

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

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

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

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.

Ques 5 : Choose the correct answer.

**The number of prime factors of  $(3 \times 5)^{12} (2 \times 7)^{10} (10)^{25}$  is:**

Option 1 : 47

Option 2 : 60

Option 3 : 72

Option 4 : 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

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

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

Ques 9 : Choose the correct answer.

**The smallest number, which is a perfect square and contains 7936 as a factor is:**

Option 5 :

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

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

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.

**$(x^n + y^n)$  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  $90 \times 80 \times 70 \times 60 \times 50 \times 40 \times 30 \times 20 \times 10$ ?**

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  $a^3 - b^3$  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  $C + n^2$  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 :  $K \cdot L = A$

Option 2 :  $K \cdot A = L$

Option 3 :  $L \cdot A = K$

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  $\log_x (0.1) = -1/3$ , 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  $a^x = b^y$ , 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  $\log_8 x + \log_8 (1/6) = 1/3$  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  $\log_{10} 7 = a$ , then  $\log_{10}(1/70)$  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 :  $a^2+b^2 = 7ab$

Option 2 :  $a^2-b^2 = 7ab$

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  $x^4 y^3 z^{-2}$  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  $\log_{10000} x = -1/4$ , 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  $3^{-1/2} \log_3 (9)$  is:

Option 1 : 3

Option 2 : 1/3

Option 3 : 2/3

Option 4 : none of  
these

Ques 46 : Choose the correct answer.

$\log_e xy - \log_e |x|$  equals to:

Option 1 :  $\log_e x$

Option 2 :  $\log_e |x|$

Option 3 :  $-\log_e x$

Option 4 : none of  
these

Ques 47 : Choose the correct answer.

The value of  $(\log_a n) / (\log_{ab} n)$  is given by:

Option 1 :  $1 + \log_a b$

Option 2 :  $1 + \log_b a$

Option 3 :  $\log_a b$

Option 4 :  $\log_b a$

Ques 48 : Choose the correct answer.

If  $(a^4 - 2a^2b^2 + b^4)^{x-1} = (a-b)^{2x} (a+b)^{-2}$ , then x equals to:

Option 1 :  $(a - b) / (a + b)$

Option 2 :  $\log (a^2 - b^2)$

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  $\log_a n$ ,  $\log_b n$  and  $\log_c n$  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  $\text{antilog}_{10} 100$ ?

Option 1 : 2

Option 2 :  $10^{100}$

Option 3 : 100

Option 4 : 10

Ques 51 : Choose the correct answer.

If  $\text{antilog}_x 5 = 30$ , what can you infer about  $x$ ?

Option 1 :  $x$  is a number between 1 and 2

Option 2 :  $x$  is  $30^5$

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  $\log_2 x$  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  $\log_{512} 8$ ?

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  $\log_7 (1/49)$ ?

Option 1 : 2

Option 2 :  $1/2$

Option 3 :  $-1/2$

Option 4 : -2

Ques 57 : Choose the correct answer.

Given that  $\log_{64} x = 2/6$ , 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  $7^x = 85$ , what is the value of  $x$ ?

Option 1 :  $\log_7 85$

Option 2 :  $\log_{85} 7$

Option 3 :  $\log_{10} 7$

Option 4 :  $\log_{10} 85$

Ques 59 : Choose the correct answer.

If  $\log_{10} 2 = 0.3010$ , what is the number of digits in  $2^{64}$

Option 4 : None of

Option 1 : 19

Option 2 : 20

Option 3 : 18

these

Ques 60 : Choose the correct answer.

**What is  $\log_1 10$ ?**

Option 1 : 1

Option 2 : 10

Option 3 : 0

Option 4 : Tends to infinity

Ques 61 : Choose the correct answer.

**What is  $\log_{10} 0$  ?**

Option 1 : 0

Option 2 : 10

Option 3 : 1

Option 4 : Not defined

Ques 62 : Choose the correct answer.

**What is the value of  $\log_3 (-9)$ ?**

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  $\log_3 (1/9) + \log_9 81$  ?**

Option 1 : 2

Option 2 : -2

Option 3 : 0

Option 4 : 4

Ques 68 : Choose the correct answer.



**What is the value of  $\log_3 1.5 + \log_3 6$  ?**

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  $\log_8 x$  equivalent to?**

Option 1 :  $\log_2 (x/3)$

Option 2 :  $\log_2 (3x)$

Option 3 :  $(\log_2 x)/3$

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  $\log_{20} 1$  ?**

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  $(7^{71} \times 6^{59} \times 3^{65})$  is**

Option 1 : 1

Option 2 : 2

Option 3 : 4

Option 4 : 6

Ques 73 : Choose the correct answer.

**$1.5^2 * 0.0225^{1/2} = ?$**

Option 1 : 0.0375

Option 2 : 0.3375

Option 3 : 3.275

Option 4 : 32.75

Ques 74 : Choose the correct answer.

**If  $x^{1/2} / 441^{1/2} = 0.02$ , 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  $2^{1/2}$  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 :  $7 \times 8^{-25}$

Option 2 :  $7 \times 8^{-26}$

Option 3 :  $8 \times 8^{-26}$

Option 4 : None of these

Ques 77 : Choose the correct answer.

