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**Subject: Quantitative Techniques for Managers**

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Question No: 01

Q1. Fill the following statements with appropriate words and options:

1. Parametric data is the word which use to measure (mean)

2. Figures belong with …quantitative… data.

3. Attributive study of the data belongs with … qualitative data.

4. …classifying mixtures… is the process which separate data from heterogeneous to homogeneous groups.

5. The field which depends upon the utilization of human resource in data management is called as …human resource information system (HRIS).

6. The Grading score of the students belongs with …qualitative…… measurement scale

7. Today’s temperature was recorded at 32⁰ F, lays in the category of …Fahrenheit…measurement scale.

8. Quantitative study has very limited number of usage in advance research studies. (/F)

9. Number of dots in a single line is very good example of countable data. (T/)

10. Qualitative data do not belong with the field of Statistics. (T/)

Question No: 02

a) Describe the relevant fields and branches of Data Management.

Ans: Definition: Data management allows business leaders to leverage the data they collect from customers and suppliers to propel growth.

As computer use became widespread, IT professionals built data warehouses that used relational techniques for offline data analysis. This gave managers powerful new ways to use data for decision-making purposes.

Data management includes storage, data security, data sharing, data governance, data architecture, database management, and records management. Once your data management strategy is in place, you’ll glean important insights by using your data to its full potential.

Different from a data management platform, data management software is a program like Microsoft MySQL, PostgreSQL, Microsoft Access, or Oracle that handles queries on your data. Use it to create, edit, and maintain your database files and records in the form of structured tables, fields, and columns. Data management provides guidance on the use of the EXCEL, MINITAB, and SPSS.

Braches of data management :

Data management includes storage,

database systems ,

master data and metadata management ,

quality control,

integration definition ,

warehousing ,

transformation,

governance

 architecture.

b) How could you elaborate the “Importance and Applications of Quantitative study in Management” in business life?

Ans: importance of Quantitative study in management in business life is that if anyone is interested to start a business first he should know about the quantitative method.

Because businesses are all about quantities for example quantities of goods produced and services provided.

Quantities of input and cost, quantities of revenue and profit and so on.

If we read newspaper there are also mention numbers of pages numbers are essential to our way of life our understanding of the world around us. This subject important for businesses because if someone starts business now or in future he would must face the quantitative management as customers, employees, suppliers.

Application:

Quantitative models give managers a better grasp of the problems so that they can make the best decisions based on the information available. Quantitative techniques are used by managers in practically all aspects of a business.

* Project Management
* Production Planning and Scheduling
* Purchasing and Inventory
* Marketing
* Research and Development
* Finance
* Agriculture

Question No: 03

(A) i

Probability of one dice is 6 outcomes

So probability of 2 dice will have 36 outcomes

So probability of 3 dice will have 216 outcomes

(B)

A coin has a possible 2 outcome that is half ½ it may be heads or tail

So

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 | Column 6 |
| HHHHH | HHHHT | HHHTH | HHTHH | HTHHH | THHHH |
| HHHTT | HHTHT | HTHHT | THHHT | HHTTH | HTHTH |
| THHTH | HTTHH | THTHH | TTHHH | TTTHH | TTHTH |
| THTTH | HTTTH | TTHHT | THTHT | HTTHT | THHTT |
| HTHTT | HHTTT | TTTTH | TTHTT | THTTT | HTTTT |
| TTTTT |  |  |  |  |  |

Q3) Aii

3- Shirts, 7- Ties and 2- Pants

So a person has 3 shirts, 7 ties and 2 pants

So the probability is 3 x 7 x 2 = 42

So he can wear 42 different outfits.

Q3 Bi). There are 7 people standing in a line. How many ways to construct a line with 7 people?

Ans: No of ways 7 people line = 7!

 So 7 x 6 x 5 x 4 x 3 x 2 x 1 = 5040 ways

 5040/7= 720

Q3B ii) There are 3 members (Principal, Headmaster & Clerk). How many arrangements could be possible for these members during selections?

Ans: number of people 3

A = Principal, B = Headmaster, C = Clerk

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | A | B | C |
| 2 | A | C | B |
| 3 | B | A | C |
| 4 | B | C | A |
| 5 | C | A | B |
| 6 | C | B | A |

3! = 3x2x1 = 6

Q3 B iii How many arrangements could be possible for the word “Probability” and “Statistics “. ?

Ans: PROBABILITY it has total n= 11

P = 1

R = 1

O = 1

B = 2

A = 1

I = 2

L = 1

T = 1

Y = 1 Linear arrangements = $x=\frac{11!}{1!x1!x1!x2!x1!x2!x1!x1!x1!}$ = 9979200

STATISTICS:

Ans: STATISTICS n= 10

S = 3

T = 3

A = 1

I = 2

C = 1

Linear arrangements = x $=\frac{10!}{3!x3!x1!x2!x1!}$ = 50400