16U333 (Pages:2) Name……..…………….

Reg. No…………….…...

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2017
(Regular/Supplementary/Improvement)
(CUCBCSS-UG)
CC15UPSY3C02- PSYCHOLOGICAL STATISTICS
(Psychology -Complementary Course)
(2015 Admission onwards)

Time: Three Hours   Maximum: 80 Marks

Part A
Answer *all* questions. Each question carries 1 mark

A. Objective type Questions:

1. In a stratified sampling method _____ are heterogeneous.

    a. Samples   b. Within Strata   c. Between strata   d. None of these

2. Line of best fit is also known as

    a. Scatter line   b.Regression   c.Polygon   d. Frequency curve

3. A hypothesis which is completely specifies the distribution is called

    a. Composite   b. Null   c. Directional   d. Simple

4. Level of significance is the probability of

    a. Type I error   b. Type II error   c. Not committing error d. None of these.

5. Binomial distribution is a _____ distribution.

    a. Independent   b. Continuous   c. Dependent   d. Discrete

B.Fill in the blanks:

6. Mean of a Poisson distribution is μ, then its standard deviation is………….

7. If binomial random variable has mean 4 and variance 3 then the value of p is………….

8. One –way ANOVA is used when analyzing the difference between more than ………..

9. For a normal distribution, mean = ... = mode.

10. Probability of rejecting the null hypothesis, when it is false, is called …………..

(10 x 1 = 10 Marks)

Part B
Answer *all* questions. Each question carries 2 marks

11. What is critical region?

12. Distinguish between parameter and statistic.

13.Define Binomial distribution.

14. For a Poisson distribution P(x=1) = P(x=2),what is the mean of X?

15. Define simple random sampling.

16. Define central limit theorem.

17. Define power of a statistical test.

18. What is standard error?

19. What are the uses of F –test?

20. What is the test statistic for testing H_0: $\mu_1 = \mu_2$ against H_1: $\mu_1 \neq \mu_2$?

(10 x 2 = 20 Marks)

Part C
Answer *any six* questions. Each question carries 5 marks

21. What are the uses of t- test?

22. Write a brief note on Central limit theorem.

23. Discuss the uses of χ^2?

24. What is meant by Stratified random sampling? What are its advantages over systematic sampling?

25. A sample of 35 items were taken from a population with standard deviation 12 and the sample mean is found to be 76. Can it be regarded as a sample from normal population with $\mu = 70$.

26. What are the merits and demerits of sample survey?

27. X is a Normal variate with mean 20 and S.D 5. Find the probability that (1) $16 \leq X \leq 22$ (2) $X \geq 23$.

(6 x 5 = 30 Marks)

Part D

Answer questions. Each carries 10

x	0	1	2	3	4
f	30	62	46	10	2

any two question marks

28. Fit a Poisson distribution to the following data and calculate the theoretical frequencies.

29. A sample of 400 observations were taken from a population with S.D 15. If the mean of the sample was 27 test whether the hypothesis that the mean of the population is more than 24 ($\alpha = .05$).

30. What you mean by hypothesis testing, explain steps related to hypothesis testing.

31. What is sampling, explain different sampling method in detail.

(2 x10 = 20 marks)

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