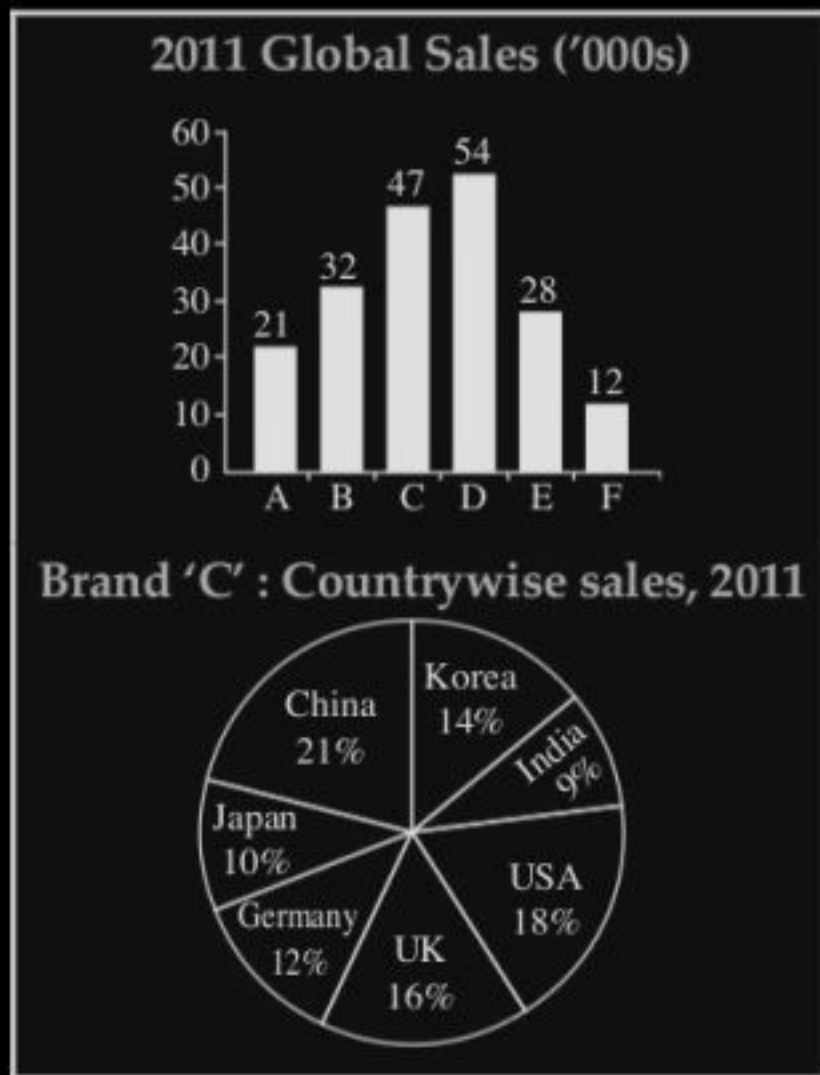


Directions—(Q. 1–5) Study the graph to answer these questions.

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



- What is the difference in volume of sales of brand 'C' in UK and India ?  
(A) 2892 (B) 3290  
(C) 3112 (D) 2918
- 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
- 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%

- 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%
- 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.

Item	Country					
	A	B	C	D	E	F
Iron ore	18	12	25	11	32	5
Coal	12	38	22	6	29	42
Silver	14	18	26	3	48	23
Copper	23	12	20	2	2	16
Gold	2	4	8	1	3	10

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.

- 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%
- 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

- 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
- 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

- 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—

- If statement I alone is sufficient but statement II alone is not sufficient to answer the question.
- If statement II alone is sufficient but statement I alone is not sufficient to answer the question.

- (C) If both statements I and II together are required to answer the question but neither statement alone is sufficient.
- (D) If statements I and II together are 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.

