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Std. VII Div. 'B' Roll No.

Sl. No.	Topic	Page No.	Date	Grade/ Marks	Sign.
1.	[redacted] Ex- 11 (D)		2.8.21		
2.	12 (A)		2.8.21		
12.	12 (A) Home assignment		2.8.21		
3.	Ex 12 (B)		4 3.8.21		
4.	Ex - 12 (B)		4.8.21		
5.	Ex - 13 (A)		12.8.21		
6.	Ex - 13 (B)		13.8.21		

(iii) $\{x : x + 3 = 2 \text{ and } x \in N\}$

$= x \neq 3 = 2 = x = 2 - 3 = -1$

Which is not a natural number.

It is an empty set

(iv) $P = \{x : 3x = 0\} = \{0\}$ Which is not an empty set.

Hence (ii) and (iii) are empty sets

6. (i) True

(ii) True

(iii) False

(iv) True

(v) False

(vi) false

(vii) false

(viii) False

(ix) True

(x) False

7. ϕ and $\{\}$ are the null sets others are not as there have same element.

These are equivalent sets as these have equal number of elements

(vii) $A = \{0^2, 1^2, 2^2, 3^2, 4^2\} = \{0, 1, 4, 9, 16\}$
$B = \{16, 9, 4, 1, 0\}$

These are equal sets as these have same and equal numbers of elements.

(viii) $F = \{8, 10, 12, 14, 16\}$
$= F = \{$ even natural numbers between 6 and 18 $\}$

$= \{8, 10, 12, 14, 16\}$

(ix) $A = \{$ letters of the word SUPERSTITION $\}$

$B =$ letters of the word JURISDICTION.
$= \{J, U, R, I, S, D, C, T, O, N\}$

These are ~~equal~~ neither equal nor equivalent sets as these have different and unequal elements.

50 (i) The set of triangle having three equal sides. This is not an empty set

(ii) The set of lions in your class This is an empty set

(iii) E = {even natural number less than 10}
= {2, 4, 6, 8}
O = {odd natural number less than 9}
= {1, 3, 5, 7}

These are equivalent sets as both have equal number of elements but no the same.

(iv) A = {Days of the week starting with letter S}
= {Sunday, Saturday}
B = {Days of the week starting with letter T}
= {Tuesday, Thursday}

These are equivalent sets as both have equal numbers of elements.

(v) M = {multiples of 2 and 3 between 10 and 20}
= {12, 14, 15, 16, 18}

These are equal ~~number~~ sets as these have same and equal number of elements.

(vi) P = {Prime number which divide 70 exactly}
= {2, 5, 7}

Q = {prime number which divide 105 exactly}
= {3, 5, 7}

prime number between 7 and 103

= As there is not such prime number between 7 and 10 it is a null set.

(x) Planets of two solar system

= It is an ~~infinite~~ finite set as there are countable.

40. (i) A = {First four natural numbers}
= {1, 2, 3, 4}

= B = {First whole numbers}
= {0, 1, 2, 3}

These are equivalent sets as both have equal number of elements but not same.

(ii) A = Set of letters of the word 'follow'
= {f, o, l, w}

B = Set of letters of the word 'wolf'
= {w, o, l, f}

These are equal sets as these have same and equal elements.

= A = {1, 2, 3, 4, 5, 6, 7, 8, 9} and B = {5, 10, 15}

∴ These are not disjoint sets as there is one element 5, which is a common o

v. {people living at calcutta} and {people living in west bengal}

= These are disjoint sets a people of calcutta are the people of west bengal as calcutta is a city of west bengal.

so, only (ii) is a pair of disjoint sets.

13 (B)

3(i) {0, 1, 2, 6, 8} and {odd numbers less than 10}

= {0, 1, 2, 6, 8} and {1, 3, 5, 7, 9} (Ans)

(ii) {Birds and three}

= These are disjoint sets as there is one element (1) is common

(ii) {Birds and tree}

= These are disjoint sets there is no common element in terms.

(iii) {x : x is a fan of cricket} and {x : x is a fan of football}

= These are not disjoint sets as there can be a person who is fan of both the games.

(iv) A = {Natural numbers less than 10} and
B = {x : x is a multiple of 5}

: It is a infinite as these are countable

(ix) $\{x \mid x$ is a prime number between 7 and 103

: As there is not such prime number between 7 and 10 it is a null set.

x) Planets of two solare system

: It is an ~~infinite~~ finite set as there are countable.

2 (i) {Natural numbers more than 100}

= It is an infinite set

(ii) A = {x : x is an integar between 1 and 2}

= It is a null set

(iii) B = {x : x ∈ W, x is less than 100}

= It is a finite set it has 100 elements

(iv) set of mountains in the world

= It is an infinite set

(v) {multiples of 8}

= It is an infinite set

(vi) {Even numbers not divisible by 2}

= It is a null set

(vii) {squares of natural numbers}

= It is an infinite set

(viii) {coins used in India}

1(i) $n(A) = 366$

(ii) $n(B) = 12$

(iii) $n(C) = 7$

(iv) $n(D) = 5$

(v) $n(E) = 3$

(vi) $n(F) = 7$

(vii) $n(G) = 5$