**Jaipuria Institute of Management, Indore**

PGDM First Trimester (Batch 2023-25)

End Term Examination, October, 2023

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| Course Name | Statistics for Management | Course Code | 40501 |
| Max. Time | **2 hours** | Max. Marks | **40** |

**INSTRUCTIONS:**

* *Students can use MS-Excel data analysis tool pack in the examination.*
* *Students should save excel file with their name enrollment no. and section on the desktop.*
* *Students are advised to write their comments in text box along with output in Excel file only.*
* *Each question should be solved in separate excel sheet.*
* *Only ONE Excel file per student should be submitted.*

**Questions.1 (10 Marks)**

“HDCC Bank” has seven branches in Jabalpur. The General Manager of the bank in Mahakaushal region is concerned about the average time (hrs.) for processing of car loan applications in different branches. So, he appointed an independent research firm which collected following data using random sampling method. Examine (Explore) the data. State the null and alternative hypothesis, apply appropriate statistical tool (at α = 0.01) and generate meaningful management insights.

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| **Branch Location** | **Car Loan file Processing Time (Hours)** | | | | | | | | | | |
| Savitri  GCF Road | 15 | 12 | 10 | 11 | 10 | 9 | 8 | 11 | 10 | 10 |
| Narmada Rd, Adarsh Nagar | 8 | 7 | 8 | 9 | 7 | 6 | 5 | 9 | 8 |  |
| Kumbhare Mansion, SBI Chowk | 10 | 9 | 10 | 11 | 10 | 8 | 10 | 9 |  |  |
| Shri Krishna Plaza Cherital Ward | 8 | 9 | 10 | 11 | 9 | 8 | 10 | 11 | 10 |  |
| Idgah Complex Nayapara | 7 | 6 | 8 | 9 | 10 | 8 | 6 | 5 | 9 |  |
| Mastana Chowk Rd, Bengali Colony | 12 | 13 | 15 | 16 | 10 | 14 | 12 | 9 | 8 | 10 |
| M R 4 Main Road, Vijay Nagar | 10 | 9 | 9 | 8 | 9 | 10 | 11 | 10 | 11 |  |

**Question No. 2 (10 Marks)**

Jimmy’s Hot Dog is a famous burger joint in 56 Dukan at Indore. Jimmy makes mutton hotdogs every day and has a policy of discarding all the unsold hotdogs by end of the day. Each hotdog costs Rs. 25/- and is sold for Rs. 40/-. The sale for last three months is tabulated below. Estimate probabilities in this uncertain business situation and suggest best course of action to Mr. Jimmy.

*(Use Data sheet “Jimmy’s Hot Dog” from the attached Excel File)*

**Questions. 3 (10 Marks)**

“Super Maruti” is a Maruti car garage which has expertise in maintenance and repairs of Maruti cars. The garage claims that after Monsoon service, the mileage of cars significantly improves. To verify their claim, an automobile research company gathered the data using random sampling, which is enclosed in the excel file. State the null and alternative hypothesis, apply relevant concepts and generate meaningful management insights. (Assume that all other conditions remained unchanged)

*(Use Data sheet “Super Maruti” from the attached Excel File)*

**Question No. 4 (10 Marks)**

Ms. Neelu Bambani was concerned about her portfolio of BSE 200 stocks. Currently she only has one stock of Reliance Industries Limited in her portfolio and wish to diversify the same. She has shortlisted four stocks, ACC Cement, Bajaj Auto, Dr. Reddy’s Lab and HDFC Bank. However, due to financial constraints, currently she can invest in one stock only.

Apply relevant conceptual framework to Ms. Neelu Bambani’s data and generate meaningful insights.

*(Use Data sheet “Neelu Bambani’s Portfolio” from attached Excel File)*