BUSINESS STATISTICS HSSC-II
SECTION – A (Marks 10)

Time allowed: 15 Minutes

NOTE:- Section-A is compulsory. All parts of this section are to be answered on the question paper itself. It should be completed in the first 15 minutes and handed over to the Centre Superintendent. Deleting/oversetting is not allowed. Do not use lead pencil.

Q. 1 Circle the correct option i.e. A / B / C / D. Each part carries one mark.

(i) The word Statistics may have been derived from the German word
A. Status
B. Statistik
C. Statistique
D. Statista

(ii) The data, which have not undergone any statistical treatment are
A. Primary data
B. Secondary data
C. Discrete data
D. Continuous data

(iii) If the data are classified according to their time of occurrence then this procedure is called
A. Multi-way classification
B. Chronological classification
C. Geographical classification
D. Spatial classification

(iv) The total of relative frequencies is always equal to
A. –1
B. 0.5
C. 1
D. 100

(v) In symmetrical distribution mean, median and mode are always
A. Negative
B. Zero
C. Different
D. Equal

(vi) Median is a/an
A. Calculating average
B. Positional average
C. Exact average
D. None of these

(vii) Index numbers are called
A. Economic barometer
B. Statistical barometer
C. Mathematical barometer
D. Physical barometer

(viii) The most suitable average for index number is
A. Arithmetic Mean
B. Geometric Mean
C. Median
D. Mode

(ix) The probability of an event always lies between
A. –1 and 0
B. –1 and 1
C. 0 and +1
D. –0.5 and 0.5

(x) The probability of drawing red card out of 52 cards is
A. 1/2
B. 1/4
C. 1/13
D. None of these
BUSINESS STATISTICS  HSSC-II

Time allowed: 2:15 Hours  Total Marks Sections B and C: 40

NOTE:-  Answer any eight parts from Section 'B' and any two questions from Section ‘C’ on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

SECTION – B (Marks 24)

Q. 2  Attempt any EIGHT parts. The answer to each part should not exceed 3 to 4 lines. (8 x 3 = 24)

(i)  Write down the applications of Statistics in business.

(ii)  Differentiate between Primary and Secondary data.

(iii) The following data show the number of absent students during the month of November 2011 from I. Com class: 3, 4, 5, 6, 7, 1, 0, 2, 3, 4, 5, 7, 8, 7, 2, 1, 6, 7, 8, 9, 10, 6, 7, 3

Make a Frequency distribution taking class interval as one.

(iv)  What is meant by Graph?

(v)  The following data indicate the size of shoes sold at a store during the given week.

Find model size of shoes.

<table>
<thead>
<tr>
<th>Size of shoes</th>
<th>4½</th>
<th>5</th>
<th>5½</th>
<th>6</th>
<th>6½</th>
<th>7</th>
<th>7½</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of pairs sold</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>20</td>
<td>25</td>
<td>17</td>
<td>16</td>
<td>4</td>
</tr>
</tbody>
</table>

Also find Median.

(vi)  Write down the desirable qualities of a good average.

(vii) If in a certain distribution mean is 45 and median is 50 then find mode. Also give the assumption you take regarding the shape of distribution.

(viii) Differentiate between Fix base and Chain base method.

(ix)  Find Price relatives for the data given below, using ‘average of last three years’ as base:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>15</td>
<td>16</td>
<td>20</td>
<td>22</td>
<td>24</td>
<td>23</td>
<td>26</td>
<td>15</td>
<td>20</td>
</tr>
</tbody>
</table>

(x)  Two unbiased coins are tossed once. Find the following:

a. Make a sample space
b. Probability that two heads appeared
c. Probability that exact one head appeared

(xi)  A fair cubical die is rolled once. What is the probability of obtaining:

a. Six
b. An even number
c. The number greater than 4

SECTION – C (Marks 16)

Note:-  Attempt any TWO questions. All questions carry equal marks. (2 x 8 = 16)

Q. 3  Calculate Arithmetic Mean, Median and Mode of the following data:

<table>
<thead>
<tr>
<th>Groups</th>
<th>0-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-19</th>
<th>20-24</th>
<th>25-29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>20</td>
<td>23</td>
<td>30</td>
<td>21</td>
<td>17</td>
<td>19</td>
</tr>
</tbody>
</table>

Q. 4  Construct index numbers for 1995 from the following data taking 1990 as base by:

(i) Laspeyre’s Method  (ii) Paasche’s Method  (iii) Fisher’s Ideal Method

<table>
<thead>
<tr>
<th>Commodity</th>
<th>1990</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>120</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>160</td>
</tr>
<tr>
<td>C</td>
<td>12</td>
<td>80</td>
</tr>
<tr>
<td>D</td>
<td>15</td>
<td>60</td>
</tr>
</tbody>
</table>

Q. 5  A marble is drawn at random from a box containing 10 red, 30 white, 20 blue and 15 orange marbles.

What is the probability that it is:

(i) White
(ii) Orange or red
(iii) Not red or blue
(iv) Red, white or blue