DS2003-Advance Statistics **ASSIGNMENT – II** **02-04-2023**

Instructions:

PRINT the document on A4 size pages for solving the assignment.
PROVIDE the information required below and attach this page at the start of your assignment.
USE ONLY blue/black pen for solving the assignment.
SOLVE the assignment on plain white A4 size pages.
SUBMIT your assignment in your respective classes:
06/04/2023 (Thursday)
Assignments submitted after the DUE DATE will not be accepted.
Please FOLLOW all the instructions carefully.

OBTAINED MARKS

Submitted To:_____

Submitted By: _____
Name of the student

Roll Number: _____
e.g. 16L-1234

Section: _____
e.g. CS-A

Submission Date: _____
e.g.02-09-2018

Question No.	***1***	***2***	***Instructions Followed***
Total Marks (***15***)	***5***	***10***	***Yes/No***

Q.1

FAST University conducted a Job fairs for their graduate to attain the job or internship in different software companies. A hiring manager of software company interviews candidates, one by one, to fill a vacancy.
The number of candidates interviewed until one candidate receives an offer. After repeating the experiment 250 times, we obtain the following results

x	1	2	3	4	5	6
f	140	70	30	8	1	1

Test the hypothesis at 5 percent level of significance that the observed distribution of x may be fitted by the geometric distribution.

Question.2
A freelancer wants to determine whether the averaging prices of the different services in the fiverr account are the same or not. He chooses the services as Graphics & Designs, Digital Marketing Writing& translation and Video& Animation. From these services he randomly selects the ten account of each service and note the prices.
Following are the data

Graphics & Designs	Digital Marketing	Writing& translation	Video & Animation
4458	11888	2972	7430
5944	474014	1486	8916
7430	62410	4458	7430
29719	133735	1486	37149
23775	89175	14860	29719
8916	8916	2972	74297
22290	133735	8916	10402
1486	29719	2972	35633
4458	46065	19318	564656
2972	4458	5944	13374

1. Test the Hypothesis that the type of four services have the same prices of the project.
2. Use Tukey's test, Bonferroni test and Scheffe method to compare pairs of services means.
3. Use the graphical procedure to compare the average services prices. What conclusions can you draw? How do they compare with the conclusion from (a).
4. Analyze the residuals from this experiment. Are the basic analysis of variance assumptions satisfied?
5. If in Part(4), assumptions are not satisfied then provide the solution with alternate technique[non-parametric Test; Kruskal-Wallis Test].