2013

M.Sc.

2nd Semester Examination

BIOTECHNOLOGY

PAPER—BIT-202

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

(*Biostatistics and Computer Application*)

Group — A

1. Answer any *five* questions from the following : 5×2

(a) Four cards are drawn at random from a full pack. What is the probability that they belong to different suits ?

(b) What is Pie diagram ?

(c) Rank correlation is 0·143 if the sum of square of different in Rank is 48. Find N.

(d) Calculate the mean if Median is 54 and Mode is 62.

(e) Calculate the Mean of Binomial distribution where probability of failure is 2/3 and standard deviation is 2.

(f) Write down the difference between WINDOWS and LINUX.

(g) What is algorithm?

(h) Define WAN and LAN.

Group — B

Answer any *two* questions from the following : 2×5

2. A survey of 100 similar sized hospitals revealed a mean daily census in the podiatries services of 27 with a standard deviation of 6·5. Do these data provide sufficient evidence to indicate that the population mean is greater than 25? [α = 0·05] 5

3. Mr. X is known to hit the target in 4 out of 5 shots where as Mr. Y is known to hit the target in 3 out of 5 shots. Find the probability that (i) both will hit the target, (ii) none will hit the target. 5

4. What is Sampling? State any one method of random sampling. 1+4

5. Define narrow band, voice band and broad band communication channels. 5

Group — C

Answer any *two* questions from the following : 2×10

6. (i) On a average there are 3 mistakes on a page of book. The book contains 200 pages. What is the probability that a randomly selected page has exactly one mistake?

(ii) X is a Poisson variate show that

P (x = 1) = P (x = 2). Find P (x = 0). 6+4

7. The following results were worked out from scores in Statistics and Mathematics in a certain Examination :

	Scores in Statistics (X)	Scores in Mathematics (Y)
Mean	39·5	47·5
Standard deviation	10·8	17·8

Karl Pearsons Correlation Coefficient between X and Y = 0·42. Find both the regression lines and use these

lines to estimate the value of Y when X = 50 and the value of X when Y = 30. 10

8. (a) What is high level language? Give example.

   (b) Write a programme in 'C' language to add two integer numbers. 3+7

9. (a) What is CPU? Describe its different units. State the function of CPU.

   (b) What do you mean peripheral devices? (1+4+3)+2

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