

Vivekanand Education Society's Institute of Technology, Chembur, Mumbai,
Department Of Artificial Intelligence and Data Science

Year:2022-23 (ODD Sem)

Internal Assessment Test 2

Class : Third Year D11AD	Division: A
Semester : V	Subject: SAIDS
Date: 17/10/2022 (12 pm to 1 pm)	Time: 1 hr

Course Outcome	CO3	CO5	CO6
Percentage %	30%	30%	40%

Q.1)	(Attempt any five of the following)					Marks (20)	Course Outcomes		
	a)	Compare Parametric and non-Parametric Test?							
	b)	Elaborate the Errors SSE,SST and SSR w.r.t Linear Regression?							
	c)	Elaborate Multicollinearity in Multiple Linear Regression?							
	d)	Compare one way and two way Anova? ..							
	e)	A research team wants to study the effects of a new drug on insomnia. 8 tests were conducted with a variance of 600 initially. After 7 months 6 tests were conducted with a variance of 400. At a significance level of 0.05 was there any improvement in the results after 7 months? F value is 4.88(Given)							
	f)	Find the simple linear regression equation that fits the given data					CO6		
		X	1	2	3	4	5		
		Y	2	4	6	4	5	2M	
	Q.2)	Solve using one way Anova					CO3		
		Observation	A	B	C	D			
		1	8	12	18	13			
		2	10	11	12	9			
		3	12	9	16	12			
		4	8	14	6	16			
	a)	5	7	4	8	15	5M		
		OR							
		The score of a sample of 20 students in their university examination are arranged according to the method used in their training : 1) Video Lectures 2) Books and Articles 3) Class Room Training. Evaluate the Effectiveness of these training methods at 0.10 level of significance.							
	b)						CO5		
							5M		

Note : Use Kruskal Wallis Test

Video lecture	76	90	84	95	57	72	
Book & Article	80	80	67	59	91	94	68
Class Room Training	70	85	52	93	86	79	80

Calculate the Multiple Regression Line for Following Dataset

Q.3)

X1	60	62	67	70	71	72	75
X2	22	25	24	20	15	14	14
Y	140	155	159	179	192	200	212

OR

7 random people were given 3 different drugs and for each person, the reaction time corresponding to the drugs were noted. Test the claim at the 5% significance level that all the 3 drugs have the same probability distribution.

b)

people	1	2	3	4	5	6	7
A	1.24	1.71	1.37	2.53	1.23	1.94	1.72
B	1.50	1.85	2.12	1.87	1.34	2.33	1.43
C	1.62	2.05	1.68	2.62	1.51	2.86	2.86

Note: Friedman Test

CO6

5M

CO5

5M

~ All the best!! ~