1. Explain bar graphs.

2. What is the ratio of those who know all the three languages to those who do not know Sanskrit in the figure below.

3. Production of a company (in lakh units) over the given years is

```
Production 5 7.5 10 17.5 25 27.5 32.5
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The production in 2002 is what percent of the production in 1996?

4. Fill in the following blanks.
   a) GIANT : DWARF :: GENIOUS : 
   b) 3 : 11 :: 7 : 
   c) 1, 6, 15, 

5. Choose the odd pair of words
   a) BLACK SMITH : ANIVIL, CARPENTER : SAW, BARBER : SCISSORS, GOLD SMITH : ORNAMENTS, SULTOR : CHISEL
b) WHITE: DIRTY, EASY: DIFFICULT, BRAVE: COWARD, END: BEGINNING.

6. Find the missing term of the following series
a) 1, 4, 27, 16, ——- 36, 343.

b) 1, 3, 6, 7, 9, —— 12, 21.

7. Explain tests of divisibility by 4 and 11 with examples.

8. Find the HCF of 0.63, 1.05 and 2.1.

9. What is the least number that must be subtracted from 1672 to obtain a number which is completely divisible by 17.

10. Find the average of first 40 natural numbers.


12. A cyclist covers a distance of 750 m in 2 minutes 30 sec. What is the speed in km/hr of the cyclist.

13. The CP of 21 articles is equal to the SP of 18 articles. Find the gain or loss percentage.

14. a) What percent of 25 is 2.125.

b) Which is greatest 16.5%, \( \frac{2}{15} \) and 0.17.

15. Find compound interest on Rs 7500 at 4% per annum for 2 years compounded annually.

ANSWER ANY SIX QUESTIONS. EACH CARRIES 5 MARKS (6X5 = 30)

16. The following table gives the percentage of marks obtained by seven students in six subjects in an examination. The numbers in the brackets give the max. marks in each subject.

<table>
<thead>
<tr>
<th>Subject (Maximum Marks)</th>
<th>Maths</th>
<th>Chemistry</th>
<th>Physics</th>
<th>Geography</th>
<th>HISTORY</th>
<th>Computer science</th>
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</thead>
<tbody>
<tr>
<td>Student</td>
<td>(150)</td>
<td>(130)</td>
<td>(120)</td>
<td>(100)</td>
<td>(60)</td>
<td>(40)</td>
</tr>
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<td>90</td>
<td>60</td>
<td>70</td>
<td>80</td>
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<td>80</td>
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<td>35</td>
<td>50</td>
<td>77</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

a) In which subject is the overall percentage the best?

b) The number of students who obtained 60% and above marks in all subjects.

17. The pie chart given below showing how a person’s monthly salary is distributed over different expense heads
18. Fill in the following blanks.

a) MENU: FOOD : CATALOGUE : -------

b) FISH: SHOAL : ELEPHANT : ------------

c) LIGHT : GLINT : SOUND : -------

d) METRE : DISTANCE : ; KILOGRAM : -------

e) KNIFE: SWORD:: THREAD: ---------------

19. a) In certain code OVER is written as PWFSQ and BARE is written as CBSFD. How is OPEN written in that code.

b) Choose the word which is least like the other words in ZEBRA, LION, TIGER, HORSE and GIRAFFE.

c) Choose the number which is different from others 13, 17,23,63,71.

d) Find the missing number 4, 27, 16, ---, 36,343.


20. The sum of the squares of three consecutive odd numbers is 2531. Find the numbers.

21. At what time between 5 and 6 o'clock are the hands of a clock 3 minutes apart.

22. The average age of a class of 39 students is 15 years. If the age of the teacher be included, then the average increases by 3 months. Find the age of the teacher.

23. 'A' and 'B' are two stations 390 km apart. A train from station 'A' starts at 10 a.m. and travels towards 'B' at 65 km/hr. Another train starts from 'B' at 11 a.m. and travels towards 'A' at 35 km/hr. At what time do they meet?

24. Difference of two numbers is 1660. If 7.5% of one number is 12.5% of the other number, find the two numbers.

25. The difference between the compound interest and the simple interest accrued on an amount of Rs 18000 in 2 years was Rs. 405. What was the rate of interest per annum?