13 | Blood Relationship

In the examinations questions based on Blood Relationship are related to our daily life. There is a long chain of relationships exists in the families of all of us. The examiner asks the questions on simple relationships but using indirect links of these relationships. In order to solve these problems, analyse the given statements carefully and systematically.
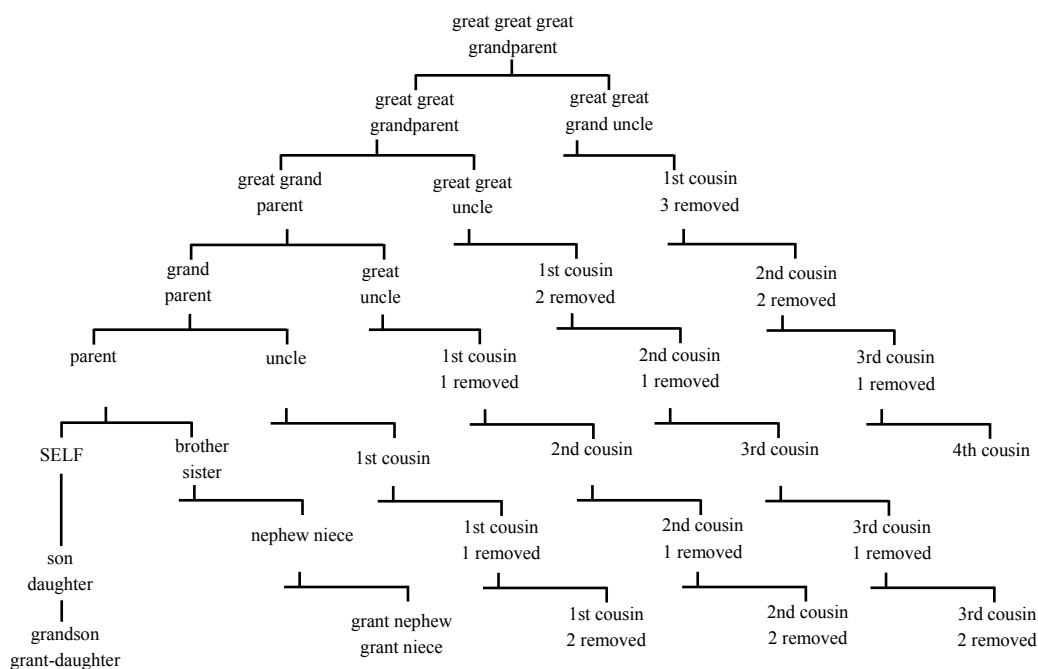
For examples:
- My father's only child means I (Myself).
- Anita's husband's father-in-law's only daughter means Anita (Herself).

Note

While attempting questions on Blood Relationship, first read all the pieces of information as quickly as possible and then point out the two persons between whom relationship is to be established. Finally, try to corelate the given relationships. While concluding relationship between two persons be careful about the sexes of the persons involved. Majority of the students tend to define or derive relationship without caring for sex of the persons.

Blood Relations

For solving problems involving blood relationships, sometimes it would be convenient if a family tree is drawn. Students are required to analyse the given statements and find out the relationship.

- Mother's or father's son   :   Brother
- Mother's or father's daughter   :   Sister
- Mother's or father's brother   :   Uncle (paternal uncle if he is father's brother and maternal uncle if he is mother's brother)
- Mother's or father's sister   :   Aunt

- Mother's or father's father   :   Grandfather
- Mother's or father's mother   :   Grandmother
- Grandmother's brother   :   Granduncle
- Grandmother's sister   :   Grandaunt
- Grandfather's brother   :   Granduncle
- Grandfather's sister   :   Grandaunt
- Son's wife   :   Daughter-in-law
- Daughter's husband   :   Son-in-law
- Husband's or wife's sister   :   Sister-in-law
- Husband's or wife's brother   :   Brother-in-law
- Brother's of sister's son   :   Nephew

