**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU -27**

Registration Number:

Date & Session:

**MSc. FOOD SCIENCE & TECHNOLOGY – III SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2022**

**(Examination conducted in December 2022)**

**FST 3422: FOOD QUALITY, SAFETY MANAGEMENT AND STATISTICS**

**Time: 2 ½ Hours Max Marks: 70**

**This paper contains 2 printed pages and FOUR parts**

 **I. Answer any Five of the following 3x5=15**

1. Write the principles of Codex Alimentarius Commission.

2. Mention the statistical tools used for quality management of food processing.

3. Define the role of AGMARK in quality management of food products.

 4. What is regression analysis?

5. Mention the quality parameters for grading poultry meat.

6. Abbreviate USFDA. Mention its role in food safety management.

7. Give the merits and demerits of non-probability sampling with examples.

**II Answer any Five of the following 5x5=25**

8. Write a note on PDCA cycle.

9. Give an outline of the Fish bone diagram used in Total Quality Management.

10. Highlight the function of FSSAI.

11. Give a brief note on methods of identification of food adulteration.

12. Explain food traceability concept with a case study.

13. Mention the quality assessment parameters of Eggs.

14. a) The following numbers represent the ages of people on a bus:

 3, 6, 27, 13, 6, 8, 12, 20, 5, 10. Calculate the mean of their ages.

 b) The following represents age distribution of students in an elementary class.

 Find the mode of the values: 7, 9, 10, 13, 11, 7, 9, 19, 12, 11, 9, 7, 9, 10, 11.

 c) . Find the median of the set of numbers:

 100, 200, 450, 29, 1029, 300 and 2001

 d) Find the mode from these test results:

 90, 80, 77, 86, 90, 91, 77, 66, 69, 65, 43, 65, 75, 43, 90.

 e) Find the median of the set of numbers:  21, 3, 7, 17, 19, 31, 46, 20 and 43.

**III Answer any Two of the following 2x10=20**

15. Discuss various features of ISO 22000 series

16. Explain FSSAI ACT 2006 and its various amendments.

17. Describe Probability and Non Probability Sampling with its advantages and disadvantages.

**IV Answer the following 10x1=10**

18. a) What is Correlation? Define various Correlation with plotted graphs.

 b) In the following table details of 6 people having different age and weight are given.

Calculate the value of the Pearson correlation coefficient.

|  |  |  |
| --- | --- | --- |
| Serial No. | Age (x) | Weight (Y) |
| 1 | 40 | 78 |
| 2 | 21 | 70 |
| 3 | 25 | 60 |
| 4 | 31 | 55 |
| 5 | 38 | 80 |
| 6 | 47 | 66 |