REV-00
MRD /06/10 2013/02

MA RURAL DEVELOPMENT
Second Semester
Statistical Analysis and Application

(MRD- 09)

Duration: 3Hrs. **Full Marks: 70**

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins. **Marks: 50**

I. Answer any three from the followings: **10×3=30**

1. Calculate the mean, median, mode and range from the following data:
   47, 56,71,44,32

2. Two dice are rolled simultaneously. Find the probability of:
   a) Getting a total of 9
   b) Getting a sum greater than 9
   c) Getting a double of even numbers
   d) Getting a sum of numbers on the two faces divisible by 3
   e) Getting at least one 5

3. Compute the standard deviation (σ) from the series:
   72,54,87,78,98,64

4. Calculate Chi-square test (χ^2) from the following data:

	Data Type I	Data Type II
Category I	56	54
Category II	26	43

5. Compute the Rank Co-relation co-efficient (r) from the series:
   X = 82, 81, 80, 79, 78
   Y= 22, 35, 75, 63, 48

II. Answer any four from the followings: **5×4=20**

1. A dice is thrown 7 times. What is the probability that there will not more than 1 case? Find the mean and variance of the number of cases. Give reason.
2. Discuss about the measures of asymmetry.
3. What is the role of statistics in research?
4. Define Type I error and Type II error in testing the hypothesis.
5. Write notes on: Mean, Median and Mode as measures of Central Tendency.
6. From the digits 3, 5, 6, 9 how many difference 2 digit numbers can be formed?
   a) With repetition
   b) Without repetition

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(The figures in the margin indicate full marks for the questions)

Duration: 20 minutes **Marks – 20**

(PART A- Objective)

Choose the correct answers from the following: **20×1=20**

1. "Inferential statistics are concerned with the process of generalization"---State True/False.

2. State the formula of Standard Deviation.

2. What is Normal curve?

3. Cite the situation when one could have a positive skewness.

4. What are the measures of dispersion?

5. "The higher the degree of probability, the less likely the event is to happen"—State True/ False.

6. The value of *n* in binomial distribution should be
   a. Maximum at 20 b. Less than 20
   c. 20 d. 10

7. "In Poisson distribution we are only interested in *p* i.e success"—State True/False.

8. In Poisson distribution *np* is denoted by .....

9. F distribution is originally conceived by the British statistician ..... in..... .

10. What is the limit of p and q in binomial distribution?

11. "The higher the degree of probability, the less likely the event is to happen"—State True/ False.

12. Co-relation is positively significant if the value of r is:

a. -.5 b. 0.2
c. 0 d. -.2

13. What is the function of Co-relation?

14. Standard deviation is commonly denoted by the symbol:

a. € b. α
c. σ d. π

15. How can you express Linear Regression?

16. A bag contains 5 white and 12 black balls. The probability that a white ball is drawn from bag is -

a) 5/12 b) 5/17 c) 1/ 2 d) 1/3

17. A single letter is selected from the world 'probability'. The chance that it is a vowel is-

a) 0 b) 2/11 c) 3/11 d) 4/11

18. If 3 coins are tossed together, the chance of getting at least one head is

a) 8 b) 6 c) 3 d) None of these

19. The mean and variance of poisson distribution –

a) Are equal c) Not equal
b) Mean >variance d) Mean< Variance

20. Full form of ANOVA.

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