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Quantitative questions

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 %

Ans: 100/9 %

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 %

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

Ans: 10 : 21

Curved surface area of a cylinder = 2 * Pi * r * h
Ratio = (6/7) * (5/9) = 10:21

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

Ans: 3600

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

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

Ans: 496

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

5. if 1/2x +1/4x+1/8x=14 Then the value of x is:
a. 8 b. 12 c. 4 d. 16

Ans: x = 16

6. Which of the following expressions will always be true?

Ans: D

Verify from options
8. 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

Ans(D)

9. 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

Ans: 130 m

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

10. Find the simple interest on Rs. 306.25 from March 3rd to August 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

Ans: 4.59

from March 3rd to July 27th(In the same year) =
146 days (306.25 * 146 * 3.75)/ (365 * 100) =
4.59

11.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 kmc. 320 km d. 420 km

Ans: 324 km

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

12.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

Ans: 44 m

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

13. 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

Ans: 3 days

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

14.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

Ans: 20 * 4 * 3 = 240 gm

16. 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
Ans: let's say original ratio is x:y
(x+5)/(y+6) = 5/6
Then x/y = 5/6

17.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

Ans: 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

18.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

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

35(1/50) + 21(x) = 1
X=70 days
19. 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

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

3/36 = 1/12

21.3 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
Ans: 0.63

22. 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

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

23.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
Ans: a. both have the same value

Packet-a : 1 gm cost = 48/100
Packet-b : 1 gm cost = 72/150

24.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
Ans:

25.Sridevi is younger than Rajeev by 4 years. if their ages are in the ratio of 7:9. how old is Sridevi? Ans: if Sridevi is x then Rajeev will be (x+4)
x/(x+4) = 7/9
x=14

26.A sum of Rs. 900 amounts to Rs. 950 in 3 years at simple interest. If the interest rate is increased by 4%, it would amount to how much?

27.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? Ans: 150 km

28. (x + 1/x) = 6 the value of (x5 + 1/x5) = ?
Ans: 6726

29.In how many ways can 44 people be divided into 22 couples? Ans: 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!)}

30.Find the remainder when (x3 + 4 x2 + 6 x - 2) is divided (x+5) Ans: -57

31.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

Ans:539

35.The section of a solid right circular cone by a plane containing vertex and perpendicular to base is an equilateral triangle of side 10 cm. find the volume of the cone?
a. 221.73 cm3 b.223.73 cm3 c.228.73 cm3 d.226.61 cm3

36.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%
Ans: 4%

37.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. Ans: b

38.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

39.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
Ans: 1/7

40.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 Ans: x=30

41.Anirudh,Harish and Sahil invested a total of Rs.1,35,000 in the ratio 5:6:4 Anirudh invested has capital for 8 months. Harish invested for 6 months and Sahil

invested for 4 months. If they earn a profit of Rs.75,900,then what is the share of Sahil in the profit?
A. Rs.12,400 B. Rs.14,700 C. Rs.15,800 D.
Rs.13,200 Ans: 13,200

42. A man sets out to cycle from Delhi to Rohtak and at the same time another man starts from Rohtak to cycle to cycle to Delhi. After passing each other they completed their journey in (10/3) hours and (16/3) hours respectively.At what rate does the second man cycle if the first cycle at 8 kmph?
A.6.12 kmph B.6.42 kmph C. 6.22 kmph D. 6.32
kmph Ans: 6.32

43.Two trains are travelling in opposite directions at uniforms speeds of 60 kmph and 50 kmph.They take 5 seconds to cross each other.If the two trains travelled in the same directions.then a passenger sitting in the faster moving train would have overtaken the other than in 18 seconds.what are the lengths of the trains?
A. 87.78 m and 55 m B.112 m and 78 m C.102.78 m and 50 m D.102.78 m and 55 m Ans: C

44. A cube is given with an edge of 12 units.it is painted on all faces and then cut into smaller cubes of edge of 4 units. How many cubes will have 2 faces painted?
A. 2 B. 12 C. 8 D. 0

45.Two numbers are in the ratio xy,when 2 is added to both the numbers.the ratio becomes 1:2.when 3
is subtracted from both the numbers. The ratio becomes 1:3.Find the sum of x and y. A. 27 B. 24 C. 28 D. 26
Ans: 26

46.To earn extra profit,a shopkeeper mixes 30 kg of dal purchased at Rs.36/kg and 26 kg of dal purchased at Rs.20/kg.What will be the profit that he will make if he sells the mixture at Rs.30/kg? A. Rs.60 B. Rs.80 C. Rs.50 D. Rs.100
Ans: 80

