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**

Ques 61 : Choose the correct answer.
What is log100 ?
Option 1 : 0 Option 2 : 10 Option 3 : 1 **Option 4 : Not defined**

Ques 62 : Choose the correct answer.
What is the value of log3 (-9)?
Option 1 : 3 Option 2 : 1/3 Option 3 : -3 **Option 4 : Not defined**

Ques 63 : Choose the correct answer.
Rajeev multiplies a number by 10, the log (to base 10) of this number will change in what way?
Option 1 : Increase by 10 **Option 2 : Increase by 1** Option 3 : Multiplied by 10 Option 4 : None of these

Ques 64 : Choose the correct answer.
The logarithm of a very small positive number will tend to which of the following?
Option 1 : 0 **Option 2 : negative infinity** Option 3 : positive infinity Option 4 : 1

Ques 65 : Choose the correct answer.
If n numbers are in geometric progression, the logarithm of the number will be in which of the following?
Option 1 : Geometric Progression **Option 2 : Arithmetic Progression** Option 3 : Harmonic Progression
Option 4 : None of these

Ques 66 : Choose the correct answer.
Which of the following is equivalent to log(a + b) ?
Option 1 : log a + log b Option 2 : log a * log b Option 3 : log a - log b **Option 4 : None of these**

Ques 67 : Choose the correct answer.
What is the value of log3 (1/9) + log 9 81 ?
Option 1 : 2 Option 2 : -2 **Option 3 : 0** Option 4 : 4

Ques 68 : Choose the correct answer.
What is the value of log3 1.5 + log3 6 ?
Option 1 : 2 Option 2 : 2.7 Option 3 : 1.8 Option 4 : None of these

Ques 69 : Choose the correct answer.
Which of the following is log8 x equivalent to?
Option 1 : log2 (x/3) Option 2 : log2 (3x) **Option 3 : (log2x)/ 3** Option 4 : None of these

Ques 70 : Choose the correct answer.
If n numbers are in arithmetic progression, the logarithm of the number will be in which of the following?
Option 1 : Exponentially Option 2 : Linearly Option 3 : Quadratically **Option 4 : None of these**

Ques 71 : Choose the correct answer.
What is the value of log20 1 ?
Option 1 : 0 Option 2 : 1 Option 3 : 20 Option 4 : None of these

Ques 72 : Choose the correct answer.
The unit's digit in the product (771 x 659 x 365) is
Option 1 : 1 Option 2 : 2 **Option 3 : 4** Option 4 : 6

Ques 73 : Choose the correct answer.
1.52 * 0.02251/2 = ?
Option 1 : 0.0375 **Option 2 : 0.3375** Option 3 : 3.275 Option 4 : 32.75

Ques 74 : Choose the correct answer.
If x1/2 / 4411/2 = 0.02, the value of x is:
Option 1 : 0.1764 Option 2 : 1.764 Option 3 : 1.64 Option 4 : 2.64

Ques 75 : Choose the correct answer.
The value of 21/2 upto three places of decimal is
Option 1 : 1.41 Option 2 : 1.412 Option 3 : 1.413 **Option 4 : 1.414**

Ques 76 : Choose the correct answer.
The value of (8-25- 8-26) is:
Option 1 : 7 x 8-25 **Option 2 : 7 x 8-26** Option 3 : 8 x 8-26 Option 4 : None of these

Ques 77 : Choose the correct answer.
If 22n-1 = (1 / 8n-3) then the value of n is:
Option 1 : 3 **Option 2 : 2** Option 3 : 0 Option 4 : -2

Ques 78 : Choose the correct answer.
If 2x = 3y = 6-z, then (1/x + 1/y + 1/z)
is equal to:
Option 1 : 0 Option 2 : 1 Option 3 : 3/2 Option 4 : -0.5

Ques 79 : Choose the correct answer.
What is the remainder when 1723 is divided by 16?
Option 1 : 0 **Option 2 : 1** Option 3 : 2 Option 4 : 3

Ques 80 : Choose the correct answer.
What will be the remainder when 1336 is divided by 2196?
Option 1 : 0 **Option 2 : 1** Option 3 : 12 Option 4 : 2195

Ques 81 : Choose the correct answer.
The roots of the equation 4x-3*2x+2+32=0 would include-
Option 1 : 2, 3 Option 2 : 1, 2, 3 Option 3 : 1, 2 Option 4 : 4, 8

Ques 82 : Choose the correct answer.
If ax =b, by=c and cz =a, then the value of xyz is:
Option 1 : 0 **Option 2 : 1** Option 3 : 2 Option 4 : 3

Ques 83 : Choose the correct answer.
If x = 1+21/2 and y=1-21/2, then x2+y2 is -
Option 1 : 2 Option 2 : 3 **Option 3 : 6** Option 4 : 0

Ques 84 : Choose the correct answer.

