Roll No…….. **Total No. of Printed Pages: [02]**

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B.Sc. Operation Theater Technology (Semester – 4th)

BIOSTATISTICS AND COMPUTER APPLICATIONS

Subject Code: BOTTS1 - 405

Paper ID: [20131919]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a. State the relationship between mean, mode and median.

b. Define the probability of an event.

c. Write down the applications of binomial distribution.

d. Write down the important forms of frequency distribution graphs.

e. Distinguish between qualitative and quantitative data.

f. The weight in Kg of 10 students are given below:
39, 43, 36, 38, 46, 51, 33, 44, 44, 43
Find the mode of this data

g. Define statistics and tell its importance

h. Write types of frequency distribution

i. Draw the frequency polygon from the following data:

Age in years	10 - 20	20 - 30	30 -40	40 - 50	50 -60
No. of patients	5	20	25	35	10

j. If a bag contains 8 red balls and 5 black balls. Find the probability of getting a red ball.

Section – B **(5 marks each)**

Q2. Differentiate between parametric and non-parametric tests.

Q3. Prepare the histogram for the following data:

Class Interval	0 – 10	10 - 20	20 -40	40 -70
Frequency	5	8	20	24

Q4. Define paired ‘t’-test with illustrations.

Q5. Calculate the median of the following data gives the height of five students in cm.

S. No.	1	2	3	4	5
Height of Student	153	158	163	168	173

Q6. Calculate the mean from the following data

Age	18-20	21 - 23	24 - 26	27 -29	30 -32	33 -35

Child	18	20	32	7	2	1

Section – C **(10 marks each)**

Q7. Find the mean using step deviation method, from the following data:

Marks	More than 10	20	30	40	50	60
No. of students	50	46	40	20	10	03

Q8. A die is thrown 6 times. Consider "getting of odd number" is a success, then what is the probability of-

a) 5 successes
b) Atleast 5 successes
c) At most 6 successes

Q9. Calculate the median from the following data

Marks	**No. of Students**	**Marks**	**No. of Students**
Less than 10	04	Less than 50	96
Less than 20	16	Less than 60	112
Less than 30	40	Less than 70	120
Less than 40	76	Less than 80	125