JHARKHAND Rai University
RANCHI

End Semester/Reappear (Semester I) Examination December 2023

Programme: M.Sc. (Ag.) Agronomy **Full Marks: 50**
Course: Statistical Method **Time: 2 Hrs.**
Course Code: 13A.STAT.501
Enrolment no. _____

Section I

1. **Short Answer type questions.** **4 x 5 = 20**

a. Sketch the histogram to represent the following frequency distribution CO1 Understand

Daily Wages (Rs.)	5 – 10	10 – 15	15 – 20	20 – 25	25 – 30
No. of Workers	10	20	35	25	15

or

Draw a Pi Chart to represent the following data on the proposed outlay during a five year of a Jharkhand Government: CO1 Understand

Plan	Rs. (in Lack)
Agriculture	9,000
Industries and Mines	7,000
Irrigation and Power	5,000
Transport and Communication	6,000
MISCELLANEOUS	3,000

b. Define the Arithmetic and weighted arithmetic mean with example. CO2 Remember

or

Explain the Empirical relation b/w Mean Median and Mode? CO2 Understand

c. A sample is collected from the items produced by a factory. The sample size is 81. The standard deviation of the population is 0.3. Find the standard error of the mean of sampling distribution. CO3 Understand

or

A population consists of six numbers 4, 8, 12, 16, 20, 24. Find population mean and population standard deviation. CO3 Understand

d. Express the T- test used for in the statistics. CO4 Understand

or

Discuss the procedure for testing of hypothesis. CO4 Understand

Section II

Long Answer type questions. **2x15 = 30**

2. Two managers are asked to rank a group of employees in order of potential for eventually becoming top managers the ranking are as follows: CO4 Analyze

Employees	A	B	C	D	E	F	G	H	I	J
Ranking by Manager1	10	2	1	4	3	6	5	8	7	9
Ranking by Manager1	9	4	2	3	1	5	6	8	7	10

Calculate rank correlation coefficient.

or

Ten students got the following percentage of marks in QM and statistics, calculate the rank correlation. CO4 Evaluate

Marks in Q M	78	36	98	25	75	82	90	62	65	39
Marks in statistics	84	51	91	60	68	62	86	58	53	47

3. A population consists of six numbers 4, 8, 12, 16, 20, 24. Consider all samples of size two which can be drawn without from this population, find (a) population mean (ii) Population standard deviation (iii) Mean of the sampling distribution (iv) Standard deviation of the sampling distribution of means. CO3 Evaluate

or

If the population is 3, 6, 9, 15, 27 (i) List all possible samples of size 3 that can be taken without replacement from the finite population. (ii) Calculate the mean of each of the sampling distribution of means. (iii) Find the standard deviation of sampling distribution of means. CO3 Evaluate

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