47.There are 4 boys and 3 girls.they sit in arrow randomly.what is the probability that all girls are together?
A. 1/14 B. 2/14 C. 5/14 D. 3/14
Ans: 2/14

48. An oblong piece of ground measures 19m 2.5 dm by 12m5dm.Fom centre of each side of the ground,a path 2 m wide goes across to the center of the opposite side.What is the area of the path?
A. 59.5 m2 B. 54 m2 C. 43 m2D. 34 m2
Ans: 78.54

49. The circumference of the wheel of a truck is 1 meter.To cover a distance of 1.5 km.the number of
revolutions made by the wheel are: A. 3000 B. 37 C. 1500 D. 750
Ans: 1500 revolutions

50. If (x+(1/x))=4,the value of (x5+(1/x5)) is: A. 724 B. 500 C. 752 D. 525
Ans: 724

Read the information given below in the table and answer the question that follow.

51.During which year did the net profit exceed Rs.1 crore for the first time? A.1985-86 B. 1983-84 C. 1984-85 D. None of the mentioned options Ans: C

52.During which year was the “gross turnover” closest to thrice the profit before interest and depression?
A. 1985-86
B. 1983-84
C. 1984-85
D. None of the mentioned options.
Ans: A

53. During which of the given years did the net profit from the highest proportion of the profit before
interest and depression? A. 1985-86 B. 1983-84 C. 1984-85 D. None of the
mentioned options.
Ans: C

54. A sum was put at simple interest at certain rate for 3 years. Had it been put at 1% higher rate it
would have fetched Rs. 63 more. The sum is: A. Rs. 2,400 B. Rs. 2,100 C. Rs. 2,200
D.Rs. 2,480
Ans: 2,100

55.For what value of “k” will the equation (2kx2 + 5kx +2)=0 have equal roots?
A. 2/7 B. 9/4 C. 16/25 D. 7/18
Ans: C

56.In triangle PQR, PQ=6 cm,PR=8 cm and QR=12 cm. Calculate the area of the triangle PQR. A. 23.33 cm2 B. 17.5 cm2 C. 21.33 cm2 D. 28.67 cm2 ANs: 21.33

57.A company named “Dyona Automobiles”has received an order for 5,000 widgets for a total sale price of $5,000 and wants to determine the gross profit that will be generated by completing the order. The other details for producing 100,000 widgets are given as follows:
1.Raw Materials Costs-$10,000
2.Direct Labor Costs-$50,000
A. $5,000 B. $4,000 C. $3,000 D. $2,000

58. If m=(2-√3),then the value of (m6+m4+m2+1) /m3 is:
A. 64 B. 56 C. 69 D. 52

28 children can do a piece of work in 50 days.how many children are needed to complete the work in 30 days?
A. 49 B. 40 C. 35 D. 45
Ans: 49

60. A certain sum of money becomes Rs.750 in 2 years and becomes Rs.873 in 3.5 years.Find the sum and rate of interest. A. Rs.400, 13% p.a B. Rs.500,11%p.a C. Rs.630,12%p.a D. Rs.600,13%p.a

Ans: 586, 14%

61. Henna invested Rs.5000 at 12% simple interest p.a.the interest she will receive after 2 years is:
A. Rs.800 B. Rs.1000 C. Rs.600 D. Rs.1200
Ans: (5000*12*12)/100= 1200

62.A bag contains 3 red,5yellow and 4 green balls.3 balls are drawn randomly,what is the probability
that the ball drawn contains no yellow ball? A. 9/44 B. 37/44 C. 43/44 D. 7/44
Ans:
Probability = 35/12C3 =7/44

63. If a2+b2-4(a+b)= -8,then the value of (a-b) is:
A. 4 B. 0 C. 2 D. 8

64.A lent Rs.600 to b for 2 years and Rs.150 to C for 4 years and receive all together Rs.90 as both as interest.Find the rate of interest.
A. 4%p.a B. 2%p.a C. 5%p.a D. 3%p.a
Ans: 5%

65.If the perimeter and the diagonal of a rectangle is 18 cm and √41 cm respectively.Calculate the area of the rectangular field.
A. 25 cm2 B. 29 cm2 C. 18 cm2 D. 20 cm2
Ans:
2(a+b) = 18
(a+b)=9
√ (a2 + b2) = √41
(a+b)2 = a2+b2 +
2ab ab=20

66. A,B, and C enter into a partnership and their shares are in the ratio 1/2 : 1/3 : 1/4.After 2 months,A withdraws half of his capital and after 10 months,a profit of RS. 378 is divied among them. What is B's share?
A. Rs.144 B. Rs.156 C. Rs.166 D. Rs.129