Directions—(Q. 16–20) Two quantities A and B are given in each of the following questions. Mark answer as—

- (A) If quantity A is greater than quantity B.
- (B) If quantity B is greater than quantity A.
- (C) If quantities A and B are equal.
- (D) If comparison cannot be made.

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.

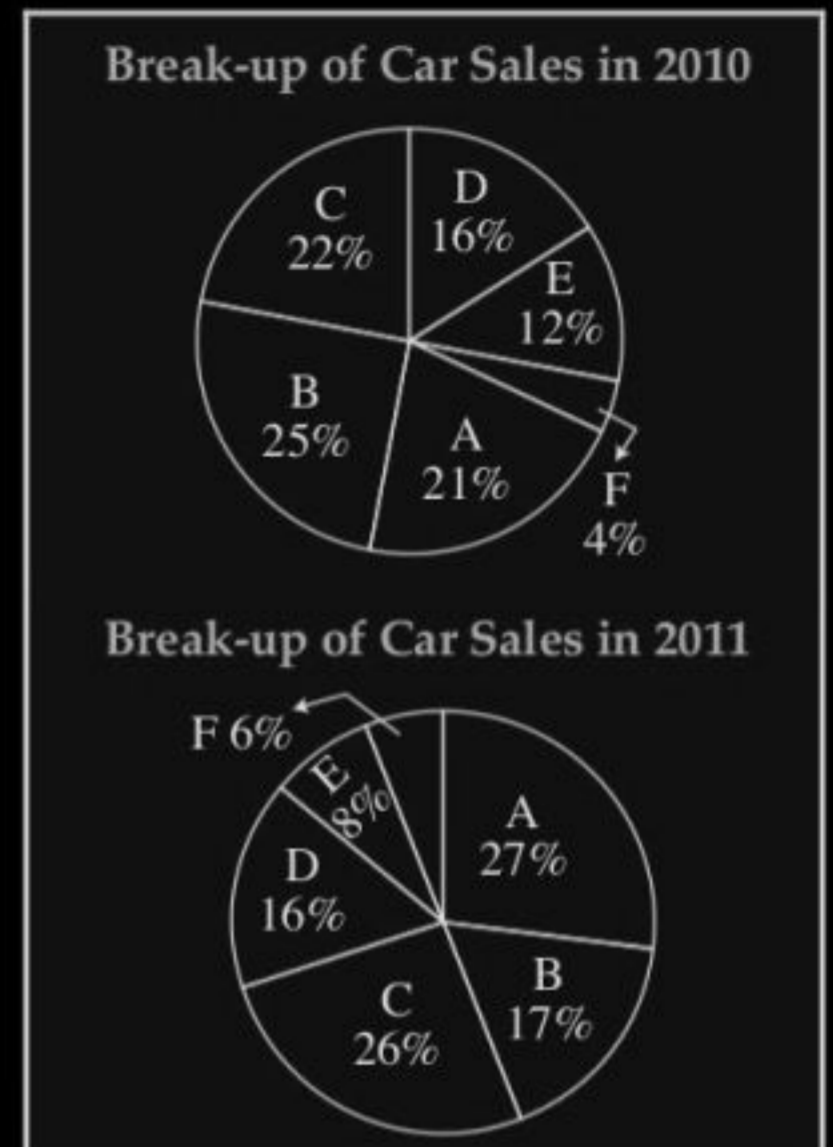
- A. The price of a movie ticket.
- B. The price of a slice of pizza.

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.

Directions—(Q. 21–25) Study the graphs to answer these questions.

