DATA INTERPRETATION

TABULATION & BAR GRAPH
Q1. Expenditures of a Company (in Lakh Rupees) per Annum Over the given Years (Bank PO 2009).

<table>
<thead>
<tr>
<th>Year</th>
<th>Item of Expenditure</th>
<th>Salary</th>
<th>Fuel and Transport</th>
<th>Bonus</th>
<th>Interest on Loans</th>
<th>Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td></td>
<td>288</td>
<td>98</td>
<td>3.00</td>
<td>23.4</td>
<td>83</td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td>342</td>
<td>112</td>
<td>2.52</td>
<td>32.5</td>
<td>108</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>324</td>
<td>101</td>
<td>3.84</td>
<td>41.6</td>
<td>74</td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td>336</td>
<td>133</td>
<td>3.68</td>
<td>36.4</td>
<td>88</td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td>420</td>
<td>142</td>
<td>3.96</td>
<td>49.4</td>
<td>98</td>
</tr>
</tbody>
</table>

1. What is the average amount of interest per year which the company had to pay during this period?
   A. Rs. 32.43 lakhs
   B. Rs. 33.72 lakhs
   C. Rs. 34.18 lakhs
   D. Rs. 36.66 lakhs

2. The total amount of bonus paid by the company during the given period is approximately what percent of the total amount of salary paid during this period?
   A. 0.1%
   B. 0.5%
   C. 1%
   D. 1.25%

3. Total expenditure on all these items in 1998 was approximately what percent of the total expenditure in 2002?
   A. 62%
   B. 66%
   C. 69%
   D. 71%

4. The total expenditure of the company over these items during the year 2000 is?
   A. Rs. 544.44 lakhs
   B. Rs. 501.11 lakhs
   C. Rs. 446.46 lakhs
   D. Rs. 478.87 lakhs

5. The ratio between the total expenditure on Taxes for all the years and the total expenditure on Fuel and Transport for all the years respectively is approximately?
   A. 4:7
   B. 10:13
   C. 15:18
   D. 5:8

Solutions:

1. (D) Average amount of interest paid by the Company during the given period

   \[
   = \text{Rs} \left[ \frac{23.4+32.5+41.6+36.4+49.4}{5} \right] \text{lakhs}
   \]

   \[
   = \text{Rs} \left[ \frac{183.3}{5} \right] \text{lakhs} = \text{Rs. 36.66 lakhs.}
   \]

2. ☞ Required percentage = \[
   \left[ \frac{(3.00+2.52+3.84+3.68+3.96)}{(288+342+324+336+420)} \times 100 \right] \%
   \]
3. © Required percentage $= \left( \frac{288 + 98 + 3.00 + 23.4 + 83}{420 + 142 + 3.96 + 49.4 + 98} \times 100 \right)\%$

$$= \left( \frac{495.4}{713.36} \times 100 \right)\% = 69.45\%.$$

4. (A) Total expenditure of the Company during 2000

$$= Rs. (324 + 101 + 3.84 + 41.6 + 74) \text{ lakhs} = Rs. 544.44 \text{ lakhs}.$$

5. (B) Required ratio $= \left( \frac{83 + 108 + 74 + 88 + 98}{98 + 112 + 101 + 133 + 142} \right)$

$$= \left( \frac{451}{586} \right) = \frac{10}{13}$$

Q2. Study the following table carefully and answer these questions. Number of candidates appeared and qualified in a competitive examination from different states over the years (SBIPO, 2002)

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>5200</td>
<td>720</td>
<td>8500</td>
<td>980</td>
<td>7400</td>
</tr>
<tr>
<td>N</td>
<td>7500</td>
<td>840</td>
<td>9200</td>
<td>1050</td>
<td>8450</td>
</tr>
<tr>
<td>P</td>
<td>6400</td>
<td>780</td>
<td>8800</td>
<td>1020</td>
<td>7800</td>
</tr>
<tr>
<td>Q</td>
<td>8100</td>
<td>950</td>
<td>9500</td>
<td>1240</td>
<td>8700</td>
</tr>
<tr>
<td>R</td>
<td>7800</td>
<td>870</td>
<td>7600</td>
<td>940</td>
<td>9800</td>
</tr>
</tbody>
</table>

1. Combining the states P and Q together in 1998, what is the percentage of the candidates qualified to that of the candidates appeared?

(a) 10.87%  (b) 11.49%  (c) 12.35%  (d) 12.54%

2. The percentage of the total number of qualified candidates to the total number of appeared candidates among all the five states in 1999 is:

(a) 11.49%  (b) 11.84%  (c) 12.21%  (d) 12.57%
3. What is the percentage of candidates qualified from State N for all the years together over the candidates appeared from State N during all the years together?

(a) 12.36%  (b) 12.16%  (c) 11.47%  (d) 11.15%

4. What is the average of candidates who appeared from State Q during the given years?

(a)8700  (b)8760  (c)8810  (d) 8990

5. In which of the given years the number of candidates appeared from State P has maximum percentage of qualified candidates?

(a)1997  (b)1998  (c)2000  (d) 2001

6. Total number of candidates qualified from all the states together in 1997 is approximately what percentage of the total number of candidates qualified from all the states together in 1998?

(a) 72%  (b) 77%  (c) 80%  (d) 83%

Solution:

1. (c): Required percentage = \[ \left( \frac{1020 + 1240}{8800 + 9500} \times 100 \right) \% \]

   \[ = \left( \frac{2260}{18300} \times 100 \right) \% = 12.35\% \]

2. (b): Required percentage = \[ \left( \frac{850 + 920 + 890 + 980 + 1350}{7400 + 8450 + 7800 + 9800} \times 100 \right) \% \]

   \[ = \left( \frac{4990}{42150} \times 100 \right) \% = 11.84\% \]

3. (d): Required percentage = \[ \left( \frac{840 + 1050 + 920 + 980 + 1020}{7500 + 9200 + 8450 + 9200 + 8800} \times 100 \right) \% \]

   \[ = \left( \frac{4810}{43150} \times 100 \right) \% = 11.15\% \]
4. (d): Required percentage = \( \frac{8100 + 9500 + 8700 + 9700 + 8950}{5} = \frac{44950}{5} = 8990 \)

5. (d): The percentages of candidates qualified to candidates appeared from State P during different years are:

For 1997 = \( \frac{780}{6400} \times 100 \)\% = 12.19\%

For 1998 = \( \frac{1020}{8800} \times 100 \)\% = 11.59\%

For 2000 = \( \frac{1010}{8750} \times 100 \)\% = 11.54\%

For 1997 = \( \frac{1250}{9750} \times 100 \)\% = 12.82\%

6. (c): Required percentage = \[ \left( \frac{720 + 840 + 780 + 950 + 870}{980 + 1050 + 1020 + 1240 + 940} \right) \times 100 \] \% = \( \frac{4160}{5230} \times 100 \% = 79.54\% = 80\%

Q3. The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.

