Started on	Thursday, 9 June 2022, 9:20 PM
State	Finished
Completed on	Thursday, 9 June 2022, 9:30 PM
Time taken	10 mins 1 sec
Marks	6.33/12.00
Grade	**5.28** out of 10.00 (**53**%)

Question 1

Incorrect

Mark 0.00 out of 1.00

Let,

f(x) = 2x+3

and

g(x)= 3x+2.

Then

(fof)(x)=

Select one:

- a. 6x+7 ✗
- b. 4x+9
- c. 6x+11
- d. 9x+8

Your answer is incorrect.

The correct answer is: 4x+9

Question 2

Correct

Mark 1.00 out of 1.00

Let U = {a,b,c,d,e} be a universal set. Consider two fuzzy sets of U as,

$\tilde{A}$ = {(0.8, a), (0.3, b), (0.8, d), (0.5, e)}, and

$\tilde{B}$ = {(0.6, a), (0.9, b), (0.1, c), (0.3, d)}.

Then

¬ ($\tilde{A}$) =

Select one:

- a. {(0.8, a), (0.9, b), (0.1, c), (0.8, d), (0.5, e)}
- b. {(0.6, a), (0.3, b), (0.3, d)}
- c. {(0.8, a), (0.9, b), (0.8, d)}
- d. {(0.2, a), (0.7, b), (1,c), (0.2, d), (0.5, e)}, ✓

Your answer is correct.

The correct answer is: {(0.2, a), (0.7, b), (1,c), (0.2, d), (0.5, e)},

Question 3

Correct

Mark 1.00 out of 1.00

Let X = {10,20,30,40,50} be a universal set. Consider a fuzzy set of X as,

$\tilde{A}$ = {(0.8, 10), (1, 20), (0.3, 40), (0.5, 50)}.

and α = 0.50

Then

α-cut of ($\tilde{A}$) =

Select one:

- a. {10,20,50} ✓
- b. {10,20,30,40,50}
- c. {20}
- d. {10,20,40,50}

Your answer is correct.

The correct answer is: {10,20,50}

Question 4

Incorrect

Mark 0.00 out of 1.00

In a group of 40 girls ,11 girls can do dance and 33 can sing.

How many can do both dance and sing?

How many can do dance only?

How many can sing only?

Select one:

- a. 5, 7, 28 ✗
- b. 6, 7, 27
- c. 4, 7, 29
- d. 4, 8, 28

Your answer is incorrect.

The correct answer is: 4, 7, 29

Question 5

Correct

Mark 1.00 out of 1.00

Let A={1, 2, 3, 4}. Determine which of the following Relations are Reflexive.

Note:- Negative marking.

Select one or more:

- a. R4 = {(1, 2), (2, 1), (2,3), (3, 2), (4,1), (1,4) }
- b. R2 = {(1, 1), (2, 2), (3, 3), (4, 4)} ✓
- c. R3 = {(1, 1), (2, 2), (2,3), (3, 3), (4,1), (4, 4), (3,2)} ✓
- d. R1 = {(1, 1), (3, 3), (2, 4), (4, 4), (4,1)}

Your answer is correct.

The correct answers are: R2 = {(1, 1), (2, 2), (3, 3), (4, 4)}, R3 = {(1, 1), (2, 2), (2,3), (3, 3), (4,1), (4, 4), (3,2)}

Question 6

Correct

Mark 1.00 out of 1.00

Let set A = {1,2,3}. Consider a relation R from A to A.

Where

R ={(1,2), (2,2), (1,3), (2,3)}

and

Δ = {(1,1), (2,2), (3,3)}

Then the transitive closure of R is

Select one:

- a. R U R^{-1}
- b. R U R^{2} U R^{3} ✓
- c. R ∩ R^{2} ∩ R^{3}
- d. R U Δ

Your answer is correct.

The correct answer is: R U R^{2} U R^{3}

Question 7

Incorrect

Mark 0.00 out of 1.00

Let set A has 2 elements and set B has 5 elements, then the maximum number of relations from A to B is

Select one:

- a. 1024
- b. 2048
- c. 512
- d. 4096 ✗

Your answer is incorrect.

The correct answer is: 1024

Question 8

Correct

Mark 1.00 out of 1.00

Let R and S are two relation in set A = {1, 2, 3, 4}, where

R = {(2, 2), (2, 3), (1, 4), (3, 1)} and

S = {(1, 2), (2, 2), (2, 3), (3, 1)}. Then

R - S =

Select one:

- a. {(1,4), (1,2)}
- b. { (1, 4)} ✓
- c. {(2, 2), (2, 3), (1, 4), (3, 1), (1, 2)}.
- d. {(2, 2), (2, 3), (3, 1)}

Your answer is correct.

The correct answer is: { (1, 4)}

Question 9

Correct

Mark 1.00 out of 1.00

If U= {5, 3, 8, 7, 10, 13, 15}, then which of the following are subsets of U.

Note:- Negative marking.

Select one or more:

- a. B = {5, 15} ✓
- b. F = {11}
- c. C = { } ✓
- d. D = { 10, 13} ✓
- e. A = {0}
- f. E = {12, 3, 15, 7}

Your answer is correct.

The correct answers are: B = {5, 15}, C = { }, D = { 10, 13}

Question 10

Incorrect

Mark 0.00 out of 1.00

Let A and B be two finite sets such that n(A) = 40, n(B) = 11 and n(A ∪ B) = 27, find n(A ∩ B).

Note:- Write only numerical value.

Answer: 25 ✗

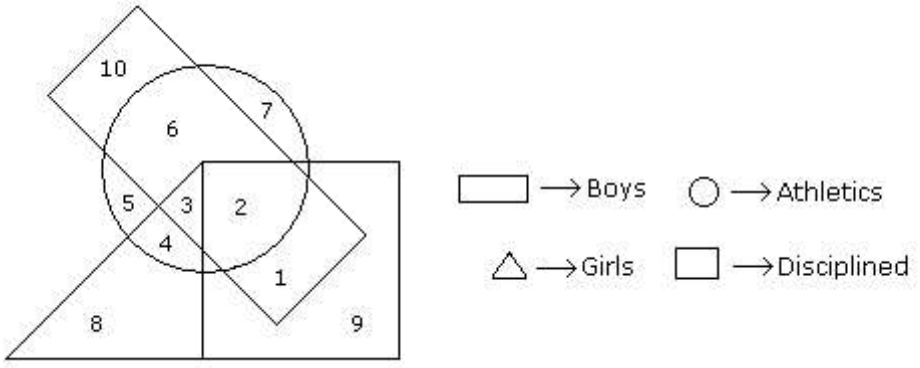
The correct answer is: 24

Question 11

Incorrect

Mark 0.00 out of 1.00

In the following Venn diagram, the number of girls ?



Answer: 4 ✗

The correct answer is: 15

Question 12

Partially correct

Mark 0.33 out of 1.00

Which of the followings are functions?

Note:- Negative Marking

Select one or more:

- [ ] a. f(x) = $\frac{x}{x-1}$
- [ ] b. f(x)= √x
- [ ] c. f(x) = √sinx
- [ ] d. $f(x)^2 = x+1$
- [x] e. f(x) =x+2 ✓
- [ ] f. f(x) = x^2

Your answer is partially correct.

You have correctly selected 1.

The correct answers are: f(x) = $\frac{x}{x-1}$, f(x) = x^2, f(x) =x+2