The combined total sale of six models of cars A, B, C, D, E and F sold by a manufacturer in 2010 and 2011 was 2,222 and 2,884, respectively. The percentage break-up of the sales of these six models in the two years is shown in the pie-charts below—



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) 0.58 : 1  
(C) 0.62 : 1      (D) 1 : 1.27

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

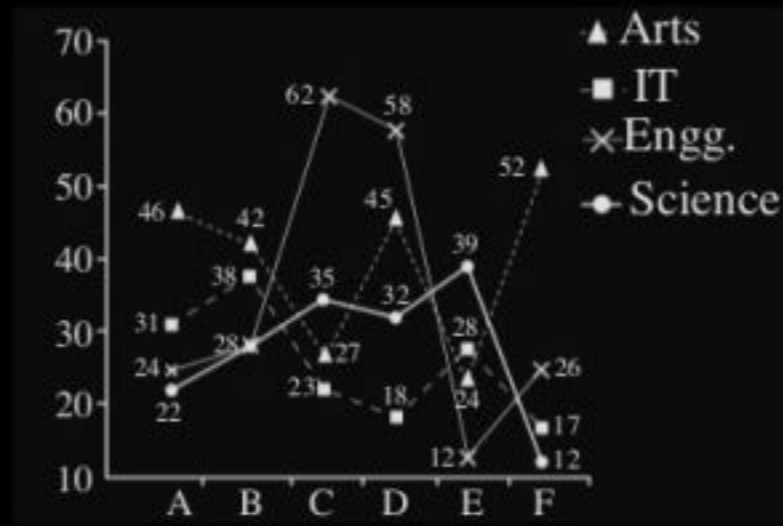
Directions—(Q. 26–30) Study the information below and answer these questions.

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

Directions—(Q. 31–35) Study the graph to answer these questions.

The graph below shows the number of graduates (in '000) of different streams, in six different states of a country.

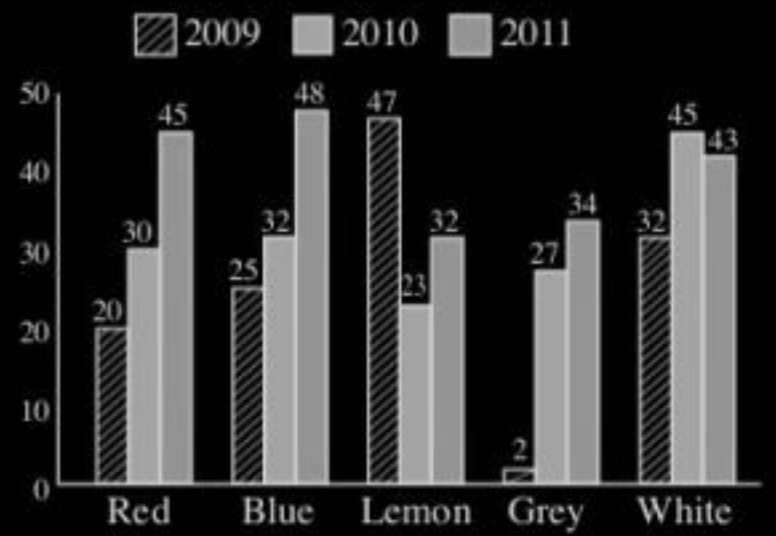


31. The total number of graduates of which two streams from all the states taken together are in the ratio 4 : 5 ?  
 (A) Science and Engg.  
 (B) Science and Arts  
 (C) Arts and IT  
 (D) Engg. and IT
32. In which two states is the number of IT graduates, as a percentage of the total number of graduates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

Brand-X : Sales Volume by colour of refrigerator (in '000s)



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

# 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. c
27. d

- 28. a
- 29. b
- 30. a
- 31. a
- 32. b
- 33. b
- 34. b
- 35. b
- 36. b
- 37. c
- 38. d
- 39. a
- 40. d