1. What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?
   A. 2:3   B. 3:5
   C. 4:5   D. 7:9

2. Total sales of branch B6 for both the years is what percent of the total sales of branches B3 for both the years?
   A. 68.54%   B. 71.11%
   C. 73.17%   D. 75.55%

3. What percent of the average sales of branches B1, B2 and B3 in 2001 is the average sales of branches B1, B3 and B6 in 2000?
   A. 75%   B. 77.5%
   C. 82.5%   D. 87.5%

4. What is the average sales of all the branches (in thousand numbers) for the year 2000?
   A. 73   B. 80
   C. 83   D. 88

5. Total sales of branches B1, B3 and B5 together for both the years (in thousand numbers) is?
   A. 250   B. 310
   C. 435   D. 560

Solution:

1. (D) Required ratio = \( \frac{75+65}{85+95} = \frac{140}{180} = \frac{7}{9} \)

2. (C) Required percentage = \( \left( \frac{70+80}{95+110} \right) \times 100 \% = \left[ \frac{150}{205} \times 100 \right] \% = 73.17\% \)

3. (D) Average sales (in thousand number) of branches B1, B3 and B6 in 2000
   \[ \frac{1}{3} \times (80 + 95 + 70) = \left( \frac{245}{3} \right) \]

   Average sales (in thousand number) of branches B1, B2 and B3 in 2001
   \[ \frac{1}{3} \times (105 + 65 + 110) = \left( \frac{280}{3} \right) \]
Required percentage = \( \frac{\left(\frac{245}{280}\right) \times 100}{3} \)\% = \( \frac{245}{280} \times 100 \)\% = 87.5\%

4. (B) Average sales of all the six branches (in thousand numbers) for the year 2000

\[
\frac{1}{6} \times [80 + 75 + 95 + 85 + 75 + 70] = 80
\]

5. (D) Total sales of branches B1, b2 and B5 for both the years (in thousand numbers) = (80 + 105) + (95 + 110) + (75 + 95) = 560.

Q1. The following table gives the percentage of marks obtained by seven students in six different subjects in an examination. The Numbers in the Brackets give the Maximum Marks in Each Subject (Bank PO 2009).

<table>
<thead>
<tr>
<th>Student</th>
<th>Subject (Max. Marks)</th>
<th>Maths</th>
<th>Chemistry</th>
<th>Physics</th>
<th>Geography</th>
<th>History</th>
<th>Computer Science</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(150)</td>
<td>(130)</td>
<td>(120)</td>
<td>(100)</td>
<td>(60)</td>
<td>(40)</td>
</tr>
<tr>
<td>Ayush</td>
<td></td>
<td>90</td>
<td>50</td>
<td>90</td>
<td>60</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>Aman</td>
<td></td>
<td>100</td>
<td>80</td>
<td>80</td>
<td>40</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>Sajal</td>
<td></td>
<td>90</td>
<td>60</td>
<td>70</td>
<td>70</td>
<td>90</td>
<td>70</td>
</tr>
<tr>
<td>Rohit</td>
<td></td>
<td>80</td>
<td>65</td>
<td>80</td>
<td>80</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Muskan</td>
<td></td>
<td>80</td>
<td>65</td>
<td>85</td>
<td>95</td>
<td>50</td>
<td>90</td>
</tr>
<tr>
<td>Tanvi</td>
<td></td>
<td>70</td>
<td>75</td>
<td>65</td>
<td>85</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Tarun</td>
<td></td>
<td>65</td>
<td>35</td>
<td>50</td>
<td>77</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

1. What are the average marks obtained by all the seven students in Physics? (rounded off to two digit after decimal)
   A. 77.26
   B. 89.14
   C. 91.37
   D. 96.11

2. The number of students who obtained 60% and above marks in all subjects is?
   A. 1
   B. 2
   C. 3
   D. None

3. What was the aggregate of marks obtained by Sajal in all the six subjects?
   A. 409
   B. 419
   C. 429
   D. 449

4. In which subject is the overall percentage the best?
   A. Maths
   B. Chemistry
REASONING AND QUANTITATIVE APTITUDE

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5. What is the overall percentage of Tarum?
   A. 52.5%  B. 55%
   C. 60%  D. 63%

Q2. Study the following table and answer the questions.

Classification of 100 Students Based on the Marks Obtained by them in Physics and Chemistry in an Examination. (Bank PO 2001).

<table>
<thead>
<tr>
<th>Subject</th>
<th>Marks out of 50</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40 and above</td>
</tr>
<tr>
<td>Physics</td>
<td>9</td>
</tr>
<tr>
<td>Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Average (Aggregate)</td>
<td>7</td>
</tr>
</tbody>
</table>

1. What is the different between the number of students passed with 30 as cut-off marks in Chemistry and those passed with 30 as cut-off marks in aggregate?
   A. 3  B. 4
   C. 5  D. 6

2. If at least 60% marks in Physics are required for pursuing higher studies in Physics, how many students will be eligible to pursue higher studies in Physics?
   A. 27  B. 32
   C. 34  D. 41

3. The percentage of number of students getting at least 60% marks in Chemistry over those getting at least 40% marks in aggregate, is approximately?
   A. 21%  B. 27%
   C. 29%  D. 31%

4. The number of students scoring less than 40% marks in aggregate is?
   A. 13  B. 19
   C. 20  D. 27

5. If it is known that at least 23 students were eligible for a Symposium on Chemistry, then the minimum qualifying marks in Chemistry for eligibility to Symposium would lie in the range?
Q3. A school has four sections A, B, C, D of Class IX students.

The results of half yearly and annual examinations are shown in the table given below

(Bank PO 2000).

<table>
<thead>
<tr>
<th>Result</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Section A</td>
</tr>
<tr>
<td>Students failed in both Exams</td>
<td>28</td>
</tr>
<tr>
<td>Students failed in half-yearly but passed in Annual Exams</td>
<td>14</td>
</tr>
<tr>
<td>Students passed in half-yearly but failed in Annual Exams</td>
<td>6</td>
</tr>
<tr>
<td>Students passed in both Exams</td>
<td>64</td>
</tr>
</tbody>
</table>

1. If the number of students passing an examination be considered a criteria for comparison of difficulty level of two examinations, which of the following statements is true in this context?
A. Half yearly examinations were more difficult.
B. Annual examinations were more difficult.
C. Both the examinations had almost the same difficulty level.
D. The two examinations cannot be compared for difficulty level.

2. How many students are there in Class IX in the school?
   A. 336
   B. 189
   C. 335
   D. 430

3. Which section has the maximum pass percentage in at least one of the two examinations?
   A. A Section
   B. B Section
   C. C Section
   D. D Section

4. Which section has the maximum success rate in annual examination?
   A. A Section
   B. B Section
   C. C Section
   D. D Section

5. Which section has the minimum failure rate in half yearly examination?
   A. A section
   B. B section
   C. C section
   D. D section

Q4. The following table shows the number of new employees added to different categories of employees in a company and also the number of employees from these categories who left the company every year since the foundation of the Company in 1995. (Bank PO 2001).

