

Register No.: Name.:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER MBA DEGREE EXAMINATION (Regular), JULY 2022**(2021 Scheme)****Course Code: 21MBA114****Course Name: Business Analytics****Max. Marks: 60****Duration: 3 Hours****PART A***(Answer all questions. Each question carries 2 marks)*

1. What is Big data. Give example?
2. Explain the concept of Data visualization?
3. Differentiate between Binomial & Poisson distribution with examples?
4. List out the types of forecasting?
5. Discuss any one type of transportation models?

PART B*(Answer any 3 questions. Each question carries 10 marks)*

6. Explain in detail the scope of Business Analytics in the area of Finance, HR, and Marketing?
7. Marks secured by eleven students in two subjects are given below.

Subject A	71	66	68	67	71	70	73	70	72	66	65
Subject B	69	65	64	63	62	65	64	65	66	62	59

Calculate Karl Pearson's coefficient of correlation amongst the marks of two subjects. Also calculate probable error and point out whether the coefficient of correlation is significant or not.

8. A box contains 5 white, 3 red and 9 black balls. If 3 balls are drawn at random find the probability that
 - a) Two of the balls drawn are white
 - b) One is of each colour
 - c) None is red
 - d) At least one is white
9. Data of 104 cricket players and statistics is collected. The Playing Role as a Bowler is kept as the base and Batsman and Bower are taken in as two dummies. The nationality (Indian/Foreign) is a dichotomous value and is the other dummy. The strike rare, the number of wickets, the number of sixes scored in a match and number of years as captaincy are the other variables used.

The depended variable is the price quoted for the played in an auction for a league team.

Number of obs = 104
F(8, 96) = 16.49
Prob > F = 1.13e-20
R-squared = 0.775
Adj R-squared = 0.742
Dependent Variable = Sold Price

Variables	Coef.	Std. Err.	T	P> t	[0.025	0.975]
Const	232321.30	4334343.65	1.81	0.0433	23231.98	4343421.21
Playing Role_ Batsman	121382.76	106685.03	1.13	0.2584	-970077.24	333464.88
Playing Role_ W. Keeper	-55121.92	1969922.63	-0.324	0.7464	-39296.54	28267245
COUNTRY_ FOREIGN	288282.91	91818.34	2.96	0.0042	91624.33	474045.98
ODI-SR	909.81	1276.34	0.7172	0.4752	-1610.69	3428.90
ODI_WKTS	772	489.76	1.69	0.0802	-23.56	1708.97
ODI_SIXER	7871.11	21987.78	3.76	0.0031	3718.45	12019.83
CAPTANCY_ EXP_YRS	218373.67	98198.98	2.12	0.0366	91624.33	474045.28
Age	-8788.98	98049.98	-0.091	0.9270	-895040	63332

Based on the output shown below answer the following questions

- Explain the overall fit of the model [3 Marks]
- What is your understanding on the variables that are significant for predicting the auction price for a player? Give reasons. [5 Marks]
- Express the regression equation in terms of the significant variables [2 Marks]

10. Outline the type of constraints in optimization models?

PART C

(Compulsory question, the question carries 20 marks)

11.

a) A certain drug was administered to 458 males out of a total of 720 in a certain locality to test its efficacy against typhoid. Relevant data is given below.

	Infection	No Infection	Total
Administered the drug	146	312	458
Not Administered	190	72	262
Total	336	384	720

b) Discuss cluster analysis with examples?

Marks (10)

c) Elaborate on Prescriptive analytics?

Marks (5)

Marks (5)
