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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- December 2019

M.Sc 1st Semester

COURSE CODE: L-18MS1BT114

MAX. MARKS: 35

COURSE NAME: Research Methodology and Inferential Statistics

COURSE CREDITS: 3

MAX. TIME: 2.0 Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Use of calculator is allowed.

Part A: Answer the following Questions.

1. Explain and illustrate the following research designs (3x2.5) [CO-4]
 - (a) Latin square design (LSD)
 - (b) Complete random design (CRD)
 - (c) Before-and-after without control design:
2. Describe, in brief, the layout of a research report, covering all relevant points. [CO-5]
3. Research is much concerned with proper fact finding, analysis and evaluation." Do you agree? with this statement? Give reasons in support of your answer [CO-1] [CO-5]
4. Distinguish between probability sampling and non-probability sampling. Mention the Assumptions of a probability sampling (2.5)

Part B:

- Q.5 Explain the following terms, Test statistics (b) P - value (c) level of significance [3] [CO-2]
- Q.6 Ten individual are chosen at random form a population and their heights were found to be 64, 65, 65, 66, 68, 68, 69, 71, 72, 73 inches. In the light of data, test the hypothesis at 5% level of significance that mean height of population is more than 66 inches. Clearly indicate null and alternate hypothesis, type of test (t or z test, single or two tail test) and decision. [4] [CO-3]
- Q.7 A random sample of 18 pairs of observation form normal populations gave correlation coefficient of 0.3. Is this significant correlation in the population? [4] [CO-3]
- Q.8 Two random sample gave following results. Apply F test for homogeneity of variance in two populations at 5% level of significance [4] [CO-3]

Sample	Size	Variance
1	13	9
2	15	10

