**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

**FIRST TRIMESTER (Batch 2021-23)**

**END TERM RE-IMPROVEMENT EXAMINATION, FEB-2022**

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| Course Name | **Statistics For Management** | Course Code | **OM 101** |
| Max. Time | **2 hours** | Max. Marks | **40** |

**INSTRUCTIONS:**

* Students can use personal Laptops and 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.

**Q1**. Since the COVID-19 pandemic, central banks worldwide have been following policy of lower interest rates and quantitative easing. Indian policy makers have also walked on similar lines during the period. Taking this policy into consideration, Mr. Mark started investing in couple of banking sector ETFs for nearly 2 years now. His motive for the investment was to earn higher than market returns, from the financial sector, which could be a direct beneficiary during the low interest rate regime in the country. However, because of higher inflation figures during the recent months, the market has been expecting few rate hikes in the financial year to come. Pondering upon this, Mr. Mark considers closing out one of the ETF and hold only one ETF from the banking sector. He has been investing in Aditya Birla Sun Life Banking ETF and Axis Mutual Fund Banking ETF.

As a financial advisor to Mr. Mark, your role is to provide insightful guidance to Mr. Mark, showcasing which ETF should be the better choice for him and why? The price information of the ETFs is provided to you. Consider NIFTY Bank index as the benchmark index for your analysis. **(10 Marks)**

*(Use Data from attached Excel File)*

**Q2.** “Best Bazar” is a chain of grocery super market across India. The store collected random sample of some customers across multiple locations in NCR region for customer billing experience and gathered following data. Examine the data, state the null and alternative hypothesis and generate meaningful insights. **(10 Marks)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Location** | **Billing Time (Minutes)** | | | | | | | | | | |
| Rohini | 8 | 9 | 7 | 11 | 12 | 10 | 15 | 7 | 9 |  |  |
| Noida sector 62 | 12 | 11 | 19 | 18 | 9 | 12 | 11 | 13 | 10 | 14 |  |
| Gurugram | 11 | 10 | 17 | 13 | 9 | 17 | 10 | 21 | 22 | 21 | 19 |
| Gaziabaad | 12 | 23 | 18 | 13 | 10 | 12 | 18 | 16 | 11 |  |  |
| Sarojini Nagar | 12 | 11 | 10 | 9 | 16 | 15 | 13 | 19 | 12 | 19 |  |
| South Delhi | 23 | 20 | 21 | 24 | 18 | 17 | 16 | 19 | 14 | 15 | 16 |
| Vikas Puri | 13 | 10 | 8 | 14 | 17 | 11 | 12 | 12 | 11 |  |  |
| Hauz Khas | 8 | 7 | 12 | 10 | 9 | 8 | 10 | 11 | 8 | 7 |  |

**Q3**. “Critical Pharma” has developed a new medicine to control blood sugar. The organization claims that on an average, an individual reduces his/her blood sugar level after regular use for one year. State the null and alternative hypothesis, apply relevant concepts and generate meaningful management insights. **(10 Marks)**

*(Use Data from attached Excel File)*

**Q4.** “Insight Marketing Research” is a market research agency engaged in providing solutions to its customers. The agency has advised expenditures on Advertisement and Sale Promotion to one of its FMCG customer for last 10 years. Analyze the data, apply relevant conceptual frameworks and generate meaningful conclusions. **(10 Marks)**

*(Use Data from attached Excel File)*