67. If a:b =4:1,then √(a/b)+ √(b/a) is :
A. 1 B. 4/5 C. None of the mentioned options D.
5/4 Ans: 5/2
68.A cube is given with an edge of 12 units.It is painted on all faces and then cut into smaller cubes of edge of 4 units.How many cubes will have 2 faces painted?
A. 8 B. 12 C. 0 D. 2
69.Find the area of Rhombus one of whose diagonals measures 8 cm
and the other 10 cm. A. 47 cm2 B. 34cm2 C. 40 cm2 D. 64cm2

70.Rs 5000 was divided among 5 men, 6 women and 5 boys, such that the ratio of the shares of men, women and boys is 5:3:2 what is the share of the boy?
a. 200 b. 100 c. 250 d. 150
Ans: 200
The ratio of shares of groups of men, women and boys = 5 :3 :2
So share of boys is = (2/10)*5000 = 1000
Share of a boy= 1000/5 = 200

Set C

Ques 1 : 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:

Option 1 : 55/601
Option 2 : 601/55
Option 3 : 11/120
Option 4 : 120/11

Correct Answer :11/120

Ques 2 : 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 ?

Option 1 : 1 litre
Option 2 : 7 litre
Option 3 : 31 litre
Option 4 : 41 litre

Correct Answer :31 Liters

Ques 3 : 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 ?

Option 1 : 4
Option 2 : 10
Option 3 : 15
Option 4 : 16

Correct Answer : 16

Ques 4 : 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:

Option 1 : 12 midnight
Option 2 : 3 a.m.
Option 3 : 6 a.m.
Option 4 : 9 a.m.

Correct Answer : 9am

Ques 5 : 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

Correct Answer : None Of These

Ques 6 : Choose the correct answer.
What least value must be assigned to * so that the number 63576*2 is divisible by 8?

Option 1 : 1
Option 2 : 2
Option 3 : 3
Option 4 : 4

Correct Answer :3

Ques 7 : Choose the correct answer.
Which of the following numbers is exactly divisible by 24 ?

Option 1 : 35718
Option 2 : 63810
Option 3 : 537804
Option 4 : 3125736

Correct Answer :3125736

Ques 8 : Choose the correct answer.
The number nearest to 15207, which is divisible by 467, is:

Option 1 : 14342
Option 2 : 15211
Option 3 : 14944
Option 4 : 15411
Option 5 : None of these

Correct Answer :15411

Ques 9 : Choose the correct answer.
The smallest number, which is a perfect square and contains 7936 as a factor is:

Option 1 : 251664
Option 2 : 231564
Option 3 : 246016
Option 4 : 346016
Option 5 : None of these

Correct Answer :246016

Ques 10 : 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

Correct Answer :336

Ques 11 : 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:
Option 1 : 1600
Option 2 : 1800
Option 3 : 2200
Option 4 : 2600
Option 5 : None of these

Ques 12 : Choose the correct answer.
The L.C.M. of two numbers is 140. If their ratio is 2:5, then the numbers are:

Option 1 : 28,70
Option 2 : 28,7
Option 3 : 8,70
Option 4 : 8,40
Option 5 : None of these

Ques 13 : 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?

Option 1 : 3
Option 2 : 1
Option 3 : 4

Option 4 : 0

Ques 14 : Choose the correct answer.
The least perfect square number which is exactly divisible by 3, 4, 7, 10 and 12 is:

Option 1 : 8100
Option 2 : 17600
Option 3 : 44100
Option 4 : None of these

Ques 15 : Choose the correct answer.
(xn+yn) is divisible by (x-y):

Option 1 : for all values of n
Option 2 : only for even values of n
Option 3 : only for odd values of n
Option 4 : for no values of n

Ques 16 : Choose the correct answer.
The greatest number that will divide 63, 138 and 228 so as to leave the same remainder in each case:
Option 1 : 15
Option 2 : 20
Option 3 : 35
Option 4 : 40

Ques 17 : 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.
Option 1 : 422
Option 2 : 842
Option 3 : 12723
Option 4 : None of these

Ques 18 : 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?
Option 1 : 10
Option 2 : 12
Option 3 : 14
Option 4 : None of these

Ques 19 : Choose the correct answer.
If a and b are natural numbers and a-b is divisible by 3, then a3-b3 is divisible by:
Option 1 : 3 but not by 9

Option 2 : 9
Option 3 : 6
Option 4 : 27

Ques 20 : Choose the correct answer.
What is the greatest positive power of 5 that divides 30! exactly?
Option 1 : 5
Option 2 : 6
Option 3 : 7
Option 4 : 8

