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AMCAT APTITUDE QUESTIONS

SET - 1

Question 1 :- The cost price of 10 articles is equal to the selling price of 9 articles. find the profit percent.

a. 101/9 %

b. 100/9 %

c. 102/9 %

d. 103/9 %

Answer :- 100/9 %

Explanation :-

Let Cost Price be x and

selling price be y

Then given that cost price of 10 articles is equal to the selling price of 9 articles

That means 10x=9y

Y= 10x/9

Profit percent = ((selling price – cost price)/cost price) * 100

= 100/9 %

Question 2 :- The ratio of radii of two right circular cylinders is 6:7 and their heights are in the ratio 5:9. The ratio of their respective curved surface areas is

a. 14:15

b. 17:19

c. 23:29

d. 10:21

Answer :- 10:21

Explanation :-

Curved surface area of a cylinder = 2 * Pi * r * h

Ratio = (6/7) * (5/9) = 10:21

Question 3 :- In how many ways can the 7 letters A,B,C,D,E,F and G be arranged so that C and E never together.

a. 5040

b. 6480

c. 3600

d. 1440

Answer :- 3600

Explanation :-

C and E never together = Total arrangements – C and E together

Total arrangements are 7!

C and E together = pack c and e into one unit + 5 other alphabets = 6! 2! (2! Is two arrange c and e internally)

C and E never together = Total arrangements – C and E together

= 7! – 6! 2!

= 3600

Question 4 :- How many numbers are there in all from 4000 to 4999 (both 4000

and 4999 included) having at least one of their digits repeated?

a. 356

b. 216

c. 496

d. 504

Answer :- 496

Explanation :-

Atleast one of their digits repeated = Total numbers – None of the digits repeated

Total numbers from 4000 to 4999 = 1000

None of the digits repeated = _ _ _ _

There are total 4 places 1st place is filled with 4 only.

So only one choice 2nd place is filled with any 9 digits except 4 as we have used 4 in 1st place.

So 9 choices Similarly 3rd place is filled with any 8 digits.

So we have 8 choices 4th place is filled with any 7 digits.

So we have 7 choices. So total arrangements = 1 * 9 * 8 * 7 = 504

Ans= 1000 – 504 = 496

Question 5 :- if 1/2x +1/4x+1/8x=14 Then the value of x is:

a. 8

b. 12

c. 4

d. 16

Answer :- x = 16

Question 6 :- Find the value of h[f(1,2,3), g(2,1,-2), h(1,-1,-1)].

a. 0.5

b. none

c. 1

d. 0

Answer :- 0

Question 7 :- A trapezium with an area of 5100 cm2 has the perpendicular distance between the two parallel sides of 60m . if one of the parallel sides be 40m. find the length of the other side.

a. 130 m

b. 110 m

c. 120 m

d. 145 m

Answer :- 130 m

Explanation :-

Area of a trapezium = (1/2) (a+b) h

Question 8 :- Find the simple interest on Rs. 306.25 from March 3rd to July 27th(In the same year) at 3.75 percent.

a. Rs. 4.57

b. Rs. 4.59

c. Rs. 4.53

d. Rs 4.58

Answer :- 4.59

Explanation :-

from March 3rd to July 27th(In the same year)

= 146 days (306.25 * 146 * 3.75)/ (365 * 100)

= 4.59

Question 9 :- Dhruv and Naksh drive at the speeds of 36 Kmph and 54 kmph respectively. If Naksh takes 3 hours lesser than what Dhruv takes for the same distance. Then distance is :

a. 324 km

b. 524 km

c. 320 km

d. 420 km

Answer :- 324 km

Explanation :-

Let dhruv takes t hours then naksh takes t-3 hours

Because distance is same in both cases So 36 * t

= 54 (t-3) t=9

ans: 36 * 9 = 324 km

Question 10 :- The radius of wheel of axis's car is 50 cm. What is the distance that the car would cover in 14 revolutions ?

