Seat No: _____   Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF MANAGEMENT
IMBA Summer 2018 - 19 Examination

Semester: 4   Date: 20/05/2019
Subject Code: 06200103   Time: 02:00 pm to 04:30 pm
Subject Name: Business Statistics   Total Marks: 60

Instructions
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.

A).Multiple choice type questions/Fill in the blanks.   (Each of 1 mark)   (05)

  1.   One of the following is/ are primary levels of data:
     a) Nominal   c) Interval-Ratio
     b) Ordinal   d) All of these

  2.   Binomial distribution is a type of :
     a) Continuous Distribution   c) Semi Continuous Distribution
     b) Continuous and Discrete Distribution   d) Discrete Distribution

  3.   Type I and Type II error are incurred in:
     a) Simulation Testing   c) Deterministic Testing
     b) Non Probability Testing   d) Hypothesis Testing

  4.   The probability of getting three 'Heads' when a coin is tossed three times is:
     a) 3/8   c) 1/3
     b) 2/3   d) 1/8

  5.   One of the following is a measure of data variation:
     a) Mean   c) Mode
     b) Median   d) Standard Deviation

B).Define the following. (Each of 1 mark)   (05)
  1. Statistics
  2. Population
  3. Discrete Distribution
  4. Joint Probability
  5. Sample

C).Direct questions. (Each of 1 mark)   (05)
  1. What is Bay's probability?
  2. What is Normal Distribution?
  3. Enlist various discrete and continuous distributions.
  4. When are Median measures better than Mean Measures?
  5. Explain briefly business applications of Pie charts.

Q.2 Answer the following questions.

A). What are various central tendency measures? Explain the importance of Mean as a central   (07)
tendency measure.

B). Discuss the primary levels of data.   (08)

Q.3 Answer the following questions.

A). There are two Population data sets given DS1 and DS2. Find out the mean, variance, standard   (07)
deviation and coefficient of variation of the given data and comment on the results.

DS1	DS2
12	5
10	19
13	3
15	18
16	12

B). The following data represents price point (x) of products and the number of customers f(x) purchasing them on a given day in a particular retail outlet.

x	12	15	20	23	25
f(x)	4	7	11	8	5

(08)

Prepare a Histogram for this data and comment on the distribution.

Q.4 Attempt any two questions.   **(Each of 7.5 mark)**   **(15)**

1. In a competition, following candidates have gathered, a cross-tabulation of which is given:

		Qualification		
		Engineering	Pharmacy	Management
	North	10	5	15
	South	20	12	18
Region from	East	15	20	5
	West	5	13	17

If one candidate has to be selected, then find the probability that the candidate:
(a) Is an engineer?
(b) Is from North?
(c) Has done pharmacy and is from South?
(d) Is either a Management graduate or from East
(e) Is from west, given that the candidate has done engineering?

2. Explain the difference between – Marginal, Union, Joint and Conditional Probability with an example.

3. What are different Probability Sampling Techniques? Discuss the Simple Random Sampling Technique in detail.

4. In a cricket selection there are **five** prospective candidates identified by the sports authority. From the past it is known that the probability of selection of a candidate is **0.7**. If the selection process follows Binomial distribution, then what is the probability that exactly **two** candidates get selected?