Private & Confidential

BERJAYA BUSINESS SCHOOL

FINAL EXAMINATION

Student ID (in Figures)	:	
Student ID (in Words)	:	

Course Code & Name	:	**BGN3301 Statistics in the Service Industry**
Trimester & Year	:	September-December 2018
Lecturer/Examiner	:	Dr Smitha Geetha
Duration	:	3 Hours

INSTRUCTIONS TO CANDIDATES

1. **This question paper consists of 2 parts:**
   PART A (20 marks) : TWO (2) short answer questions. Answers are to be written in the Answer Booklet provided.
   PART B (80 marks) : FOUR (4) problem-solving questions. Answers are to be written in the Answer Booklet provided.
2. **Candidates are not allowed to bring any unauthorized materials except writing equipment into the Examination Hall. Electronic dictionaries are strictly prohibited.**
3. **This question paper must be submitted along with all used and/or unused rough papers and/or graph paper (if any). Candidates are NOT allowed to take any examination materials out of the examination hall.**
4. **Only ballpoint pens are allowed to be used in answering the questions, with the exception of multiple choice questions, where 2B pencils are to be used.**

WARNING: The University Examination Board (UEB) of BERJAYA University College regards cheating as a most serious offence and will not hesitate to mete out the appropriate punitive actions according to the severity of the offence committed, and in accordance with the clauses stipulated in the Students' Handbook, up to and including expulsion from BERJAYA University College.

Total Number of pages = 4 (Including the cover page)

PART A : SHORT ANSWER QUESTIONS (20 MARKS)
INSTRUCTION(S) : Answer all **TWO (2)** questions. Write your answers in the Answer Booklet(s) provided.

Question 1

a. Define measures of dispersion.

(2 marks)

b. Differentiate the absolute and relative measures of dispersion.

(8 marks)
[Total: 10 marks]

Question 2

a. Discuss the difference between binomial and normal distribution.

(4 marks)

b. Identify any **SIX (6)** properties of normal distribution.

(6 marks)
[Total: 10 marks]

END OF PART A

PART B **: PROBLEM SOLVING QUESTIONS (80 MARKS)**
INSTRUCTION(S) **:** Answer all **FOUR (4)** questions. Write your answers in the Answer Booklet(s) provided.

Question 1

a. Calculate Mean, Median and Mode for the following data.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of students	3	10	15	20	12	7	3

(12 marks)

b. Calculate the Range and the Coefficient of Range for the following values.

25	32	85	32	42	10	20	18	28

(4 marks)

c. Compute Standard Deviation for the values.

4	8	10	12	15	9	7	7

(4 marks)
[Total: 20marks]

Question 2

a. Two coins are tossed, what is the probability of getting

(i) Both heads
(ii) One head
(iii) At least one head
(iv) No head

(8 marks)

b. Two unbiased dice are thrown. Find the probability that

(i) Both the dice show the same number
(ii) One die shows five
(iii) First die shows five
(iv) The total on the numbers on the dice is eight
(v) Total of the numbers on the dice is greater than 8
(vi) A sum of 10

(12 marks)

[Total: 20 marks]

Question 3

a. The height of the school children of one institution is normally distributed with Mean of 54 inches and Standard Deviation of 12 inches. What percentage of students have height between 46 and 56 inches?

(8 marks)

b. The per acre yield of crop in a particular area is observed to follow a normal distribution with Mean 15 quintals and Standard Deviation of 5 quintals. Find

(i) The proportion of the area yielding at least 25 quintals.

(6 marks)

(ii) What extent of the land under the crop can yield between 10 and 20 quintal if the total land under crop is 782 acres?

(6 marks)

[Total: 20 marks]

Question 4

a. Sum of the product of the deviations of the variables x and y from their respective means is 1320, sum of the squares of deviations of x and y variables from their respective means are 628 and 3720. Find the coefficient of correlation.

(8 marks)

b. From the following data of the age of Husband and the age of wife, form

Husband' s age	36	23	27	28	28	29	30	31	33	35
Wife's age	29	18	20	22	27	21	29	27	29	28

(i) The two regression equations
(ii) Calculate the husband's age when the wife's age is 16.
(iii) Find the age of wife when husband's age is 40. (12 marks)

[Total: 20 marks]

END OF EXAM PAPER