Capgemini Aptitude & Reasoning

1. **A shopkeeper gains 15% after allowing a discount of 20% on the market price of an article. Find his profit % if the articles are sold at a market price allowing no discount?**

A. 43.76%

B. 45%

C. 50%

D. 53.75%

Answer – A. 43.76%

Explanation:

Market price = Rs.100

SP = Rs.80, Discount = 20

Gain = 15%

CP = 80*100/115 = 69.56

Profit % = [100-69.56/69.56]*100

= 30.44*100/69.56

= 43.76%

2. **Cost price of 80 notebooks is equal to the selling price of 65 notebooks. The gain or loss % is**

A. 23%

B. 32%

C. 42%

D. 27%

Answer – A. 23%

Explanation:

% = [80 – 65/65]*100

= 15*100/65 = 1500/65

= 23.07 = 23% profit

Finally, the gain is 23%

3. **Articles are marked at a price which gives a profit of 22%. After allowing a certain discount the profit reduced to half of the previous profit, then the discount % is**

A. 7%

B. 10%

C. 12%

D. 9%

Answer – D. 9%

Explanation:

Cost Price (CP) = 100

Market Price (MP)= 122

Selling Price (SP) = 111

% of Discount (D) => 122 *(100-x)/100 = 111

122*(100-x) = 11100

12200-122x = 11100

12200-11100 = 122x

X = 1100/122 = 9.02 = 9%

Therefore, the discount is 9%

4. **Ramesh lends Rs 50,000 of two of his friends. He gives Rs 30,000 to the first at 6% p.a. simple interest. He wants to make a profit of 10% on the whole. The simple interest rate at which he should lend the remaining sum of money to the second friend is**

A. 11%

B. 17%

C. 8%

D. 16%

Answer – D.16%

Explanation:

S.I. on Rs 30000

=(30000×6×1)/100 = Rs. 1800

Profit to made on Rs 50000

= 50000×10/100=Rs 5000

S.I.on Rs.20000 = 5000-1800 = Rs.3200

Rate=(S.I.* 100)/(P * T)=(3200×100)/20000

=16% per annum

5. **Vishal borrowed some money for one year at 8% per annum simple interest and after 18 months, he again borrowed the same money at a Simple Interest of 32% per annum. In both cases, he paid Rs.5452. Which of the following could be the amount that was borrowed by Hussain in each case if interest is paid half-yearly?**

A. 4500

B. 4700

C. 3900

D. 4200

Answer – B. 4700

Explanation:

16% for 6 months

x = Borrowed money

Take x =100%

116% of x = 5452

x = 4700

6. **Rakesh lent out a part of Rs. 38800 is lent out at 6% per six months. The rest of the amount is lent out at 5% per annum after one year. The ratio of interest after 3 years from the time when the first amount was lent is 5:4. Find the second part that was lent out at 5%.**

A. 28500

B. 28800

C. 30080

D. 20500

Answer – B. 28800

Explanation:

First Part = x

[x * (0.06)*6] / (388800 – x)*0.05*2 = 5/4

1.44x = 19400 – 0.5x

x = 10000

Second Part = 38800 – 10000 = 28800

Hence the second part that was lent out at 5% = 28800

7. **The cost of the Coal block varies directly with the square of its weight. The Coal block is divided into three parts whose weights are in the ratio of 5:6:7. If the Coal block is divided into three equal parts by weight then there would be further loss of Rs.7200. Then what is the actual cost of Coal Block?**

A. 2332880

B. 3888000

C. 3960000

D. 1166400

Answer – D. 1166400

Explanation:

Cost = (5x)2+(6x)2+(7x)2 = 110×2

When weights equal = (6x)2+(6x)2+(6x)2 =108×2

Loss = 7200 = 110×2-108×2=2×2

x =60

Actual cost = (6x+6x+6x)2

(18*60)2 = 1166400

Therefore, the actual cost of Coal Block is 1166440.

8. **There are 459 students in a hostel. If the number of students increased by 36, the expenses of the mess increased by Rs .81 Per day while the average expenditure per head reduced by 1. Find the original expenditure of the mess?**

A. 7304

B. 7314

C. 7334

D. 7344

Answer – D. 7344

Explanation:

Total expenditure = 459x

36 students joined then total expenditure = 459x+81

average = 459x+81/495 = x-1

x = 16

original expenditure = 16*459 = 7344

Hence the original expenditure of the mess is 7344.