If  $2^{2n-1} = (1 / 8^{n-3})$  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  $2^x = 3^y = 6^{-z}$ , 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  $17^{23}$  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  $13^{36}$  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  $4^x - 3 \cdot 2^{x+2} + 32 = 0$  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  $a^x = b$ ,  $b^y = c$  and  $c^z = a$ , 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  $x = 1 + 2^{1/2}$  and  $y = 1 - 2^{1/2}$ , then  $x^2 + y^2$  is -

Option 1 : 2

Option 2 : 3

Option 3 : 6

Option 4 : 0

Ques 84 : Choose the correct answer.

If  $4^{x+3} = 2^{x+7}$ , 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.

$2^{x+y} = 2 \cdot (2)^{1/2}$  and  $2^{x-y} = 2^{1/2}$ , 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  $(x^{4/3} + y^{2/3})^{1/2}$  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  $x^y = y^x$  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  $2^x * 3^y = 18$  and  $2^{2x} * 3^y = 36$ , 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  $50^0$  ?

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  $25^{1.5}$  ?

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

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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

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Ques 95 : Choose the correct answer.

**Walking  $\frac{6}{7}$ th 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

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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

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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

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Ques 98 : Choose the correct answer.

**In a family, the father took  $\frac{1}{5}$  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

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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

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Ques 100 : Choose the correct answer.

**I read  $\frac{3}{8}$  of a book on one day, and  $\frac{4}{5}$  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

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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

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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

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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

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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  $3\frac{1}{2}$  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

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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  $1\frac{1}{2}$  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  $y = x^2$ , 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:  $x^{1.5} * x^2$  ?**

Option 1 :  $x^3$

Option 2 :  $x^{3.5}$

Option 3 :  $x^{0.75}$

Option 4 : None of these

Ques 122 : Choose the correct answer.

**What is the value of:  $(3^3 * 81^2 * 2^0) / 9^5$  ?**

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 2 : No value will

Option 1 : 2

agree

Option 3 : -1

Option 4 : 7

Ques 125 : Choose the correct answer.

**Which is the largest among  $2^{1/2}$ ,  $5^{1/3}$  and  $4^{1/4}$  ?**

Option 1 :  $(2)^{1/2}$

Option 2 :  $5^{1/3}$

Option 3 :  $4^{1/4}$

Option 4 : None of these

Ques 126 : Choose the correct answer.

**What is the value of  $1000^9/100^4$ ?**

Option 1 :  $100^5$

Option 2 :  $10^5$

Option 3 :  $10^{19}$

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 :  $7! \times 8!$

Option 2 :  $7 \times 8!$

Option 3 :  $7! \times 8$

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  ${}^{74}P_2$  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 :  $2^8 - 1$

Option 2 :  $3^8 - 1$

Option 3 :  $4^8 - 1$

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 :  $10^{10}$

Option 3 :  $2^{10}$

Option 4 :  $2^{10} - 1$

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**

$p$

$n$

$n$

$p$

Option 1 : n

Option 2 : p

Option 3 :  $(p+1) - 1$

Option 4 :  $(n+1) - 1$

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 :  $^{10}C_6 * 6!$

Option 4 :  $^{10}C_5 * 6$

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 174 : 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 175 : 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 176 : 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 177 : 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 178 : 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 179 : 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 180 : 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 181 : 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 182 : 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 183 : 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 184 : 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 185 : 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 186 : 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 187 : 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 188 : 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 189 : 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 190 : 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 191 : 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 192 : 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 193 : 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 194 : 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

Ques 195 : Choose the correct answer.

**A, B, C started a business with their investments in the ratio 1:3:5. After 4 months, A invested the same amount as before and B as well as C withdrew half of their investments. The ratio of their profits at the end of the year is:**

Option 1 : 4:3:5

Option 2 : 5:6:10

Option 3 : 6:5:10

Option 4 : 10:5:6

Ques 196 : Choose the correct answer.

**Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1:1:2. If the mixture is worth Rs. 153 per kg, the price of the third variety per kg will be:**



Option 1 : Rs. 169.50      Option 2 : Rs. 170      Option 3 : Rs. 175.50      Option 4 : Rs. 180

Ques 197 : Choose the correct answer.

**A can contains a mixture of two liquids A and B in the ratio 7:5. When 9 litres of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7:9. How many litres of liquid A was contained by the can initially ?**

Option 1 : 10      Option 2 : 20      Option 3 : 21      Option 4 : 25

Ques 198 : Choose the correct answer.

**A man bought a number of clips at 3 for a rupee and an equal number at 2 for a rupee. At what price per dozen should he sell them to make a profit of 20% ?**

Option 1 : Rs 4      Option 2 : Rs 5      Option 3 : Rs 6      Option 4 : Rs 7

Ques 199 : Choose the correct answer.

**Padam purchased 30 kg of rice at the rate of 17.50 per kg and another 30 kg rice at a certain rate. He mixed the two and sold the entire quantity at the rate of Rs. 18.60 per kg and made 20% overall profit. At what price per kg did he purchase the lot**

Option 1 : Rs.12.50      Option 2 : Rs. 13.50      Option 3 : Rs. 14.50      Option 4 : Rs. 15.50      Option 5 : None of these

Ques 200 : Choose the correct answer.

