Directions—(Q. 1–5) Study the graph to answer these questions.

The bar graph below shows the sales of six different cell phone manufacturers in 2011 (in '000 units). The following pie chart shows the breakup of sales of brand ‘C’ alone in the same year for those countries where it is sold.

1. What is the difference in volume of sales of brand ‘C’ in UK and India?
   (A) 2892   (B) 3290
   (C) 3112   (D) 2918

2. By what percentage should global sales of brand ‘C’ phone increase so that its sales volume in Korea becomes 7,000 units, while the volume of sales to all other countries remains the same?
   (A) 1-1   (B) 0-9
   (C) 2-3   (D) 0-7

3. If in 2012 the global sales of brand ‘C’ increases by 12%; while its sale in USA increases by 34% and in China by 22%, what is the approximate sales increase in the rest of the countries taken together?
   (A) 1-83%   (B) 2-25%
   (C) 2%   (D) 1-5%

4. If ‘A’ alone registers growth in sales in 2012 and draws level with the volume of ‘B’, what would be their combined share of the global sales volume?
   (A) 29-9%   (B) 31-2%
   (C) 27%   (D) 33%

5. If the sale of phones in 2012 registers a uniform 33% growth across all brands and all countries, what would be the combined sales volume of phones in India, Japan and Korea taken together, in that year?
   (A) 87224   (B) 82136
   (C) 85146   (D) 78958

Directions—(Q. 6–10) Study the table below to answer these questions.

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore</td>
<td>18</td>
<td>12</td>
<td>25</td>
<td>11</td>
<td>32</td>
<td>5</td>
</tr>
<tr>
<td>Coal</td>
<td>12</td>
<td>38</td>
<td>22</td>
<td>6</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>Silver</td>
<td>14</td>
<td>18</td>
<td>26</td>
<td>3</td>
<td>48</td>
<td>23</td>
</tr>
<tr>
<td>Copper</td>
<td>23</td>
<td>12</td>
<td>20</td>
<td>2</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Gold</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>10</td>
</tr>
</tbody>
</table>

The table shows the quantities of minerals exported from India to six different countries A, B, C, D, E and F (in '000 tonnes) in the year 2010.

6. If the second-largest importing country increases its off-take of all the minerals, taken together, from India and is at par with the largest importer, its share of the total exports of minerals from India would be—
   (A) 26%   (B) 19%
   (C) 23%   (D) 24%

7. If India were to ban the export of Gold altogether, by what approximate percentage should the export of the rest of the minerals increase so that the total quantity of minerals exported remains the same?
   (A) 18   (B) 3
   (C) 32   (D) 6

8. Eighteen per cent of country E’s total requirement of iron ore is being met by imports from India. Next year, its total requirement of iron ore is expected to fall by 22%, and only 12% of the revised requirement will be imported from India. Assuming all other exports to country ‘E’ by India remain at the same levels, what would be its total percentage drop in quantity of exports to ‘E’?
   (A) 28-4   (B) 11-2
   (C) 13-4   (D) 18-2

9. If international demand for Coal from India rises by 12%, that of Iron ore by 8% and Copper by 15%, by how much per cent will total exports from India rise, assuming export of Gold and Silver remain at the same level?
   (A) 6-8   (B) 11-2
   (C) 8-1   (D) 7-6

10. If due to rise in prices, volume of exports of Gold decreases by 12% while that of Silver decreases by 14%, but due to global rise in car production levels, however, demand for Iron ore increases by 6%, what is the net effect on volume of exports from India?
    (A) Increase of 3-2%
    (B) Decrease of 2-3%
    (C) Increase of 2-3%
    (D) Decrease of 3-2%

Directions—(Q. 11–15) Each of these has a question followed by two statements numbered I and II. Mark answer as—

(A) If statement I alone is sufficient but statement II alone is not sufficient to answer the question.
(B) If statement II alone is sufficient but statement I alone is not sufficient to answer the question.

(A) If statement I alone is sufficient but statement II alone is not sufficient to answer the question.
(B) If statement II alone is sufficient but statement I alone is not sufficient to answer the question.
11. If a certain village is losing 12% of its water supply each day because of a burst water pipe, then what is the loss in rupees per day?
   I. The daily water supply to the village is 700 m gallon.
   II. The cost to the village for every 24000 gallons of water lost is ₹25

12. Dipesh had a lawyer’s appointment on a certain day. Was the appointment on a Tuesday?
   I. Exactly 60 hours before the appointment, it was Sunday.
   II. The appointment was between 1:00 pm and 9:00 pm

13. What is the weighted average of marks obtained by Ashokan?
   I. Math, Science and English have weights 5, 4 and 3 respectively.
   II. Simple arithmetic mean of Math and Science is 140, which is twice his average of Science and English

14. Total amount of ₹38,500 was distributed among Anuj, Sonam and Deepak. How much does each get?
   I. Anuj gets \( \frac{2}{9} \) of what the other two together get.
   II. Sonam gets \( \frac{3}{11} \) of what the other two together get.

15. Nitu and Arun start walking towards each other simultaneously. What is the distance between them when they start?
   I. 30 minutes after crossing each other they were 1200 m apart.
   II. After crossing each other, Nitu reaches the starting point of Arun in twice as much time as Arun takes to reach the starting point of Nitu.

16. A. The number of ways you can divide 6 different candies to 4 different people.
   B. The number of ways you can divide 7 different candies to 3 different people.

17. Arun and Rakesh bought the same brand of car. Arun got a 10% discount from the dealer after which 7% sales tax was added. For Rakesh 7% tax was added and only then a 10% discount was given.
   A. The amount Arun paid for the car.
   B. The amount Rakesh paid for the car.