If 4x+3 = 2x+7, then the value of x is:
Option 1 : 3 Option 2 : 2 **Option 3 : 1** Option 4 : None of these

Ques 85 : Choose the correct answer.
2x+y = 2*(2)1/2 and 2x-y = 21/2,the value of x is:
Option 1 : 1 Option 2 : 2 Option 3 : 3 Option 4 : 4 Option 5 : None of these

Ques 86 : Choose the correct answer.
If x = 8, y = 27, the value of (x4/3+y2/3)1/2 is:
Option 1 : 5 Option 2 : 6 Option 3 : 7 Option 4 : 8 Option 5 : None of these

Ques 87 : Choose the correct answer.
If xy = yx and x = 2y, the value of y is:
Option 1 : 1 **Option 2 : 2** Option 3 : 3 Option 4 : 4 Option 5 : None of these

Ques 88 : Choose the correct answer.
If 2x * 3y = 18 and 22x * 3y= 36, the value of x is:
Option 1 : 0 **Option 2 : 1** Option 3 : 2 Option 4 : 3 Option 5 : None of these

Ques 89 : Choose the correct answer.
What is the value of 500 ?
Option 1 : 0 **Option 2 : 1** Option 3 : 50 Option 4 : None of these

Ques 90 : Choose the correct answer.
What is the value of 6-2 ?
Option 1 : 1/36 Option 2 : 36 Option 3 : -36 Option 4 : None of these

Ques 91 : Choose the correct answer.
What is the value of 0-10 ?
Option 1 : 0 Option 2 : 1 Option 3 : -10 **Option 4 : None of these**

Ques 92 : Choose the correct answer.
What is the value of 251.5 ?
Option 1 : 325 Option 2 : 32.5 **Option 3 : 125** Option 4 : None of these

Ques 93 : Choose the correct answer.
What is the value of (0.027)1/3?
Option 1 : 0.3 Option 2 : 0.03 Option 3 : 0.003 Option 4 : None of these

Ques 94 : Choose the correct answer.
What is the value of (0.016)1/4?
Option 1 : 0.2 Option 2 : 0.02 Option 3 : 0.002 **Option 4 : None of these**

Ques 95 : Choose the correct answer.
Walking 6/7th of his usual speed, a man is 12 minutes too late. The usual time taken by him to cover that distance is:

Option 1 : 1 hour **Option 2 : 1 hr 12min** Option 3 : 1 hr 15 min Option 4 : 1 hr 20 min

Ques 96 : Choose the correct answer.
A boat running upstream takes 8 hours 48 minutes to cover a certain distance, while it takes 4 hours to cover the same distance running downstream. What is the ratio between the speed of the boat and speed of the water current respectively ?
Option 1 : 2 : 1 Option 2 : 3 : 2 **Option 3 : 8 : 3** Option 4 : Cannot be determined Option 5 : None of these

Ques 97 : Choose the correct answer.
In a 100 m race, A can beat B by 25 m and B can beat C by 4 m. In the same race, A can beat C by:
Option 1 : 21 m Option 2 : 26 m **Option 3 : 28 m** Option 4 : 29 m

Ques 98 : Choose the correct answer.
In a family, the father took 1/5 of the cake and he had 4 times as much as others had, then the family members are:
Option 1 : 16 **Option 2 : 17** Option 3 : 18 Option 4 : None of these

Ques 99 : Choose the correct answer.
The price of sugar is increased by 25%. In order not to increase the expenditure a lady must reduce her consumption by:
Option 1 : 25% **Option 2 : 20%** Option 3 : 30% Option 4 : None of these

Ques 100 : Choose the correct answer.
I read 3/8 of a book on one day, and 4/5 of the remainder on another day. If now there were 30 pages unread, the book contains:
Option 1 : 240 pages Option 2 : 230 pages Option 3 : 340 pages Option 4 : 140 pages Option 5 : None of these