**The manufacturer of a certain item can sell all he can produce at the selling price of Rs. 60 each. It costs him Rs. 40 in materials and labour to produce each item and he has overhead expenses of Rs. 3000 per week in order to operate the plant. The numb**

Option 1 : 200      Option 2 : 250      Option 3 : 300      Option 4 : 400

Ques 201 : Choose the correct answer.

**A sells a bicycle to B at a profit of 20%. B sells it to C at a profit of 25%. If C pays Rs. 225 for it, the cost price of the bicycle for A is:**

Option 1 : Rs. 110      Option 2 : Rs.120      Option 3 : Rs. 125      Option 4 : Rs. 150

Ques 202 : Choose the correct answer.

**If 5% more is gained by selling an article for Rs. 350 than by selling it for Rs. 340, the cost of the article is:**

Option 1 : Rs. 50      Option 2 : Rs. 160      Option 3 : Rs. 200      Option 4 : Rs. 225

Ques 203 : Choose the correct answer.

**Consider the following statements : If a sum of money is lent at simple interest, then the**

**1. Money gets doubled in 5 years if the rate of interest is 50/3 %.**

**2. Money gets doubled in 5 years if the rate of interest is 20%.**

**3. Money becomes**

Option 1 : 1 and 3 are correct      Option 2 : 2 alone is correct      Option 3 : 3 alone is correct      Option 4 : 2 and 3 are correct

Ques 204 : Choose the correct answer.

**The difference between simple interest and compound interest on Rs.1200 for one year at 10% per annum reckoned half-yearly is:**

Option 1 : Rs. 2.50

Option 2 : Rs. 3

Option 3 : Rs. 3.75

Option 4 : Rs. 4

Option 5 :  
None of  
these

Ques 205 : Choose the correct answer.

**A sum of money lent at compound interest for 2 years at 20% per annum would fetch Rs. 482 more, if the interest was payable half-yearly than if it was payable annually. The sum is:**

Option 1 : Rs. 10,000

Option 2 : Rs. 20,000

Option 3 : Rs. 40,000

Option 4 : Rs. 50,000

Ques 206 : Choose the correct answer.

**The simple interest on Rs. 10 for 4 months at the rate of 3 paise per rupee per month is:**

Option 1 : Rs. 1.20

Option 2 : Rs. 1.60

Option 3 : Rs. 2.40

Option 4 : Rs. 3.60

Ques 207 : Choose the correct answer.

**If the compound interest on a sum for 2 years at  $25\frac{1}{2}$  % per annum is Rs. 510, the simple interest on the same sum at the same rate for the same period of time is:**

Option 1 : Rs. 400

Option 2 : Rs. 450

Option 3 : Rs. 460

Option 4 : Rs. 480

Ques 208 : Choose the correct answer.

**I started on my bicycle at 7 a.m. to reach a certain place. After going a certain distance, my bicycle went out of order. Consequently, I rested for 35 minutes and came back to my house walking all the way. I reached my house at 1 p.m. If my cycling s**

Option 1 : 4.92 km

Option 2 : 13.44 km

Option 3 : 14.375 km

Option 4 : 15.476 km

Ques 209 : Choose the correct answer.

**A bag contains 10-paisa, 20-paisa and 25-paisa coins in the ratio 7:4:3. If the total value is Rs. 90, the number of 25-paisa coins in the bag is:**

Option 1 : 120

Option 2 : 160

Option 3 : 280

Option 4 : 300

Ques 210 : Choose the correct answer.

**Find a whole number such that when one of its digit is erased, the resulting number is equal to one-ninth of the original number. The resulting number is also a multiple of 9.**

Option 1 : 90

Option 2 : 83438

Option 3 : 10125

Option 4 : 70847

Ques 211 : Choose the correct answer.

**A ship is moving at a speed of 30 kmph. To know the depth of the ocean beneath it, it sends a radiowave which travels at a speed 200 m/s. The ship receives back the signal after it has moved 500 m. What is the depth of the ocean?**

Option 1 : 4 km

Option 2 : 8 km

Option 3 : 6 km

Option 4 : 12 km

Ques 212 : Choose the correct answer.

**In a town the population grows at a simple rate of 10% in a decade and compounds from decade to decade. Find the population at the beginning of the 1970s if the population at the beginning of the 1990s is 3,63,000 people.**

Option 1 : 30,000

Option 2 : 3,00,000

Option 3 : 30,00,000

Option 4 : 3,15,000

Ques 213 : Choose the correct answer.

**In approximately how many years will a certain sum of money triple itself at 22% simple interest?**

Option 1 : 10 years

Option 2 : 11 years

Option 3 : 9 years

Option 4 : 12 years

Ques 214 : Choose the correct answer.

**A man rows a boat at a speed of 5 km/hr in still water. Find the speed of a river if it takes him 1 hr to row a boat to a place 2.4 km away and return back.**

Option 1 : 1 km/hr

Option 2 : 6 km/hr

Option 3 : 3 km/hr

Option 4 : 4 km/hr

Ques 215 : Choose the correct answer.