- Brother's or sister's daughter : Niece
- Paternal grandfather's only son : Father
- Paternal grandmother's only son : Father
- Grandfather's son : Father/uncle
- Grandmother's son : Father/uncle
- Paternal grandfather's only : Mother Daughter-in-law
- Paternal grandmother's only : Mother Daughter-in-law
- Uncle's or aunt's son or daughter : Cousin
- Sister's husband : Brother-in-law
- Brother's wife : Sister-in-law
- Children of same parents : Siblings (could be all brothers, all sisters or some brother and some sisters)
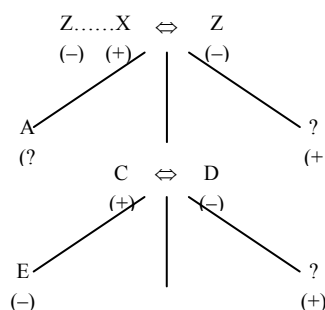- Husband or wife : Spouse

The following points are to be remembered while drawing a family tree.

- The order of hierarchy is to be strictly maintained. To make this point clear, consider a family of a person A, consisting of his grandparents, parents, uncles, aunts, sisters, brothers, wife, children, and grandchildren.
- Grandfather and grandmother will come in the first stage of the family tree.
- Mother, father, uncles and aunts will come in the second stage.
- Sisters, brothers, and wife will come in the third stage along with A.
- Sons and daughters will come in the fourth stage.
- Grandsons and daughters will come in the last stage.

Some symbols are used to indicate relationships between the two persons, as explained below:
- Vertical or diagonal lines are used to represent parent-child relationships.
- Double horizontal lines with an arrow on both sides ($\Leftrightarrow$) are used to represent husband-wife relationship.
- Dotted horizontal line (……) is used to represent brother-sister relationship.
- Plus sign (+) is used to indicate a male and minus sign (−) is used to indicate a female.
- Whenever the information is not clear or concealed, the sign '?'is used.

To understand the concept of a family tree clearly, observe the following family tree.

The above family tree gives the following information:
- X and Y is a couple, where X is the husband and Y is the wife.
- X has a sister Z.
- The couple X and Y have three children, namely A, C and another son whose name is not given. C is a son and the sex of A is not known.
- C is married to D and they have a daughter E and a son whose name is not known.
- A and the other son of X are unmarried.

In some questions, the relationship between two persons is given in a roundabout manner by relating them through other people. Students are required to analyse the series of relationships given in the problems carefully in order to determine the relationship between the two given persons.

The information given in the problems can be broadly classified into three categories:
(a) Actual information
(b) Useful secondary information
(c) Negative information

Example 1. Pointing to a man in a photograph, a woman said, 'His brother's father is the only son of my grandfather'. How is the woman related to the man in the photograph?

    a. Aunt   **b.** Daughter

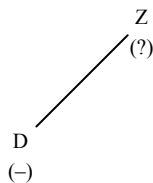   **c.** Grandmother   **d.** Sister

Solution: (d) Presume the name of the woman showing the photograph as X and the name of the man in the photograph as Y. Y's brother's father means Y's father and he is the only son of X's grandfather. This clearly indicates that Y's father and X's father is one and the same. So, X is Y's sister.

Example 2. Six members of Kapoor's family A, B, C, D, E, and F are traveling in a sumo.
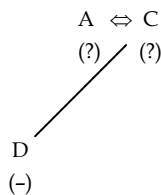(a) B is the son of C, but C is not the mother of B.
(b) A and C are a married couple.
(c) E is the brother of C.

(d)   D is the daughter of A.

(e)   F is the brother of B.

1.   How many children do A have?

    a. One   **b.** Three   **c.** Four   **d.** Two

2.   How is E related to B?

    a. Brother   **b.** Uncle

    c. Father   **d.** Cannot be determined

3.   Who is the mother of B?

    a. A   **b.** E   **c.** D   **d.** F

4.   Which of the following is a pair of females?

    a. B, D   **b.** A, E   **c.** A, D   **d.** D, F

5.   How many males are there in Kapoor's family?

    a. 3   **b.** 5   **c.** 2   **d.** 4

6.   Who is the wife of E?

    a. A   **b.** F

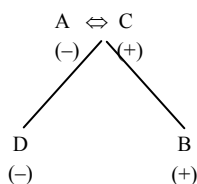   **c.** B   **d.** Cannot be determined

Solution (1-6): In this example, we are required to establish the relationship within the whole family and not just between two individuals. If we construct a family tree, it enables us to answer all the questions quickly and accurately. All the statements in the example are actual information. Statement (a) and statement (d) provide information regarding the parent-child relationship. We can start analysing with either of these two statements. We shall start with statement (d). D is the daughter of A. On representing this relation, the family tree starts as given below.
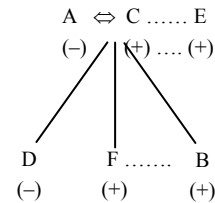

Next go to statement (b). A and C are a married couple.