1. Julia Gillard is currently the Prime Minister of—  
(A) UK  
(B) Holland  
(C) France  
(D) None of the above
2. World Post Day is celebrated on—  
(A) October 9  
(B) January 30  
(C) November 2  
(D) November 27
3. Who among the following became the President of Venezuela for the third consecutive term?  
(A) Henrique Capriles  
(B) Hugo Chavez  
(C) Tanvir Mahmud  
(D) None of the above
4. Britain the Scotland have signed an agreement to hold a referendum in ..... on the latter's independence.  
(A) 2015 (B) 2014  
(C) 2016 (D) 2017
5. Who among the following is the teenaged Pakistani girl activist who became famous world wide after a near fatal attack on her?  
(A) Kainat  
(B) Shazia  
(C) Malala  
(D) None of the above
6. Monisha Kaltenborn is associated with which sport?  
(A) Golf  
(B) Cycling  
(C) Formula One  
(D) Lawn Tennis
7. Who was captain of the West Indies cricket team that won the T-20 Cricket World Cup 2012 held in Sri Lanka?  
(A) Kieron Pollard  
(B) Chris Gayle  
(C) Dwayne Bravo  
(D) Darren Sammy
8. Wayne Rooney of England is a well known player of—  
(A) Polo  
(B) Football  
(C) Lawn Tennis  
(D) Chess
9. Which of the following cities will be hosting the next Olympic Games to be held in 2016?  
(A) Moscow  
(B) Melbourne  
(C) Rio de Janeiro  
(D) Toronto
10. Which car company has recently launched SUV segment vehicle 'Quanto' in India?  
(A) BMW  
(B) Skoda  
(C) Mahindra and Mahindra  
(D) Ford
11. The Diesel Loco Modernization Works of Indian Railways is situated in—  
(A) Ludhiana (B) Chennai  
(C) Patiala (D) Kolkata
12. The government recently cancelled the permission given to ..... for setting up of a Special Economic Zone (SEZ) in Mundra in Gujarat due to charges of violation of the SEZ Act.  
(A) Reliance Group  
(B) Aditya Birla Group  
(C) Adani Group  
(D) Godrej Group
13. Which Indian IT company has recently acquired consulting firm Lodestone?  
(A) TCS  
(B) Wipro  
(C) Infosys  
(D) Mahindra-Satyam
14. Which of the following is an Indian origin banking firm?  
(A) HSBC (B) Citibank  
(C) Yes Bank (D) RBS
15. POSCO is a major steel of which country?  
(A) Korea  
(B) China  
(C) Indonesia  
(D) None of the above
16. Steve Ballmer is the CEO of which corporate?  
(A) Vodafone  
(B) Microsoft  
(C) Google  
(D) None of the above
17. Which of the following brand of cars is owned by the Japanese automobile major Nissan?  
(A) Rapid (B) Brio  
(C) Sunny (D) EON
18. The tag line 'The power to do more' is linked with—  
(A) Dell (B) Lenovo  
(C) HP (D) Sony
19. Timothy geither is currently the treasure secretary of which country?  
(A) France  
(B) US  
(C) England  
(D) None of the above
20. Information technology corporate giant Apple recently won a \$ 1.05 billion patent case against—  
(A) Samsung  
(B) LG  
(C) Hyundai  
(D) Philips
21. World Bank has recently appointed ..... as its chief economist and senior Vice-President.  
(A) Montek Singh Ahluwalia  
(B) Kaushik Basu

