*MTH001- Elementary Mathematics Final Past Paper*

**Question No: 1      ( Marks: 1 ) – Please choose one**

  Consider the following diagram

Then the shaded region is

**►**A Ç B È C

**►**(A Ç B) – C

► **(B Ç C) – A**

**►**(A Ç C) – B

**Question No: 2      ( Marks: 1 ) – Please choose one**

For sets A and B, if A  B , then

**►**Ac B = A

**►**A B = A

**►**A B = A

**Question No: 3      ( Marks: 1 ) – Please choose one**

If A = {1, 2, 3, 4} then A is proper subset of A.

**►**True

**►**False

**Question No: 4      ( Marks: 1 ) – Please choose one**

{x}Í {x}

**►**True

**►**False

**Question No: 5      ( Marks: 1 ) – Please choose one**

If P and Q are proposition, P is true and Q is false, then P Q is

**►**True

**►**False

**Question No: 6      ( Marks: 1 ) – Please choose one**

A Ç B is a ———of A.

**►**super set

**► subset**

**►**complement set

**Question No: 7      ( Marks: 1 ) – Please choose one**

In ordered pairs order of elements matters.

**►**True

**►**Flase

**Question No: 8      ( Marks: 1 ) – Please choose one**

Let a1,a2,a3,…,an be an arithmetic sequence, then sum of the sequence Sn =

**►**True

**►**False

**Question No: 9      ( Marks: 1 ) – Please choose one**

If p is a proposition then its negation is denoted by

**►**Ùp

**►**Úp

       ► ~p

**►**p¢

**Question No: 10      ( Marks: 1 ) – Please choose one**

Conjunction of two statements p and q is denoted by

**►**pÙq

**►**pÚq

**►**p~q

**►**p ® q

**Question No: 11      ( Marks: 1 ) – Please choose one**

Let A = {1, 2, 3}   and    B = {{1,2}, 3}

then A È B = {1, 2, 3}

**►**True

**►**False

**Question No: 12      ( Marks: 1 ) – Please choose one**

Percentage change =

**►**(Change / initial value) x 100

**►**(Change / final value) x 100

**►**(initial value / Change) x 100

**►**(final value / Change) x 100

**Question No: 13      ( Marks: 1 ) – Please choose one**

|  |  |
| --- | --- |
| **Initial value =** | 1200 |
| **Final value =** | 1500 |
| **increase=** | 300 |
| **% Change   =** |  |

**►**30%

**►**20%

**►**100%

**►**25%

**Question No: 14      ( Marks: 1 ) – Please choose one**

|  |  |
| --- | --- |
| **Initial value =** | 120 |
| **Final value =** | 200 |
| **Increase =** | 80 |
| **% Change   =** |  |

**► 66.67%**

**►**40%

**►**22.5%

**►**30%

**Question No: 15      ( Marks: 1 ) – Please choose one**

The above relation shows \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**►**not a function

**►**one to one function

**► onto function**

**►**many to one function

**Question No: 16      ( Marks: 1 ) – Please choose one**

The nth term of an A. P (Arithmetic Progression) is:

**► a + (n – 1) d**

**► a – (n – 1) d**

**► a – (n – 1) d**

**► a + (n + 1) d**

**Question No: 17      ( Marks: 1 ) – Please choose one**

The nth term of an G. P (Geometric Progression) is:

**► arn-1**

**►**arn+1

**►**ran-1

**►**ran+1

**Question No: 18      ( Marks: 1 ) – Please choose one**

From the truth table,*for p q to be true, if both p and q must have the same truth values.*

**►**True

**► False**

**Question No: 19      ( Marks: 1 ) – Please choose one**

Which of them is a statement?

**►**x+2 is positive

**►**     Logic is interesting

**►** x+y=2

**►**May I come in?

**Question No: 20      ( Marks: 1 ) – Please choose one**

The final statement is called…….

**►**hypothesis

**►**assumption

► conclusion

**►**valid statement

**Question No: 21      ( Marks: 2 )**

A relation R on the set of Natural numbers N is defined as:

    For all   , a**R**b iff  is odd. Is R reflexive?

**Question No: 22      ( Marks: 2 )**

What percent of 36 is 5?

**Question No: 23      ( Marks: 3 )**

Let be defined by

*f*(*x*) =  2*x –*3

Show that *f*is an onto function.

**Question No: 24      ( Marks: 3 )**

**Name the quadrant in which these points is located.**

1. (5,  2)
2. (-3, -1)
3. (-2, 3)
4. (6, 0)
5. (0, -2)
6. (4, -3)

**Question No: 25      ( Marks: 5 )**

Let A= {a, b, c} and R is a relation defined on A such that

R = {(a, b), (b, a), (a, a)}  http://vustudents.ning.com

Is R reflexive and symmetric? Justify your answer.

**Question No: 26      ( Marks: 5 )**

Find the sum of first five terms of following geometric series:

1 + 4 + 16 + ……………