Ques 101 : Choose the correct answer.
In an examination, 70% of students passed in physics, 65% in chemistry, 27% failed in both subjects. The percentage of students who passed is:
Option 1 : 66% **Option 2 : 62%** Option 3 : 69% Option 4 : None of these

Ques 102 : Choose the correct answer.
An article was sold for Rs. 2770. Had it been sold for Rs. 3000 there would have been an additional gain of 10%. Cost Price of the article is:
Option 1 : Rs. 2100 Option 2 : Rs. 2200 **Option 3 : Rs. 2300** Option 4 : Rs. 2400 Option 5 : None of these

Ques 103 : Choose the correct answer.
Rakesh buys a scooter worth Rs. 10,000. He sells it to Mohan at a profit of 10%. If after sometime Mohan sells it back to Rakesh at a loss of 10%, then totally:
Option 1 : Rakesh loses Rs. 100 Option 2 : Rakesh loses Rs. 1100 Option 3 : Rakesh gains Rs. 100
Option 4 : Rakesh gains Rs. 1100 Option 5 : None of these

Ques 104 : Choose the correct answer.

The list price of an electric iron is Rs. 300. If two successive discounts of 15% and 10% are allowed, its selling price will be:
Option 1 : Rs. 229.50 Option 2 : Rs.231.50 Option 3 : Rs.232.50 Option 4 : Rs. 234.50 Option 5 : None of these

Ques 105 : Choose the correct answer.
The rate of compound interest at which a sum of Rs. 8000 amounts to Rs. 8820 in 2 years, is:
Option 1 : 5% Option 2 : 4% Option 3 : 6% Option 4 : 7% Option 5 : None of these

Ques 106 : Choose the correct answer.
A car is 250 metres behind the bus. The car and bus are moving with speed 60 km/hr and 35 km/hr respectively. The car will be ahead of bus by 250 metres in:
Option 1 : 37 seconds Option 2 : 48 seconds **Option 3 : 72 seconds** Option 4 : 68 seconds Option 5 : None of these

Ques 107 : Choose the correct answer.
Mohan walks a certain distance and rides back in 6 hours and 15 minutes. If he walks both ways he takes 7 hours and 45 minutes. If Mohan rides both ways the time which he will take will be:
Option 1 : 4 hours **Option 2 : 19/4** hours Option 3 : 9/2 hours Option 4 : 17/4 hours Option 5 : None of these

Ques 108 : Choose the correct answer.
Population of a village is eight thousand. If 6% men and 10% women are added, population becomes 8,600, then the number of men in the village was:
Option 1 : 4800 **Option 2 : 5000** Option 3 : 5060 Option 4 : 6000

Ques 109 : Choose the correct answer.
If 15 oxen or 20 cows can eat the grass of a field in 80 days, then in how many days will 6 oxen and 2 cows eat the same grass?
Option 1 : 40 Option 2 : 60 Option 3 : 100 **Option 4 : 160**

Ques 110 : Choose the correct answer.
At a certain party the ratio of gents and ladies was 1 : 2. But when 2 gents and 2 ladies left the party, the ratio became 1 : 3. How many people were initially present in the party?
Option 1 : 12 Option 2 : 15 Option 3 : 18 Option 4 : 24

Ques 111 : Choose the correct answer.
Prabodh bought 30 kg of rice at the rate of Rs. 8.50 per kg and 20 kg of rice at the rate of Rs. 9.00 per kg. He mixed the two. At what price (App.) per kg should he sell the mixture in order to get 20% profit?
Option 1 : Rs. 9.50 Option 2 : Rs. 8.50 **Option 3 : Rs. 10.50** Option 4 : Rs. 12.00

Ques 112 : Choose the correct answer.
The cash price of a television is Rs. 4022. A customer paid Rs. 1500 in cash and promised to pay the remaining money in 3 monthly equal instalments at the rate of 5% per annum compound interest. What is the value of each instalment?
Option 1 : Rs. 926.10 Option 2 : Rs. 903.33 Option 3 : Rs. 928.30 Option 4 : Rs. 940.50

Ques 113 : Choose the correct answer.
The population of a village decreases at the rate of 20% per annum. If its population 2 years ago was 10000, what is its present population?
Option 1 : 6000 Option 2 : 10000/144 **Option 3 : 6400** Option 4 : 7600

