**Objective (MCQ)**

Note: You have four choices for each objective type question as A, B, C and D. Choose the correct answer and encircle it. Cutting, erasing, overwriting, encircling more than one option, using of lead pencil will result in zero mark in that question.

<table>
<thead>
<tr>
<th>(D)</th>
<th>(C)</th>
<th>(B)</th>
<th>(A)</th>
<th>QUESTIONS</th>
<th>S.No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme</td>
<td>Antecedent</td>
<td>Consequent</td>
<td>Median</td>
<td>In a ratio a:b, &quot;a&quot; is called</td>
<td>1</td>
</tr>
<tr>
<td>25 %</td>
<td>2.5 %</td>
<td>10 %</td>
<td>5 %</td>
<td>On a crop produced on artificial resources Usher is deducted at the rate of...</td>
<td>2</td>
</tr>
<tr>
<td>10 %</td>
<td>13 %</td>
<td>30</td>
<td>13</td>
<td>0.13 as percentage is...</td>
<td>3</td>
</tr>
<tr>
<td>15000</td>
<td>2000</td>
<td>25000</td>
<td>2500</td>
<td>What is amount of Zakat on an amount of 10,000 is...</td>
<td>4</td>
</tr>
<tr>
<td>5,84 Rs.</td>
<td>6,843.32Rs</td>
<td>7,785.3 Rs.</td>
<td>800 Rs.</td>
<td>What is the selling price, when MP=Rs.728 Discount = 6%</td>
<td>5</td>
</tr>
<tr>
<td>Profit</td>
<td>Mark up</td>
<td>Premium</td>
<td>Bonus</td>
<td>The return earned by the bank on loan is named as</td>
<td>6</td>
</tr>
<tr>
<td>tax</td>
<td>Sales tax</td>
<td>income tax</td>
<td>excise duty</td>
<td>The tax in addition to the price of the article is called</td>
<td>7</td>
</tr>
<tr>
<td>1200</td>
<td>700</td>
<td>600</td>
<td>500</td>
<td>The value added tax at the rate of 10% at the marked price of television of Rs.1200 is</td>
<td>8</td>
</tr>
<tr>
<td>2 1/4</td>
<td>2 1/2</td>
<td>2</td>
<td>2^2</td>
<td>√2 = ?</td>
<td>9</td>
</tr>
<tr>
<td>a/b</td>
<td>√ab</td>
<td>ab/2</td>
<td>a + b/2</td>
<td>In an A.P. Arithmetic Mean is find by the formula</td>
<td>10</td>
</tr>
<tr>
<td>±8</td>
<td>16</td>
<td>4</td>
<td>64</td>
<td>What is the Geometric Mean b/w 4 and 16.</td>
<td>11</td>
</tr>
<tr>
<td>(4,5,6)</td>
<td>(5)</td>
<td>(5)</td>
<td>(4)</td>
<td>If R={(4,5),(5,4),(5,6),(6,4)} what is the domain of R</td>
<td>12</td>
</tr>
<tr>
<td>φ</td>
<td>(A∩B)⁰</td>
<td>A⁰ U B⁰</td>
<td>(AUB)⁰</td>
<td>What are the coordinated of origin</td>
<td>13</td>
</tr>
<tr>
<td>(1,0)</td>
<td>(0,1)</td>
<td>(0,0)</td>
<td>(1,1)</td>
<td>The difference between maximum and minimum value is called</td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>dispersion</th>
<th>deviation</th>
<th>Variance</th>
<th>Range</th>
</tr>
</thead>
</table>

1.Q
Part - I

2. Answer any SIX parts from the following

2.\( \text{If 8.4% of a book consists of 42 pages, find the total number of pages in the book.} \)

2.\( \text{Find the value of x in the proportion } 20:50 :: 8:x. \)

2.\( \text{If the price of 20 pens is 2000, then find the price of 40 pens.} \)

2.\( \text{What is the difference between direct proportion and Inverse proportion.} \)

2.\( \text{A bicycle was purchased for Rs. 3450 and sold for Rs. 3850. Find the profit percentage.} \)

2.\( \text{Write the formula for profit percentage.} \)

2.\( \text{Distribute Rs. 720 as profit amongst three people, so that their shares are in the ratio 3:4:5.} \)

2.\( \text{What is difference between debit card and credit card.} \)

2.\( \text{If we invest Rs. 1000 in a saving account at 10% profit per year, How much would we have in one year?} \)

3. Answer any SIX parts from the following

3.\( \text{What is difference between sales tax and excise duty?} \)

3.\( \text{A sales tax of 16% imposed on television. If the marked price of television is Rs. 18000. Calculate the total amount one has to pay, if he wants to purchase it?} \)

3.\( \text{Khalid works 6 day-week, find his gross monthly wage, if his rate of pay is Rs. 200 per day.} \)

3.\( \text{What is difference between Characteristic and Mantissa?} \)

3.\( \text{Write } 0.00018 \text{ in scientific form.} \)

3.\( \text{If } \log_2 3.0374. \text{ Find the value of x.} \)

3.\( \text{What is meant by Geometric Mean.} \)

3.\( \text{Which term of A.P } 6,2,\ldots\ldots\ldots\text{ is -146.} \)

3.\( \text{Find the 5th term of G.P } 4,12,36,\ldots\ldots\ldots\text{.} \)

4. Answer any SIX parts from the following

4.\( \text{Define compliment of set.} \)

4.\( \text{Write two binary relations in A if } A=\{-2,14\}. \)

4.\( \text{Find } AxB \text{ and } BxA \text{ if } A=\{3,5,6\} \text{ and } B=\{1,3\}. \)

4.\( \text{What is meant by cartesian plane.} \)

4.\( \text{Draw the point } (2,4) \text{ on graph paper.} \)

4.\( \text{Define Frequency.} \)

4.\( \text{Define Arithmetic mean Write its formula.} \)

4.\( \text{Convert } 85 \text{ F° (Fahrenheit) to } °C \text{ (Centigrade).} \)
Part II

Note: Attempt any THREE questions.

(a) An aeroplane carries 400 passengers, 52% of the Pakistanis, 17% were from Iran, and the rest were from British. How many people of each nationality were on the plane?

(b) Calculate the amount of Zakat on 10 tola gold and 40 tola silver, if the rate of gold is Rs. 40,000 per tola and the rate of silver is Rs. 5000 per tola.

(a) A man sold an almirah at a profit of \(\frac{7}{2}\) % had he sold it for Rs. 209, he would have lost 2%. For how much the man purchased it?

(b) A company borrowed Rs. 6000 from any Bank at 8% simple markup per annum. How much did the company owe to the bank at the end of 11 months?

(a) Calculate the gross monthly pay of a person if his Basic Pay is Rs. 18,000, House rent allowances is Rs. 3,500, Dearness allowances is Rs. 3,000, Conveyance allowance is Rs. 1,500 and Medical allowance is Rs 500.

(b) Show that \(3 \log 4 + 2 \log 5 = \frac{1}{3} \log 64 - \frac{1}{2} \log 16 = 2\)

(a) Find three A.M.s between \(\sqrt{3}\) and \(9\sqrt{3}\)

(b) Verify De Morgan's Law if \(U = \{4, 8, 9, 10\}\), \(A = \{4, 6\}\), \(B = \{6, 8, 9\}\)

(a) Draw the graph of \(y = 4x + 1\)

(b) Find the standard deviation for the values 1, 2, 3, 4, 6, 8, 11. Also find the variance in this case.