Ques 21 : Choose the correct answer.
In how many ways can a number 6084 be written as a product of two different factors ?
Option 1 : 27
Option 2 : 26
Option 3 : 13
Option 4 : 14

Ques 22 : 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?
Option 1 : 1043
Option 2 : 1073
Option 3 : 1103
Option 4 : None of these

Ques 23 : 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:
Option 1 : 11
Option 2 : 121
Option 3 : 242
Option 4 : None of these

Ques 24 : Choose the correct answer.
Let C be a positive integer such that C + 7 is divisible by 5. The smallest positive integer n (>2) such that
C + n2 is divisible by 5 is:
Option 1 : 4
Option 2 : 5
Option 3 : 3
Option 4 : Does not exist

Ques 25 : Choose the correct answer.
Four bells begin to toll together and then each one at intervals of 6 s, 7 s, 8 s and 9 s respectively. The number of times they will toll together in the next 2 hr is:
Option 1 : 14 times

Option 2 : 15 times
Option 3 : 13 times
Option 4 : 11 times

Ques 26 : Choose the correct answer.
The product of two numbers is 16200. If their LCM is 216, find their HCF.
Option 1 : 75
Option 2 : 70
Option 3 : 80
Option 4 : Data inconsistent

Ques 27 : Choose the correct answer.
There are four prime numbers written in ascending order of magnitude. The product of first three is 385 and that of last three is 1001. Find the first number.
Option 1 : 5
Option 2 : 7
Option 3 : 11
Option 4 : 17

Ques 28 : Choose the correct answer.
M and N are two distinct natural numbers. HCF and LCM of M and N are K and L respectively. A is also a natural number, which of the following relations is not possible? Option 1 : K*L=A

Option 2 : K*A=L
Option 3 : L*A=K
Option 4 : None of these

Ques 29 : Choose the correct answer.
On dividing a number by 999,the quotient is 366 and the remainder is 103.The number is:
Option 1 : 364724
Option 2 : 365387
Option 3 : 365737
Option 4 : 366757

Ques 30 : Choose the correct answer.
The difference between two numbers is 1365.When the larger number is divided by the smaller one ,the quotient is 6 and the remainder is 15.The smaller number is:
Option 1 : 240

Option 2 : 270
Option 3 : 295
Option 4 : 360

Ques 31 : Choose the correct answer.

The ratio of two numbers is 3:4 and their HCF is 4.Their LCM is:
Option 1 : 12 Option 2 : 16 Option 3 : 24 **Option 4 : 48**

Ques 32 : Choose the correct answer.
A rectangular courtyard 3.78 meters long and 5.25 meters wide is to be paved exactly with square tiles ,all of the same size. What is the largest size of the tile which could be used for the purpose?

Option 1 : 14 cm **Option 2 : 21 cm**Option 3 : 42 cm Option 4 : None of these

Ques 33 : Choose the correct answer.
The least perfect square which is divisible by 3, 4, 5, 6, 8 is:
Option 1 : 900 Option 2 : 1200 Option 3 : 2500 **Option 4 : 3600**

Ques 34 : Choose the correct answer.
What will be obtained if 8 is subtracted from the HCF of 168, 189, and 231?
Option 1 : 15 Option 2 : 10 Option 3 : 21 **Option 4 : None of these**

Ques 35 : Choose the correct answer.
The largest four digit number which is a multiple of 8, 10,12 and 15 is:
Option 1 : 120 Option 2 : 9600 Option 3 : 9840 **Option 4 : 9960**

Ques 36 : Choose the correct answer.
If logx (0.1) = -1/3, then the value of x is:
Option 1 : 10 Option 2 : 100 **Option 3 : 1000**Option 4 : 1/1000

Ques 37 : Choose the correct answer.
If ax = by, then:
Option 1 : log(a/b) = x/y Option 2 : log(a) / log(b) = x/y **Option 3 : log(a) / log(b) = y/x** Option 4 : None of these

Ques 38 : Choose the correct answer.
If log8 x + log8 (1/6) = 1/3 then the value of x is:
Option 1 : 12 Option 2 : 16 Option 3 : 18 Option 4 : 24

Ques 39 : Choose the correct answer.
If log x + log y = log (x + y), then:
Option 1 : x = y Option 2 : xy=1 Option 3 : y = (x-1)/x **Option 4 : y = x/(x-1)**

Ques 40 : Choose the correct answer.
If log10 7 = a, then log10(1/70) is equal to:
Option 1 : -(1 + a) Option 2 : (1 + a)-1 Option 3 : a/10 Option 4 : 1/10a

Ques 41 : Choose the correct answer.