<table>
<thead>
<tr>
<th>Year</th>
<th>Managers</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New</td>
<td>Left</td>
<td>New</td>
<td>Left</td>
<td>New</td>
<td>Left</td>
</tr>
<tr>
<td>1995</td>
<td>760</td>
<td>-</td>
<td>1200</td>
<td>-</td>
<td>880</td>
<td>-</td>
</tr>
<tr>
<td>1996</td>
<td>280</td>
<td>120</td>
<td>272</td>
<td>120</td>
<td>256</td>
<td>104</td>
</tr>
<tr>
<td>1997</td>
<td>179</td>
<td>92</td>
<td>240</td>
<td>128</td>
<td>240</td>
<td>120</td>
</tr>
<tr>
<td>1998</td>
<td>148</td>
<td>88</td>
<td>236</td>
<td>96</td>
<td>208</td>
<td>100</td>
</tr>
<tr>
<td>1999</td>
<td>160</td>
<td>72</td>
<td>256</td>
<td>100</td>
<td>192</td>
<td>112</td>
</tr>
</tbody>
</table>
1. What is the difference between the total number of Technicians added to the Company and the total number of Accountants added to the Company during the years 1996 to 2000?
   A. 128
   B. 112
   C. 96
   D. 88

2. What was the total number of Peons working in the Company in the year 1999?
   A. 1312
   B. 1192
   C. 1088
   D. 968

3. For which of the following categories the percentage increase in the number of employees working in the Company from 1995 to 2000 was the maximum?
   A. Managers
   B. Technicians
   C. Operators
   D. Accountants

4. What is the pooled average of the total number of employees of all categories in the year 1997?
   A. 1325
   B. 1195
   C. 1265
   D. 1235

5. During the period between 1995 and 2000, the total number of Operators who left the Company is what percent of total number of Operators who joined the Company?
   A. 19%
   B. 21%
   C. 27%
   D. 29%

Q5. The following table gives the sales of batteries manufactured by a company over the years.

Number of Different Types of Batteries Sold by a Company Over the Years (Numbers in Thousands)(S.B.I.P.O.1998)

<table>
<thead>
<tr>
<th>Year</th>
<th>4AH</th>
<th>7AH</th>
<th>32AH</th>
<th>35AH</th>
<th>55AH</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>75</td>
<td>144</td>
<td>114</td>
<td>102</td>
<td>108</td>
<td>543</td>
</tr>
<tr>
<td>1993</td>
<td>90</td>
<td>126</td>
<td>102</td>
<td>84</td>
<td>126</td>
<td>528</td>
</tr>
<tr>
<td>1994</td>
<td>96</td>
<td>114</td>
<td>75</td>
<td>105</td>
<td>135</td>
<td>525</td>
</tr>
<tr>
<td>1995</td>
<td>105</td>
<td>90</td>
<td>150</td>
<td>90</td>
<td>75</td>
<td>510</td>
</tr>
</tbody>
</table>
1. What was the approximate percentage increase in the sales of 55AH batteries in 1998 compared to that in 1992?
   A. 28%  
   B. 31%  
   C. 33%  
   D. 34%

2. The total sales of all the seven years is the maximum for which battery?
   A. 4AH  
   B. 7AH  
   C. 32AH  
   D. 35AH

3. What is the difference in the number of 35AH batteries sold in 1993 and 1997?
   A. 24000  
   B. 28000  
   C. 35000  
   D. 39000

4. The percentage of 4AH batteries sold to the total number of batteries sold was maximum in the year?
   A. 1994  
   B. 1995  
   C. 1996  
   D. 1997

1. The ratio of the number of years, in which the foreign exchange reserves are above the average reserves, to those in which the reserves are below the average reserves is?
   A. 2:6
   B. 3:4
   C. 3:5
   D. 4:4

2. The foreign exchange reserves in 1997-98 was how many times that in 1994-95?
   A. 0.7
   B. 1.2
   C. 1.4
   D. 1.5

3. For which year, the percent increase of foreign exchange reserves over the previous year, is the highest?
   A. 1992-93
   B. 1993-94
   C. 1994-95
   D. 1996-97

4. The foreign exchange reserves in 1996-97 were approximately what percent of the average foreign exchange reserves over the period under review?
   A. 95%
   B. 110%
   C. 115%
   D. 125%

5. What was the percentage increase in the foreign exchange reserves in 1997-98 over 1993-94?
   A. 100
   B. 150
   C. 200
   D. 620

Q7. The bar graph given below shows the data of the production of paper (in lakh tonnes) by three different companies X, Y and Z over the years. Production of Paper (in lakh tonnes) by Three Companies X, Y and Z over the Years. (Bank PO 2008).
1. For which of the following years, the percentage rise/fall in production from the previous year is the maximum for Company Y?
   - A. 1997
   - B. 1998
   - C. 1999
   - D. 2000

2. What is the ratio of the average production of Company X in the period 1998-2000 to the average production of Company Y in the same period?
   - A. 1:1
   - B. 15:17
   - C. 23:25
   - D. 27:29

3. The average production for five years was maximum for which company?
   - A. X
   - B. Y
   - C. Z
   - D. X and Z both

4. In which year was the percentage of production of Company Z to the production of Company Y the maximum?
   - A. 1996
   - B. 1997
   - C. 1998
   - D. 1999

5. What is the percentage increase in the production of Company Y from 1996 to 1999?
   - A. 30%
   - B. 45%
   - C. 50%
   - D. 60%
Q8. Out of the two bar graphs provided below, one shows the amounts (in Lakh Rs.) invested by a Company in purchasing raw materials over the years and the other shows the values (in Lakh Rs.) of finished goods sold by the Company over the years.

Amount invested in Raw Materials (Rs. in Lakhs)

Value of Sales of Finished Goods (Rs. in Lakhs)

1. The maximum difference between the amount invested in Raw materials and value of sales of finished goods was during the year?
   A. 1995
   B. 1996
   C. 1997
   D. 1998

2. The value of sales of finished goods in 1999 was approximately what percent of the average amount invested in Raw materials in the years 1997, 1998 and 1999?
   A. 33%
   B. 37%
   C. 45%
   D. 49%

3. What was the difference between the average amount invested in Raw materials during the given period and the average value of sales of finished goods during this period?
4. In which year, the percentage change (compared to the previous year) in the investment on Raw materials is same as that in the value of sales of finished goods?

5. In which year, there has been a maximum percentage increase in the amount invested in Raw materials as compared to the year?

Q9. A cosmetic company provides five different products. The sales of these five products (in lakh number of packs) during 1995 and 2000 are shown in the following bar graph.

Sales (in lakh number of packs) of five different products of Cosmetic Company during 1995 and 2000 (Bank PO 2009).

1. The sales of lipsticks in 2000 was by what percent more than the sales of nail enamels in 2000? (rounded off to nearest integer)
   A. 33%   B. 31%   C. 28%   D. 22%

2. During the period 1995-2000, the minimum rate of increase in sales is in the case of?
3. What is the approximate ratio of the sales of nail enamels in 2000 to the sales of Talcum powders in 1995?
   A. 7:2  
   B. 5:2  
   C. 4:3  
   D. 2:1

4. The sales have increased by nearly 55% from 1995 to 2000 in the case of?
   A. Lipsticks  
   B. Nail enamels  
   C. Talcum powders  
   D. Shampoos

5. The sales of conditioners in 1995 was by what percent less than the sales of shampoos in 1995? (rounded off to nearest integer)
   A. 57%  
   B. 36%  
   C. 29%  
   D. 25%

Q10. A soft drink company prepares drinks of three different flavours - X, Y and Z. The production of these three flavours over a period of six years has been expressed in the bar graph provided below. Production of Three Different Flavours X, Y and Z by a Company over the years (in lakh bottles)(I.B.P.S. 2002)

1. The total production of flavour Z in 1997 and 1998 is what percentage of the total production of flavour X in 1995 and 1996?
   A. 96.67%  
   B. 102.25%  
   C. 115.57%  
   D. 133.33%

2. For which flavour was the average annual production maximum in the given period?
   A. X only  
   B. Y only
   A. 50,000 bottles  B. 80,000 bottles  C. 2,400,000 bottles  D. 5,000,000 bottles

4. What was the approximate decline in the production of flavour Z in 2000 as compared to the production in 1998?
   A. 50%  B. 42%  C. 33%  D. 25%

5. For which of the following years the percentage of rise/fall in production from the previous year is the maximum for the flavour Y?