**A boat covers 40 km upstream and 90 km downstream in 5 hr. It can also cover 60 km upstream and 60 km downstream in 5 hr. The speed of the water current is**

Option 1 : 4 km/hr

Option 2 : 5 km/hr

Option 3 : 20 km/hr

Option 4 : 25 km/hr

Ques 216 : Choose the correct answer.

**Two champion swimmers start a two-length swimming race at the same time, but from opposite ends of the pool. They swim at constant but different speeds. They first pass at a point 18.5 m from the deep end. Having completed one length, each swimmer take**

Option 1 : 90 m

Option 2 : 45 m

Option 3 : 26.5m

Option 4 : Data insufficient

Ques 217 : Choose the correct answer.

**A and B start together from the same point on a circular track and walk in the same direction till they both again arrive together at the starting point. A completes one circle in 224 s and B in 364 s. How many times will A have passed B?**

Option 1 : 4

Option 2 : 5

Option 3 : 6

Option 4 : 7

Ques 218 : Choose the correct answer.

**36 men can complete a piece of work in 18 days. In how many days will 27 men complete the same work ?**

Option 1 : 12

Option 2 : 18

Option 3 : 22

Option 4 : 24

Option 5 :  
None of these

Ques 219 : Choose the correct answer.

**39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons, working 6 hours a day, complete the work ?**

Option 1 : 10

Option 2 : 13

Option 3 : 14

Option 4 : 15

Ques 220 : Choose the correct answer.

**If 7 spiders make 7 webs in 7 days, then 1 spider will make 1 web in how many days ?**

Option 1 : 1

Option 2 :  $7/2$

Option 3 : 7

Option 4 : 49

Ques 221 : Choose the correct answer.

**Some persons can do a piece of work in 12 days. Two times the number of such persons will do half of that work in:**

Option 1 : 6 days

Option 2 : 4 days

Option 3 : 3 days

Option 4 : 12 days

Ques 222 : Choose the correct answer.

**Ronald and Elan are working on an assignment. Ronald takes 6 hours to type 32 pages on a computer, while Elan takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages ?**

Option 1 : 7 hours 30 minutes

Option 2 : 8 hours

Option 3 : 8 hours 15 minutes

Option 4 : 8 hours 25 minutes

Ques 223 : Choose the correct answer.

**A and B can do a work in 12 days, B and C in 15 days, C and A in 20 days. If A, B and C work together, they will complete the work in:**

Option 1 : 5 days

Option 2 :  $47/6$  days

Option 3 : 10 days

Option 4 :  $47/3$  days

Ques 224 : Choose the correct answer.

**A and B can do a job together in 7 days. A is  $7/4$  times as efficient as B. The same job can be done by A alone in:**

Option 1 :  $28/3$  days

Option 2 : 11 days

Option 3 :  $49/4$  days

Option 4 :  $49/3$  days

Ques 225 : Choose the correct answer.

**A and B can complete a work in 15 days and 10 days respectively. They started doing the work together but after 2 days B had to leave and A alone completed the remaining work. The whole work was completed in:**

Option 1 : 8 days

Option 2 : 10 days

Option 3 : 12 days

Option 4 : 15 days

Ques 226 : Choose the correct answer.

**A, B and C together can complete a piece of work in 10 days. All the three started working at it together and after 4 days A left. Then B and C together completed the work in 10 more days. A alone could complete the work in:**

Option 1 : 15 days

Option 2 : 16 days

Option 3 : 25 days

Option 4 : 50 days

Ques 227 : Choose the correct answer.

**One pipe can fill a tank three times as fast as another pipe. If together the two pipes can fill the tank in 36 minutes, then the slower pipe alone will be able to fill the tank in:**

Option 1 : 81 min

Option 2 : 108 min

Option 3 : 144 min

Option 4 : 192 min

Ques 228 : Choose the correct answer.

**A large tanker can be filled by two pipes A and B in 60 minutes and 40 minutes respectively. How many minutes will it take to fill the tanker from empty state if B is used for half the time and A and B fill it together for the other half ?**

Option 1 : 15 min

Option 2 : 20 min

Option 3 : 27.5 min

Option 4 : 30 min

Ques 229 : Choose the correct answer.

**Three taps A, B and C can fill a tank in 12, 15 and 20 hours respectively. If A is open all the time and B and C are open for one hour each alternately, the tank will be full in:**

Option 1 : 6 hrs.

Option 2 : 20/3 hrs

Option 3 : 7 hrs

Option 4 : 15/2 hrs

Ques 230 : Choose the correct answer.

**Two pipes can fill a tank in 20 and 24 minutes respectively and a waste pipe can empty 3 gallons per minute. All the three pipes working together can fill the tank in 15 minutes. The capacity of the tank is:**

Option 1 : 60 gallons

Option 2 : 100 gallons

Option 3 : 120 gallons

Option 4 : 180 gallons

Ques 231 : Choose the correct answer.

**Ram and Shyam together do a work in 8 days. Both of them began to work. After 3 days Ram fell ill. Shyam completed the remaining work in 15 days. In how many days can Ram complete the whole work?**

Option 1 : 12

Option 2 : 17

Option 3 : 16

Option 4 : 15

Ques 232 : Choose the correct answer.

