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| **Semester: Sept 23 – Dec 23****Maximum Marks: 50 Examination: ESE Examination Date: 22-12-23 Duration: 3 Hours** |
| **Programme code: 08****Programme: MBA EXE** | **Class:** FY | **~~Semester~~/Trimester:** I |
| **College:**  **K J Somaiya Institute of Management** | **Name of the department/Section/Center: DST** |
| **Course Code:** 217P08C110 | **Name of the Course: Business Modelling using Spreadsheets**  |
| **Instructions:** 1. **Attempt Any five Questions carries 10 Marks.**
2. **Create your own file for the files not given**
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| **Question Nos.** |  |  **Max.****Marks** |
| Q1 | Use **metadata** file and find out the following things1. Find out the total revenue of the “toiletries” item type which are prioritized highly ‘H’
2. Find out the total profit made collectively from the cereals which have cost less than 1000000
3. Using order ID find out the country. [using index and match]
4. Sum of the Total Revenue of Item Types that end in “es “
5. Find out count in 2011[order date 1-1-2011 to 31-12-2011] how many ‘medicines’ we had in Item Type.
6. How many records are there for “electric Items” with “M”.
7. Find out how many “H” are there for “Vegetables “
8. Sum of the total revenue for the country “Germany “
9. Sum of the total revenue for the “ unit cost” is equal to “117.11”
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| Q2 | Create two variable data table from the given data:

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| Ad Spend | 1,00,000 |
| Ad Revenue | 2,00,000 |
| Advertising Cost of Sales (ACOS) |  |

1. Calculate Advertising Cost of Sales (ACOS).
2. ACOS = (Ad Spend ÷ Ad Revenue) x 100.
3. The five values to be taken for Ad Spend are 1,10,000; 1,20,000; 1,30,000; 1,40,000 and 1,50,000.
4. The five values to be taken for Ad Revenue are 2,10,000; 2,20,000; 2,30,000; 2,40,000 and 2,50,000.
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| Q3 | Project related information is are given below. Show scenario report analyzing profit of the project for following::Price of the product, quantity sold .Total revenue will be price \* qtyTransport cost which is 10% of the total revenueItem cost which is 20% of the qtyTotal cost will be transport cost +Item costLastly profit will be total revenue -total cost

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|  | Export sales to Europe  |
|  | price | 32 |
|  | qty | 100 |
|  | total revenue |  |
|  | transport cost |  |
|  | item cost |  |
|  |  total cost |  |
|  | profit |  |

Create scenario for the following situations and analyze profit.

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| --- | --- | --- |
|  | qty | price |
| s1 | 100 | 32 |
| s2 | 200 | 35 |
| s3 | 300 | 45  |
|  |  |  |

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| Q. 4 | **Use Data file which contains*** Date -  The date of the observation.
* UnitPrice - The unit price of a single avocado.
* Total Volume - Total number of avocados sold.
* Total Bags
* Type - Conventional or organic
* Region - The city or region of the observation.

Solve the following queries. 1.What is the average price of avocados across regions2. How does the average price of Organic avocados compared to conventional avocados?3. Find total price of avocados in each month of the year 2015.4.Which year had the highest total sales volume of avocados5. What is the total revenue generated from avocado sales in each region.6. Which region has the highest total bags of avocados sold?7.Plot a pivot chart to analyze the total sales of avocados in various regions8. Plot a pivot chart to depict the year wise sales of avocados. 9. In how many observations, the total bag size is more than 10000. 10. Is there any difference in sales trends between two types? | 10 |
| Q. 5 | As part of their application for a loan to buy Lakeside Farm, a property they hope to develop as a bed-and-breakfast operation, the prospective owners have projected:

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| Monthly fixed cost (loan payment, taxes, insurance, maintenance) | $6000 |
| Variable cost per occupied room per night | $ 20 |
| Revenue per occupied room per night | $ 75 |
| a. | Find the total cost per month. Assume 30 days per month. |
| b. | Find total revenue per month. |
| c. | If there are 12 guest rooms available, can they break even? What percentage of rooms would need to be occupied, on average, to break even? |

 | 10 Marks |
| Q. 6 | A) Following are the salaries of 5 employees. Find out total salary of these employees

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| **Pay Roll No**  | **Name**  | **Salary Rs.**  | **Part time Rs.**  | **Arrears**  |
| 1011  | Prasanna  | 10000  | 900  | 1800  |
| 1012  | Anitha  | 14000  | 800  | 1600  |
| 1013  | Ravi  | 18000  | 700  | 1700  |
| 1014  | Saritha  | 15000  | 600  | 1600  |
| 1015  | Mallika  | 17000  | 500  | 1800  |

Using Conditional Formatting, list out employees who got a) Less than Rs. 15000 as salary b) More than Rs. 700 as Part-time c) Rs. 1600 as Arrears.d) total salary above Rs. 17000e) Highest SalaryB) Create a mortgage calculator with varied interest rates showing the difference of monthly payments, total repayment, and total interest paid. **(Use: Mortgage calculator.xlsx)** | 10 Marks |