

Ex-10.D

1. i)  $\{3, 5, 7, \dots\}$

ans:- Infinite

ii)  $\{1, 2, 3, 4\}$

ans:- Finite

iii)  $\{\dots, -3, -2, -1, 0, 1, 2\}$

ans:- Infinite

iv)  $\{20, 30, 40, 50, \dots, 200\}$

ans:- Finite

2. A i) Empty

A ii) Not empty

A iii) Empty

A iv) Empty

A v) Not empty

3. i)  $\{3, 5, 7\}$  and  $\{5, 3, 7\}$

ans:- Equal

ii)  $\{8, 6, 10, 12\}$  and  $\{3, 2, 4, 6\}$

ans:- Equivalent

iii)  $\{7, 7, 2, 2\}$  and  $\{1, 2, 7\}$

ans:- Equal

iv)  $\{2, 4, 6, 8, 10\}$  and  $\{a, b, d, e, m\}$

ans:- Equivalent.

$A \cap B \neq \emptyset$

4.  $A \cap B \neq \emptyset$

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6. i) Equivalent      v) True

ii) Equal      vi) False

iii) Equal      vii) True

iv) Equal      viii) False

v) Equal      ~~ix)~~

vi) Equivalent

7. i) Finite

ii) Infinite

iii) Finite

iv) Finite

v) Infinite

vi) Finite

8. i) False

ii) False

iii) True

iv) True

9. i) Disjoint sets; as no girl can be of age below 15 yrs and also above 15 yrs.
- ii) Overlapping sets; as boys above 27 yrs are also above 20 yrs.
- iii) Overlapping sets; as natural no's from 50 to 59 are common to both the sets.
- iv) Overlapping sets; as students of class IX studying in I.C. or S.E Board are common.
- v) Overlapping sets; as natural no. 24 is common to both the sets.
- vi) Disjoint sets; as no letter is common to both the sets.