Maths - KCET - 12

# Question 1

If , then find the value of at .

1. 23
2. 24
3. 27
4. 30

# Question 2

Let , then find .

1. 12
2. 9
3. 15
4. 10

# Question 3

If , then find .

1. None of these

# Question 4

If is continuous at , then ?

# Question 5

If , then

# Question 6

The derivative of with respect to is:

1. None of these

# Question 7

If and , find at .

1. 4
2. 3
3. 2
4. 1

# Question 8

Find , if .

1. None of these

# Question 9

If , then

# Question 10

Find .

# Question 11

If , what is at equal to?

1. 0
2. 1
3. -1
4. 2

# Question 12

If , then is:

# Question 13

If , then find .

# Question 14

Find the value of the constant so that the function given below is continuous at

# Question 15

For the function given by , the value of will be equals to:

# Question 16

If  Determine the values of and so that is continuous.

# Question 17

Let, and is even , then is:

1. Reflexive relation on Z
2. Equivalence relation on Z
3. Transitive relation on Z
4. None of the above

# Question 18

Let be a relation defined as , where and . Then, relation is a/an:

1. Reflexive and symmetric
2. Symmetric and transitive
3. Transitive and reflexive
4. Reflexive only

# Question 19

The relation ’has the same father as’ over the set of children is:

1. Only reflexive
2. Only symmetric
3. Only transitive
4. An equivalence relation

# Question 20

Which one of the following is correct?

1. The function is one-one into
2. The function is many-one into
3. The function is one-one onto
4. The function is many-one onto

# Question 21

Which of the following functions, is one-one?

1. None of these

# Question 22

Consider the function such that: . Which one of the following is correct?

1. The function is one-one into
2. The function is many-one into
3. The function is one-one onto
4. The function is many-one onto

# Question 23

Let be the set of natural numbers and be a function given by . Which one of the following is correct?

1. f is one - one and onto
2. f is one - one but not onto
3. f is only onto
4. f is neither one - one nor onto

# Question 24

The function is:

1. Odd
2. Even
3. Neither odd nor even
4. Periodic

# Question 25

If , then what is equal to?

# Question 26

If , then is?

1. 16
2. 4
3. 8
4. 2

# Question 27

If , then

# Question 28

If and are two mappings defined as and , then the value of is:

1. 21
2. 23
3. 27
4. 20

# Question 29

If , then

# Question 30

Let be defined by which is a bijective mapping, then is given by,

# Question 31

If A = 1, 2, B = 1, 2, 3, 4, C = 5, 6 and D = 5, 6, 7, 8. find which one is true.

1. A × (B ∩ C) = (A ∩  B) × C
2. (A ∩ B) × D = A × (B ∩ D)
3. (B ∩ C) × D = B × (C ∩ D)
4. A × C is a subset of B × D

# Question 32

If f = (9, 5), (11, 5), (13, 7 and g = (4, 9), (5, 11), (6, 13). Write the function f o g?

1. (4, 5), (5, 5), (13, 7)
2. (4, 5), (5, 5), (6, 7)
3. (4, 5), (5, 5), (6, 6)
4. (4, 5), (6, 5), (6, 7)

# Question 33

If f ∶ R → R and g ∶ R → R are two mappings defined as f(x) = 2x and g(x) = x + 2, then the value of (f + g) (2) is:

1. 8
2. 10
3. 12
4. 24

# Question 34

Let be defined byThen is:

1. 9
2. 14
3. 5
4. 10

# Question 35

Find the domain and range of following function:<math xmlns="http://www.w3.org/1998/Math/MathML"><mi>f</mi><mo>(</mo><mi>x</mi><mo>)</mo><mo>=</mo><msqrt><mn>25</mn><mo>-</mo><msup><mi>x</mi><mn>2</mn></msup></msqrt></math>

1. , [0,5]
2. , [- 3,3]
3. , [4,0]
4. None of the above

# Question 36

If and then find the value of o

1. 1
2. - 1

# Question 37

Let A = 1, 2, 3. The total number of distinct relations that can be defined over A is:

1. 2
2. 2
3. 2
4. 2

# Question 38

If is given by , then is given by:

1. None of these

# Question 39

If , then find the value of .

# Question 40

is equal to:

# Question 41

# Question 42

Find the value of .

1. None of these

# Question 43

Find .

1. 1

# Question 44

Find the value of .

# Question 45

What is equal to?

# Question 46

Find the value of .

# Question 47

If , then is equal to :

# Question 48

If then find the value of .

1. None of these

# Question 49

holds, when:

1. only
2. only
3. only

# Question 50

Write the principal value of .

# Question 51

Find the value of .

# Question 52

The value of the expression is:

1. None of these

# Question 53

Find the value of .

# Question 54

If then ?

1. 3
2. 5

# Question 55

If , then:

# Question 56

The principal value of lies in the interval

# Question 57

If then what is the value of ?

1. 1
2. 0

# Question 58

The value of is:

# Question 59

If , then equals:

# Question 60

Find the principal value of .