SOLUTIONS:

1. (B) Average marks obtained in Physics by all the seven students

   \[
   \frac{1}{7} \times [ (90\% \text{ of } 120) + (80\% \text{ of } 120) + (70\% \text{ of } 120) + (80\% \text{ of } 120) + (85\% \text{ of } 120) + (65\% \text{ of } 120) + (50\% \text{ of } 120) ] = \frac{1}{7} \times [ (90 + 80 + 70 + 80 + 85 + 65 + 50)\% \text{ of } 120
   \]

   \[
   \frac{1}{7} \times [ 520\% \text{ of } 120 ] = \frac{624}{7} = 89.14.
   \]

2. (B) From the table it is clear that Sajal and Rohit have 60% or more marks in each of the six subjects.

3. (D) Aggregate marks obtained by Saja = [ (90\% \text{ of } 150) + (60\% \text{ of } 130) + (70\% \text{ of } 120) + (70\% \text{ of } 100) + (90\% \text{ of } 60) + (70\% \text{ of } 40) ] = [ 135 + 78 + 84 + 70 + 54 + 28 ] = 449.

4. (A) We shall find the overall percentage (for all the seven students) with respect to each subject. The overall percentage for any subject is equal to the average of percentages obtained by all the seven students since the maximum marks for any subject is the same for all the students.

   Therefore, overall percentage for:
Maths = \[ \left( \frac{1}{7} \times (90 + 100 + 90 + 80 + 80 + 70 + 65) \right) \% = \left( \frac{1}{7} \times 575 \right) \% = 82.14\% \]

5. (C) Aggregate marks obtained by Tarun = [ (65\% of 150) + (35\% of 130) + (50\% of 120) + ((77\% of 100) + (80\% of 60) + (80\% of 40) ] = [ 97.5 + 45.5 + 60 + 77 + 48 + 32 ] = 360.

The maximum marks (of all the six subjects) = (150 + 130 + 120 + 100 + 60 + 40) = 600.

Therefore Overall percentage of Tarun = \( \left( \frac{360}{600} \times 100 \right) \% = 60\% \)

Q2. 1.(D)

Required difference = (No. of students scoring 30 and above marks in Chemistry) - (Number of students scoring 30 and above marks in aggregate) = 27 - 21 = 6.

2.(B) We have 60\% of \( \left( \frac{60}{100} \times 50 \right) = 30. \)

\[ \therefore \text{Required number} = \text{No. of students scoring 30 and above marks in Physics} = 32 \]

3.(C) Number of students getting at least 60\% marks in Chemistry = Number of students getting 30 and above marks in Chemistry = 21.

Number of students getting at least 40\% marks in aggregate = Number of students getting 20 and above marks in aggregate = 73.

Required percentage = \( \left( \frac{21}{73} \times 100 \right) \% = 28.77\% \approx 29\% \)

4.(D) We have 40\% of 50\% = \( \left( \frac{40}{100} \times 50 \right) \% = 20 \)

\[ \therefore \text{Required number} = \text{Number of students scoring less than 20 marks in aggregate} \]

\[ = 100 - \text{Number of students scoring 20 and above marks in aggregate} \]

\[ = 100 - 73 = 27. \]
5. (C) Since 66 students get 20 and above marks in Chemistry and out of these 21 students get 30 and above marks, therefore to select top 35 students in Chemistry, the qualifying marks should lie in the range 20-30.

Q3. 1. (C) Number of students who passed half-yearly exams in the school

\[ = (\text{Number of students passed in half-yearly but failed in annual exams}) \]
\[ + (\text{Number of students passed in both exams}) \]
\[ = (6 + 17 + 9 + 15) + (64 + 55 + 46 + 76) = 288. \]

Also, Number of students who passed annual exams in the school

\[ = (\text{Number of students failed in half-yearly but passed in annual exams}) \]
\[ + (\text{Number of students passed in both exams}) \]
\[ = (14 + 12 + 8 + 13) + (64 + 55 + 46 + 76) = 288. \]

Since, the number of students passed in half-yearly = the number of students passed in annual exams. Therefore, it can be inferred that both the examinations had almost the same difficulty level.

Thus Statements (a), (b) and (d) are false and Statement (c) is true.

2.(D) Since the classification of the students on the basis of their results and sections form independent groups, so the total number of students in the class:

\[ = (28 + 23 + 17 + 27 + 14 + 12 + 8 + 13 + 6 + 17 + 9 + 15 + 64 + 55 + 46 + 76) = 430. \]

3.(D) Pass percentages in at least one of the two examinations for different sections are:

For Section A

\[ \left(\frac{14+6+64}{28+14+6+64}\times 100\right)\% = \left(\frac{84}{112}\times 100\right)\% = 75\% \]

For Section B

\[ \left(\frac{12+17+55}{23+12+17+55}\times 100\right)\% = \left(\frac{94}{107}\times 100\right)\% = 87.5\% \]

For Section C

\[ \left(\frac{8+9+46}{17+8+9+46}\times 100\right)\% = \left(\frac{63}{80}\times 100\right)\% = 78.75\% \]
For Section D \[
\left(\frac{13+15+76}{27+13+15+76}\right) \times 100\% = \left[\frac{104}{131}\right] \times 100\% = 79.39\%
\]

Clearly, the pass percentage is maximum for Section D.

4. (A) Total number of students passed in annual exams in a section = \[
(\text{No. of students failed in half-yearly but passed in annual exams}) + (\text{No. of students passed in both exams})
\]

\[
\therefore \quad \text{Success rate in annual exams in Section A}
\]

\[
= \left[\frac{\text{No. of students of Section A passed in annual exams}}{\text{Total number of students in Section A}}\right] \times 100\%
\]

\[
= \left[\frac{14+64}{28+14+6+64}\right] \times 100\% = \left[\frac{78}{112}\right] \times 100\% = 69.64\%
\]

Similarly, success rate in annual exams in:

Section B \[
\left[\frac{12+55}{23+12+17+55}\right] \times 100\% = \left[\frac{67}{107}\right] \times 100\% = 62.62\%
\]

Section C \[
\left[\frac{8+46}{17+8+9+46}\right] \times 100\% = \left[\frac{54}{80}\right] \times 100\% = 67.5\%
\]

Section D \[
\left[\frac{13+76}{27+13+15+76}\right] \times 100\% = \left[\frac{89}{131}\right] \times 100\% = 67.94\%
\]

5. (D) Total number of failures in half-yearly exams in a section = \[
(\text{Number of students failed in both exams}) + (\text{Number of students failed in half-yearly but passed in Annual exams})
\]

\[
\therefore \quad \text{Failure rate in half-yearly exams in Section A}
\]

\[
= \left[\frac{\text{No. of students of Section A failed in half-yearly}}{\text{Total number of students in Section A}}\right] \times 100\%
\]

\[
= \left[\frac{28+14}{28+14+6+64}\right] \times 100\% = \left[\frac{42}{112}\right] \times 100\% = 37.5
\]
Similarly, failure rate in half-yearly exams in:

Section B\[\left(\frac{23+12}{23+12+17+46}\times100\right)\% = \left(\frac{35}{107}\times100\right)\% = 32.71\%\]

Section C\[\left(\frac{17+8}{17+8+9+46}\times100\right)\% = \left(\frac{25}{80}\times100\right)\% = 31.25\%\]

Section D\[\left(\frac{27+13}{27+13+15+76}\times100\right)\% = \left(\frac{40}{131}\times100\right)\% = 30.53\%\]

Clearly, the failure rate is minimum for Section D.