Ques 114 : Choose the correct answer.
A certain sum of money at simple interest becomes Rs. 1062 in 2 years and Rs. 1183.50 in 3½ years. What is rate of interest per annum?
Option 1 : 7% Option 2 : 6% **Option 3 : 9%** Option 4 : 5%

Ques 115 : Choose the correct answer.
If the simple interest on a sum at 4% per annum for 2 years is Rs. 80, then the compound interest on the same sum for the same period is:
Option 1 : Rs. 86.80 Option 2 : Rs. 86.10 Option 3 : Rs. 88.65 **Option 4 : Rs. 81.60**

Ques 116 : Choose the correct answer.
A man covers a distance of 1200 km in 70 days resting 9 hours a day, if he rests 10 hours a day and walks with speed 1½ times of the previous in how many days will he cover 750 km?
Option 1 : 30 **Option 2 : 31.25** Option 3 : 31 Option 4 : 33

Ques 117 : Choose the correct answer.
A train leaves Delhi at 6.00 a.m. and reaches Agra at 10.00 a.m. Another train leaves Agra at 8.00 a.m. and reaches Delhi at 11.30 a.m. At what time do the two trains cross each other if the distance between Delhi and Agra is 200 km?
Option 1 : 8.45 a.m. **Option 2 : 8.56 a.m.** Option 3 : 9.20 a.m. Option 4 : 9.56 a.m.

Ques 118 : Choose the correct answer.
How many litres of a 90% solution of concentrated acid needs to be mixed with a 75% solution of concentrated acid to get a 30 L solution of 78% concentrated acid?
Option 1 : 24 L Option 2 : 22.5 L **Option 3 : 6 L** Option 4 : 17.5 L

Ques 119 : Choose the correct answer.
If x is a positive number and y = x2, then which of the following is true?
Option 1 : y is always more than x Option 2 : x is always more than y Option 3 : x is always equal to y
Option 4 : None of these

Ques 120 : Choose the correct answer.
Rajiv has a number x in his mind. He finds out that the square of x is less than x. What is the range of x?
Option 1 : x is more than 0 Option 2 : x is less than 1 **Option 3 : x is more than 0, but less than 1**
Option 4 : This is not possible

Ques 121 : Choose the correct answer.
What is the value of: x1.5 * x2 ?
Option 1 : x3 **Option 2 : x3.5** Option 3 : x0.75 Option 4 : None of these

Ques 122 : Choose the correct answer.
What is the value of: (33*812*20)/95 ?
Option 1 : 0 **Option 2 : 3** Option 3 : 1/3 Option 4 : None of these

Ques 123 : Choose the correct answer.
What number should be divided by (0.81)1/2 to give the result as 81?
Option 1 : 9 Option 2 : 81 **Option 3 : 72.9** Option 4 : 0.9

Ques 124 : Choose the correct answer.
If 6(x-3) = 36(x-5), then what is the value of x?
Option 1 : 2 Option 2 : No value will agree Option 3 : -1 **Option 4 : 7**

Ques 125 : Choose the correct answer.
Which is the largest among 21/2, 51/3 and 41/4 ?
Option 1 : (2)1/2 **Option 2 : 51/3** Option 3 : 41/4 Option 4 : None of these

Ques 126 : Choose the correct answer.
What is the value of 10009/1004?
Option 1 : 1005 Option 2 : 105 **Option 3 : 1019** Option 4 : None of these

Ques 127 : Choose the correct answer.
In how many different ways can the letters of the word 'OPTICAL' be arranged so that the vowels always come together ?
Option 1 : 120 **Option 2 : 720** Option 3 : 4320 Option 4 : 2160 Option 5 : None of these

Ques 128 : Choose the correct answer.
In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together ?
Option 1 : 810 Option 2 : 1440 Option 3 : 2880 **Option 4 : 50400** Option 5 : 5760

Ques 129 : Choose the correct answer.
How many 3 digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated ?
Option 1 : 5 Option 2 : 10 Option 3 : 15 **Option 4 : 20**

Ques 130 : Choose the correct answer.
A committee is to be formed comprising 7 members such that there is a simple majority of men and at least 1 women. The shortlist consists of 9 men and 6 women. In how many ways can this be done?
Option 1 : 3,724 Option 2 : 3,630 **Option 3 : 4,914** Option 4 : 5,670

Ques 131 : Choose the correct answer.
From a pack of 52 playing cards, 4 cards are removed at random. In how many ways can the 1st place and 3rd place cards be drawn out such that both are black ?
Option 1 : 64,974 Option 2 : 62,252 Option 3 : 69,447 **Option 4 : 1,592,500**

Ques 132 : Choose the correct answer.

