ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

PG & RESEARCH DEPARTMENT OF BIOCHEMISTRY

Subject Name: Research Methodology & Biostatistics
Subject code: PBC1014S
Class: II M.Sc Biochemistry
Staff Name: Mr.A.Lawrance & Dr.S.Silvan

SECTION –A

I. ANSWER IN ONE SENTENCE

1. What are the two sources of Secondary Data?
2. Write the formula for the Quartile deviation.
3. Write the methods of studying correlation.
4. What is Primer?
5. Write the formula helps in obtain the value of chi-square.
6. What is the principle of spectroscopy?
7. What is meant by Bar chart and Pie chart?
8. What is Median?
9. Define F test.
10. What is DNA fingerprinting?
11. What is meant by frequency distribution?
12. What is Dot-Blot Assay?
13. Define cumulative frequency.
14. What is geometric mean?
15. Define Histogram.
16. Define Harmonic Mean.
17. What is Regression Co-efficient?
18. Define RFLP
19. Give one function of DNA finger printing.
20. Define mode.
21. What is mean deviation?
22. What is meant by review writing?
23. What is RT-PCR?
24. Explain FPLC.
25. What is MALDI TOF.
26. Define patent.
27. What is anesthesia and euthanasia?
28. What is CPCSEA?
29. Explain about FISH.
30. Write the principle of DNA sequencing.
31. Write the principle of Mass spectrometry.
32. What is ogive curve?

SECTION -B

II. ANSWER THE FOLLOWING

1. Calculate the Mean deviation about the Median in the following series of marks 20, 22, 27, 30, 31, 32, 35, 40, 45 and 48
2. Give an account on Southern blotting.
3. Give an account on i) RFLP ii) RAPD
4. Give an account on RT-PCR
5. Explain the Principle and applications of DNA sequencing.
6. Explain the characteristics of central tendency and mention the methods used to measure the central tendency.
7. Briefly explain about frequency polygon and Histogram.
8. Give an account of frequency distribution.
9. Give an account of median and mode.
10. Explain RAPD technique with its applications.
11. Give the principle of quantitative real-time PCR.
12. How do you tabulate statistical data?
13. Briefly explain about frequency polygon and Pie chart.
14. Give a note on measurement of central value.
15. Write a note on range and harmonic mean.
16. Explain correlation and regression and their co-efficient.
17. How do you analyze the presence of RFLP in human population?
18. Give a brief notes on primary data
19. What is blotting? Explain southern blotting.
20. Explain in detail about dot-blot.
21. Write principle and technique of ORD
22. Give an account on sangar's DNA sequencing.
23. What is the requisites of a good table? State the rules.
24. Write short notes on student 't' test.
25. Give an account on Chi square test.
26. Bring out the importance of writing review of literature.
27. Write short notes on RFLP technique.
28. Write short notes on circular dichroism.
29. Give an account on DNA finger printing.
30. Explain the objects of Tabulation? write its application.
31. Explain the different methods to display the data.
32. Explain what is +ve and –ve correlation?
33. Give the properties of t-Distribution & Applications of t-Distribution
34. Write the properties of standard deviation.
35. Write the steps involved in Report writing.
36. Explain the working method of NMR & its application.
37. Write the applications of PCR.
38. Give a brief account on ethics in food safety.
39. Give a brief account on ethics in drug safety.
40. Briefly explain about anesthesia and euthanasia.
41. Write notes on ethics in animal experimentation.
42. Give details about CPCSEA guidelines.

SECTION –C

1. Describe the methods of collecting Primary data.
2. Write an essay on Blotting techniques.
3. Explain how to write Review of Literature.
4. Write an account of data collection and data classification.
5. What is meant by standard deviation? Add a note on measures of dispersion.
6. Give an account of blotting techniques involved in biomolecules separation.
7. Write an account of literature collection, citation and report writing.
8. Give an account on various forms of displaying data.
9. What is called polymorphism? Explain RFLP & RAPD.
10. Give an account on principle, technique and application of NMR.
11. Explain in detail about thesis writing.
12. Discuss the various methods of data collection.
13. What is ANOVA, explain the types and its application?
14. Explain the principle, technique and applications of western blotting and northern blotting.
15. Write an essay on DNA sequencing method.
16. Describe the principle, diagnostic and laboratory applications of PCR.
17. Write an account of literature collection, citation and report writing.
18. Give the technique and the applications of RAPD.
19. Write an account of scientific writing.
20. Give the principle of quantitative real-time PCR.
21. Explain MALDI TOF-principle &application.
22. Briefly explain about CPCSEA guidelines for animal care.
23. Explain about animal welfare.
24. Write notes on ethics in animal experimentation.