Q4. 1. (D) Required difference

\[= (272 + 240 + 236 + 256 + 288) - (200 + 224 + 248 + 272 + 260) = 88.\]

2. (B) Total number of Peons working in the Company in 1999

\[= (820 + 184 + 152 + 196 + 224) - (96 + 88 + 80 + 120) = 1192.\]

3. (A) Number of Managers working in the Company:

In 1995 = 760.
In 2000 = (760 + 280 + 179 + 148 + 160 + 193) - (120 + 92 + 88 + 72 + 96)
\[= 1252.\]

\[\therefore\] Percentage increase in the number of Managers \[= \left(\frac{1252-760}{760}\times100\right)\% = 64.74\%\]

Number of Technicians working in the Company:

In 1995 = 1200.
In 2000 = (1200 + 272 + 240 + 236 + 256 + 288) - (120 + 128 + 96 + 100 + 112)
\[= 1936.\]

\[\therefore\] Percentage increase in the number of Technicians \[= \left(\frac{1936-1200}{1200}\times100\right)\% = 61.33\%.\]
Number of Operators working in the Company:

In 1995 = 880.
In 2000 = (880 + 256 + 240 + 208 + 192 + 248) - (104 + 120 + 100 + 112 + 144) = 1444.

\[ \therefore \text{Percentage increase in the number of Operators} = \left( \frac{1444 - 880}{880} \times 100 \right)\% = 64.09\%. \]

Number of Accountants working in the Company:

In 1995 = 1160.
In 2000 = (1160 + 200 + 224 + 248 + 272 + 260) - (100 + 104 + 96 + 88 + 92) = 1884.

\[ \therefore \text{Percentage increase in the number of Accountants} = \left( \frac{1884 - 1160}{1160} \times 100 \right)\% = 62.41\%. \]

Number of Peons working in the Company:

In 1995 = 820.
In 2000 = (820 + 184 + 152 + 196 + 224 + 200) - (96 + 88 + 80 + 120 + 104) = 1288.

\[ \therefore \text{Percentage increase in the number of Peons} = \left( \frac{1288 - 820}{820} \times 100 \right)\% = 57.07\%. \]

Clearly, the percentage increase is maximum in case of Managers.

4.(B) Total number of employees of various categories working in the Company in 1997 are:

Managers = (760 + 280 + 179) - (120 + 92) = 1007.
Technicians = (1200 + 272 + 240) - (120 + 128) = 1464.
Operators = (880 + 256 + 240) - (104 + 120) = 1152.
Accountants = (1160 + 200 + 224) - (100 + 104) = 1380.
Peons = (820 + 184 + 152) - (96 + 88) = 972.

\[ \therefore \text{Pooled average of all five categories of employees working in the Company in 1997} = \] 

\[ = \frac{1}{5} \times (1007 + 1464 + 1152 + 1380 + 972) \]

\[ = \frac{1}{5} \times (5975) = 1195. \]
5.(D) Total number of Operators who left the Company during 1995 - 2000

\[ = (104 + 120 + 100 + 112 + 144) = 580. \]

Total number of Operators who joined the Company during 1995 - 2000

\[ = (880 + 256 + 240 + 208 + 192 + 248) = 2024. \]

\[ \therefore \text{Required Percentage} = \left( \frac{580}{2024} \times 100 \right)\% = 28.66 \approx 29\%. \]

Q5. 1.(D) Required percentage \[ = \left( \frac{(145-108)}{108} \times 100 \right)\% = 34.26\% \approx 34\%. \]

2.(C) The total sales (in thousands) of all the seven years for various batteries are:

For 4AH = 75 + 90 + 96 + 105 + 90 + 105 + 115 = 676

For 7AH = 144 + 126 + 114 + 90 + 75 + 60 + 85 = 694

For 32AH = 114 + 102 + 75 + 150 + 135 + 165 + 160 = 901

For 35AH = 102 + 84 + 105 + 90 + 75 + 45 + 100 = 601

For 55AH = 108 + 126 + 135 + 75 + 90 + 120 + 145 = 799.

Clearly, sales are maximum in case of 32AH batteries.

3.(D) Required difference = [(84 - 45) x 1000] = 39000.

4.(D) The percentages of sales of 4AH batteries to the total sales in different years are:

For 1992 = \left( \frac{75}{543} \times 100 \right)\% = 13.81\%. 


For 1993 = \( \left( \frac{90}{528} \times 100 \right) \% = 17.05\% \).

For 1994 = \( \left( \frac{96}{525} \times 100 \right) \% = 18.29\% \).

For 1995 = \( \left( \frac{105}{510} \times 100 \right) \% = 20.59\% \).

For 1996 = \( \left( \frac{96}{465} \times 100 \right) \% = 20.35\% \).

For 1997 = \( \left( \frac{105}{495} \times 100 \right) \% = 21.21\% \).

For 1998 = \( \left( \frac{115}{605} \times 100 \right) \% = 19.01\% \).

Clearly, the percentage is maximum in 1997.

5. (B) From the table it is clear that the sales of 7AH batteries have been decreasing continuously from 1992 to 1997.

Q6. 1. (C) Average foreign exchange reserves over the given period = 3480 million US $.


2. (D) Required ratio = \( \frac{5040}{3360} = 1.5 \)

3. (A) There is an increase in foreign exchange reserves during the years 1992 - 1993, 1994 - 1995, 1996 - 1997, 1997 - 1998 as compared to previous year (as shown by bar-graph).
The percentage increase in reserves during these years compared to previous year are:

For 1992-1993 = \( \left[ \frac{(3720 - 2640)}{2640} \times 100 \right] \% = 40.91\% \)

For 1994-1995 = \( \left[ \frac{(3360 - 2520)}{2520} \times 100 \right] \% = 33.33\% \)

For 1996-1997 = \( \left[ \frac{(4320 - 3120)}{3120} \times 100 \right] \% = 38.46\% \)

For 1997-1998 = \( \left[ \frac{(5040 - 4320)}{4320} \times 100 \right] \% = 16.67\% \)

Clearly, the percentage increase over previous year is highest for 1992 - 1993.

4. (D) Average foreign exchange reserves over the given period

\[
\frac{1}{8} \times (2640 + 3720 + 2520 + 3360 + 3120 + 4320 + 5040 + 3120) \text{ million US } \$
\]

= 3480 million US $.


The required percentage = \( \left[ \frac{4320}{3480} \times 100 \right] \% = 124.14\% \approx 125\% \).


\[
\therefore \text{ Increase } = (5040 - 2520) = 2520 \text{ US $}.
\]

\[
\therefore \text{ Percentage Increase } = \left[ \frac{2520}{2520} \times 100 \right] = 100\% 
\]

Q7. 1. (A) Percenage change (rise/fall) in the production of Company Y in comparison to the previous year, for different years are:

For 1997 = \( \left[ \frac{(35 - 25)}{25} \times 100 \right] \% = 40\% \).