- (C) Amartya Sen  
(D) C. Rangarajan
22. Which of the following corporate houses is the India Partner of global coffee chain 'starbucks' ?  
(A) Tatas  
(B) Aditya Birla  
(C) Godrej  
(D) None of the above
23. Which state has the largest urban population in India ?  
(A) Maharashtra  
(B) Kerala  
(C) Chhattisgarh  
(D) West Bengal
24. Mr. Hamid Ansari was re-elected as India's ..... Vice-President.  
(A) 13th (B) 14th  
(C) 12th (D) 11th
25. 'Dream Yuga' is a motorbike launched by which company?  
(A) Hero (B) Honda  
(C) TVS (D) Yamaha
26. Which Insurance Company uses the tag line 'jiyo befikar' ?  
(A) LIC  
(B) ICICI Prudential  
(C) TATA-AIG  
(D) Bajaj Allianz
27. Which Indian city has an IIT and IIM both situated there ?  
(A) Indore  
(B) Raipur  
(C) Kozikhode  
(D) Bangalore
28. Who became the first woman speaker of Lok Sabha in India?  
(A) Sarojini Naidu  
(B) Meira Kumar  
(C) Aruna Asaf Ali  
(D) Indira Gandhi
29. Kargil Vijay Divas is celebrated on ..... every year in honour of Kargil war heroes.  
(A) November 2  
(B) July 26  
(C) November 27  
(D) July 15
30. CBDT stands for—  
(A) Central Boards of Direct Tarrifs  
(B) Central Boards of Direct Taxation  
(C) Central Board of Direct Taxes  
(D) Central Boards of Daily Taxes
31. Which is the most mobile chess piece ?  
(A) Rook (B) Horse  
(C) Queen (D) Bishop
32. Thomas Cup is associated with which sport ?  
(A) Badminton  
(B) Golf  
(C) Tennis  
(D) Hockey
33. Indian Institute of Sugarcane Research is located at—  
(A) Nasik (B) Lucknow  
(C) Meerut (D) Pune
34. Telecom giant 'NOKIA' comes from—  
(A) Germany  
(B) Finland  
(C) Poland  
(D) Australia
35. Which Indian state projects itself as 'God's Own Country'?  
(A) Uttarakhand  
(B) U.P.  
(C) Kerala  
(D) M.P.
36. Which country includes its income from cocaine and narcotics in its GDP ?  
(A) Columbia  
(B) Venezuela  
(C) Afghanistan  
(D) Peru
37. Which of the following sectors is **not** the part of infrastructure ?  
(A) Railways  
(B) Power  
(C) Food processing  
(D) Roads
38. Which among the following is the oldest development financial institution of India ?  
(A) UTI (B) IDBI  
(C) ICICI (D) IFCI
39. 'Prima' is a newly launched—  
(A) Car (B) Tractor  
(C) Truck (D) Motor-cycle

# ANSWER KEY

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



- 28. b
- 29. c
- 30. c
- 31. a
- 32. c
- 33. b
- 34. b
- 35. c
- 36. a
- 37. c
- 38. d
- 39. c