a. 11 m

b. 22 m

c. 33 m

d. 44 m

Answer :- 44 m

Explanation :-

Distance covered in one revolution is equal to wheel surface area = 2 * Pi * r

Distance covered in 14 revolutions = 14 (2 * (22/7) * 50)

= 44000 cm

= 44 m

Question 11 :- P can do a piece of work in 5 days of 8 hours each and Q can do in 4 days of 6 hours each. How long will they take do it working 5 hours a day?

a. 2 days

b. 3 days

c. 4 days

d. 5 days

Answer :- 3 days

Explanation :-

P can do in 5* 8 hours= 40 hours

Q can do in = 24 hours

Working together in one hour = (1/40) + (1/24) = 1/15

Total work can be finished in 15 hours

They 5 hours a day so total number of days = 15/5 = 3 days

Question 12 :- Libra had three diamond weighing equal. One of the diamond fell and broke into 4 equal pieces weighing 20gm each. what was the total weight of three diamonds.

a. 200 gm

b. 280 gm

c. 320 gm

d. 240 gm

Answer :- 20 * 4 * 3 = 240 gm

Question 13 :- if the antecedent and consequent of a ratio are increased by 5 and 6 respectively then the ratio is 5:6. find the original ratio.

a. 5:6

b. 1:2

c. 2:3

d. 3:4

Answer :- A

Explanation :-

let's say original ratio is x:y (x+5)/(y+6) = 5/6

Then x/y = 5/6

Question 14 :- Rohit and Rahul start from the same point and move away from each other at right angle. After 4 hours they are 80 km apart. if the speed of Rohit is 4 kmph more than Rahul. what is the speed of Rohit?

a. 16 kmph

b. 20 kmph

c. 12 kmph

d. none

Answer :- A

Explanation :-

x is the speed of rahul then (x+4) will be rohit speed

802 = (4x)2 + ((x+4)4)2

X=12

Rohit speed = 12 + 4 = 16kmph

Question 15 :- Abhimanyu and supreet can together finish a work in 50 days. They worked together for 35 days and then supreet left. After another 21 days, Abhimanyu finished the remaining work. In how many days Abhimanyu alone can finish the work?

a. 70 days

b. 75 days

c. 80 days

d. 60 days

Answer :-

35 days worked together + 21 days abhimayu worked = finished the work

35(1/50) + 21(x) = 1 X

=70 days

Question 15 :- if two fair dice are thrown simultaneously. then what is the probability that sum of the numbers appearing on the top faces of the dice is less than 4?

a. 6/14

b. none

c. 1/12

d. 3/18

Answer :- C

possible cases are (1,1) (1,2) and (2,1) = 3

3/36 = 1/12

Question 15 :- 3 individuals john wright, greg chappell and gary kristen are in the race for the appointment of new coach of team india. The probabilities of their appointment are 0.5, 0.3 and 0.2 respectively. If john wright is appointed then probability of ganguly appointed as a captain will be 0.7 and corresponding

probability if greg chappell or gary kristen is appointed are 0.6 and 0.5 respectively. find the overall probability that ganguly will appointed as a captain.

a. 0.63

b. 0.35

c. 0.18

d. 0.89

Answer :- 0.63

Question 16 :- A man spends Rs 660 on tables and chairs. the price of each table is Rs. 150 and the price of each chair is Rs. 20. If he buys maximum number of tables, what is the ratio of chairs to tables purchased?

a. 2: 5

b. 3:5

c. 2:3

d. 3:4

Answer :- 4 tables + 3 chairs =660 Chairs to tables ratio is 3:4

Question 17 :- Two packets are available for sale. packet a: peanuts 100 gms for Rs 48 only packet b: peanuts 150 gms for Rs 72 only which is a better buy?

a. both have the same value

b. packet b

c. data insufficient

d. packet a

Answer :- A

both have the same value

Packet-a : 1 gm cost = 48/100

Packet-b : 1 gm cost = 72/150

Question 18 :- Find the surface area of a piece of metal which is in the form of a parallelogram whose base is 10 cm and height is 6.4 cm .

a. 64 cm2

b. 65 cm2

c. 45 cm2

d. 56 cm2

Answer :-

Question 18 :- Sridevi is younger than Rajeev by 4 years. if their ages are in the ratio of 7:9. how old is Sridevi?