In how many ways can the digits 2,3,5,7 and 9 be placed to form a three-digit number so that the higher order digit is always greater than the lower order digits? (Assume digits are all different).
Option 1 : 8 Option 2 : 9 **Option 3 : 10** Option 4 : 15

Ques 133 : Choose the correct answer.
In how many ways can 4 ladies and 4 men form two mixed doubles teams for a tennis match?
Option 1 : 72 Option 2 : 108 Option 3 : 36 Option 4 : 84

Ques 134 : Choose the correct answer.
In CAT entrance examination paper there are 3 sections, each containing 5 questions. A candidate has to solve 5, choosing at least one from each section. The number of ways he can choose is
Option 1 : 2,500 **Option 2 : 2,250** Option 3 : 2,750 Option 4 : 3,250

Ques 135 : Choose the correct answer.
A boy has 4 different boxes and 5 different marbles. In how many ways can he place the marbles in the boxes such that each box has at least one marble ?
Option 1 : 560 **Option 2 : 240** Option 3 : 420 Option 4 : 36

Ques 136 : Choose the correct answer.
A teacher was trying to form the groups of students in such a way that every group has equal number of students and that number should be a prime number. She tried for first 5 prime numbers, but on each occasion exactly one student was left behind. If t
Option 1 : 0 Option 2 : 2 Option 3 : 3 **Option 4 : 4**

Ques 137 : Choose the correct answer.
Ram buys 7 novels from a book fair. Shyam buys 8 novels from the fair, none of which is common with those bought by Ram. They decide to exchange their books one for one. In how many ways can they exchange their books for the first time ?
Option 1 : 7!x8! Option 2 : 7x8! Option 3 : 7!x8 **Option 4 : 56**

Ques 138 : Choose the correct answer.
In an examination 10 questions are to be answered choosing at least 4 from each of part A and part B. If there are 6 questions in part A and 7 in part B, in how many ways can 10 questions be answered ?
Option 1 : 212 **Option 2 : 266** Option 3 : 272 Option 4 : 312

Ques 139 : Choose the correct answer.
A box contains 20 tickets of identical appearance, the tickets being numbered 1, 2, 3, ….., 20. In how many ways can 3 tickets be chosen such that the numbers on the drawn tickets are in arithmetic progression ?
Option 1 : 18 Option 2 : 33 Option 3 : 56 **Option 4 : 90**

Ques 140 : Choose the correct answer.
A company could advertise about its new product in 4 magazines, 3 newspapers and 2 television channels. But in a later move it decided to give advertisements in only 2 of the magazines, one of the newspapers and one the TV channels. In how many ways can
Option 1 : 30 **Option 2 : 36** Option 3 : 44 Option 4 : None of these

Ques 141 : Choose the correct answer.
In how many ways can the letters of the word 'ERGONOMICS' be rearranged such that the vowels always appear together?
Option 1 : 6! /2! Option 2 : 6!*4! Option 3 : 7! /2! **Option 4 : (7! * 4!)/2!**

Ques 142 : Choose the correct answer.
How many different four letter words can be formed (the words need not be meaningful) using the letters of the word PACIFIC such that the first letter is P and the last letter is F?
Option 1 : 8 Option 2 : 3 Option 3 : 6 Option 4 : 7!/5!

Ques 143 : Choose the correct answer.
The value of 74P2 is
Option 1 : 2775 Option 2 : 150 **Option 3 : 5402** Option 4 : none of these

Ques 144 : Choose the correct answer.
In how many different ways can the letters of the word ' HARDWARE' be arranged in such a way that the vowels always come together.
Option 1 : 120 **Option 2 : 1080** Option 3 : 1440 Option 4 : 4320 Option 5 : 720

Ques 145 : Choose the correct answer.
In how many ways a committee, consisting of 4 men and 10 women can be formed from 6 men and 10 women?
Option 1 : 266 Option 2 : 50 **Option 3 : 15** Option 4 : 8640 Option 5 : none of these

Ques 146 : Choose the correct answer.
Out of 7 consonants and four vowels ,how many words of three consonants and 2 vowels can be formed?
Option 1 : 210 Option 2 : 1050 **Option 3 : 25200** Option 4 : 21400 Option 5 : none of these

Ques 147 : Choose the correct answer.
3 books of mathematics and 5 books of physics are placed on a shelf so that the books on the same subject always remain together .The possible arrangements are .
Option 1 : 1440 Option 2 : 1956 Option 3 : 720 Option 4 : none of these

Ques 148 : Choose the correct answer.
The number of possible selections of one or more questions from 8 given questions, each question having an alternative, is
Option 1 : 28-1 **Option 2 : 38-1** Option 3 : 48-1 Option 4 : none of these

Ques 149 : Choose the correct answer.