For 1998 = \( \left[ \frac{(35 - 35)}{25} \times 100 \right] \% = 0\% \).
For 1999 = \left[ \frac{(40-35)}{35} \times 100 \right] \% = 14.29\%.

For 2000 = \left[ \frac{(50-45)}{40} \times 100 \right] \% = 25\%.

Hence, the maximum percentage rise/fall in the production of Company Y is for 1997.

2.(C) Average production of Company X in the period 1998-2000

\[ \frac{1}{3} \times (25 + 50 + 40) \] lakh tons.

Average production of Company Y in the period 1998-2000

\[ \frac{1}{3} \times (35 + 50 + 40) \] lakh tons.

The required ratio = \left( \frac{\frac{115}{3}}{\frac{125}{3}} \right) = \frac{115}{125} = \frac{23}{25}.

3.(D) Average production (in lakh tons) in five years for the three companies are:

For Company X = \left[ \frac{1}{5} \times (30 + 45 + 25 + 50 + 40) \right] = \frac{190}{5} = 38.

For Company Y = \left[ \frac{1}{5} \times (25 + 35 + 35 + 50 + 40) \right] = \frac{185}{5} = 37.

For Company Z = \left[ \frac{1}{5} \times (35 + 40 + 45 + 35 + 35) \right] = \frac{190}{5} = 38.
Average production of five years is maximum for both the Companies X and Z.

4.(A) The percentages of production of Company Z to the production of Company Z for various years are:

For 1996 = \( \left( \frac{35}{25} \times 100 \right) \% = 140\% \).

For 1997 = \( \left( \frac{40}{35} \times 100 \right) \% = 114.29\% \).

For 1998 = \( \left( \frac{45}{35} \times 100 \right) \% = 128.57\% \).

For 1999 = \( \left( \frac{35}{40} \times 100 \right) \% = 87.5\% \).

For 2000 = \( \left( \frac{35}{50} \times 100 \right) \% = 70\% \).

Clearly, this percentage is highest for 1996.

5.(D) Percentage increase in the production of Company Y from 1996 to 1999

\[
\left( \frac{40 - 25}{25} \times 100 \right) \% = \left( \frac{15}{25} \times 100 \right) \% = 60\%.
\]

Q8. 1.(C) The differences between the amount invested in raw material and the value of sales of finished goods for various years are:

For 1995 = Rs. (200 - 120) lakhs = Rs. 80 lakhs.

For 1996 = Rs. (300 - 225) lakhs = Rs. 75 lakhs.

For 1997 = Rs. (500 - 375) lakhs = Rs. 125 lakhs.

For 1998 = Rs. (400 - 330) lakhs = Rs. 70 lakhs.

For 1999 = Rs. (600 - 525) lakhs = Rs. 75 lakhs.

For 2000 = Rs. (460 - 420) lakhs = Rs. 40 lakhs.
Clearly, maximum difference was during 1997

2.(D) Required percentage = \( \left( \frac{600}{375+330+525} \times 100 \right) \% = 48.78\% \approx 49\% \).

3.(D) Required difference =

\[
\text{Rs.} \left[ \frac{1}{6} \times (200 + 300 + 500 + 400 + 600 + 460) - \frac{1}{6} (120 + 225 + 375 + 330 + 525 + 420) \right]
\]

lakhs

= \text{Rs.} \left[ \left( \frac{2460}{6} \right) - \left( \frac{1995}{6} \right) \right] \text{lakhs} = \text{Rs.} \left( 410 - 332.5 \right) \text{lakhs} = \text{Rs.} \ 77.5 \text{lakhs}.

4.(B) The percentage change in the amount invested in raw-materials and in the value of sales of finished goods for different years are:

**Percentage change in Amount invested in raw-material:**

For 1996 = \( \left( \frac{225-120}{120} \times 100 \right) \% = 87.5\% \).

For 1997 = \( \left( \frac{375-225}{225} \times 100 \right) \% = 66.67\% \).

For 1998 = \( \left( \frac{330-375}{375} \times 100 \right) \% = -12\% \).

For 1999 = \( \left( \frac{525-330}{330} \times 100 \right) \% = 59.09\% \).

For 2000 = \( \left( \frac{420-525}{525} \times 100 \right) \% = -20\% \)

**Percentage change in value of sales of finished goods:**

For 1996 = \( \left( \frac{300-200}{200} \times 100 \right) \% = 50\% \).
For 1997 = \[\left(\frac{500-300}{300} \times 100\right)\% = 66.7\%\].

For 1998 = \[\left(\frac{400-500}{500} \times 100\right)\% = -20\%\].

For 1999 = \[\left(\frac{600-400}{400} \times 100\right)\% = 50\%\].

For 2000 = \[\left(\frac{460-600}{600} \times 100\right)\% = -23.33\%\].

Thus, the percentage difference is same during the year 1997.

5.(A) The percentage increase in the amount invested in raw-materials as compared to the previous year, for different years are:

For 1996 = \[\left(\frac{225-120}{120} \times 100\right)\% = 87.5\%\].

For 1997 = \[\left(\frac{375-225}{225} \times 100\right)\% = 66.67\%\].

For 1998 there is a decrease.

For 1999 = \[\left(\frac{525-330}{330} \times 100\right)\% = 59.09\%\].

For 2000 there is a decrease.

\[\because\] There is maximum percentage increase in 1996.

Q9.1.(C) Required percentage = \[\left(\frac{(48.14-37.76)}{37.76} \times 100\right)\% = 27.57\% \approx 28\%\].

2.(A) The percentage increase from 1995 to 2000 for various products are:

Lipsticks = \[\left(\frac{(48.17-20.15)}{20.15} \times 100\right)\% = 139.06\%\].
Nail enamels = \[\left(\frac{33.76-5.93}{5.93} \times 100\right)\% = 536.76\%\]

Talcum powders = \[\left(\frac{29.14-14.97}{14.97} \times 100\right)\% = 94.66\%\]

Shampoos = \[\left(\frac{12.21-7.88}{7.88} \times 100\right)\% = 54.95\% \approx 55\%\]

Conditioners = \[\left(\frac{10.19-5.01}{5.01} \times 100\right)\% = 103.39\%\]

\[\therefore\] The minimum rate of increase in sales from 1995 to 2000 is in the case of Shampoos.

3.(B) Required ratio = \[\frac{33.76}{14.97} \approx 2.3 = \frac{5}{2}\]

4.(D) The percentage increase from 1995 to 2000 for various products are:

Lipsticks = \[\left(\frac{48.17-20.15}{20.15} \times 100\right)\% = 139.06\%\]

Nail enamels = \[\left(\frac{33.76-5.93}{5.93} \times 100\right)\% = 536.76\%\]

Talcum powders = \[\left(\frac{29.14-14.97}{14.97} \times 100\right)\% = 94.66\%\]

Shampoos = \[\left(\frac{12.21-7.88}{7.88} \times 100\right)\% = 54.95\% \approx 55\%\]

Conditioners = \[\left(\frac{10.19-5.01}{5.01} \times 100\right)\% = 103.39\%\]

5.(B) Required percentage = \[\left(\frac{7.88-5.01}{7.88} \times 100\right)\% = 36.42\% = 36\%\]
**Q10.1.(D) Required percentage = \left[ \frac{(60+60)}{(50+40)} \times 100 \right] \% = \left[ \frac{120}{90} \times 100 \right] \% = 133.33\%**

2.(B) Average annual productions over the given period for various flavours are:

For Flavour X = \frac{1}{6} \times (50 + 40 + 55 + 45 + 60 + 50) = 50 lakh bottles.