- A and B can separately do a piece of work in 20 and 15 days, respectively. They worked together for 6 days, after which B was replaced by C. If the work was finished in the next 4 days, then the number of days in which C alone could do the work will be—  
(A) 60 days (B) 40 days  
(C) 35 days (D) 30 days
- B can do a piece of work in 6 hour, B and C together can do it in 4 hour and A, B and C together in  $2\frac{2}{3}$  hour. In how many hours can A and B together do the same piece of work ?  
(A) 11 hour (B)  $6\frac{1}{7}$  hour  
(C)  $2\frac{3}{7}$  hour (D)  $3\frac{3}{7}$  hour
- X can do  $\frac{1}{4}$  of a work in 10 days. Y can do 40% of the work in 40 days and Z can do  $\frac{1}{3}$  of the work in 13 days. Who will complete the work first ?  
(A) X (B) Y  
(C) Z (D) Both X and Z
- A can do a piece of work in 7 days of 9 hours each whereas B can do the same work in 6 days of 7 hours each. How long will they take to do the work together, working  $8\frac{2}{5}$  hours a day ?  
(A) 2 days (B) 3 days  
(C)  $3\frac{1}{7}$  days (D)  $4\frac{2}{5}$  days
- When 5 per cent is lost in grinding wheat, a country has to import 20 million bags to make up for the loss. But when only 2 per cent is lost, it has to import 15 million bags. What is the quantity of wheat which grows in the country in million bags ?  
(A)  $133\frac{1}{3}$  (B) 150  
(C)  $106\frac{2}{3}$  (D)  $166\frac{2}{3}$
- In a consumer preferences survey, 20% respondents opted for product A whereas 60% opted for product B. The remaining individuals were undecided. If the difference between those who opted for product B and those who were undecided is 720, how many individuals had been interviewed for the survey ?  
(A) 1440  
(B) 1800  
(C) 3600  
(D) Data inadequate
- Gauri went to the stationers and bought items worth ₹ 25, out of which 30 paise went on sales tax on taxable purchases. If the tax rate was 6%, then what was the cost of the tax-free items ?  
(A) ₹ 15 (B) ₹ 15.70  
(C) ₹ 19.70 (D) ₹ 20
- Shyam had three notebooks X, Y and Z. Of these, X had 120 pages, Y had 10% more and Z had 10% less. If he tore out 5%, 10% and 15% of pages in X, Y and Z respectively, then what per cent of total pages did he tear out ?  
(A) 8%  
(B) 15%  
(C) 7%  
(D) None of the above
- A bag contains 4 five rupee coins, 3 two rupee coins and 3 one rupee coins. If 6 coins are drawn from the bag at random, what are the odds in favour of the draw yielding maximum amount ?  
(A) 1 : 70 (B) 1 : 69  
(C) 69 : 70 (D) 70 : 1
- Varun throws two unbiased dice together and gets a sum of 7. If his friend Tarun then throws the same two dice, what is the probability that the sum is less than 7 ?  
(A)  $\frac{1}{6}$  (B)  $\frac{7}{12}$   
(C)  $\frac{1}{2}$  (D)  $\frac{5}{12}$
- In a factory where toys are manufactured, machines A, B and C produce 25%, 35% and 40% of the total toys, respectively. Of their output, 5%, 4% and 2% respectively, are defective toys. If a toy drawn at random is found to be defective, what is the probability that it is manufactured on machine B ?  
(A)  $\frac{17}{69}$   
(B)  $\frac{28}{69}$   
(C)  $\frac{35}{69}$   
(D) None of the above
- A and B alternately throw a pair of dice. A wins if he throws 6 before B throws 7 and B wins if he throws 7 before A throws 6. What are their respective chances of winning, if A throws the dice first ?  
(A)  $\frac{13}{16}, \frac{31}{16}$  (B)  $\frac{30}{61}, \frac{31}{61}$   
(C)  $\frac{31}{61}, \frac{41}{61}$  (D)  $\frac{38}{61}, \frac{23}{61}$
- What will be the ratio of simple interest earned by a certain amount at the same rate of interest for 6 years and 9 years ?  
(A) 1 : 3  
(B) 1 : 4  
(C) 2 : 3  
(D) Data inadequate
- An automobile financier claims to be lending money at simple interest but he includes the interest every six months for calculating the principal. If he is charging an interest of 10%, the effective rate of interest becomes.  
(A) 10%  
(B) 10.25%  
(C) 10.5%  
(D) None of the above