A five -digit number divisible by 3 is to be formed using numerals 0,1,2,3,4 and 5 without repetition. The total number of ways this can be done is

Option 1 : 216 Option 2 : 240 Option 3 : 600 Option 4 : 3125

Ques 150 : Choose the correct answer.

Let A be containing 10 distinct elements ,then the total number of distinct functions from A to A IS

Option 1 : 10! **Option 2 : 1010** Option 3 : 210 Option 4 : 210-1

Ques 151 : Choose the correct answer.

A polygon has 44 diagonals, the number of its sides is

Option 1 : 10

Option 2 : 11

Option 3 : 12

Option 4 : 22

Ques 152 : Choose the correct answer.

The number of triangles that can be formed by choosing the vertices from a set of 12 points, seven of which lie on the same straight line is

Option 1 : 105

Option 2 : 115

Option 3 : 175

Option 4 : 185

Ques 153 : Choose the correct answer.

There are 5 letters and five addressed envelopes. the number of ways in which all the letters can be put in wrong envelopes is

Option 1 : 119

Option 2 : 44

Option 3 : 59

Option 4 : 40

Ques 154 : Choose the correct answer.

The number of ways in which 8 different flowers can be strung to form a garland so that 4 particular flowers are never separated is

Option 1 : 960

Option 2 : 2880

Option 3 : 288

Option 4 : 576

Ques 155 : Choose the correct answer.

At an election there are five candidates and three members to be elected , and a voter may vote for any number of candidates not greater than the number to be elected. Then the number of ways in which a voter may vote is
Option 1 : 25
Option 2 : 30
Option 3 : 32
Option 4 : none of these

Ques 156 : Choose the correct answer.
There are n different books and p copies of each. the number of ways in which a selection can be made from them is
Option 1 : np
Option 2 : pn
Option 3 : (p+1)n -1
Option 4 : (n+1)p-1

Ques 157 : Choose the correct answer.
The sides AB, BC, CA of a triangle ABC have 3,4 and 5 interior points respectively on them. The total number of triangles that can be constructed by using these points as vertices is
Option 1 : 220
Option 2 : 204
Option 3 : 205
Option 4 : 195

Ques 158 : Choose the correct answer.
A lady gives dinner party to five guests to be selected from 9 friends .The number of ways of forming the party of 5,given that two of the friends will not attend the party together is
Option 1 : 56
Option 2 : 126
Option 3 : 91
Option 4 : none of these

Ques 159 : Choose the correct answer.
Each question has four choices out of which only one is correct. A candidate has to answer four questions. The number of ways he fails to give all answers correctly, is
Option 1 : 15
Option 2 : 81
Option 3 : 255
Option 4 : 256

Ques 160 : Choose the correct answer.
A college has 10 basketball players. A 5-member team and a captain will be selected out of these 10 players. How many different selections can be made?
Option 1 : 1260
Option 2 : 210
Option 3 : 10C6 * 6!

Option 4 : 10C5 * 6

Ques 161 : Choose the correct answer.
There are 10 yes or no questions. How many ways can these be answered?
Option 1 : 1084
Option 2 : 2048
Option 3 : 1024
Option 4 : 100

Ques 162 : Choose the correct answer.
If the letters of the word CHASM are rearranged to form 5 letter words such that none of the word repeat and the results arranged in ascending order as in a dictionary what is the rank of the word CHASM?
Option 1 : 24
Option 2 : 31
Option 3 : 32
Option 4 : 30

Ques 163 : Choose the correct answer.
A bag contains 4 white, 5 red and 6 blue balls. Three balls are drawn at random from the bag. The probability that all of them are red, is:
Option 1 : 1/22
Option 2 : 3/22
Option 3 : 2/91
Option 4 : 2/77