**Two workers A and B were employed for a work. A takes 8 hour more than the time taken by A and B together. If B takes 4.5 hours more than the time taken by A and B together, how long would A and B take together to complete the work?**

Option 1 : 7 hours

Option 2 : 6 hours

Option 3 : 5 hours

Option 4 : 4 hours

Ques 233 : Choose the correct answer.

**If 5 persons can do 5 times of a work in 5 days, then 10 persons can do 10 times of that work in:**

Option 1 : 10 days

Option 2 : 8 days

Option 3 : 5 days

Option 4 : 2 days

Ques 234 : Choose the correct answer.

**Two taps can fill a cistern in 6 min. and 7 min. respectively. If these taps are opened alternatively for a minute, in what time will the cistern be filled?**

Option 1 : 5.67 min

Option 2 : 6.25 min

Option 3 : 5 min

Option 4 : 45/7 min

Ques 235 : Choose the correct answer.

**Two taps A and B can fill a cistern in 28 min. and 42 min. respectively. Third tap C can empty it in 42 min. If all the three taps are opened, the time taken to fill the cistern is:**

Option 1 : 30 min

Option 2 : 35 min

Option 3 : 28 min

Option 4 : 42 min

Ques 236 : Choose the correct answer.

**49 pumps can empty a reservoir in  $6\frac{1}{2}$  days, working 8 hours a day. If 196 pumps are used for 5 hours a day,**

**then the same work will be completed in:**

Option 1 : 2.6 days

Option 2 : 3 days

Option 3 : 2.5 days

Option 4 : 2 days

Ques 237 : Choose the correct answer.

**16 men complete one-fourth of a piece of work in 12 days. What is the additional number of men required to complete the work in 12 more days ?**

Option 1 : 48

Option 2 : 36

Option 3 : 30

Option 4 : 16

Ques 238 : Choose the correct answer.

**A takes thrice as long to do a piece of work, as B takes. A and B together can do a piece of work in 7.5 days. A alone can do in:**

Option 1 : 30 days

Option 2 : 40 days

Option 3 : 50 days

Option 4 : 60 days

Option 5 :  
None of  
these

Ques 239 : Choose the correct answer.

**A cistern can be filled by two pipes A and B in 10 and 15 hours respectively and is then emptied by a tap in 8 hours. If all the taps are opened, the cistern will be fill in:**

Option 1 : 21 hours

Option 2 : 22 hours

Option 3 : 23 hours

Option 4 : 24 hours

Option 5 :  
None of  
these

Ques 240 : Choose the correct answer.

**A locomotive engine, without any wagons attached to it, can go at a speed of 40 km/hr. Its speed is diminished by a quantity that varies proportionally as the square root of the number of wagons attached. With 16 wagons, its speed is 28 km/hr. The**

Option 1 : 99

Option 2 : 100

Option 3 : 101

Option 4 : 120

Ques 241 : Choose the correct answer.

**If 33 untrained labourers can do a work in 15 days of 12 hr. each, how many trained labourers can do 50% more work in 11 days of 9 hr each ? (It may be assumed that it takes 2 trained labourers to do the work of 5 untrained labourers)**

Option 1 : 42

Option 2 : 36

Option 3 : 90

Option 4 : 100

Ques 242 : Choose the correct answer.

**Which of the following fractions is less than  $\frac{7}{8}$  and greater than  $\frac{1}{3}$  ?**

Option 1 :  $\frac{1}{4}$

Option 2 :  $\frac{23}{24}$

Option 3 :  $\frac{11}{12}$

Option 4 :  $\frac{11}{24}$

Ques 243 : Choose the correct answer.

**$892.7 - 573.07 - 95.007 = ?$**

Option 1 : 224.623

Option 2 : 224.777

Option 3 : 233.523

Option 4 : 414.637

Ques 244 : Choose the correct answer.

Which is the closest approximation to the product  $0.3333 \times 0.25 \times 0.499 \times 0.125 \times 24$  ?

Option 1 : 1/8

Option 2 : 3/4

Option 3 : 3/8

Option 4 : 2/5

Ques 245 : Choose the correct answer.

**Find the value of X :**

$$0.009/X = 0.01$$

Option 1 : 0.0009

Option 2 : 0.09

Option 3 : 0.9

Option 4 : 9

Ques 246 : Choose the correct answer.

**The least among the following is:**

Option 1 : 0.2

Option 2 : 1/0.2

Option 3 : 0.22222222

Option 4 :  $(0.2)^2$

Ques 247 : Choose the correct answer.

**In the following expression, there are two missing digits: \* and #. Find the value of \*.**

$$1*5\#4 / 148 = 78$$

Option 1 : 1

Option 2 : 4

Option 3 : 6

Option 4 : 8

Option 5 :  
None of  
these

Ques 248 : Choose the correct answer.

**What is the value of  $(-5)(4)(2)(-1/2)(3/4)$  ?**

Option 1 : -30

Option 2 : -15

Option 3 : 15

Option 4 : 30

Ques 249 : Choose the correct answer.

**If  $x * y = x^2 + y^2 - xy$ , then the value of  $9 * 11$  is:**

Option 1 : 93

Option 2 : 103

Option 3 : 113

Option 4 : 121

Ques 250 : Choose the correct answer.

