

Write the answers to each  
Module in a separate  
answer-book.

2019

## PSYCHOLOGY — HONOURS

Third Paper

Full Marks : 100

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words  
as far as practicable.

Module - 2.1

(Psychometry)

Marks : 50

Use of Simple Calculator allowed.

1. Write short notes on *any two* of the following (word limit 300 words each) : 5×2
- (a) Analysis of Variance
- ~~(b) Distinguish between Type I and Type II error~~
- ~~(c) Standard error~~
- (d) Phi coefficient.

2. Answer *any one* of the following (word limit 800 words) :
- (a) Define measurement. Write, in detail, about the different levels of measurement. 2+8
- (b) (i) Write the properties of median.
- (ii) Compute the median from the following distribution of body weights (kg.) 3+7

Class Intervals	51-53	54-56	57-59	60-62	63-65	66-68	69-71
Frequencies	5	7	14	28	15	8	3

- (c) State the properties of normal probability curve. 10
3. Answer *any two* questions from the following (word limit 1000 words each) :
- (a)  (i) Distinguish between product moment and rank difference correlation.

Please Turn Over

(i) Compute appropriate correlation where normality is not assumed between vocabulary and typewriting scores. 5+10

Students	Vocabulary		Typewriting
1	81	1	29
2	224	-0.5	48.45
3	351	0	55.1
4	195	2	49.3
5	233	1	53.2
6	137	2	41.5
7	210	1	22.9
8	146	0	38.2
9	118	1	35.7
10	252	-2.5	48.45

	Critical Values	
	0.05	0.01
df 8	0.632	0.765
df 9	0.602	0.735

$18.5$   
 $10(100-1)$   
 $1 - \frac{6 \times 18.5}{990}$   
 $1 - \frac{111}{990} = 1 - 0.112$

(b) (i) What are one tailed and two tailed tests?

(ii) The achievement test scores of 10 students, before and after practice, are given below. Does practice make a significant difference in achievement test scores? 5+10

Individuals :	1	2	3	4	5	6	7	8	9	10
Achievement Scores										
Before Practice :	72	67	90	97	84	92	65	75	80	69
After Practice :	120	81	110	103	109	137	115	82	110	89

	Critical Values	
	0.05	0.01
df 9	2.262	3.250
df 8	2.306	3.355

$\frac{265}{10}$   
 $26.5$

$$\frac{MD}{\sqrt{\frac{x_1^2 + x_2^2}{N(N-1)}}}$$

0.083

(3)

M(II) - Psychology-H-3

- (c) (i) What do you mean by Chi-square test of independence?  
(ii) The following table represents the number of boys and the number of girls who chose each of the five possible answers to an item in an attitude scale :

	Approve Strongly	Approve	Indifferent	Disapprove	Disapprove Strongly	Total
Boys	25	30	10	25	10	100
Girls	10	15	5	15	15	60

Do these data indicate a significant sex difference in attitude toward this question? 3+12

	Critical	Values
	0.05	0.01
df 4	9.488	13.277
df 5	11.070	15.086

- (d) (i) Distinguish between Kurtosis and Skewness with diagram and examples.  
(ii) In an intelligence test, the distribution is normal with  $M = 100$  and  $SD = 20$ .  
(A) What percentage of scores lie between 80 and 120?  
(B) What percentage of scores lie between 40 and 160?  
(C) What is the Kurtosis value for a mesokurtic curve?  
(D) What is the skewness value of a normal curve?

7+2+2+2+2

Module - 2.2  
(Methodology)  
Marks : 50

4. Write short notes on *any two* of the following (word limit 300 words each) :

5×2

- (a) Research Problem (3)  
(b) Ethics in Psychological Research  
(c) Types of Norms  
(d) Time series design.

5. Answer *any one* question (word limit 800 words) :

- (a) Delineate the major steps in psychological research. (5) 10  
(b) Discuss, in detail, the controlling techniques of different types of extraneous variables. 10  
(c) Write the characteristics of Good hypothesis. What role does hypothesis play in Research? 8+2

Please Turn Over

6. Answer *any two* of the following questions (word limit 1000 words each) :

- (a) What is sampling? Discuss its types. What is the difference between probability and non-probability sampling? (5) 2+10+3
- (b) Define variable. State the different types of variable in Psychological research. (5) 3+12
- (c) (i) Discuss the different types of validity.  
(ii) How are reliability and validity related?  
(iii) A performance test has 40 test items, its reliability coefficient is 0.50 and validity coefficient is 0.52. What would happen to its reliability if its length is increased to double? 7+4+4
- (d) Describe the Randomised and Matched group design. Differentiate between them with example. 10+5