

MANIPAL ACADEMY OF HIGHER EDUCATION, DUBAI CAMPUS
School of Business

II SEMESTER PGDDS INTERNAL EXAMINATION – April 2022
COURSE: Business Intelligence (DSC 422)

Time:1 Hour

MAX.MARKS: 20

Instructions to Candidates:

Answer all questions

Attach a completed PBIX File under Internal Exam Assignment

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Ques. 1 Choose the correct option (1 x 7 = 7 marks)

1. BI applications must be integrated with
 - A. databases.
 - B. legacy systems.
 - C. enterprise systems.
 - D. all of these**
2. What type of analytics seeks to recognize what is going on as well as the likely forecast and make decisions to achieve the best performance possible?
 - A. descriptive
 - B. prescriptive**
 - C. predictive
 - D. domain
3. Which characteristic of data means that all the required data elements are included in the data set?
 - A. data source reliability
 - B. data accessibility
 - C. data richness**
 - D. data granularity

4. Which type of visualization tool can be very helpful when the intention is to show relative proportions of dollars per department allocated by a university administration?
 - A. heat map
 - B. bullet
 - C. pie chart
 - D. bubble chart
5. Which type of visualization tool can be very helpful when a data set contains location data?
 - A. bar chart
 - B. geographic map
 - C. highlight table
 - D. tree map
6. When you tell a story in a presentation, all of the following are true EXCEPT
 - A. a story should make sense and order out of a lot of background noise.
 - B. a well-told story should have no need for subsequent discussion.
 - C. stories and their lessons should be easy to remember.
 - D. the outcome and reasons for it should be clear at the end of your story.
7. This technique makes no *a priori* assumption of whether one variable is dependent on the other(s) and is not concerned with the relationship between variables; instead it gives an estimate on the degree of association between the variables.
 - A. regression
 - B. correlation
 - C. means test
 - D. multiple regression

Ques. 2 Read the following case scenario and answer the following question.

Analysis at the Speed of Thought

Kaleida Health, the largest healthcare provider in western New York, has more than 10,000 employees, five hospitals, a number of clinics and nursing homes, and a visiting-nurse association that deals with millions of patient records. Kaleida's traditional reporting tools were inadequate to handle the growing data, and they were faced with the challenge of finding a business intelligence tool that could handle large data sets effortlessly, quickly, and with a much deeper analytic capability.

At Kaleida, many of the calculations are now done in MS Power BI, primarily pulling the data from Oracle databases into Excel and importing the data into Power BI. For many of the monthly analytic reports, data is directly extracted into Power BI from the data warehouse; many of the data queries are saved and rerun, resulting in time savings when dealing with millions of records—each having more than 40 fields per record. Besides speed, Kaleida also uses Power BI to merge different tables for generating extracts.

Using Power BI, Kaleida can analyze emergency room data to determine the number of patients who visit more than 10 times a year. The data often reveal that people frequently use emergency room and ambulance services inappropriately for stomachaches, headaches, and fevers. Kaleida can manage resource utilizations—the use and cost of supplies which will ultimately lead to efficiency and standardization of supplies management across the system. Kaleida now has its own business intelligence department and uses Microsoft Power BI to compare itself to other hospitals across the country. Comparisons are made on various aspects, such as length of patient stay, hospital practices, market share, and partnerships with doctors.

QUESTIONS

1. What are the desired functionalities of a reporting tool?

(3 marks)

Answer: A reporting tool should generate reports that make visualizations easily discernible. It should help users make sense out of the reports, identify problem areas, and contribute to improvements. It also should be able to handle the volume of data required and prepare reports within the necessary time frame.

2. What advantages were derived by using a reporting tool in the case?

(3 marks)

Answer: At Kaleida Health, Tableau's reporting tool handles more data faster than its traditional reporting tools did. Also, the analytic capability is deeper. The reports provide detailed data for analyzing efficiency and comparing the performance of Kaleida's hospitals with other hospitals nationwide.

Ques. 3 Click the below link to access the file which you are instructed to connect to Microsoft Power BI analyze the following.

Connect Sales Date and Product breakup.

1. Create a new column of Total cost using the data from both files.
2. Company has decided to give a discount of 10% on the product price, you are required to calculate the total discount in a new column.
3. Calculate the Total Revenue if the company plans to take a markup of 20% on each item.
4. Calculate the total revenue on Weekends and Weekdays (assuming the week starts from Monday and ends on Thursday)
5. Prepare a report Representative wise as to the number of Items sold by them along with total profits made.
6. Calculate and show in a table the total number of Priority Customers (Priority customers are those who have ordered more than 30 units in a day).

7. Show the visuals for Item wise profit and profits on weekends and weekdays (assuming the week starts from Monday and ends on Thursday)

(7 Marks)