15. A sum of money lent at compound interest for 2 years at 20% per annum would fetch ₹ 482 more if the interest was payable half yearly than if it was payable annually. The sum is—  
 (A) ₹ 10,000 (B) ₹ 20,000  
 (C) ₹ 40,000 (D) ₹ 50,000
16. Sultan took a loan from the bank at 8% per annum and was supposed to pay a sum of ₹ 2240 at the end of 4 years. If the same sum is cleared off in four equal annual instalments at the same rate, the amount of annual instalment will be—  
 (A) ₹ 500 (B) ₹ 550  
 (C) ₹ 600 (D) ₹ 1000
17. A circus tent is cylindrical to a height of 3 m and conical above it. If the diameter of the base is 140 m and the slant height of the conical portion is 80 m, the length of canvas 2 m wide required to make the tent is—  
 (A) 8960 m (B) 9660 m  
 (C) 9460 m (D) 9860 m
18. The ratio between the length and breadth of a rectangular park is 3 : 2. If a man cycling along the boundary of the park at the speed of 12 km/h completes one round in 8 minute, then the area of the park in sq m is—  
 (A) 15360 (B) 153600  
 (C) 30720 (D) 307200
19. If the numbers representing volume and surface area of a cube are equal, then the length of the edge of the cube in terms of the unit of measurement will be—  
 (A) 3 (B) 4  
 (C) 5 (D) 6
20. A metal sheet 27 cm long, 8 cm broad and 1 cm thick is melted into a cube. The difference between the surface area of the two solids, is—  
 (A) 284 cm<sup>2</sup> (B) 296 cm<sup>2</sup>  
 (C) 286 cm<sup>2</sup> (D) 300 cm<sup>2</sup>
21. A, B and C have 40,  $x$  and  $y$  balls, respectively. If B gives 20 balls to A, he is left with half as many balls as C. If together they had 60 more balls, each of them would have had 100 balls on an average. What is the ratio of  $x$  to  $y$  ?  
 (A) 3 : 2 (B) 2 : 3  
 (C) 2 : 1 (D) 3 : 4
22. There are a total of 43800 students in 4 schools of a city. Half the number of students of the first school, two-third of the second, three-fourth of the third and four-fifth of the fourth are all equal. What is the ratio of the number of students of A to D, if A, B, C and D be the first, second, third and fourth schools, respectively ?  
 (A) 8 : 5 (B) 1 : 3  
 (C) 2 : 3 (D) 7 : 9
23. Four numbers are in proportion. The sum of the squares of the four numbers is 50 and the sum of the mean is 5. The ratio of first two terms is 1 : 3. What is the average of the four numbers ?  
 (A) 1 (B) 3  
 (C) 5 (D) 6
24. The concentration of petrol in three different mixtures (of petrol and kerosene) is  $\frac{1}{2}$ ,  $\frac{3}{5}$  and  $\frac{4}{5}$ , respectively. If 2 litres, 3 litres and 1 litre are taken from these three different vessels and mixed, what is the ratio of petrol and kerosene in the new mixture ?  
 (A) 4 : 5 (B) 3 : 2  
 (C) 3 : 5 (D) 2 : 3
25. A company CEO invited nine persons for a business meeting, where the host will be seated at a circular table. How many different arrangements are possible if two invitees X and Y be seated on either side of the host CEO ?  
 (A) 10080 (B) 10800  
 (C) 9200 (D) 4600
26. Find the number of ways in which ten different flowers can be strung together to make a garland in such a way that three particular flowers are always together ?  
 (A) 30240 (B) 30420  
 (C) 23400 (D) None of the above
27. A committee of 3 experts is to be selected out of a panel of 7 persons. Three of them are engineers, three are managers and one is both engineer and manager. In how many ways can the committee be selected if it must have at least one engineer and one manager ?  
 (A) 33 (B) 22  
 (C) 11 (D) 66
28. A cricket team of 11 players is to be formed from a pool of 16 players that includes 4 bowlers and 2 wicket-keepers. In how many different ways can a team be formed so that the team has atleast 3 bowlers and one wicket-keeper ?  
 (A) 2472 (B) 2274  
 (C) 2427 (D) 1236
29. Vijay purchased two different kinds of alcohol. In the first mixture the ratio of alcohol to water is 3 : 4 and in the second mixture it is 5 : 6. If he mixes the two given mixtures and makes a third mixture of 18 litres in which the ratio of alcohol to water is 4 : 5, the quantity of the first mixture (whose ratio is 3 : 4) that is required to make 18 litres of the third kind of mixture is—  
 (A) 6 (B) 7  
 (C) 8 (D) 9
30. The average marks of the students in four sections A, B, C and D of a school is 60%. The average marks of the students of A, B, C and D individually are 45%, 50%, 72% and 80%, respectively. If the average marks of the students of sections A and B together is 48% and that of the students of B and C together is 60%, what is the ratio of the number of students in sections A and D ?  
 (A) 2 : 3 (B) 4 : 3  
 (C) 5 : 3 (D) 3 : 5
31. Two casks of 48 litres and 42 litres are filled with mixtures of milk and water; the proportions in the two casks being respectively, 13 : 7 and 18 : 17. If the contents of the two casks be mixed and 20 litres of water be added to the whole, what will be the proportion of milk and water in the resulting mixture ?  
 (A) 5 : 12 (B) 7 : 13  
 (C) 12 : 13 (D) 8 : 15
32. Two companies A and B quote for a tender. On the tender opening day, A realizes that the two