Now, statement (a) states that B is the son of C, but C is not the mother of B. From this it is clear that C is the father of B. This means C is a male, and hence, A must be a female.

According to statement (c), E is the brother of C, and according to statement (5), F is the brother of B. The final family tree now appears as shown below.
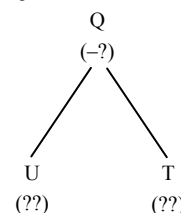

With the help of the above family tree, we can answer all the questions.

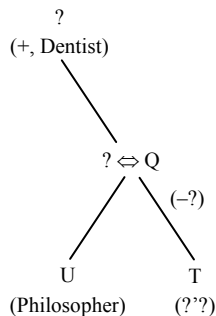**Answer: 1. (b)   2. (b)   3. (a)   4. (c)   5. (d)   6. (d)**

Example 3. P, Q, R, S, T, and U are six members of a family, and each of them is in a different profession, namely, philosopher, manager, advocate, businessman, dentist, and contractor.

(a)   In this group, there are two married couples.

(b)   The dentist is the grandfather of U who is a philosopher.

(c)   The manager S is married to P.

(d)   R, the businessman, is married to the advocate.

(e)   Q is the mother of U and T.

1.   What is the profession of P?

    a. Dentist   **b.** Businessman

    c. Manager   **d.** Advocate

2.   How many male members are there in the family?

    a. Three   **b.** Two

    c. Four   **d.** Can't be determined

3.   Which of the following is one of the two pairs of couples in the family?

    a. P, R   **b.** P, S

    c. P, Q   **d.** Can't be determined

4.   What is the profession of T?

    a. Businessman   **b.** Philosopher

    c. Dentist   **d.** Contractor

5.   What is the relation between P and T?

    a. Uncle   **b.** Grandfather

    c. Brother   **d.** Father

Solution: In the above example, let us consider statement (e) which states that Q is the mother of U and T.

Next, let us look for the statement which gives clue on relationship involving Q, U, or T. In statement (b), it is given that the dentist is the grandfather of U who is a philosopher. Since Q is the mother of U, she must be the daughter-in-law of the dentist.

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                  ?
              (+, Dentist)


                  ? ⇔ Q
                      (–?)


            U               T
        (Philosopher)     (?'?)
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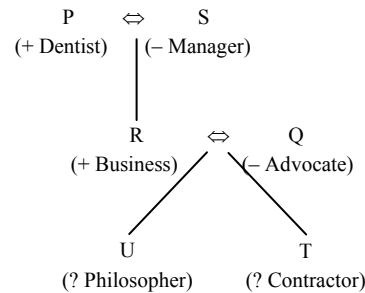
The other two remaining statements are (c) and (d).

S (? Manager) ⇔ P (??)   (The manager S is married to P)

R (Businessman) ⇔ ? (– Advocate)   (R, the businessman, is married to the advocate)

Now, try to co-relate all the above three diagrams.

Since all the actual information has been used, let us read statement (a) which states that there are two married couples in the family. It implies that the dentist's wife is alive. She must be the manager S and the dentist must be P because the other couple is businessman and advocate. Now, only R is remaining who must be the husband of Q, and hence Q must be an advocate. The final family tree appears as under.

```
         P       ⇔       S
     (+ Dentist)   |  (– Manager)


          R      ⇔       Q
     (+ Business) /  (– Advocate)


        U               T
    (? Philosopher)   (? Contractor)
```

Observe that the sex of T and U can't be determined. But the profession of T must be contractor based on the USI..

