MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	: **III (New)**	**Term**	: **I**	**Academic Year**	: **2018-19**
Course No.	: STAT 231	**Title**	: **Statistical Methods**		
Credits	: 2(1+1)				
Day & Date	: Saturday, 24.11.2018	**Time**	: 9.00 to 11.00	**Total Marks**	: **40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 State the probability mass function of Binomial and Poisson's distribution. State the properties of Normal probability distribution.

Q.2 Explain complete analysis of variance (ANOVA) of one way classification.

Q.3 What are the characteristics of ideal measures of central tendency? State the merits and demerits of Arithmetic Mean.

Q.4 What is correlation? List out types of correlations. Discuss the method of studying correlation by using 'scatter diagram'.

Q.5 What is meant by 'measures of dispersion'? Write formula (with specification of terms used) for standard deviation of individual series and continuous frequency distribution.

Q.6 State five different steps followed in testing a hypothesis. Explain method of testing mean of single population (t-test for single sample).

Q.7 Write short notes (Any two).

a) Method of finding/selecting best fit line (best fit line)

b) Two types of errors in testing hypothesis

c) Classification and its types.

Q.8 What is Random experiment, Simple event, Compound events and Mutually exclusive events?

Q.9 Give two definitions of 'Statistics'. Enlist and explain limitations of 'Statistics'.

Q.10 Differentiate between correlation and regression. Write relationship between correlation coefficient and regression coefficients.

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SECTION "B"

Q.11 Complete the following sentences by choosing correct alternative

1) The value of regression coefficient lies in between_____

a) -1 to +1 b) 0 to +1 c) -1 to 0 d) $-\infty$ to $+\infty$

2) The Geometric Mean for the series 10, 1, 2, 0, 7 is_____.

a) 0 b) 2 c) 4 d) 5

3) The value of _____ can be determined by ogive curves.

a) Arithmetic Mean b) Geometric Mean c) Median d) Mode

4) Skewness and Kurtosis are the types of Measures of_____.

a) Central tendency b) Correlation c) Regression d) Dispersion

Q.12 Answer in one sentence.

1) Which measure of central tendency can be determined by Histogram?
2) What is meant by 'Statistics'?
3) What are the methods of sampling?
4) What is the level of significance?

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