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Year & Section: **BSIT-2F**

**SET OPERATIONS**

**PROBLEM:**

**A**

A = {3, 4, 7, 8, 9,11, 15}

B = {2, 5, 7, 8, 11}

C = {6, 9, 10, 11}

U = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15}

**U**

**B**

2

6

10

13

9

11

15

8

3

4

1

5

12

Find the answer of this problem :

7

14

**C**

**SOLUTION:**

To solve this problem, we'll break it down step by step.

**Step 1** : Find the complement of set C, denoted as

C = {6, 9, 10, 11}

U = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15}

The complement of set C (), contains all the elements in the universal set U that are not in set C.

= {1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 15}

**Step 2** : Find the set difference of the complement of set C and set A, denoted as  **\ A.**

A = {3, 4, 7, 8, 9, 11, 15}

The set difference of and A is the elements in that are not in A.

\ A = {1, 2, 5, 12, 13, 14}

**Step 3** : Find the complement of the set difference obtained in Step 2, denoted as .

The complement of the set difference .contains all the elements in the universal set U that are not in the set {1, 2, 5, 12, 13, 14}.

.= {3, 4, 6, 7, 8, 9, 10, 11, 15}

**Step 4** : Find the union of the set obtained in Step 3 with set B, denoted as **.**

B = {2, 5, 7, 8, 11}

Combining the elements of set B with the set obtained in Step 3:

∪ B = {2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15}

**FINAL ANSWER:**

Therefore, the union of and B is **{2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15}**.