Answer: 1. (a)   2. (b)   3. (b)   4. (d)   5. (b)

Multiple Choice Questions

Grandparents

1. Geeta, who is Surendra's daughter, says to Seema, "Your mother Sarita is the younger sister of my father, who is the third child of Deepak." How is Deepak related to Seema?
   a. Maternal uncle   b. Grandfather
   c. Data Inadequate   d. None of these

2. Q's mother is sister of P and daughter of M. S is daughter of P and sister of T. How is M related to T?
   a. Grandmother
   b. Father
   c. Grandfather
   d. Grandfather or Grandmother

3. Pointing towards Seema, Bunty Said, "I am the only son of the mother's son." How is Seema related to Bunty?
   a. Niece   b. Aunt   c. Cousin   d. Mother

4. A boy goes to see a moves and finds a man who is his relative. The man is the husband of the sister of his mother. How is the man related to the boy?
   a. Nephew   b. Uncle
   c. Brother   d. None of these

5. Pointing towards a person, a man said to woman, "His mother is the only daughter of your father." How is the woman related to the person?
   a. Daughter   b. Sister   c. Mother   d. Wife

6. Pointing towards a female in the picture, Suman said, "She is the mother of Riya, whose father is my son." How is Suman realted to the female in the picture?
   a. Aunt   b. Mother
   c. Data Inadequate   d. None of these

7. Sarita is mother-in-law of Deepa who is sister-in law of Rajendra. Surendra is father of Ravindra, the only brother of Rajendra. How is Sarita related to Rajendra?
   a. Wife   b. Mother
   c. Aunt   d. Mother-in-law

8. A, B and C are sister. D is the brother of E and E is the daughter of B. How is A related to D?
   a. Sister   b. Cousin
   c. Nice   d. Aunt

9. A and B are sister's. R and S are brother. 'A's daughter is R' sister. What is B's relation to S?
   a. Grandmother   b. Ant
   c. Sister   d. Mother

10. A and B are sister. A is the mother of D. B has a daughter C who is married of F. G is the husband of A. How is B related to F ?
    a. Sister-in-law   b. Mother-in-law
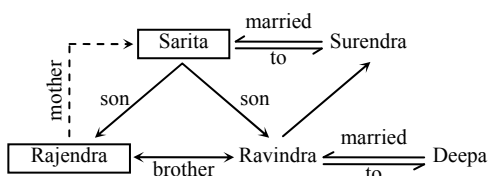   c. Mother   d. None of these

11. My mother's fathers' only daughter's only son is related to me as
    a. myself
    b. brother
    c. cannot be determined
    d. Either myself or brother

12. How is Rajendra's mother's husband's mother's granddaughter related to Rajendra?
    a. Aunt
    b. Sister
    c. Daughter
    d. Cannot be determined

13. Pointing to a boy, Nada said, 'He is the son of my grandfather's only child. How is Nada related to that boy?
    a. Cousin
    b. Sister
    c. Aunt
    d. None of these

14. Showing a lady in the park, Vikash said, 'She is the daughter of my grandfather'. How is Vikash related to that lady?
    a. Father
    b. Uncle
    c. Cousin
    d. Brother

15. Pointing to Roshan, Deepa says, "He is the son of my grandfather's only son." How is roshan related to Deepa?
    a. Cousin
    b. Brother
    c. Uncle
    d. None of these

16. Sushma told Seema, "The girl I met yesterday at the beach was the youngest daughter of the brother-in-law of my friend's mother." How is the girl related to Sushma's friend?
    a. Friend
    b. Niece
    c. Daughter
    d. Cousin

17. A may said to a lady, "Your mother's husband's sister is my aunt." How is the lady related to the man?
    a. Granddaughter
    b. Aunt
    c. Daughter
    d. Sister

18. Looking at a portrait of a man, Harendra said, "His mother is the wife of my father's son. Brothers and sister I have none. "At whose portrait was Harendra looking?"
    a. His nephew
    b. His cousin
    c. His uncle
    d. His son

19. Pointing towards a girl, a professor said, "She is the only daughter of the only son of the wife of the father-in-law of my wife." How is the girl related with the professor?
    a. Daughter-in-law
    b. Daughter
    c. Niece
    d. None of these

20. D's Brother's sister's father's brother is S and S' daughter is B. How is D related to B?
    a. Niece
    b. Uncle
    c. Nephew
    d. Cousin

21. How is Sushma's daughter-in-law's son's son related to Sushma's husband?
    a. Great grand son-in-law
    b. Grandson
    c. Cannot be determined
    d. None of these