- quotes are in the ratio 7 : 4 and hence decreases its price during negotiations to make it ₹ 1 lakh lower than B's quoted price. B then realizes that the final quotes of the two were in the ratio 3 : 4. By how much did A decrease its price in order to win the bid ?
- (A) ₹ 7 lakh  
(B) ₹ 4 lakh  
(C) ₹ 9 lakh  
(D) None of the above
33. To fill a certain tank, pipes A, B and C take 20 minute, 15 minute and 12 minute respectively. If the three pipes are opened every alternate minute, how long will it take to fill the tank ?
- (A) 5 minute (B) 10 minute  
(C) 12 minute (D) 15 minute
34. A bath can be filled by the cold water and hot water pipes in 10 minute and 15 minute respectively. A person leaves the bathroom after turning on both pipes simultaneously and returns at the moment when the bath should be full. Finding, however, that the waste pipe has been open, he then closes it. In exactly four minute more the bath is full. In how much time would the waste pipe empty the full bath, if it alone is opened ?
- (A) 9 minute  
(B) 10 minute  
(C) 12 minute  
(D) None of the above
35. A, B and C are three pipes attached to a cistern. A and B can fill it in 20 minute and 30 minute respectively, while C can empty it in 15 minute. If A, B and C be kept open successively for 1 minute each, how soon will the cistern be filled ?
- (A) 180 minute  
(B) 60 minute  
(C) 157 minute  
(D) 155 minute
36. Two taps can separately fill a cistern in 10 minute and 15 minute respectively. If these two pipes and a waste pipe are kept open simultaneously, the cistern gets filled in 18 minute. The waste pipe can empty the full cistern in—
- (A) 7 minute (B) 13 minute  
(C) 23 minute (D) 9 minute
37. Raghu travelled 1200 km by air which formed  $\frac{2}{5}$ th of his trip. One-third of the whole trip he travelled by car and the rest of the journey he did by train. The distance travelled by train is—
- (A) 1600 km (B) 800 km  
(C) 1800 km (D) 480 km
38. A man has to cover a distance of 6 km in 45 minute. If he covers one-half of the distance in  $\frac{2}{3}$ rd time, what should be his speed to cover the remaining distance in the remaining time ?
- (A) 12 km/h (B) 16 km/h  
(C) 3 km/h (D) 8 km/h
39. A man starts cycling from A to B and at the same time, another man starts cycling from B to A along the same path. They completed their journeys in  $1\frac{2}{3}$  and  $2\frac{2}{5}$  hours, respectively. At what speed has the second man cycled if the first cycles at 16 km/h ?
- (A)  $16\frac{1}{2}$  km/h (B)  $18\frac{1}{2}$  km/h  
(C)  $11\frac{1}{9}$  km/h (D)  $13\frac{1}{3}$  km/h
40. Two men A and B start walking from a place 'X' at  $4\frac{1}{2}$  km/h and  $5\frac{3}{4}$  km/h, respectively. How many km apart will they be at the end of  $3\frac{1}{2}$  hours if they are walking in the same direction ?
- (A)  $4\frac{1}{2}$  km (B)  $5\frac{3}{4}$  km  
(C)  $4\frac{3}{8}$  km (D)  $35\frac{7}{8}$  km

# ANSWER KEY

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

- 28. a
- 29. b
- 30. b
- 31. c
- 32. b
- 33. d
- 34. a
- 35. a
- 36. d
- 37. b
- 38. a
- 39. c
- 40. c