**If  $a = 0.1039$ , then the value of  $(4a^2 - 4a + 1)^{1/2} + 3a$  is:**

Option 1 : 0.1039

Option 2 : 0.2078

Option 3 : 1.1039

Option 4 : 2.1039

Ques 251 : Choose the correct answer.

**If a, b, c, d, e are five consecutive odd numbers, their average is:**

Option 1 : 5 (a + 4)

Option 2 : (abcde/5)

Option 3 : 5 (a + b + c + d + e)  
Option 4 : None of these

Ques 252 : Choose the correct answer.

$$(x \% \text{ of } 932) + 30 = 309.6$$

**Find x.**

Option 1 : 25

Option 2 : 30

Option 3 : 35

Option 4 : 40

Ques 253 : Choose the correct answer.

**Which of the following multipliers will cause a number to be increased by 29.7% ?**

Option 1 : 1.297

Option 2 : 12.97

Option 3 : 129.7

Option 4 : 1297

Ques 254 : Choose the correct answer.

**If  $2A = 3B$  and  $4B = 5C$ , then A : C is:**

Option 1 : 4 : 3

Option 2 : 8 : 15

Option 3 : 15 : 8

Option 4 : 3 : 4

Ques 255 : Choose the correct answer.

**0.4777 ... is the recurring decimal for the fraction:**

Option 1 : 4777/100000

Option 2 : 477/100

Option 3 : 437/1000

Option 4 : 43/90

Ques 256 : Choose the correct answer.

**$0.8888 \div 0.011$  is equal to:**

Option 1 : 8.08

Option 2 : 80.8

Option 3 : 0.808

Option 4 : None of these

Ques 257 : Choose the correct answer.

**The ascending order of rational numbers  $-7/10$ ,  $5/-8$ ,  $2/-3$  is:**

Option 1 :  $-7/10$ ,  $2/-3$ ,  $5/-8$

Option 2 :  $-7/10$ ,  $5/-8$ ,  $2/-3$

Option 3 :  $5/-8$ ,  $-7/10$ ,  $2/-3$

Option 4 :  $2/-3$ ,  $5/-8$ ,  $-7/10$

Ques 258 : Choose the correct answer.

**If A is real and  $1 + A + A^2 + A^3 = 40$ , then A is equal to:**

Option 1 : -3

Option 2 : -1

Option 3 : 1

Option 4 : 3

Ques 259 : Choose the correct answer.

**$(1 + 3 + 5 + \dots + 3983) / 1992 = ?$**

Option 1 : 1988

Option 2 : 1992

Option 3 : 1990

Option 4 : None of these

Ques 260 : Choose the correct answer.

**Which one of the following should be added to  $25p^2 + 16q^2$ , so that the resulting sum becomes a perfect square?**

Option 1 :  $20pq$

Option 2 :  $30pq$

Option 3 :  $40pq$

Option 4 :  $50p^2q^2$

Ques 261 : Choose the correct answer.

**$(1.0816)^{1/2} = ?$**

Option 1 : 0.14

Option 2 : 1.4

Option 3 : 1.004

Option 4 : 1.04

Ques 262 : Choose the correct answer.



**If the digit in the units place of a square natural number is 6, then the digit in the tens place will be:**

Option 1 : 1

Option 2 : 3

Option 3 : Even

Option 4 : Odd

Ques 263 : Choose the correct answer.

**$(a+b)^3 - (a-b)^3$  can be factorized as:**

Option 1 :  $2b(3a^2+b^2)$

Option 2 :  $2a(3a^2+b^2)$

Option 3 :  $2b(3b^2+a^2)$

Option 4 :  $2a(a^2+3b^2)$

Ques 264 : Choose the correct answer.

**If  $9x^2+3px+6q$  when divide by  $3x+1$  leaves a remainder  $-3/4$  and  $qx^2+4px+7$  is exactly divisible by  $x+1$ , then the values of p and q respectively will be:**

Option 1 : 0,  $7/4$

Option 2 :  $-7/4$ , 0

Option 3 : Same

Option 4 :  $7/4$ , 0

Ques 265 : Choose the correct answer.

**The equations  $2x+3y-7=0$  and  $10x+15y-35=0$  are:**

Option 1 : Consistent and have unique solution

Option 2 : Consistent and have infinitely many solutions

Option 3 : inconsistent

Option 4 : none of these

Ques 266 : Choose the correct answer.

**The solution of the simultaneous equations  $(1/2)x + (1/3)y = 2$  and  $x+y=1$  is:**

Option 1 :  $x = 0$ ,  $y = 1$

Option 2 :  $x = 1$ ,  $y = 0$

Option 3 :  $x = 2/3$ ,  $y = 3/2$

Option 4 :  $x = 10$ ,  $y = -9$

Ques 267 : Choose the correct answer.

**If the equation  $x^2-2(k+1)x+(9/2)k=0$  has two identical roots then the values of k are:**

Option 1 :  $k=1$ , 2

Option 2 :  $k=2$  or  $1/2$

Option 3 :  $k=3$ ,  $1/2$

Option 4 : none of these

Ques 268 : Choose the correct answer.