22. If Twinkle says Riya's father Ravindra is the only son of my father-in-law Mahendra, then how is Priyanka, who is the sister of Riya related to Mahendra?
    a. Daughter
    b. Daughter-in-law
    c. Wife
    d. None of these

23. A is the uncle of B, who is the daughter of C and C is the daughter-in-law of P. How is a related to P?
    a. Brother
    b. Son
    c. Data inadequate
    d. None of these

24. A is father of X; B is mother of Y. the sister of X and Z is Y which of following statements is definitely not true.
    a. B is the mother of Z
    b. X is the sister of Z
    c. Y is the son of A
    d. b has one daughter

25. D's father's mother's son's wife is related to D as:
    a. Grandmother
    b. Mother
    c. Aunt
    d. Cannot be determined

26. A family has a man, his wife, their four sons and their wives. The family of every son also has 3 sons and one daughter. Find out the total number of male members in the whole family.
    a. 4
    b. 8
    c. 12
    d. 17

27. Ravindra goes to visit his sister who has a daughter Taun. Tanu was playing carom with Bunty. How is Ravindra related to Bunty?
    a. Cousin
    b. Brother
    c. Uncle
    d. Data inadequate

28. Pointing to Priyanka, father of Bunty says, "She is the daughter of the daughter of the wife of the only son of the grandfather of my sister." How is Sonam related to Priyanka if Sonam is the sister of Bunty's father?
    a. Aunt
    b. Cannot be determined
    c. Niece
    d. None of these

29. Two persons were quarrelling over their relationship with a man in a photograph. One was saying that the man was his grandfather, and another was also saying the same. But they were not brothers. What was the relationship between them?
    a. Cousins
    b. Data inadequate
    c. Brother and sister
    d. None of these

30. P's father's father is the husband of Q's mother's mother. How is P related to Q?
    a. Cousin
    b. Sister
    c. Brother
    d. Cannot be determined

ANSWERS

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
b	d	b	b	c	d	b	d	b	b
11.	**12.**	**13.**	**14.**	**15.**	**16.**	**17.**	**18.**	**19.**	**20.**
d	d	b	d	b	d	d	d	b	d
21.	**22.**	**23.**	**24.**	**25.**	**26.**	**27.**	**28.**	**29.**	**30.**
d	d	b	c	d	d	d	b	b	d

SOLUTIONS

1. **(b)** Geeta ⇒ Surendra's daughter.
   Deepak ⇒ father of Surendra.
   Deepak ⇒ brother of Sarita.
   Sarita ⇒ mother of Seema.
   Therefore, 'Deepak' is the grandfather of 'Seema'.

2. **(d)** S ⇒ Daughter of P.
   S ⇒ Sister of T.
   So, T ⇒ Daughter of P.
   Sister of P ⇒ Daughter of M.
   So, P ⇒ Son or daughter of M.
   T ⇒ Grand daughter of M.

3. **(b)** Seema's mother's son ⇒ Seema's brother
   So, son of Seema's brother ⇒ Bunty
   Therefore, 'Seema' is the aunt of 'Bunty'

4. **(b)** Sister of one's mother
   ⇒ one's maternal aunt.
   So, the man is the husband of the boy's maternal aunt.
   Therefore, the 'man' is the uncle of the 'boy'.

5. **(c)** Only daughter of woman's father
   ⇒ she herself.
   So, person ⇒ woman's son
   Therefore, the 'woman' is the mother of the person.

6. **(d)** Riya ⇒ Daughter of Suman's son.
   Female in the picture ⇒ Riya's mother.
   So, Female in the picture ⇒ Suman's son's wife.
   Therefore 'Suman' is the mother-in-law of the 'female in the picture'

7. **(b)** Sarita ⇒ Mother-in-law of Deepa.
   Deepa ⇒ Sister-in-law of Rajendra.
   Surendra ⇒ Father of Ravindra.
   Ravindra ⇒ only brother of Rajendra.
   The blood relationship tree/chart can be constructed as given below:

Therefore, 'Sarita' is the Mother of 'Rajendra'.

8. **(d)** E ⇒ daughter of B.
   D ⇒ brother of E.
   A ⇒ sister of B.
   Therefore 'A' is the aunt of 'D'.

