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G.R. No.	
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PAPER CODE	V482-224 FCESE
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MAY 2022 - ENDSEM EXAM
FINAL. YEAR B. TECH. (CIVIL & MECHANICAL) (SEMESTER - II)
COURSE NAME: BUSINESS ANALYTICS
COURSE CODE: IOEUA40184F
(PATTERN 2018)

Time: [1 Hour]

[Max. Marks: 30]

(*) Instructions to candidates:

- 1) Answer Q.1 OR Q.2, Q.3 OR Q.4, Q.5 OR Q.6.
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Q.1 a Simplify the use of Power BI Gateway in detail and also importance of Power BI Mobile. 4 Marks

Q.1 b Justify the necessity of data transformation and also distinguish some advance data transformations in Power BI 6 Marks

OR

Q2 a Identify the importance of Power BI Service 4 Marks

Q2 b Simplify YTD QTD and MTD with suitable examples and develop DAX to calculate it 6 Marks

Q.3 a Identify the significance of regression analysis with examples 4 Marks

Q.3 b A study is conducted to determine whether students' first year GPA (Y) can be predicted by their ACT score (X). A random sample of n=120 freshmen from a small college were selected. The following EXCEL output gives the results of a simple linear regression on the data. 6 Marks

- a. Develop the regression equation for predicting GPA as function of ACT score
- b. Determine the predicted GPA for student scoring 20 on the ACT?
- c. Relationship whether positive or negative between GPA and ACT exists?
- d. Identify predictor and target variable?

Regression Statistics					
Multiple R	0.2695				
R Square	0.0726				
Adjusted R Square	0.0648				
Standard Error	0.6231				
Observations	120				

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	3.5878	3.5878	9.2402	0.0029
Residual	118	45.8176	0.3883		
Total	119	49.4055			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	2.11	0.3209	6.5880	0.0000	1.4786	2.7495
ACT(X)	0.04	0.0128	3.0398	0.0029	0.0135	0.0641

OR

Q.4 a Simply the significance of the term central tendency with examples 4 Marks

- Q.4 b A commercial real estate company is interested in the relationship between properties' rental prices (Y), and the following predictors: building age, expenses/taxes, vacancy rates, and square footage. The results for a regression are given below. 6 Marks

Regression Statistics	
Multiple R	0.7647
R Square	0.5847
Standard Error	1.1369
Observations	81

ANOVA					
	df	SS	MS	F	P-value
Regression	4	138.3269	34.5817	26.7555	0.0000
Residual	76	98.2306	1.2925		
Total	80	236.5575			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	12.2006	0.5780	21.1099	0.0000	11.0495	13.3517
age	-0.1420	0.0213	-6.6549	0.0000	-0.1845	-0.0995
exp/tax	0.2820	0.0632	4.4642	0.0000	0.1562	0.4078
vacancy	0.6193	1.0868	0.5699	0.5704	-1.5452	2.7839
sqfoot	0.0000	0.0000	5.7224	0.0000	0.0000	0.0000

- Relationship between rental rate and any of these predictors? Interpret the strength of the relationship?
 - Conclude the regression equation.
 - Determine properties rental prize for 10years old building with 0 tax, 2 vacancy and 500Sq.ft area.
 - Identify predictor and target variable.
- Q.5 a Distinguish the importance of Tableau architecture with neat diagram? 4 Marks
- Q.5 b Justify the Business analytics role in detail played in HR management. 6 Marks

OR

- Q.6 a Simplify the significance of all tableau products. 4 Marks
- Q.6 b Justify Business analytics role in detail played in educational industry. 6 Marks