18. The average height in the class didn’t change after Shaan and John left and Aarti and Geeta came.
   A. The height of Shaan
   B. The height of Aarti

19. Travis received an allowance. With a fifth of the money, he bought a ticket to a movie and with a quarter of what is left he bought a slice of pizza.
   A. The price of a movie ticket.
   B. The price of a slice of pizza.

20. Mukesh and Vijay each have some stamps while Sharon has none. They decided to give Sharon half of the number that Mukesh has and half of the number that Vijay has.
   A. The average number of stamps that Mukesh and Vijay have before giving Sharon any stamps.
   B. The number of stamps that Sharon gets from Mukesh and Vijay.

21. What is the ratio of the number of cars sold of model A in 2010 to the number of cars sold of model C in 2011?
   (A) 1 : 3 : 2  (B) 0.5 : 1
   (C) 0 : 6 : 1  (D) 1 : 2

22. By how much percentage is the increase in sales from 2010 to 2011 of model D more/less than that of model C?
   (A) 69% less
   (B) 60% more
   (C) 59% less
   (D) None of the above

23. How many models have registered higher percentage increase in sales individually, as compared to the percentage increase in total sales?
   (A) 2
   (B) 3
   (C) 1
   (D) None of these

24. If the declining trend in model B sales is projected to continue in 2012 as well, what would be the approximate model B sales in that year?
   (A) 459
   (B) 424
   (C) 430
   (D) 434
25. What was the ratio of the combined sale of the two highest selling models to that of the two lowest selling models in 2011?
(A) 2 : 1 (B) 3 : 1
(C) 5 : 1 (D) 1 : 4

Directions—(Q. 26–30) Study the information below and answer these questions.

The adult population of a town in 1990 was 20,440 people of which 53% were females while 60% were illiterates. Of these, the number above the age of 50 in that year was 17%. In the 2000 Census, it was found that adult population has reached 30,760, 48% of them being females. Of the total adult population in 2000, 72% were below the age of 50 and total illiterates were 7,000. Assume uniform pattern of age distribution amongst males and females.

26. What is the ratio of adult females below the age of 50 in the years 1990 and 2000?
(A) 2.50 : 2 (B) 2 : 2.50
(C) 1 : 1.18 (D) 1.18 : 1

27. If every adult female above the age of 50 was given a special annual allowance of ₹ 24,000 in 1990 which was increased to ₹ 30,000 by the year 2000, by what percentage has the quantum of this annual allowance increased/decreased from 1990 to 2000?
(A) 108 (B) 280
(C) 208 (D) 180

28. What is the ratio of total adult illiterates in 1990 to total adult females below 50 in 2000?
(A) 1 : 0.87 (B) 1.15 : 1
(C) 0.87 : 1 (D) 1 : 1.15

29. What has been the percentage increase in adult illiterates from 1990 to 2000?
(A) 127 (B) 191
(C) 132 (D) 275

30. If expense incurred on education (per literate adult) in 1990 was ₹ 1200 and the same had increased by 25% in 2000, what is the percentage increase in expenditure under this head?
(A) 236 (B) 263
(C) 250 (D) 178

31. The total number of graduates of which two streams from all the states taken together are in the ratio 4 : 5?
(A) Science and Engg. (B) Science and Arts
(C) Arts and IT (D) Engg. and IT

32. In which two states is the number of IT graduates, as a percentage of the total number of graduates in that state, most nearly the same?
(A) C and F (B) E and B
(C) A and E (D) D and F

33. By what per cent is the sum total of Engg. graduates in B, C and F taken together greater than the sum total of Arts graduates in D and E taken together?
(A) 56 (B) 68
(C) 65 (D) 86

34. The number of Science graduates in all the states combined is what per cent of the number of graduates of all other streams taken together?
(A) 28.5 (B) 27.9
(C) 29.7 (D) 21.4

35. In which states is the difference between the number of Engg. and IT graduates higher than the difference between the number of Science and Arts graduates?
(A) A, C and E (B) C, F and B
(C) F, B and D (D) C, D and E

Directions—(Q. 36–40) Study the graph to answer these questions.

The graph below shows sales of different colours of Brand-X refrigerator for the years 2009, 2010 and 2011.

36. Over the given three years which has been the highest selling colour; and what percentage of volume did it account for?
(A) Blue, 21% (B) White, 25%
(C) White, 26% (D) Lemon, 28%

37. Sale of which colour(s) of refrigerator registered the highest percentage increase between 2010 and 2011?
(A) Blue (B) Lemon
(C) Red and Blue (D) Grey

38. What is the share of sales volume accounted for by the year 2011?
(A) 43-26% (B) 46-14%
(C) 44-16% (D) 41-64%

39. What is approximately the ratio of sales of Red, Lemon and White refrigerators, taken together, in 2010 to that of the combined total sales of Blue and Grey ones in 2009 and 2011 taken together?
(A) 9 : 10 (B) 10 : 9
(C) 11 : 12 (D) 1 : 1-2

40. How many instances are there in the graph when the difference in sale of refrigerators was greater or lesser by 35% or more as compared to the previous year?
(A) 4 (B) 5
(C) 6 (D) 7
MAT 13 Data analysis and Sufficiency

ANSWER KEY

1. b
2. b
3. a
4. b
5. c
6. c
7. d
8. c
9. d
10. d
11. c
12. c
13. a
14. c
15. d
16. b
17. a
18. d
19. c
20. c
21. c
22. d
23. b
24. d
25. b
26. b
27. c
28. d