**The number which should be subtracted from  $5a^2-3ab+7b^2$  to make it equal to  $a^2+ab+b^2$ , is:**

Option 1 :  $4a^2-4ab+6b^2$

Option 2 :  $4a^2-4ab+5b^2$

Option 3 :  $4a^2+4ab+6b^2$

Option 4 :  $4a^2-3ab+6b^2$

Option 5 : None of these

Ques 269 : Choose the correct answer.

**If  $x = (1/2)(2p+2q-r)$ ,  $y = (1/3)(-p-2q+3r)$  and  $z=(1/5)(3p-4r+5q)$ , then the value of  $2x-3y-5z$  is:**

Option 1 : 0

Option 2 :  $-q$

Option 3 : 2

Option 4 : None of these

Ques 270 : Choose the correct answer.

**The roots of the quadratic equation  $6x^2-5x+1=0$  are:**

Option 1 : 2,3      Option 2 : 1/2,1/3      Option 3 : 3,4      Option 4 : 1/3,1/4      Option 5 : None of these

Ques 271 : Choose the correct answer.

**If  $a = 16$ ,  $b=25$ , the value of  $1/(a^{-1/2} - b^{-1/2})$  is:**

Option 1 : 10      Option 2 : 15      Option 3 : 20      Option 4 : 25      Option 5 : 30

Ques 272 : Choose the correct answer.

**$3a^2(ab+bc+ca) =$**

Option 1 :  $3a^2+3a^2bc+3a^3c$       Option 2 :  $3a^3b+3a^2bc+3c$       Option 3 :  $3a^3b+3a^2bc+3a^3c$       Option 4 :  $a^3b+abc+a^2c$       Option 5 : None of these

Ques 273 : Choose the correct answer.

**$x^4y-xy^4 =$**

Option 1 :  $xy(x-y)(x^2+xy+y^2)$       Option 2 :  $xy(x+y)(x^2-xy+y^4)$       Option 3 :  $x(xy-1)(x^2-xy+y)$       Option 4 :  $(x^3+y^2)xy$       Option 5 : None of these

Ques 274 : Choose the correct answer.

**Factors of  $6a^2-25a+4$  are:**

Option 1 :  $(a+4)(a-6)$       Option 2 :  $(a-4)(6a+1)$       Option 3 :  $(a-4)(6a-1)$       Option 4 :  $(a-6)(a-4)$       Option 5 : None of these

Ques 275 : Choose the correct answer.

**The correct relationship after eliminating x, y and z from  $x+y = a$ ,  $y+z=b$  and  $z+x = c$  and  $x+y+z = m$ , is:**

Option 1 :  $m=x+y+z$       Option 2 :  $2m=a+b+c$       Option 3 :  $m=x-y-z$       Option 4 :  $2m=x-y-z$       Option 5 : None of these

Ques 276 : Choose the correct answer.

**If  $r = at^2$  and  $s = 2at$ , the relation among s, r and a is:**

Option 1 :  $s^2=4ar$       Option 2 :  $s=ar$       Option 3 :  $s=2ar$       Option 4 :  $s^2=ar$       Option 5 : None of these

Ques 277 : Choose the correct answer.

**If  $a+b=6$ ,  $ab=5$ , the value of  $a-b$  is:**

Option 1 : 4      Option 2 : 5      Option 3 : 6      Option 4 : 7      Option 5 : 9

Ques 278 : Choose the correct answer.

**$|X - 5| + 4 > 0$  and  $|X^2| < 4$ . Then x can be:**

Option 1 : 4

Option 2 : 2

Option 3 : 0.5

Option 4 : All of these

Ques 279 : Choose the correct answer.

**If  $f(x)$  = sum of all the digits of x, where x is a natural number, then what is the value of  $f(101)+f(102)+f(103)+\dots+f(200)$ ?**

Option 1 : 1000

Option 2 : 784

Option 3 : 999

Option 4 : 1001

Ques 280 : Choose the correct answer.

**Pawan is a very confused person. Once he wrote  $1+2+3+4+5+6+7+8+9+10 = 100$ . In how many places you need to change '+' with '\*' to make the equality hold good ?**

Option 1 : 2

Option 2 : 4

Option 3 : 3

Option 4 : None of these

Ques 281 : Choose the correct answer.

**What is the highest power of 82 contained in  $83! - 82!$  ?**

Option 1 : 3

Option 2 : 2

Option 3 : 164

Option 4 : None of these

Ques 282 : Choose the correct answer.

**If  $x = 0.75$ , then what is the value of the expression  $(1+x+x^2) + x^3/(1-x)$  ?**

Option 1 : 0.25

Option 2 : 4

Option 3 : 1.75

Option 4 : 1

Ques 283 : Choose the correct answer.

**If a lies between 2 and 3, both included, and b lies between 4 and 6, both included, then what is the ratio of minimum and maximum limits of  $a^2 - b^2$ ?**

Option 1 : -4

Option 2 : 4

Option 3 :  $32/7$

Option 4 : -  $28/6$

Ques 284 : Choose the correct answer.

