

BA PSYCHOLOGY
SIXTH SEMESTER (SPECIAL REPEAT)
RESEARCH & STATISTICS-II
BPY-602

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

[PART-A : Objective]

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1 × 20 = 20

- Statement I: A researcher hypothesis is a tentative statement postulating a relationship between factual and conceptual elements of the variables.
Statement II: A researcher sets up a null hypothesis so that deduced consequences of a research hypothesis may be directly tested.
In light of the above statements, choose the correct answer from the options given below.
 - Both statement I and II are true
 - Both statement I and II are false
 - Statement I is correct but Statement II is false
 - Statement I is incorrect but Statement II is true
- The hypothesis which states that no difference exists between the scores of the variables are:
 - Research hypothesis
 - Null hypothesis
 - Statistical hypothesis
 - Alternate hypothesis
- In case of (2*2) table, the degree of freedom are (2-1)(2-1)=1. Again, in case of (3*3) table, degree of freedom are
 - 1
 - 2
 - 3
 - 4
- Approximately percentage area of curve lies within the limits of ± 1 standard deviation from the mean.
 - 68%
 - 68.26%
 - 34.13%
 - 34%
- The sample mean is significant when
 - The population mean is 0
 - The sample mean is 0
 - The sample and population mean is not equal
 - The sample and population mean is equivalent
- The value of standard deviation of Z score is
 - -1σ
 - 1σ
 - $\pm 1\sigma$
 - $\pm 2\sigma$
- The term refers to the divergence in the height of the curve or in the peakedness of the curve.
 - Negative skewness
 - Kurtosis
 - Positive skewness
 - Normal curve

8. The process of selecting a subset of a population for a survey is known as
 - a. Survey research
 - b. Representative
 - c. Triangulation
 - d. Sampling
9. A researcher selects a probability sample of 100 out of the total population. It is called
 - a. A quota sample
 - b. A simple random sample
 - c. A stratified random sample
 - d. A systematic sample
10. To ensure the accuracy of a research, the sample should be
 - a. Taken randomly
 - b. Fixed by quota
 - c. Representative of the population
 - d. Purposive
11. The null hypothesis is always tested at:
 - a. 0.05 level of significance
 - b. 0.01 level of significance
 - c. 0.10 level of significance
 - d. Both 0.01 and 0.05 levels of significance
12. Which one is not true about the quasi experimental research design?
 - a. To make comparison among different groups of individuals
 - b. Sample selected through randomization
 - c. Samples are not selected through randomization
 - d. Groups are not equal
13. When there are two or more independent variables in a study and researcher need to test several hypotheses, in this case, which research design researcher might think of?
 - a. True experimental research design
 - b. Factorial design
 - c. Quasi experimental research design
 - d. Non experimental research design
14. Given symbolic representation, 'O1 O2 O3 X O4 O5 O6' is of
 - a. Interrupted time-series research design
 - b. Equivalent time-sample series design
 - c. Time series design
 - d. Control group time series
15. Main characteristics of true experimental design are
 - a. Control and manipulation
 - b. Control and randomization
 - c. Randomization and manipulation
 - d. Control, Manipulation, and randomization
16. "H: The mean of the adjustment scores of the teachers of government schools in Haryana state is higher than the mean of the adjustment scores of the teachers of non-government schools" is the hypothesis formulated by a researcher. Identify the type of hypothesis?
 - a. Directional hypothesis
 - b. Non-directional hypothesis
 - c. Null hypothesis
 - d. Alternative hypothesis
17. A researcher divides the school students on the basis of gender and then by using the random digit table, he selects some of them from each group. This process is called
 - a. Stratified sampling
 - b. Stratified random sampling
 - c. Representative sampling
 - d. None of the above
18. We use factorial design
 - a. To know the relationship between two variables
 - b. To test the hypothesis
 - c. To know the difference between two variables
 - d. To know the difference among many variables

19. When studying an active independent variable, an interventions or treatment given to group of participants is called
- a. Experimental group
 - b. Control group
 - c. Both (a) and (b)
 - d. Neither (a) or (b)
20. The behaviour that is measured during an experiment is known as the
- a. Confounding variable
 - b. Independent variable
 - c. Dependent variable
 - d. Control variable
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(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What is research design? Illustrate the types of true experimental research design with symbolic representation. 3+7=10

2. a) What are the properties of NPC? 6+4=10
b) Locate the position in NPC with the help of diagram-
i) The Mean, Median and Mode in the normal curve
ii) $Z = + 2.1 \sigma$ and $Z = -1.5 \sigma$ in normal curve

3. What do you mean by correlation coefficient? Find out the Product Moment correlation coefficient: 3+7=10

Individuals	Scores in test X	Scores in test Y
A	15	60
B	25	70
C	20	40
D	30	50
E	35	50

4. a) Discuss divergence in normality. 5+5=10
b) An intelligence test was administered on a group of 500 cases of class 5. The Mean I.Q. of the students was found 100 and S.D. of I.Q scores was 16. Find how many students of class 5 having the I.Q
i) 80 and ii) above 120

5. Discuss the types of hypotheses. Construct one-one hypothesis of each type for your research problem. 6+4=10

6. a) Discuss the following concepts: 2+2+6=10
i) Significance of mean.
ii) Degrees of freedom and confidence intervals in testing null hypothesis
b) Given $M=25.00$, $SD = 4$, $N=100$. Compute the .99 confidence interval for the true mean.

7. a) What is a chi square test used for? Why chi square is said test of 'goodness of fit'? 2+3+5=10
b) A one rupee coin was tossed for 60 times and the observed frequencies are 40 heads and 20 tails, using the chi-square test. Find out whether this result is better than mere "chance"?

8. a) Discuss any three methods of drawing random sampling. 5+5=10
b) What are the sources of stating a research problem?

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