delhi	58	61	31	Kolkata	14	47	29	10	CO3						
Cities	Below	Average	Above																						
Dehradun	63	42	15																						
Delhi	58	61	31																						
Kolkata	14	47	29																						
13.	<p>The following table showing the wage distribution in a factory. Find mean, median and mode of wage. If the management of the factory wants to fix minimum wages per week, suggest an appropriate measure of central tendency.</p> <table border="1" data-bbox="203 1228 1299 1396"> <tr> <td>Weekly wages(Rs)</td> <td>0-10</td> <td>10-20</td> <td>20-30</td> <td>30-40</td> <td>40-50</td> </tr> <tr> <td>No. of employess</td> <td>14</td> <td>25</td> <td>27</td> <td>24</td> <td>15</td> </tr> </table>	Weekly wages(Rs)	0-10	10-20	20-30	30-40	40-50	No. of employess	14	25	27	24	15	10	CO3										
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14.	<p>You are working in financial company. Your company is going to launch a new financial product into market. Before launching this product you want to understand market insight about such product. Develop a questionnaire in this situation.</p>	10	CO2																						
15.	<p>The mean weekly sales of soap bars in departmental stores was 140 bars per store. After an advertisement campaign the mean weekly sales in 26 stores for a typical week increased to 147 and showed a s.d. of 16. Can you infer that advertisement is effective in promoting sales? Use $\alpha=0.05$</p>	10	CO3																						

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	ii. Which one of the following sets is the measure of central tendency? a. Mean, standard deviation, mode b. Mean, median, standard deviation c. Arithmetic mean, median, mode d. Standard deviation, internal validity, mode	2	CO3
	iii. Departmental stores selected to test a new merchandising display system is the example of a. Quota sampling b. Convenience sampling c. Judgmental sampling d. Purposive sampling	2	CO1
	iv. “There is no relationship between higher motivation level and higher efficiency” is an example of which type of hypothesis? a. Alternative b. Null c. Correlation d. Research	2	CO4
	v. What is the first step in research process? (a) Developing hypothesis (b) Collection of data (c) Formulating research problem	2	CO1

	(d) Developing hypothesis		
	vi. A business research report is the _____ stage of a research process. a. First b. Second c. Middle d. Last	2	CO1
	vii. Which of the following research design,discover of ideas & insights is an objective? a. Casual b. Diagnosis c. Exploratory d. Descriptive	2	CO1
	viii. If we took the 500 people attending a school in Dehradun City, divided them by gender, and then took a random sample of the males and a random sampling of the females, the variable on which we would divide the population is called the _____. a. Independent variable b. Dependent variable c. Stratification variable d. Sampling variable	2	CO1
	ix. Let's suppose we are predicting score on a training posttest from number of years of education and the score on an aptitude test given before training. Here is the regression equation $Y = 25 + .5X_1 + 10X_2$, where X_1 = years of education and X_2 = aptitude test score. What is the predicted score for someone with 10 years of education and a aptitude test score of 5? a. 25 b. 50 c. 35 d. 80	2	CO3
	x. How many times the students appear in the research class is the example of _____. e. Intensity f. Space g. Frequency h. Direction	2	CO3
SECTION B (Attempt any Eight questions)			

2.	What do you mean by hypothesis? How you will decide null hypothesis? Explain with example.	5	CO3														
3.	Explain the difference between sampling error and non-sampling error.	5	CO1														
4.	You are working as a fund manager at XYZ company. The company wants to launch a new financial product in India, therefore the company needs some information about consumer requirements about new financial product. Suggest a suitable research and research design in this situation with justification.	5	CO4														
5.	When nominal scale is used in research. Frame two questions based on nominal scale?	5	CO2														
6.	What do you mean by causal research design and when it is used.	5	CO3														
7.	Suppose we have to prepare a dissertation for the partial fulfillment of BBA degree. How you will choose your dissertation topic. Outline the process involved in selection of topic?	5	CO5														
8.	<p>A small industry is interested in analyzing the effects of advertising on its sales. Over a 6-month period ,it finds the following results:</p> <table border="1" data-bbox="203 898 1300 1010"> <tr> <td>x</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>6</td> <td>8</td> </tr> <tr> <td>y</td> <td>2.4</td> <td>3</td> <td>3.6</td> <td>4</td> <td>5</td> <td>6</td> </tr> </table> <p>Where X represents the money spent on advertising (in hundreds) and Y represents the total sales(in thousands) . Use these data to determine the correlation coefficient.</p>	x	1	2	3	4	6	8	y	2.4	3	3.6	4	5	6	5	CO3
x	1	2	3	4	6	8											
y	2.4	3	3.6	4	5	6											
9.	What do you mean by research process? Draw the layout of research process.	5	CO1														
10.	Explain judgment sampling with examples.	5	CO1														