9. **The average weight of 40 Students is 32. If the Heaviest and Lightest are excluded the average weight reduces by 1. If only the Heaviest is excluded then the average is 31. Then what is the weight of the Lightest?**

A. 30

B. 31

C. 32

D. 33

Answer – 2. 31

Explanation:

40*32 = 1280

1280-H/39 = 31

H =71

1280-71- L/38 = 31

L = 31

10. **M and N invested rupees 4000 and 5000 respectively in a business. M being an active partner will get rupee 50 every month extra for running the business. In a year if M receive a total of 800 rupees, then what will N get from the business.**

A. 200

B. 300

C. 400

D. 250

Answer – D. 250

Explanation:

The ratio in which the profit will divide – 4:5.

M will get 50*12 = 600 rupees extra, so from business M got 200 rupees.

i.e (4/9)*P = 200, P = 450. So N will get 450 – 200 = 250 rupees

11. **A Jar contains 30 liters mixture of Milk and Water in the ratio of x:y respectively. When 10 liters of the mixture is taken out and replaced it water, then the ratio becomes 2:3. Then what is the initial quantity of Milk in the Jar?**

A. 18 Liter

B. 20 Liter

C. 12 Liter

D. 15 Liter

Answer – A. 18 Liter

Explanation:

x+y =30

(x-10*x/x+y)/ (y-10*y/(x+y) + 10) = 2/3

2x-4/3y = 20

x =18

12. **A Jar contains 100 liters of Milk a thief stole 10 liters of Milk and replaced it with water. Next, he stole 20 liters of Milk and replaced it with water. Again he stole 25 liters of Milk and replaced with water. Then what is the quantity of water in the final mixture?**

A. 55 Liter

B. 54 Liter

C. 50 Liter

D. 46 Liter

Answer – D. 46 Liter

Explanation:

According to the given data

Milk = 100*90/100*80/100*75/100 = 54

Water = 100-54 = 46

13. **A Container contains 'X' Liters of Milk. A thief stole 50 Liters of Milk and replaced it with the same quantity of water. He repeated the same process further two times. And thus Milk in the container is only 'X-122' liters. Then what is the quantity of water in the final mixture?**

A. 124 Liter

B. 128 Liter

C. 250 Liter

D. 122 Liter

Answer – D. 122 Liter

Explanation:

$X-122 = X(1-50/X)^3$

X = 250 Liter

Milk = 250-122 = 128

Water = 122

14. **The perimeter of a square is equal to twice the perimeter of a rectangle of length 10 cm and breadth 4 cm. What is the circumference of a semi-circle whose diameter is equal to the side of the square?**

A. 46 cm

B. 36 cm

C. 38 cm

D. 23 cm

Answer – B. 36 cm

Explanation:

However, Perimeter of square = 2(l + b)

= 2 * 2(10 + 4) = 2 * 28 = 56 cm

Side of square = 56/4 = 14 cm

Radius of semi-circle = 14/2 = 7cm

Circumference of the semi-circle = 22/7 * 7 + 14 = 36 cm

15. **The length of a rectangle is 3/5th of the side of a square. The radius of a circle is equal to the side of the square. The circumference of the circle is 132 cm. What is the area of the rectangle, if the breadth of the rectangle is 15 cm?**

A. 112 cm^2

B. 149 cm^2

C. 189 cm^2

D. 199 cm^2

Answer – C. 189 cm^2

Explanation:

The circumference of the circle = 132

$2\pi R = 132$; R = 21 cm

Side of square = 21 cm

Length of the rectangle = 3/5 * 21 = 63/5

Area of the rectangle = 63/5 * 15 = 189 cm^2

16. **Smallest side of a right-angled triangle is 13 cm less than the side of a square of perimeter 72 cm. Second largest side of the right-angled triangle is 2 cm less than the length of the rectangle of area 112 cm^2 and breadth 8 cm. What is the largest side of the right-angled triangle?**

A. 20 cm

B. 12 cm

C. 10 cm

D. 13 cm

Answer – D. 13 cm

Explanation:

Side of square = 72/4 = 18 cm

Smallest size of the right-angled triangle = 18 – 13 = 5 cm

Length of rectangle = 112/8 = 14 cm

Second side of the right-angled triangle = 14 – 2 = 12 cm

Hypotenuse of the right-angled triangle = √(25 + 144) = 13cm

17. **Quartz: Radio::? : Cement**

A. Plaster of Paris

B. Plastic

C. Leather

D. gypsum

Answer – D. gypsum

Explanation:

Quartz is used to make radio similarly Gypsum is used to make Cement

18. **Carbon dioxide: Extinguish:: Oxygen:?**

A. Isolate

B. Foam

C. Explode

D. Burn

Answer – D. Burn

Explanation:

Oxygen supports Burning similarly Carbon dioxide helps in extinguishing

19. **Farming: Monsoons:: Market:?**

A. Volume

B. Demand

C. Supply

D. Rate

Answer – B. Demand

Explanation:

