REV-01 MAE/25/30

2022/07

MA EDUCATION SECOND SEMESTER STATISTICS IN EDUCATION

MAE - 202

(Use Separate Answer Scripts for Objective & Descriptive)

Duration: 3 hrs.

Full Marks: 70

Time: 20 min. (PART-A: Objective)

Marks: 20

Choose the correct answer from the following:

1X20 = 20

In an NPC, the mean, median and mode is:

 a. 0
 b. 1
 c. 2
 d. 3

 The variables involved in Parametric tests must be measured in:

a. Interval scale
b. Both a and c
c. Ratio scale
d. Only b

3.tests are not based on the assumption of normal distribution of

population:
a. Parametric
b. Significance
c. Non-Parametric
d. ANOVA

When the distribution curve is normal, the value of Kurtosis (Ku) is:
 a. 0.236
 b. 0.231

c. 0.261 d. 0.263

a. Skewness
b. Kurtosis
c. Normal Curve
d. Both a and b

6. The full form of 'df' is:
a. Decree of freedom

a. Decree of freedom
b. Degree of freedom
c. Decree of flexibility
d. Degree of flexibility

7. The normal curve extends between:

a. $\pm 1\sigma$ and mean

b. $\pm 2\sigma$ c. $\pm 1\sigma$ d. $\pm 3\sigma$

8.is a test of significance when we have data expressed in the form of frequencies:

a. T-test
b. ANOVA
c. z-test
d. Chi-square

9. The hypothesis which states that no difference exists between the scores of the variables are:

a. Null hypothesis
b. Research hypothesis
c. Alternate hypothesis
d. Statistical hypothesis

10.	A composite procedure for testing the significant two samples is:	ficance of the mean difference between mo
	a. Chi-square c. t-test	b. ANOVAd. Mann Whitney test
11.		b. Categorical data d. Continuous data
12.	The null hypothesis is always tested at: a. 0.01 level of significance c. 0.10 level of significance	b. 0.05 level of significanced. Both 0.01 and 0.05 levels of significance
13.	Type II error is harmful to/than ty a. More c. Equally	ype I error: b. Less d. Variably
14.	Chi square test was developed by: a. Fredrick Robert Helmert c. Carl Freidrich Gauss	b. Karl Pearsond. Adraine
15.	In linear correlation, the relationship betwe graphically in a: a. Projectile c. Straight line	en the two set of scores can be represented b. Curve d. Slope
16.		
17.	1 t test is also known as:	
	a. Directional testc. 1 way test	b. Non- directional testd. 2 way test
18.	indicates perfect positive correlatio a2 c1	n: b +1 d. +2
19.	Which of the following statement is true? a. Type I error is more harmful than Type b. The 2 t test is tested only in one direction c. Significance of the mean is an indicator d. H0 is used to indicate significant difference	on of an ideal situation in research
20.	The total area under the curve is arbitrarily a. 10 c. 1000	taken to be: b. 100 d. 10000

PART-B : Descriptive

Time: 2 hrs. 40 min. Marks: 50

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

- What is the meaning of Statistics? Give the uses of Statistics in Education and Psychology.
- 2. Discuss divergence in normality. In case of normal distribution 8+2=10 what should be the value of skewness?
- 3. In a particular test, there were 16 independent observations of a certain magnitude with a mean of 100 and SD of 24. Find out at both 0.05 and 0.01 levels of confidence, the limits of the confidence interval for the population mean.
- 4. a. How does the procedure for determining the significance of the mean of a small sample differ from that of a large sample?
 - b. 40 boys and 50 girls of class 9 were asked to choose one elective subject among Advanced mathematics, Information Technology, Hindi, Assamese. The choices of the boys and girls are as follows:

Students					
Sex	Advanc ed Mathe matics	Inform ation Techno logy	Hindi	Assame se	Total
Boys	14	12	6	8	40
Girls	12	20	8	20	50

Test the hypothesis that, the choice of the subject is dependent upon the gender of students

5. A mathematics teacher divides his class into two random groups. He provides special coaching in computation skill for an hour daily to the experimental group hoping that such a drill will promote the computation skill of the students of this group. The control group is not provided any such drill. At the end of the session, he administers an achievement test and collects data as under:

10

	Experimental group	Control
Mean	35	30
SD	4	3
No. of students	48	45

Is the gain in mathematics significant enough?

6. The following are mathematics scores for three groups of equal

subjects tested:				
Group	Group	Group	Group	
I	II	III	IV	
4	9	2	7	
5	10	2	7	
1	9	6	4	
0	6	5	2	
2	6	2	7	

Apply the Analysis of Variance to test the null hypothesis.

7. What is Pearson's correlation coefficient? Find out the Product Moment correlation coefficient:

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

- 8. Write short notes on:
 - a. Chi-square as a test of goodness-of-fit.b. Assumptions of ANOVA

5+5=10

2+8=10

10