Unit 4 - Week 2

Assignment 2

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-02-12, 23:59 IST.

1) Let A and B be two sets such that $A - B = \{1, 3, 5, 7, 11\}$, $B - A = \{2, 6, 8\}$ and $A \cap B = \{4, 10\}$, then the set A is equal to *1 point*

- {2, 4, 6, 8, 10}
- {1, 3, 4, 5, 7, 10, 11}
- {1, 2, 3, 4, 5, 6, 7, 8, 10, 11}
- Can not find A, as the information is insufficient.

No, the answer is incorrect.
Score: 0
Accepted Answers:
{1, 3, 4, 5, 7, 10, 11}

2) An empty set is denoted by $\emptyset$. Consider the following statements *1 point*

$A : \emptyset \in \emptyset$
$B : \emptyset \subseteq \emptyset$

- A is true, B is true
- A is true, B is false
- A is false, B is true
- A is false, B is false

No, the answer is incorrect.
Score: 0
Accepted Answers:
A is false, B is true

3) Let A, B be two sets and U be the universal set. Then $A \cap (A \cup B)^C$ is *1 point*

- A
- U
- ϕ
- A – B

No, the answer is incorrect.
Score: 0
Accepted Answers:
ϕ

4) Let $\mathbb{N}$ and $\mathbb{R}$ denote the set of natural numbers and real numbers respectively. Which of the following is an example of disjoint sets? *1 point*

- $A = \{x | x \in \mathbb{N}$ and x is a multiple of 5 $\}$ and $B = \{x | x \in \mathbb{N}$ and x is a multiples of 7 $\}$
- Set of natural numbers $\mathbb{N}$ and set of real numbers $\mathbb{R}$
- $S = \{$ People having birth month January $\}$ and $P = \{$ People having birth year 1994 $\}$
- $M = \{x | x \in \mathbb{N}$ and x is an Odd number $\}$ and $N = \{x | x \in \mathbb{N}$ and x is an even number $\}$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$M = \{x | x \in \mathbb{N}$ *and x is an Odd number* $\}$ *and* $N = \{x | x \in \mathbb{N}$ *and x is an even number* $\}$

5) Let A and B be two sets such that $|A| = 10, |B| = 8, |A \cup B| = 14$, then $|A \Delta B|$ is *1 point*

- 18
- 6
- 10
- 4

No, the answer is incorrect.
Score: 0
Accepted Answers:
10

6) Number of elements in set $S = \{1 + (-1)^n | n \in \mathbb{N}\}$ is/are *1 point*

- 1
- 2
- ∞ (Infinite elements)
- 0

No, the answer is incorrect.
Score: 0
Accepted Answers:
2

7) Let $A = \{1, \{1\}, \{2\}\}$, then which of the following is an element of power set of A? *1 point*

- 1
- {2}
- {1}
- {1, 2}

No, the answer is incorrect.
Score: 0
Accepted Answers:
{1}

8) Let $U = \{1, 2, 3, 4, a, b, c\}$ be the universal set and $L = \{2, 4, a, c\}$ be subsetof U . Then, L^C is *1 point*

- {1, 3, 4, b}
- {1, 3, b}
- {1, 3, a, b}
- {1, 3, b, c}

No, the answer is incorrect.
Score: 0
Accepted Answers:
{1, 3, b}

9) Each student in a class of 100 plays at least one sport Football, Cricket or Tennis. 40 play Football and 30 play Tennis. 15 play Football and Cricket, 10 play Cricket and Tennis and 8 play Football and Tennis. 3 students play all 3 sports. Find the number of students who play Cricket. *1 point*

- 60
- 40
- 50
- 45

No, the answer is incorrect.
Score: 0
Accepted Answers:
60

10) State if the following statement is true or false. *1 point*

$$(A \cup B) - (A \cap B) = (A - B) \cup (B - A)$$

- True
- False

No, the answer is incorrect.
Score: 0
Accepted Answers:
True