# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION – **ZOOLOGY**

SECOND SEMESTER – APRIL 2010

**ZO 2956 - BIOSTATISTICS**

Date & Time: 23/04/2010 / 1:00 - 4:00 Dept. No. Max. : 100 Marks

## PART - A

Answer **ALL** the questions **10 x 2 = 20 Marks**

1. What is regression equation?
2. Differentiate hypothesis from null hypothesis.
3. What is standard deviation?
4. What is meant by degree of freedom?
5. What is scatter point?
6. What is the significance of histogram?
7. Define range.
8. Explain binomial equation.
9. How is data collected?
10. Define mean.

## PART – B

Answer any **FOUR** of the following **4 x 10 = 40 Marks**

11. What are the different kinds of diagrams?
12. Explain the components of a table?
13. Draw a pie diagram for the following data and write its significance.

| | |
|---|---|
| Mercury | 7 |
| copper | 9 |
| Iron | 21 |
| Zinc | 11 |
| Lead | 7 |

14. Differentiate skewness from kurtosis.
15. Comment on co-efficient of correlation.
16. Calculate the Chi square for the following table and find if there is any significance between RBC and Hb.

| RBC Count | Hb Below Normal | Hb Above Normal |
|---|---|---|
| Below Normal | 70 | 110 |
| Above Normal | 140 | 150 |

## PART – C

Answer any **TWO** of the following **2 x 20 = 40 Marks**

17. The following table shows the effectiveness of anti–biotics (X) in killing virus (Y). Find regression equation X on Y. When Y=9, 5

| Antibiotics (X) | 9 | 11 | 14 | 16 | 21 |
|---|---|---|---|---|---|
| Virus (Y) | 7 | 4 | 9 | 11 | 15 |

18. Describe the different graphs and diagrams in bio statistical representation of data.
19. Draw histogram, polygon and cumulative frequency of the following data.

| Wt (gm) | 1.1-3.0 | 3.1-6.0 | 6.1-9.0 | 9.1-12.0 | 12.1-15 | 15.1-18 |
|---|---|---|---|---|---|---|
| Frequency | 9 | 13 | 27 | 11 | 9 | 7 |

20. By ANOVA find if there is an increase in wheat production in different sub species in different plots. Table value=3.49

| A | B | C | D |
|---|---|---|---|
| 4 | 1 | 5 | 10 |
| 1 | 11 | 4 | 9 |
| 9 | 13 | 7 | 9 |
| 4 | 3 | 0 | 4 |

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