Ques 164 : Choose the correct answer.
A box contains 20 electric bulbs, out of which 4 are defective. Two bulbs are chosen at random from this box. The probability that at least one of these is defective, is:
Option 1 : 4/19
Option 2 : 7/19
Option 3 : 12/19
Option 4 : 21/95

Ques 165 : Choose the correct answer.
In a class, 30% of the students offered English, 20% offered Hindi and 10% offered both. If a student is selected at random, what is the probability that he has offered English or Hindi ?
Option 1 : 2/5
Option 2 : 3/4
Option 3 : 3/5
Option 4 : 3/10

Ques 166 : Choose the correct answer.
A box contains 6 red balls, 7 green balls and 5 blue balls. Each ball is of a different size. The probability that the red ball being selected is the smallest red ball, is
Option 1 : 1/18
Option 2 : 1/3

Option 3 : 1/6
Option 4 : 2/3

Ques 167 : Choose the correct answer.
If A and B are 2 independent events and P(A)=0.5 and P(B) = 0.4, find P(A/B):
Option 1 : 0.5
Option 2 : 0.4
Option 3 : 0.88
Option 4 : None of these

Ques 168 : Choose the correct answer.
A 5-digit number is formed by the digits 1,2,3,4 and 5 without repetition. What is the probability that the number formed is a multiple of 4?
Option 1 : 1/4
Option 2 : 1/5
Option 3 : 2/5
Option 4 : 1/120
Option 5 : 4

Ques 169 : Choose the correct answer.
In a single throw of dice, what is the probability to get a number greater or equal to 4?
Option 1 : 1/3
Option 2 : 2/3
Option 3 : 1/2
Option 4 : None of these

Ques 170 : Choose the correct answer.
A bag contains 5 oranges, 4 bananas and 3 apples. Rohit wants to eat a banana or an apple. He draws a fruit from the bag randomly. What is the probability that he will get a fruit of his choice?
Option 1 : 3.5/12
Option 2 : 7/12
Option 3 : 5/12
Option 4 : None of these

Ques 171 : Choose the correct answer.
There are two boxes A and B. Box A has three red and four blue balls. Box B has five red and two blue balls. Anya draws a ball from each bag randomly. What is the probability that both balls are red?
Option 1 : 4/7
Option 2 : 8/49
Option 3 : 7/8
Option 4 : 15/49

Ques 172 : Choose the correct answer.
Ravi has a bag full of 10 Nestle and 5 Cadbury chocolates. He draws two chocolates. What is the probability that he got at least one Nestle chocolate?
Option 1 : 2/3

Option 2 : 3/7
Option 3 : 2/21
Option 4 : None of these

Ques 173 : Choose the correct answer.
The probability of having at least one tail in 5 throws of a coin is
Option 1 : 1/32
Option 2 : 31/32
Option 3 : 1/5
Option 4 : None of these

Ques 474 : Choose the correct answer.
A bag contains 5 yellow and 4 brown pencils. If two pencils are drawn, what is the probability that the pencils are of the same colour?
Option 1 : 5/108
Option 2 : 1/6
Option 3 : 5/18
Option 4 : 4/9

Ques 475 : Choose the correct answer.
A single letter is drawn at random from the word, “ASPIRATION”, the probability that it is a vowel is?
Option 1 : 1/2
Option 2 : 1/3
Option 3 : 3/5
Option 4 : 2/5

Ques 476 : Choose the correct answer.
The probability that a man can hit a target is 3/4. He tries 5 times. The probability that he will hit the target at least three times is:
Option 1 : 291/364
Option 2 : 371/464
Option 3 : 471/502
Option 4 : 459/512

Ques 477 : Choose the correct answer.
An unbiased dice is rolled 3 times. The probability that the value on the dice is not more than 4 in any of the 3 rolls is:
Option 1 : 8/27
Option 2 : 1/27
Option 3 : 26/27
Option 4 : 2/3

Ques 478 : Choose the correct answer.
Probability of occurrence of event A is 0.5 and that of event B is 0.2. The probability of occurrence of both A and B is 0.1. What is the probability that none of A and B occur?
Option 1 : 0.3

Option 2 : 0.4
Option 3 : 0.7
Option 4 : None of these

Ques 479 : Choose the correct answer.
An unbiased coin is tossed 5 times. If tail appears on first four tosses, then probability of tail appearing on the fifth toss is:
Option 1 : 1/2
Option 2 : 1
Option 3 : 0
Option 4 : 4/5