Answer :-

if Sridevi is x then Rajeev will be (x+4) x/(x+4) = 7/9

x=14

Question 19 :- two trains for Palwal leave Kanpur at 10a.m and 10:30 am and travel at the speeds of 60 kmph and 75 kmph respectively. After how many kilometres from Kanpur will the two trains be together?

Answer :- 150 km

Question 20 :- (x + 1/x) = 6 the value of (x5 + 1/x5) = ?

Answer :- 6726

Question 21 :- In how many ways can 44 people be divided into 22 couples?

Answer :-

Short cut how many ways n people be divided into n/2 couples (n!)/{(2!)n/2 (n/2)!

so ans is b. (44!)/{(2!)22 (22!)}

Question 22 :- Find the remainder when (x3 + 4 x2 + 6 x - 2) is divided (x+5)

Answer :- 57

Question 23 :- A solid cylinder has total surface area of 462 cm2 . If total surface area of the cylinder is thrice of its curved surface area. then the volume of the cylinder is:

a. 539 cm3

b. 545 cm3

c. 531 cm3

d. 562 cm3

Answer :- 539

Question 24 :- A sum of Rs 468.75 was lent out at simple interest and at the end of 1 year and 8 months, the total amount of Rs 500 is recieved. find the rate of

interest.

a. 2%

b. 4%

c. 1%

d. 3%

Answer :- 4%

Question 25 :- Consider the following two curves in the X-Y plane y=(x3+x2+5) y=(x2+x+5) Which of the following statements is true for -2<= x <=2?

a. The two curves do not intersect.

b. The two curves intersect thrice.

c. The two curves intersect twice.

d. The two curves intersect once.

Answer :- b

Question 26 :- Give a model for maximising the profit in a company or minimising the loss in a conflict with optimisation techniques.where quantity f(x) is referred to as the object function while the vector 'x'consists of decision variables.

A. None of the mentioned options.

B. x* =arg min f(x)

C. x* =arg max f(x)

D. x* =an-1+an arg min f(x)n

Question 27 :- A positive integer is selected at random and is divided by 7,what is the probability that the remainder is 1?

A. 3/7

B. 4/7

C. 1/7

D. 2/7

Answer :- 1/7

Question 28 :- A mixture of 40 litres of salt and water contains 70%of salt.how much water must be added to decrease the salt percentage to 40%?

A. 40 litres

B. 30 litres

C. 20 litres

D. 2 litres

Answer :- x=30

Question 29 :- Choose the correct answer.

If the sum of two numbers is 55 and the H.C.F. and L.C.M of these numbers are 5 and 120 respectively, then the sum of the reciprocals of the numbers is equal to:

A. 55/601

B. 601/55

C. 11/120

D. 120/11

Answer :- 11/120

Question 29 :- Choose the correct answer.

Three different containers contain 496 litres, 403 litres and 713 litres of mixtures of milk and water respectively. What biggest measure can measure all the different quantities exactly ?

A. 1 litre

B. 7 litre

C. 31 litre

D. 41 litre

Answer :- 31 Liters

Question 30 :- Choose the correct answer.

Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together ?

A. 4

B. 10

C. 15

D. 16

Answer :- **16**

Question 31 :- **Choose the correct answer.**

Four different electronic devices make a beep after every 30 minutes, 1 hour, 3/2 hour and 1 hour 45 minutes respectively. All the devices beeped together at 12 noon. They will again beep together at:

A. 12 midnight

B. 3 a.m.

C. 6 a.m.

D. 9 a.m.

Answer :- **9am**

Question 32 :- **Choose the correct answer.**

The number of prime factors of (3 x 5)12 (2 x 7)10 (10)25 is:

Option 1 : 47

Option 2 : 60

Option 3 : 72

Option 4 : None of these

Answer :- **None Of These**

Question 33 :- **Choose the correct answer.**

What least value must be assigned to * so that the number 63576*2 is divisible by 8?

