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BG—26—2016

FACULTY OF SCIENCE

B.Sc. (Second Year) (Third Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(Revised Course)

BIOTECHNOLOGY

Paper (BTT-3.4)

(Mathematics, Statistics and Computer Sciences)

(Friday, 25-11-2016)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—80

N.B. :— (i) All questions are carry equal marks.

(ii) Non-programmable calculator is allow.

(iii) Q. No. 1 is compulsory.

1. (a) (i) Union of a set

(ii) Quartite

(iii) Relation

(iv) Cartesian product

(v) Statistics.

10

(b) Prove with one example and also draw a Venn diagram :

10

$$A \cup B = B \cup A$$

$$A \cap B = B \cap A.$$

P.T.O.

2. Attempt (a) or (b) :

15

(a) (i) Calculate mean, mode and median for the following data : 8

C-I	<i>f</i>
5—10	17
10—15	28
15—20	61
20—25	38
25—30	11
30—35	19
35—40	31

(ii) What is diagrammatic representation of data. 7

Or

(b) (i) What is frequency distribution ? 8

(ii) Calculate variance : 7

C-I	<i>f</i>
5—10	5
10—15	3
15—20	10
20—25	9
25—30	8
30—35	7
35—40	4
40—45	2

WT

(3)

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3. Attempt (a) or (b) :

15

(a) (i) Calculate correlation :

8

X

Y

1

4

2

5

3

6

4

7

5

8

6

9

7

10

8

11

9

12

10

13

(ii) Write a measure of central tendency.

7

Or

(b) (i) Calculate quartile for the following data :

7

6, 13, 5, 2, 17, 10, 19, 20, 15, 14, 23.

(ii) $\lim_{x \rightarrow 2} \frac{x^3 - 8}{x - 2}$

8

$\lim_{x \rightarrow 2} x^3 + 4x^2 - 3x + 12.$

4. Attempt (a) or (b) :

15

(a) (i) What is input and output devices of a computer ?

7

(ii) What is OS ?

8

P.T.O.

Or

- (b) (i) What is PowerPoint of a computer ? 7
- (ii) What is computer and write its generations. 8
5. Attempt any *three* : 15
- (i) What is mode ?
- (ii) What is correlation ?
- (iii) What is CPU ?
- (iv) What is Linux ?
- (v) What is Function ?