Ques 480 : Choose the correct answer.
X and Y are two independent events. The probability that X and Y occur is 1/12, and the probability that neither occur is 1/2, the probability of occurrence of X can be:
Option 1 : 1/3
Option 2 : 1/5
Option 3 : 1/2
Option 4 : 1/10

Ques 481 : Choose the correct answer.
An unbiased coin is tossed n times. If the probability of getting 4 tails equals the probability of getting 7 tails, then the probability of getting two tails is:
Option 1 : 55/2048
Option 2 : 3/4096
Option 3 : 1/1024
Option 4 : None of these

Ques 482 : Choose the correct answer.
Sudhanshu and Pankaj stand in a circle with 10 other persons. If the arrangement of the person is at random, then the probability that there are exactly 3 persons between Sudhanshu and Pankaj is?
Option 1 : 9/11
Option 2 : 2/11
Option 3 : 1/11
Option 4 : None of these

Ques 483 : Choose the correct answer.
Three numbers are chosen from 1 to 30 randomly. The probability that they are not consecutive is:
Option 1 : 1/145
Option 2 : 144/145
Option 3 : 139/140
Option 4 : 1/140

Ques 484 : Choose the correct answer.
A bag is full of 20 bananas and no other fruit. Rajeev draws a fruit from the bag. What is the probability that he will draw a banana?

Option 1 : 1
Option 2 : 0
Option 3 : 1/2
Option 4 : None of these

Ques 485 : Choose the correct answer.
An unbiased dice is rolled 5 times and the outcomes are 1, 2, 3, 4 and 5 respectively. If it is rolled again, what is the probability that the outcome is 6?
Option 1 : 1
Option 2 : 5/6
Option 3 : 1/6
Option 4 : None of these

Ques 486 : Choose the correct answer.
The probability of drawing an apple from a bag of fruits is 6/25. How many apples should Ravi draw, so that there is a chance he will draw 12 apples on average?
Option 1 : 25
Option 2 : 50
Option 3 : 12
Option 4 : None of these

Ques 487 : Choose the correct answer.
What is the probability for a day to be Sunday?
Option 1 : 1/7
Option 2 : 1/5
Option 3 : 52/365
Option 4 : None of these

Ques 488 : Choose the correct answer.
Rani has a bag with three blue and three yellow coins. She takes out a coin, sees its colour and puts it back in the bag. She does this thrice. What is the probability that she saw all blue coins.
Option 1 : 1/8
Option 2 : 1/2
Option 3 : 1/3
Option 4 : None of these

Ques 489 : Choose the correct answer.
Shikhar has a bag with 2 balls, each of which can be black or white with equal probability. Now, he draws out a ball and it turns out to be black. After this event, what is the probability that both balls are black?
Option 1 : 1/2
Option 2 : 1/4
Option 3 : 1
Option 4 : None of these

Ques 490 : Choose the correct answer.

A coin is tossed thrice. What is the probability that the first toss of coin lands head, second tail and third lands tail as well?
Option 1 : 1/16
Option 2 : 3/8
Option 3 : 1/8
Option 4 : None of these

Ques 491 : Choose the correct answer.
The probability of occurrence of event A is 0.3 and that of event B is 0.4. The events are independent. What is the probability of occurrence of both A and B?
Option 1 : 0.7
Option 2 : 0.1
Option 3 : 0.12
Option 4 : Cannot be determined

Ques 492 : Choose the correct answer.
The probability of occurrence of event A is 0.1 and that of event B is 0.2. The events are mutually exclusive. What is the probability of occurrence of both A and B?
Option 1 : 0.1
Option 2 : 0
Option 3 : 1
Option 4 : Cannot be determined

Ques 493 : Choose the correct answer.
The probability of occurrence of event X is 0.8 and that of event Y is 0.05. The events are mutually exclusive. What is the probability of occurrence of either X or Y?
Option 1 : 0.85
Option 2 : 0.75
Option 3 : 0
Option 4 : Cannot be determined

Ques 494 : Choose the correct answer.
10% of the voters did not cast their vote in an election between two candidates. 10% of the votes polled were found invalid. The successful candidate got 54% of the valid votes and won by a majority of 1620 votes. The number of voters enrolled on the vo
Option 1 : 25000
Option 2 : 33000
Option 3 : 35000
Option 4 : 40000