**If a, b, c are roots of the equation  $1x^3 - 4x^2 + 6.5x + 3.5 = 0$ , then what is the value of  $a^2 + b^2 + c^2$ ?**

Option 1 : 1

Option 2 : 64

Option 3 : 169

Option 4 : 3

Ques 285 : Choose the correct answer.

**If  $|x| + |y| = 7$ , then what is the sum of minimum and maximum values of  $x + y$ ?**

Option 1 :  $3/2$

Option 2 : -7

Option 3 : 7

Option 4 : 0

Ques 286 : Choose the correct answer.

**$832.58 - 242.31 = 779.84 - ?$**

Option 1 : 179.57

Option 2 : 199.57

Option 3 : 295.05

Option 4 : None of

Ques 287 : Choose the correct answer.

**Which is the closest approximation to the product  $0.3333 * 0.25 * 0.499 * 0.125 * 24$  ?**

Option 1 : 1/8

Option 2 : 3/4

Option 3 : 3/8

Option 4 : 2/5

Ques 288 : Choose the correct answer.

**The simplification of  $(0.2 * 0.2 + 0.02 * 0.02 - 0.4 * 0.02) / 0.36$**

Option 1 : 0.009

Option 2 : 0.09

Option 3 : 0.9

Option 4 : 9

Ques 289 : Choose the correct answer.

**If  $1^3 + 2^3 + 3^3 + \dots + 9^3 = 2025$ , then the value of  $(0.11)^3 + (0.22)^3 + \dots + (0.99)^3$  is close to:**

Option 1 : 0.2695

Option 2 : 0.3695

Option 3 : 2.695

Option 4 : 3.695

Ques 290 : Choose the correct answer.

**In a purse there are 30 coins, twenty one-rupee and remaining 50-paise coins. Eleven coins are picked simultaneously at random and are placed in a box. If a coin is now picked from the box, find the probability of it being a rupee coin?**

Option 1 : 4/7

Option 2 : 1/2

Option 3 : 2/3

Option 4 : 5/6

Ques 291 : Choose the correct answer.

**A, B and C are three students who attend the same tutorial classes. If the probability that on a particular day exactly one out of A and B attends the class is 7/10; exactly one out of B and C attends is 4/10; exactly one out of C and A attends is 7/10. I**

Option 1 : 46/100

Option 2 : 63/100

Option 3 : 74/100

Option 4 : 99/100

Ques 292 : Choose the correct answer.

**A box contains 10 balls numbered 1 through 10. Anuj, Anisha and Amit pick a ball each, one after the other, each time replacing the ball. What is the probability that Anuj picks a ball numbered less than that picked by Anisha, who in turn picks a lesser n**

Option 1 : 3/25

Option 2 : 1/6

Option 3 : 4/25

Option 4 : 81/400

Ques 293 : Choose the correct answer.

**A biased die has a probability of 1/4 of showing a 5, while the probability of any of 1, 2, 3, 4, or 6 turning up is the same . If three such dice are rolled, what is the probability of getting a sum of atleast 14 without getting a 6 on any die ?**

Option 1 : 5/24

Option 2 : 9/160

Option 3 : 1/30

Option 4 : 7/160

Ques 294 : Choose the correct answer.

**A, B, C, D and E play the following game. Each person picks one card from cards numbered 1 through 10. The person who picks the greatest numbered card loses and is out of the game. Now the remaining four return their cards to the pack and draw again, and**

Option 1 : 3/14

Option 2 : 4/17

Option 3 : 1/5

Option 4 : 5/24

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Ques 295 : Choose the correct answer.

**Which among the following is greatest:  $5^{1/2}$ ,  $11^{1/3}$ ,  $123^{1/6}$  ?**

Option 1 :  $5^{1/2}$

Option 2 :  $11^{1/3}$

Option 3 :  $123^{1/6}$

Option 4 : All are equal

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Ques 296 : Choose the correct answer.

**What are the unit's digits of  $3^{69}$ ,  $6^{864}$ ,  $4^{725}$  respectively ?**

Option 1 : 9,6 and 6

Option 2 : 6, 6 and 6

Option 3 : 3,6 and 4

Option 4 : None of these

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Ques 297 : Choose the correct answer.

**$A = 1^1 * 2^2 * 3^3 * 4^4 * 5^5 * \dots \dots 10^{10}$ . How many zeroes will be there at the end of A ?**

Option 1 : 6

Option 2 : 15

Option 3 : 10

Option 4 : None of these

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Ques 298 : Choose the correct answer.

**If  $x = 3 + 3^{1/2}$ , then what is the value of  $x^2 + 9/x^2$  ?**

Option 1 :  $15 + 3 * 3^{1/2}$

Option 2 :  $18 + 3 * 3^{1/2}$

Option 3 :  $27 + 3 * 3^{1/2}$

Option 4 : None of these

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Ques 299 : Choose the correct answer.

**If  $x^4 + 1/x^4 = 47$ , then find the value of  $x^3 + 1/x^3$**

Option 1 : 18

Option 2 : 27

Option 3 : 9

Option 4 : 12

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Ques 300 : Choose the correct answer.

**The product of two numbers is 2028 and their H.C.F. is 13. The number of such pairs is:**

Option 1 : 1

Option 2 : 2

Option 3 : 3

Option 4 : 4

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