First depends on the second

20. **Three of the following Four are alike in a certain way and so form a group. Which is the one that does not belong to that group?**

A. Apple

B. Orange

C. Brinjal

D. Grapes

Answer – C. Brinjal

Explanation:

Brinjal is a vegetable

21. **Three of the following Four are alike in a certain way and so form a group. Which is the one that does not belong to that group?**

A. Badminton
B. Table Tennis
C. Rugby
D. Hockey

Answer – C. Rugby

Explanation:
Only sport Rugby contains a single thing Rugby, all other contains 2 things in order to play

22. **Three of the following Four are alike in a certain way and so form a group. Which is the one that does not belong to that group?**

A. Mathura
B. Varanasi
C. Haridwar
D. Allahabad

Answer – A. Mathura

Explanation: Remainings are located in the bank of Ganga river

23. **Three of the following Four are alike in a certain way and so form a group. Which is the one that does not belong to that group?**

A. Papaya

B. Water Melon

C. Mango

D. Orange

Answer – C. Mango

Explanation: Mango – only 1 seed, Remaining all fruits contains more than 3 seeds

24. **Three of the following Four are alike in a certain way and so form a group. Which is the one that does not belong to that group?**

A. Italy

B. Greece

C. Poland

D. Europe

Answer – D. Europe

Explanation: It is an Asian country

25. **Statement:** Should India install more nuclear reactors for electricity generation.

Arguments:

I. Yes, the government can earn more revenue from them.

II. No, this will increase the costs of the government.

A. Only I is strong

B. Only II is strong

C. Both I & II are strong

D. None of the above are valid

Answer – D. None of the above are valid

Explanation:

Both the arguments I and II are not forceful as revenue and money cannot be the sole factor that would be considered in a major decision concerning nuclear reactors. There are going to be more important and other factors as well that would need to be taken care of in taking a critical decision like this.

26. **Statement:** India should increase the number of universities from 350 to 1500.

Arguments:

I. Yes, it is crucial to sustaining India's growth because we have a large number of people seeking education.

II. No, the increase will cause a dilution in academic standards and more corruption.

A. Only I is strong

B. Only II is strong

C. Both are equally valid

D. None are valid

Answer – A. Only I is strong

Explanation:

The argument 'I' is a logical argument as the number of students seeking education is growing and thus the need for universities is also increasing. However, the corruption clause in argument II is beyond the scope of the argument. Therefore, the only argument I hold strength

27. **Statement:** Is clear focus the key to high achievements?

Arguments:

I. Yes, one with no goal or focus leads a barren existence.

II. No, behind every successful man is a woman.

A. Only I is strong

B. Only II is strong

C. Both I & II are strong

D. None of the above are valid

Answer – D. None of the above are valid

Explanation:

The question is whether focus can be regarded as the key to high achievements or not. The argument I talk about people who have no goals. It does not answer the question raised by the main statement. Argument II has no connection with the main statement.

28. **A is fifteenth from the left end and B is eight from the right end. If there are 4 boys between them and B is to the right of A then the total number of a student sitting in the row.**

A. 27

B. 28

C. 29

D. 26

Answer – A. 27

Explanation:

Given that, A is fifteenth from the left end and B is eight from the right end then

(14 people) A **** B (7 persons) = 27

Therefore, the total number of a student sitting in the row = 27

29. **In a row of 30 children, Madhav is 12th from the left end. Raghu a friend of Madhav is 3 to the left of Madhav. Find the position of Raghu from the left end.**

A. 10th

B. 5th

C. 8th

D. 9th

Answer – D. 9th

Explanation:

(8 persons) (Raghu) ** Madhav(18 people)

Hence, the position of Raghu from the left end = 9th

30. **Avinash is 5 ranks above Sunil in a class of 30. If Sunil rank is 15th from the last. What is Avinash rank from the start?**

A. 10

B. 12

C. 13

D. 11

Answer – D. 11

Explanation:

(10 students) Avinash * * * * Sunil (14 person)

Therefore, Avinash rank from the starting is 11

31. **P is fifteenth from the left end in a row of boys and Q is eighteenth from the right end. If R is tenth from P towards the right end and fourth from Q towards the right end. How many boys are there in the row?**

A. 38

B. 40

C. 35

D. 36

Answer – A. 38

Explanation:

(14 people)P * * * * * Q * * * R (13 person)

Therefore, the number of boys in the row is 38.

32. **In a group of 6 students P, Q, R, S, T and U each one having different height. P is taller than T but not as tall as U. Q and U are not the tallest and also R is the shortest. Who is the tallest among them?**

A. S

B. Q

C. P

D. U

Answer – A. S

Explanation:

According to the given data

S > (Q,U) > P > T > R

Hence S is the tallest among them