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Name.............................

Reg. No.........................

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2015

(CUCBCSS—UG)

Complementary Course

PSY. 3C 02—PSYCHOLOGICAL STATISTICS—III

Time : Three Hours

Maximum : 80 Marks

Part A

A. Objective type questions. Each question carries 1 mark. Multiple choices.

Choose the correct answer :

1 A larger sample size is required when :

　　(a) The population of interest for a study is less diverse.

　　(b) A low level of precision is required.

　　(c) The population of interest is easily recruited to the study.

　　(d) A high level of precision is required.

2 The type of sampling approach where each person in the sampling frame has an equal chance of being selected is best described as :

　　(a) Systematic sampling.　　　　　　(b) Stratified random sampling.

　　(c) Simple random sampling.　　　　(d) Non-probability sampling.

3 Which of the following is *not* a step in calculation of the Chi-square statistic ?

　　(a) Formulate the null hypothesis and determine the expected frequency of each answer.

　　(b) Determine the appropriate significance level.

　　(c) Calculate the sample mean.

　　(d) Calculate the Chi-square value.

4 A type II error occurs when :

　　(a) The null hypothesis is incorrectly accepted when it is false.

　　(b) The null hypothesis is incorrectly rejected when it is true.

　　(c) The sample mean differs from the population mean.

　　(d) The test is biased.

Turn over

5   Of type I and type II error, which is traditionally regarded as more serious ?

Type I   Type II

They are equally serious.   Neither is serious.

Fill in the blanks :

6   Independent samples *t*-test is used for analyzing the difference between ———— groups.

7   The hypothesis that an analyst is trying to prove is called ————.

8   One-way ANOVA is used when analyzing the difference between more than ————.

9   A ———— is a subset of a population.

10 A *p*-value is considered "convincing" if it is ———— than 0.01 or 0.05.

$(10 \times 1 = 10$ marks)

Part B

Answer all questions.
Each question carries 2 marks.

11 What is sampling ?

12 Define Chi-square ?

13 Define mean ?

14 What is type I error ?

15 What is stratified sampling ?

16 What is a sample ?

17 What is critical region ?

18 What is correlation ?

19 What is a paired *t*-test ?

20 What is type II error ?

$(10 \times 2 = 20$ marks)

Part C

Answer any six paragraph questions.
Each question carries 5 marks.

21 Explain type I and type II errors.

22 What is cluster sampling ?

23 Explain the tests of significance.

24 Write a brief notes on Central limit theorem.

25 Distinguish between systematic sampling and cluster sampling.

26 Discuss the uses of Chi-square ?

27 What is *t*-test ?

28 Explain the importance of normal distribution.

(6 × 5 = 30 marks)

Part D

*Answer any **two** questions in an essay each.*
Each question carries 10 marks.

29 What is sampling ? Explain the methods of Sampling.

30 What is a hypothesis ? Discuss the steps in hypothesis testing.

31 What are small sample tests ? Discuss in detail.

32 Discuss the sampling theory.

(2 × 10 = 20 marks)