

M.Sc. Examination, 2019
Semester-II
Biotechnology
Course : IX
Computer Application and Biostatistics

Time : 3 Hours

Full Marks : 40

Questions are of value as indicated in the margin.

Group - A

Answer **any two** questions

1. What do you mean by escape sequence in C-Programming? Write down the differences between While and Do-While loop in C-Programming with suitable example. What is array? 2+6+2=10
2. Write down the differences between Structure and Union with suitable example. Write down the meaning of strcpy(), strlen(), strcmp() functions in C. Write a programme to swap two numbers without using third variable. 4+3+3=10
3. What is DBMS? Give examples of three aggregate functions in SQL. Write down the INSERT command and DELETE command of SWK. What is PERL and CGI? 2+3+2+3=10

Group – B

Answer **any two** questions

1. What do you mean by data? How do primary data differ from secondary data? Give proper example. What is descriptive statistics? Mention the different statistical parameters of descriptive statistics. How does SE differ from SD? 1+1+1+1+4+2=10
 2. What is “R” language? What are its advantages over “Excel”? How are correlations related to regression? What is the significance of SS? Diagrammatically plot the relationship between two variables when they are (i) Positively correlated (ii) Negatively correlated (iii) No Correlation. 1+2+2+2+3=10
 3. What is the purpose of chi-square test? In a typical Mendelian experiment a Tall pea plant with Red flower was crossed with a Dwarf plant with White flower. The F1 plants generated were all Tall plants with Red flower. The F1 plants were crossed with the parental plant (Dwarf with Red flower). The generated progeny showed a population of 35 Tall plants with Red flower, 39 Tall plants with white flower, 29 dwarf plants with white flower and 30 dwarf plants with white flower. Comment on the inheritance pattern of genes associated with plant height and flower colour. Comment on the inheritance pattern of genes associated with plant height and flower. (chi-square Table value at $p = 0.05$ is 7.82 for df. 2+8=10
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