If log{(a+b)/3} = 0.5(log a + log b), then the correct relation between a and b is:
Option 1 : a2+b2 = 7ab Option 2 : a2-b2 = 7ab Option 3 : (a+b)2 = 2 Option 4 : (a+b)/3 = (1/2)(a+b)
Option 5 : None of these

Ques 42 : Choose the correct answer.
If log x = log 3 + 2 log 2- (3/4) log 16. The value of x is:
Option 1 : 1/2 Option 2 : 1 **Option 3 : 3/2** Option 4 : 2 Option 5 : None of these

Ques 43 : Choose the correct answer.
If log x =(1/2) log y = (1/5) log z, the value of x4y3z-2 is

Option 1 : 0 **Option 2 : 1**Option 3 : 2 Option 4 : 3 Option 5 : None of these

Ques 44 : Choose the correct answer.
If log10000 x = -1/4, then x is given by:
Option 1 : 1/100 **Option 2 : 1/10** Option 3 : 1/20 Option 4 : none of these

Ques 45 : Choose the correct answer.
The value of 3-1/2 log3(9) is:
Option 1 : 3 **Option 2 : 1/3**Option 3 : 2/3 Option 4 : none of these

Ques 46 : Choose the correct answer.
loge xy - loge |x| equals to:
Option 1 : loge x Option 2 : loge |x| Option 3 : - loge x **Option 4 : none of these**

Ques 47 : Choose the correct answer.
The value of (loga n) / (logab n) is given by:
Option 1 : 1 + loga b Option 2 : 1 + logb a Option 3 : loga b Option 4 : logb a

Ques 48 : Choose the correct answer.
If (a4 - 2a2b2 + b4)x-1 = (a-b)2x (a+b)-2, then x equals to:
Option 1 : (a - b) / (a + b) Option 2 : log (a2 - b2) Option 3 : log (a + b) / log (a - b)
Option 4 : log (a - b) /
log (a + b)

Ques 49 : Choose the correct answer.
If a, b, and c are in geometric progression then loga n, logb n and logc n are in:
Option 1 : AP Option 2 : GP **Option 3 : HP**Option 4 : None of these

Ques 50 : Choose the correct answer.
What is the value of antilog10100?
Option 1 : 2 **Option 2 : 10100**Option 3 : 100 Option 4 : 10

Ques 51 : Choose the correct answer.
If antilog x 5 = 30, what can you infer about x?
Option 1 : x is a number between 1 and 2 Option 2 : x is 305 Option 3 : x is a number between 2 and 3
Option 4 : None of these

Ques 52 : Choose the correct answer.
Every time x is increased by a given constant number, y doubles and z becomes three times. How will log(y) and log(z) behave as x is increased by the same constant number?
Option 1 : Both will grow linearly with different slopes Option 2 : Both will grow linearly with same slopes
Option 3 : y will grow linearly, while z will not Option 4 : z will grow linearly, while y will not

Ques 53 : Choose the correct answer.
x triples every second. How will log2x change every second?

Option 1 : It will double every second Option 2 : It will triple every second **Option 3 : It increases by a**
constant amount every second. Option 4 : None of these

Ques 54 : Choose the correct answer.
f(x) grows exponentially with x, how will f(log(x)) grow?
Option 1 : Exponentially **Option 2 : Linearly** Option 3 : Quadratically Option 4 : None of these

Ques 55 : Choose the correct answer.
What is the value of log512 8?
Option 1 : 3 **Option 2 : 1/3**Option 3 : -3 Option 4 : -1/3

Ques 56 : Choose the correct answer.
What is the value of log7 (1/49)?
Option 1 : 2 Option 2 : 1/2 Option 3 : -1/2**Option 4 : -2**

Ques 57 : Choose the correct answer.
Given that log64 x = 2/6, what is the value of x?
Option 1 : 2 **Option 2 : 4** Option 3 : 6 Option 4 : 8

Ques 58 : Choose the correct answer.
If 7x = 85, what is the value of x?
Option 1 : log785 Option 2 : log857 Option 3 : log107 Option 4 : log1085

Ques 59 : Choose the correct answer.
If log102 = 0.3010, what is the number of digits in 264
Option 1 : 19 **Option 2 : 20** Option 3 : 18 Option 4 : None of these

Ques 60 : Choose the correct answer.
What is log110?
Option 1 : 1 Option 2 : 10 Option 3 : 0**Option 4 : Tends to infinity**