SECTION-C

(Answer any Four questions)

11.	<p>A study was made by a retail merchant to determine the relation between weekly advertising expenditure and sales. The following data were recorded:</p> <table border="1" data-bbox="203 109 1305 279"> <tr> <td>Advertising cost(Rs)</td> <td>40</td> <td>20</td> <td>25</td> <td>20</td> <td>30</td> <td>50</td> <td>40</td> <td>20</td> <td>50</td> <td>40</td> </tr> <tr> <td>Sales</td> <td>385</td> <td>400</td> <td>395</td> <td>365</td> <td>475</td> <td>440</td> <td>490</td> <td>420</td> <td>560</td> <td>525</td> </tr> </table> <p>(i) Find the regression line to predict weekly sales from advertising expenditures. (ii) Estimate the weekly sales when advertising costs is Rs 35.</p>	Advertising cost(Rs)	40	20	25	20	30	50	40	20	50	40	Sales	385	400	395	365	475	440	490	420	560	525	10	CO3
Advertising cost(Rs)	40	20	25	20	30	50	40	20	50	40															
Sales	385	400	395	365	475	440	490	420	560	525															
12.	<p>1072 college students of BBA were classified according to their intelligence and economic conditions. Test whether there is any association between intelligence and economic conditions.</p> <table border="1" data-bbox="250 751 1284 1079"> <thead> <tr> <th rowspan="2">Economic Conditions</th> <th colspan="4">Intelligence</th> </tr> <tr> <th>Excellent</th> <th>Good</th> <th>Mediocre</th> <th>Dull</th> </tr> </thead> <tbody> <tr> <th>Good</th> <td>48</td> <td>199</td> <td>181</td> <td>82</td> </tr> <tr> <th>Not good</th> <td>81</td> <td>185</td> <td>190</td> <td>106</td> </tr> </tbody> </table> <p>(Given that 5% value of χ^2 for 2 d.f. and 3 d.f. are 5.991 and 7.82 respectively)</p>	Economic Conditions	Intelligence				Excellent	Good	Mediocre	Dull	Good	48	199	181	82	Not good	81	185	190	106	10	CO3			
Economic Conditions	Intelligence																								
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13.	<p>If the two lines are $2X-3Y+6=0$ and $4Y-5X-8=0$, find the mean value of X and Y and the coefficient of correlation between X and Y .If the standard deviation of X is 3 determine the standard deviation of Y.</p>	10	CO3																						
14.	<p>You are working in financial company. Your company is going to launch a new financial product into market. Before launching this product you want to understand market insight about such product. Develop a questionnaire in this situation.</p>	10	CO2																						
15.	<p>The Upjohn Company, based in Kalamazoo, Michigan, manufactures and markets pharmaceuticals and health related products. With more than 19,000 employees and distribution in over 30 countries from Australia to Zaire, the company's annual sales top \$1 billion.</p> <p>Upjohn is constantly developing and marketing new products. One example is Rogaine.</p> <p>Originally developed as an antihypertension drug. Rogine was shown in clinical tests</p>	10	CO1& CO2																						

to encourage moderate height growth on some short(less height) male volunteers.

Thereafter, Upjohn quickly applied to the U.S. Food and drug Administration (FDA) for the right to market the drug as a height-growth product in the US.

Questions:

- (i) What type of exploratory business research should Upjohn conduct?
- (ii) Prepare a questionnaire for the solving the Rogine's marketing problem?