

**STATISTICS (COMMERCE GROUP) (Academic Session 2006 – 2008)**

208-(INTER PART –II)

ROLL NO:(In Figures) \_\_\_\_\_

(Objective Type)

GROUP – I

(In Words) : \_\_\_\_\_

Write Serial No. of your answer book \_\_\_\_\_

Time Allowed : 15 Minutes

Maximum Marks : 10

Signature of Deputy Supdt. \_\_\_\_\_

Note : Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using a pencil. This paper must be tagged with the answer-book.

1. Some possible answers to each statement are given below. Tick (✓) mark the correct answer : 10

(i) Now-a-days, the word statistics can be expressed in how many ways :

( 2 , 3 , 4 , 5 )

(ii) A Greek letter and is used as a short hand notation for sum :

(  $\Sigma$  ,  $\pi$  ,  $\bar{X}$  ,  $\hat{X}$  )

(iii) The data obtained from college record is :

( Primary , Secondary , Raw , Qualitative. )

(iv) What is the total angle of pie-chart : (  $90^\circ$  ,  $180^\circ$  ,  $360^\circ$  ,  $60^\circ$  )

(v) Frequency is denoted by : ( c , f , q , r )

(vi) The sum of deviation from mean is :

( Zero , Positive , Negative , None of these )

(vii) Index Numbers are called the barometers of :

( Statistics , Economics. Mathematics. None of these. )

(viii) The most frequent value in the data is called :

( Mode , Median , G.M. , H.M. )

(ix) Index Number for base period is :

( 100 , Always 100 , Never 100 , None of these )

(x) The probability of an event always lies between :

( -1 and +1 , -1 and 0 , 0 and +1 , 0 and  $\infty$  )

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Roll No \_\_\_\_\_ ( To be filled in by the candidate)

**STATISTICS (COMMERCE GROUP) (Academic Session 2006 – 2008 )**

208-(INTER PART – II)

Time Allowed : 1.45 hours

( Essay Type )

GROUP – I

Maximum Marks : 40

Note : All questions are to be attempted on the answer book.

**SECTION – I**

2. Write any TWELVE (12) short answers of the following questions :

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- (i) What is Inferential Statistics?
- (ii) Define discrete variable and continuous variable.
- (iii) What is constant and variable?
- (iv) Name the methods used for collection of primary data.
- (v) Verify that  $\sum_{i=1}^7 x_i^2 \neq \left( \sum_{i=1}^7 x_i \right)^2$
- (vi) What do you understand by the term "Classification"?
- (vii) Define class interval.
- (viii) Name the types of graphs.
- (ix) Define mode with examples.
- (x) Find out Arithmetic Mean given  $\sum x = 308$  ,  $n = 7$
- (xi) Write two merits of median.
- (xii) For a certain frequency distribution, the value of Mean is 15 Median is 20. What will be value of Mode?
- (xiii) Define composite index number.
- (xiv) Define Chain Base Method.
- (xv) Define weighted index number.
- (xvi) Define sample space.
- (xvii) Define equally likely events.
- (xviii) Define addition law for not mutually exclusive events.

**SECTION – II**

Note : Attempt any TWO questions.

3. (a) The following are the lengths of 20 maize plants recorded to <sup>the</sup> nearest inch. Construct a frequency distribution taking classes as 118 – 123 , 124 – 129 , -----, 160 – 165, etc.

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|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 132 | 140 | 152 | 144 | 126 |
| 176 | 119 | 154 | 165 | 138 |
| 150 | 128 | 150 | 142 | 135 |
| 145 | 135 | 140 | 147 | 142 |

(b) Draw a component bar chart for the following data :

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| Division   | Both Sexes | Male | Female |
|------------|------------|------|--------|
| Peshawar   | 64         | 33   | 31     |
| Rawalpindi | 40         | 21   | 19     |
| Sargodha   | 60         | 32   | 38     |
| Lahore     | 65         | 35   | 30     |

( Turn Over )

(2)

4. (a) Eight coins were tossed together and the number of head observed :

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|              |   |   |    |    |    |    |    |   |   |
|--------------|---|---|----|----|----|----|----|---|---|
| No. of Heads | 0 | 1 | 2  | 3  | 4  | 5  | 6  | 7 | 8 |
| Frequency    | 1 | 9 | 26 | 59 | 72 | 52 | 29 | 7 | 1 |

Required to calculate : (i) Median. (ii) Mode.

- (b) Following data indicate daily income of small industrial unit :

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|             |           |           |           |           |           |
|-------------|-----------|-----------|-----------|-----------|-----------|
| Income (Rs) | 118 – 126 | 127 – 135 | 136 – 144 | 145 – 153 | 154 – 162 |
| Workers     | 3         | 5         | 12        | 6         | 4         |

Calculate Arithmetic Mean of income.

5. (a) The following table gives prices in rupees for 40 kg for the years 1970 – 1975 :

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|        |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|
| Year   | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 |
| Prices | 30.5 | 32.8 | 40.2 | 43.5 | 44.5 | 48.2 |

Find (i) Link relatives for prices. (ii) Chain relatives base 1970

- (b) If a card is drawn from a pack of 52 playing cards, find the probability that it is :

(i) Red card. (ii) Card number is 10. (iii) Diamond card.

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