Correct Marks : 3

Question Label : Short Answer Question

Using the Central Limit Theorem, find the approximate probability that in a random sample of 300 selected children at least 30 will have defective eye-sight. Enter the answer correct to 1 decimal place.

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0.5

Business Analytics

Section Id :	64065339800
Section Number :	7
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	11
Number of Questions to be attempted :	11
Section Marks :	20
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065384961
Question Shuffling Allowed :	No

Is Section Default? : null

Question Number : 120 Question Id : 640653588631 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DIPLOMA LEVEL : BUSINESS ANALYTICS (COMPUTER BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?

CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406531963343. ✔ YES

6406531963344. ✖ NO

Sub-Section Number : 2

Sub-Section Id : 64065384962

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 121 Question Id : 640653588632 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Multiple Choice Question

Latent demand in a demand-response curve is the area obtained when

Options :

6406531963345.

✔ Price is reduced below the identified optimal price

6406531963346. ✖ Price is increased beyond the identified optimal price

6406531963347. ✖ The optimal price is increased beyond the maximum available price

6406531963348. ✖ Quantity is reduced below the identified optimal quantity

Question Number : 122 Question Id : 640653588642 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Multiple Choice Question

What is the objective function of logistic regression?

Options :

6406531963365. ✖ Minimization of squared errors

6406531963366. ✔ Maximization of log-likelihood

6406531963367. ✖ Minimization of residuals

6406531963368. ✖ None of these

Sub-Section Number :	3
Sub-Section Id :	64065384963
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653588633 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (123 to 125)

Question Label : Comprehension

A multiple linear regression model, as specified below, is fit on a dataset with 250 data points.

Then answer the given three subquestions (*Note: If your answer is in decimal, enter it rounded to two*

decimal places. For example, if your answer is "10.256", enter it as "10.26")

$$\text{MLR Model: } Y = 2.1 + 1.4 * X_1 - 4.2 * X_2 + 0.5 * X_3 + 7 * X_4 + \varepsilon$$

Sub questions

Question Number : 123 Question Id : 640653588634 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1

Question Label : Short Answer Question

How many degrees of freedom are present for the "Residuals" in the ANOVA Table?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

245

Question Number : 124 Question Id : 640653588635 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1

Question Label : Short Answer Question

How many total degrees of freedom are present for the fitted model in the ANOVA Table?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

249

Question Number : 125 Question Id : 640653588636 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1

Question Label : Short Answer Question

If no feature engineering was performed, then how many features were present in the dataset?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

4

Sub-Section Number :	4
Sub-Section Id :	64065384964
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 126 Question Id : 640653588637 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Short Answer Question

The relationship between Demand “D” and Selling Price “P” is given by the equation D(p) = 180 – 6*P. If the intention is to maximize the profit, then what is the optimal selling price if the item is going to be made at Rs. 20 per unit?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

25

Question Number : 127 Question Id : 640653588640 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Short Answer Question

Say a demand response curve is modelled as a constant elasticity curve. If Q1 is 2400 units, Q2 is 1500 units, P1 is Rs. 100 and P2 is Rs. 200, then what is the elasticity of the curve? (*Note: If your answer is in decimal, enter it rounded to two decimal places. For example, if your answer is "10.256", enter it as "10.26"*)

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.65 to 0.70

Sub-Section Number :	5
Sub-Section Id :	64065384965
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 128 Question Id : 640653588638 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1

Question Label : Multiple Choice Question

You are solving a regression problem with 8 explanatory variables. The data has 150 observations, and the R-square value was found to be 0.75. You are adding one more explanatory variable to the dataset (a total of 9 explanatory variables). The new R-square value is 0.8, and the new adjusted R-

square value is 0.92. What does this imply?

Options :

6406531963353. ✖ The new variable does not improve the model

6406531963354. ✖ The new variable alone has high explanatory power

6406531963355. ✖ The data is too small for fitting a regression model with 9 variables

6406531963356. ✔ None of these

Sub-Section Number :	6
Sub-Section Id :	64065384966
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 129 Question Id : 640653588639 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Max. Selectable Options : 0

Question Label : Multiple Select Question

What does the term “Multicollinearity” refer to? (Select all that are applicable)

Options :

6406531963357. ✖ The dependent and independent variables are not-related

6406531963358. ✖ The dependent and independent variables are linearly related

6406531963359. ✖ The dependent variable is linearly related to another dependent variable

6406531963360. ✔ None of these

Question Number : 130 Question Id : 640653588641 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Max. Selectable Options : 0

Question Label : Multiple Select Question

What are the applications of logistic regression?

Options :

6406531963362. ✔ Predicting binary outcomes

6406531963363. ✔ Predicting the multi-class output

6406531963364. ✔ Predicting the odds of the occurrence of a specific event

Sub-Section Number :	7
Sub-Section Id :	64065384967
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653588643 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (131 to 133)

Question Label : Comprehension

Based on the below confusion matrix, answer the given subquestions. (*Note: Give your answer in decimal (not in %) rounded to two decimal places. For example, if your answer is "10.256", enter it as "10.26"*)"

		Actual	
		Positive	Negative
Predicted	Positive	45	18
	Negative	12	25

Sub questions

Question Number : 131 Question Id : 640653588644 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Short Answer Question

What is the accuracy of the model?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

0.7

Question Number : 132 Question Id : 640653588645 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Short Answer Question

What is the precision of the model for predicting the positive class?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.71 to 0.72

Question Number : 133 Question Id : 640653588646 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 2

Question Label : Short Answer Question

What is the recall of the model for predicting the positive class?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.79 to 0.80

Sub-Section Number :	8
Sub-Section Id :	64065384968
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653588647 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (134 to 139)

Question Label : Comprehension

You are given the below regression output. Then answer the given subquestions (*Note: If your answer is in decimal, enter it rounded to two decimal places. For example if your answer is "10.256", enter it as "10.26"*)

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.442234909							
R Square	0.195571715							
Adjusted R Square	0.150881255							
Standard Error	27.32379716							
Observations	20							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	X1	X3	3267.182	X5	0.050888766			
Residual	X2	13438.61805	X4					
Total	19	16705.8						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	836.8263158	12.69276328	65.9294	6.41147E-23	810.1598097	863.4928219	810.1598097	863.4928219
X Variable 1	2.216541353	1.059571407	2.091923	0.050888766	-0.009535568	4.442618275	-0.009535568	4.442618275

Sub questions

Question Number : 134 Question Id : 640653588648 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Short Answer Question

What is the value of X1?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

1

Question Number : 135 Question Id : 640653588649 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Short Answer Question

What is the value of X2?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Equal

Text Areas : PlainText

Possible Answers :

18

Question Number : 136 Question Id : 640653588650 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Short Answer Question

What is the value of X3?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

3267.10 to 3267.30

Question Number : 137 Question Id : 640653588651 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Short Answer Question

What is the value of X4?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

746.40 to 746.65

Question Number : 138 Question Id : 640653588652 Question Type : SA Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Short Answer Question

What is the value of X5?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

4.25 to 4.45

Question Number : 139 Question Id : 640653588653 Question Type : SA Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0.5

Question Label : Short Answer Question

What is the p-value for the regression model?

Response Type : Numeric

Evaluation Required For SA : Yes

Show Word Count : Yes

Answers Type : Range

Text Areas : PlainText

Possible Answers :

0.05 to 0.06

MLF

Section Id :	64065339801
Section Number :	8
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	11
Number of Questions to be attempted :	11
Section Marks :	40
Display Number Panel :	Yes
Group All Questions :	No