For Flavour Y = \frac{1}{6} \times (55 + 60 + 50 + 55 + 50 + 55) = 54.17 lakh bottles.

For Flavour Z = \frac{1}{6} \times (45 + 50 + 60 + 60 + 45 + 40) = 50 lakh bottles.

\therefore Maximum average production is for Flavour Y.


= \left[ \frac{1}{3} \times (50 + 40 + 55) \right] = \left( \frac{145}{3} \right) lakh bottles.

Average production of flavour Y in 1998, 1999 and 2000

= \left[ \frac{1}{3} \times (55 + 50 + 55) \right] = \left( \frac{160}{3} \right) lakh bottles.

Difference = \left( \frac{160}{3} - \frac{145}{3} \right) = \frac{15}{3} = 5 lakh bottles = 5,00,000 bottles.

4.(C). Percentage decline in the production of flavour Z in 2000 as compared to the production in 1998

5.(B). The percentage rise/fall in production from the previous year for flavour Y during various years are:

In 1996 = \left[ \frac{(60-55)}{55} \times 100 \right] \% = 9.09\% (increase)

In 1997 = \left[ \frac{(60-50)}{60} \times 100 \right] \% = 16.67\% (decrease)

In 1998 = \left[ \frac{(55-50)}{50} \times 100 \right] \% = 10\% (increase)
In 1999 = \left(\frac{55-50}{50} \times 100\right)\% = 9.09\% \ (increase)

In 2000 = \left(\frac{55-50}{50} \times 100\right)\% = 10\% \ (increase)

\therefore \text{Maximum change is decrease of 16.67\% during 1997.}

**EXERCISE**

Q1. The following table gives the percentage distribution of population of five states, P, Q, R, S and T on the basis of poverty line and also on the basis of sex. (Bank PO 2000).

<table>
<thead>
<tr>
<th>State</th>
<th>Percentage of Population below the Poverty Line</th>
<th>Proportion of Males and Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Below Poverty Line</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M : F</td>
</tr>
<tr>
<td>P</td>
<td>35</td>
<td>5 : 6</td>
</tr>
<tr>
<td>Q</td>
<td>25</td>
<td>3 : 5</td>
</tr>
<tr>
<td>R</td>
<td>24</td>
<td>1 : 2</td>
</tr>
<tr>
<td>S</td>
<td>19</td>
<td>3 : 2</td>
</tr>
<tr>
<td>T</td>
<td>15</td>
<td>5 : 3</td>
</tr>
</tbody>
</table>

1. If the male population above poverty line for State R is 1.9 million, then the total population of State R is?
   A. 4.5 million  \quad B. 4.85 million  \quad C. 5.35 million  \quad D. 6.25 million

2. What will be the number of females above the poverty line in the State S if it is known that the population of State S is 7 million?
   A. 3 million  \quad B. 2.43 million
3. What will be the male population above poverty line for State P if the female population below poverty line for State P is 2.1 million?
A. 2.1 million  
B. 2.3 million
C. 2.7 million  
D. 3.3 million

4. If the population of males below poverty line for State Q is 2.4 million and that for State T is 6 million, then the total populations of States Q and T are in the ratio?
A. 1:3  
B. 2:5
C. 3:7  
D. 4:9

Q2. A school has four sections A, B, C, D of Class IX students.

The results of half yearly and annual examinations are shown in the table given below.

<table>
<thead>
<tr>
<th>Result</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Section A</td>
</tr>
<tr>
<td>Students failed in both Exams</td>
<td>28</td>
</tr>
<tr>
<td>Students failed in half-yearly but passed in Annual Exams</td>
<td>14</td>
</tr>
<tr>
<td>Students passed in half-yearly but failed in Annual Exams</td>
<td>6</td>
</tr>
<tr>
<td>Students passed in both Exams</td>
<td>64</td>
</tr>
</tbody>
</table>

1. If the number of students passing an examination be considered a criteria for comparison of difficulty level of two examinations, which of the following statements is true in this context?
A. Half yearly examinations were more difficult.
B. Annual examinations were more difficult.
C. Both the examinations had almost the same difficulty level.
D. The two examinations cannot be compared for difficulty level.

2. How many students are there in Class IX in the school?
   A. 336   B. 189
   C. 335   D. 430

3. Which section has the maximum pass percentage in at least one of the two examinations?
   A. A Section   B. B Section
   C. C Section   D. D Section

4. Which section has the maximum success rate in annual examination?
   A. A Section   B. B Section
   C. C Section   D. D Section

5. Which section has the minimum failure rate in half yearly examination?
   A. A section   B. B section
   C. C section   D. D section

Q3. Study the following table and answer the questions based on it.

Number of Candidates Appeared, Qualified and Scheduled in a Competitive Examination from Five States Delhi, H.P, U.P, Punjab and Haryana Over the Years 1994 to 1998 (Bank P.O.2003)

<table>
<thead>
<tr>
<th>Year</th>
<th>Delhi</th>
<th>H.P</th>
<th>U.P</th>
<th>Punjab</th>
<th>Haryana</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>App</td>
<td>Qual</td>
<td>Sel</td>
<td>App</td>
<td>Qual</td>
</tr>
<tr>
<td>1997</td>
<td>8000</td>
<td>850</td>
<td>94</td>
<td>7800</td>
<td>810</td>
</tr>
<tr>
<td>1998</td>
<td>4800</td>
<td>500</td>
<td>48</td>
<td>7500</td>
<td>800</td>
</tr>
<tr>
<td>1999</td>
<td>7500</td>
<td>640</td>
<td>82</td>
<td>7400</td>
<td>560</td>
</tr>
<tr>
<td>2000</td>
<td>9500</td>
<td>850</td>
<td>90</td>
<td>8800</td>
<td>920</td>
</tr>
<tr>
<td>2001</td>
<td>9000</td>
<td>800</td>
<td>70</td>
<td>7200</td>
<td>850</td>
</tr>
</tbody>
</table>

1. For which state the average number of candidates selected over the years is the maximum?
1. The percentage of candidates qualified from Punjab over those appeared from Punjab is highest in the year?