A. 1

B. 2

C. 3

D. 4

Answer :- **3**

Question 34 :- **Choose the correct answer. Which of the following numbers is exactly divisible by 24 ?**

A. 35718

B. 63810

C. 537804

D. 3125736

Answer :- 3125736

Question 35 :- Choose the correct answer. The number nearest to 15207, which is divisible by 467, is:

A. 14342

B. 15211

C. 14944

D. 15411

E. None of these

Answer :- 15411

Question 36 :- Choose the correct answer. The smallest number, which is a perfect square and contains 7936 as a factor is:

A. 251664

B. 231564

C. 246016

D. 346016

E. None of these

Answer :- 246016

Question 37 :- Choose the correct answer. In a division problem, the divisor is twenty times the quotient and five times the remainder. If remainder is 16, the number will be:

Option 1 : 3360

Option 2 : 336

Option 3 : 1616

Option 4 : 20516

Option 5 : None of these

Answer :- 336

Question 38 :- Choose the correct answer.

The L.C.M. of two numbers is 4800 and their G.C.M. is 160. If one of the numbers is 480, then the other number is:

A. 1600

B. 1800

C. 2200

D. 2600

E. None of these

Answer :- A

Question 39 :- Choose the correct answer.

The L.C.M. of two numbers is 140. If their ratio is 2:5, then the numbers are:

A. 28,70

B. 28,7

C. 8,70

D. 8,40

E. None of these

Answer :- A

Question 40 :- Choose the correct answer. If a number is exactly divisible by 85, then what will be the remainder when the same number is divided by 17?

A. 3

B. 1

C. 4

D. 0

Answer :- D

Question 41 :- Choose the correct answer. The least perfect square number which is exactly divisible by 3, 4, 7, 10 and 12 is:

A. 8100

B. 17600

C. 44100

D. None of these

Answer :- C

Question 42 :- Choose the correct answer. (xn+yn) is divisible by (x-y):

A. for all values of n

B. only for even values of n

C. only for odd values of n

D. for no values of n

Answer :- D

Question 43 :- Choose the correct answer. The greatest number that will divide 63, 138 and 228 so as to leave the same remainder in each case:

A. 15

B. 20

C. 35

D. 40

Answer :- D

Question 44 :- Choose the correct answer. Find the largest number, smaller than the smallest four-digit number, which when divided by 4,5,6 and 7 leaves a remainder 2 in each case.

A. 422

B. 842

C. 12723

D. None of these

Answer :- B

Question 45 :- Choose the correct answer. What is the highest power of 5 that divides 90 x 80 x 70 x 60 x 50 x 40 x 30 x 20 x 10?

A. 10

B. 12

C. 14

D. None of these

Answer :- A

Question 46 :- Choose the correct answer. If a and b are natural numbers and a-b is divisible by 3, then a3-b3 is divisible by:

A. 3 but not by 9

B. 9

C. 6

D. 27

Answer :- B

Question 47 :- Choose the correct answer. What is the greatest positive power of 5 that divides 30! exactly?

A. 5

B. 6

C. 7

D. 8

Answer :- C

Question 48 :- Choose the correct answer. In how many ways can a number 6084 be written as a product of two different factors ?

A. 27

B. 26

B. 13

D. 14

Answer :- C

Question 49 :- Choose the correct answer. What is the smallest four-digit number which when divided by 6, leaves a remainder of 5 and when divided by 5 leaves a remainder of 3?

A. 1043

B. 1073

C. 1103

D. None of these

Answer :- **D**

Question 50 :- **Choose the correct answer. P is an integer. P>883. If P-7 is a multiple of 11, then the largest number that will always divide (P+4) (P+15) is:**

A. 11

B. 121

C. 242

D. None of these

Answer :- **C**