2. In the year 1997, which state had the lowest percentage of candidates selected over the candidates appeared?
   A. Delhi  B. H.P  C. U.P  D. Punjab

4. The number of candidates selected from Haryana during the period under review is approximately what percent of the number selected from Delhi during this period?
   A. 79.5%  B. 81%  C. 84.5%  D. 88.5%

5. The percentage of candidates selected from U.P over those qualified from U.P is highest in the year?

Q4. Study the following table carefully and answer the questions given below (Bank P.O.2001) Classification of 100 students based on the marks obtained by them in Physics and Chemistry in an examination.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Marks out of 50</th>
<th>40 and above</th>
<th>30 and above</th>
<th>20 and above</th>
<th>10 and above</th>
<th>0 and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td></td>
<td>9</td>
<td>32</td>
<td>80</td>
<td>92</td>
<td>100</td>
</tr>
<tr>
<td>Chemistry</td>
<td></td>
<td>4</td>
<td>21</td>
<td>66</td>
<td>81</td>
<td>100</td>
</tr>
<tr>
<td>(Aggregate)</td>
<td></td>
<td>7</td>
<td>27</td>
<td>73</td>
<td>87</td>
<td>100</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. The number of students scoring less than 40% marks in aggregate is:
   A. 13  B. 19  C. 20  D. 27

2. If at least 60% marks in Physics are required for pursuing higher studies in Physics, how many students will be eligible to pursue higher studies in Physics?
   A. 27  B. 32  C. 34  D. 41

3. What is the difference between the number of students passed with 30 as cut-off marks in Chemistry and those passed with 30 as cut-off marks in aggregate?
   A. 3  B. 4  C. 5  D. 6

4. The percentage of the number of students getting at least 60% marks in Chemistry over those getting at least 40% marks in aggregate, is approximately:
   A. 21%  B. 27%  C. 29%  D. 31%.

5. If it is known that at least 23 students were eligible for a Symposium on Chemistry the minimum qualifying marks in Chemistry for eligibility to Symposium would lie in the range:
   A. 40-50  B. 30-40  C. 20-39  D. Below 20

Q5. Study the following table to answer the question that are given below it EXPENDITURES OF A COMPANY (IN LAKS RUPEES) PER ANNUM OVER THE GIVEN YEARS (RBI2003)

<table>
<thead>
<tr>
<th>Item of Expenditure</th>
<th>Salary</th>
<th>Fuel and Transport</th>
<th>Bonus</th>
<th>Interest on Loans</th>
<th>Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>288</td>
<td>98</td>
<td>3.00</td>
<td>23.4</td>
<td>83</td>
</tr>
<tr>
<td>1999</td>
<td>342</td>
<td>112</td>
<td>2.52</td>
<td>32.5</td>
<td>108</td>
</tr>
<tr>
<td>2000</td>
<td>324</td>
<td>101</td>
<td>3.84</td>
<td>41.6</td>
<td>74</td>
</tr>
<tr>
<td>2001</td>
<td>336</td>
<td>133</td>
<td>3.68</td>
<td>36.4</td>
<td>88</td>
</tr>
<tr>
<td>2002</td>
<td>420</td>
<td>142</td>
<td>3.96</td>
<td>49.4</td>
<td>98</td>
</tr>
</tbody>
</table>

1. The ratio between the total expenditure on Taxes for all the years and the total expenditure on Fuel and Transport for all the years respectively is approximately:
   A. 4:7  B. 10:13  C. 15:18  D. 5:8

2. The total expenditure of the Company over these items during the year 2000 is:
   A. Rs. 544.44 lakhs  B. Rs. 501.11 lakha  C. Rs. 446.46 lakhs  D. Rs. 478.87 lakhs
3. What is the average amount of interest per year which the Company had to pay during this period?
   A. Rs. 32.43 lakhs  B. Rs.33.72 lakha  C. Rs.34.18 lakhs  D. Rs. 36.66 lakhs

4. Total expenditure on all these items in 1998 was approximately what percent of the total expenditure in 2002?
   A. 62%  B. 66%  C. 69%  D. 71%

5. The total amount of bonus paid by the Company during the given period is approximately what percent of the total amount of salary paid during this period?
   A. 0.1  B. 0.5%  C. 1%  D. 1.25%

Q6. Study the bar chart and answer the question based on it.

![Production of Fertilizers by a Company (in 1000 tonnes) Over the Years](chart.png)

1. What was the percentage decline in the production of fertilizers from 1997 to 1998?
   A. 33(1/3)%  B. 20%
   C. 25%  D. 21%

2. The average production of 1996 and 1997 was exactly equal to the average production of which of the following pairs of years?
3. What was the percentage increase in production of fertilizers in 2002 compared to that in 1995?

- A. 320%
- B. 300%
- C. 220%
- D. 200%

4. In which year was the percentage increase in production as compared to the previous year the maximum?

- A. 2002
- B. 2001
- C. 1997
- D. 1996

5. In how many of the given years was the production of fertilizers more than the average production of the given years?

- A. 1
- B. 2
- C. 3
- D. 4

Q7. The bar graph given below shows the percentage distribution of the total production of a car manufacturing company into various models over two years.

Percentage of Six different types of Cars manufactured by a Company over Two Years

(RRB 2010)

1. What was the difference in the number of Q type cars produced in 2000 and that produced in
2001?
A. 35,500
B. 27,000
C. 22,500
D. 17,500

2. Total number of cars of models P, Q and T manufactured in 2000 is?
A. 2,45,000
B. 2,27,500
C. 2,10,000
D. 1,92,500

3. If the percentage production of P type cars in 2001 was the same as that in 2000, then the number of P type cars produced in 2001 would have been?
A. 1,40,000
B. 1,32,000
C. 1,17,000
D. 1,05,000

4. If 85% of the S type cars produced in each year were sold by the company, how many S type cars remain unsold?
A. 7650
B. 9350
C. 11,850
D. 12,250

5. For which model the percentage rise/fall in production from 2000 to 2001 was minimum?
A. Q
B. R
C. S
D. T

Q8. Study the bar chart and answer the questions. (Bank PO 2009)

Sale of Cellular Phones

1. The difference in the sales of cellular phones for the years 1997 and 1999 is?
1. The total amount of expenditures of the company is how many times of expenditure on
1. The expenditure on research and development?
   A. 27
   B. 20
   C. 18
   D. 8

2. If the expenditure on advertisement is 2.10 crores then the difference between the expenditure on transport and taxes is?
   A. Rs. 1.25 crores
   B. Rs. 95 lakhs
   C. Rs. 65 lakhs
   D. Rs. 35 lakhs

3. What is the ratio of the total expenditure on infrastructure and transport to the total expenditure on taxes and interest on loans?
   A. 5:4
   B. 8:7
   C. 9:7
   D. 13:11

4. If the interest on loans amounted to Rs. 2.45 crores then the total amount of expenditure on advertisement, taxes and research and development is?
   A. Rs. 7 crores
   B. Rs. 5.4 crores
   C. Rs. 4.2 crores
   D. Rs. 3 crores

5. The expenditure on the interest on loans is by what percent more than the expenditure on transport?
   A. 5%
   B. 10%
   C. 20%
   D. 40%

Q10. The following bar chart shows the trends of foreign direct investments (FDI) into India from all over the world.

   Trends of FDI in India
1. What was the ratio of investment in 1997 over the investment in 1992?
   A. 5.50
   B. 5.36
   C. 5.64
   D. 5.75

2. What was the absolute difference in the FDI to India in between 1996 and 1997?
   A. 7.29
   B. 7.13
   C. 8.13
   D. None of these

3. If India FDI from OPEC countries was proportionately the same in 1992 and 1997 as the total FDI from all over the world and if the FDI in 1992 from the OPEC countries was Euro 2 million. What was the amount of FDI from the OPEC countries in 1997?
   A. 11
   B. 10.72
   C. 11.28
   D. None of these

4. Which year exhibited the highest growth in FDI in India over the period shown?
   A. 1993
   B. 1994
   C. 1995
   D. 1996

5. What was India's total FDI for the period shown in the figure?
   A. 93.82
   B. 93.22
   C. 93.19
   D. None of these