9. **(b)** Daughter of A ⇒ Sister of R.
   So, R and S ⇒ A's sons or sons of A.
   [∵ A and B are sister and R and S are brothers]
   So, B ⇒ sister of A.
   Therefore, 'B' is the aunt of 'S'.

10. **(b)** A ⇒ D's mother.
    F ⇒ C's husband.
    So, 'C' is wife of 'F'
    B ⇒ C's mother.
    Therefore, 'B' is the mother-in-law of 'F'.
    [*Note:* Wife's mother ⇒ Mother-in-law.]

11. **(d)** My mother's father's only daughter ⇒ my mother.
    Therefore, my mother's only son ⇒ either-myself or my brother.

12. **(d)** Rajendra's mother's husband
    ⇒ Rajendra's father.
    Rajendra's father's mother
    ⇒ Rajendra's grandmother
    So, Rajendra's grandmother's granddaughter
    ⇒ Rajendra's sister or cousion.
    Therefore, the relationship cannot be determined.

13. **(b)** Nada's grandfather's only child ⇒ Nada's father or mother.
    So, this person's son ⇒ Nada's brother
    Therefore, ''Nada' is the sister of the 'boy'.

14. **(d)** Only son of Vikash's grandfather ⇒ Rather of Vikash.
    Daughter of Vikash's father ⇒ sister of Vikash.
    Therefore, 'Vikash' is the brother of that 'lady'.

15. **(b)** My grandfather's only son ⇒ my father.
    So, Roshan ⇒ son of Deepa's father.
    Therefore, 'Roshan' is the brother of deepa.

16. **(d)** Daughter of brother-in-law ⇒ Niece
    So, Mother's Niece ⇒ Cousin
    Therefore, the 'girl' is the cousin of 'Sushma's friend'.

17. **(d)** Lady's mother's husband
    ⇒ Lady's father
    So, Lady's father's sister ⇒ Lady's aunt
    [∵ Lady's aunt ⇒ man's aunt]
    Therefore, the 'lady' is sister of the 'man'.

18. (d) Harendra's father's only son $\Rightarrow$ He himself

[∵ Harendra has no brother or sister]

So, wife of Harendra's father's only son

$\Rightarrow$ Harendra's wife

So, Harendra's wife $\Rightarrow$ man's mother.

Therefore, the 'man' is the son of Harendra.

19. (b) Wife of the father-in-law of person's wife
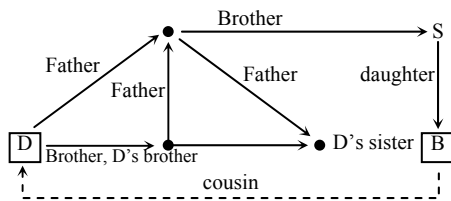
$\Rightarrow$ person's mother.

So, only son of person's mother $\Rightarrow$ person himself.

Therefore, the 'girl' is the only daughter of the 'professor'.

20. (d) D's brother's sister $\Rightarrow$ D's sister.

D's sister's father $\Rightarrow$ D's father.

D's father's brother $\Rightarrow$ S.

So, 'S' is the uncle of 'D'

S's daughter $\Rightarrow$ B

So, D's uncle's daughter $\Rightarrow$ D's cousin.

The blood relationship tree/chart can be constructed as given.

Therefore, 'D' is the cousin of B'.

21. (d) Therefore, her grandson's on

$\Rightarrow$ greater grandson.

Sushma's daughter-in-law's son

$\Rightarrow$ Her grandson

22. (d) Only son of Twinkle's father-in-law

$\Rightarrow$ Twinkle's husband

So, Ravindra $\Rightarrow$ Riya's and Priyanka's father.

[∵ Priyanka and Riya are sisters]

So, Mathendra $\Rightarrow$ Priyanka's grandfather.

Therefore, 'Pryanka's grandfather.

Therefore, 'Priyanka' is grand daughter of 'Mahendra'.

23. (b) B $\Rightarrow$ daughter of C.

C $\Rightarrow$ daughter-in-law of P

So, P $\Rightarrow$ grandfather of B.

A $\Rightarrow$ uncle of B

So, A $\Rightarrow$ brother of B's father.

Therefore, 'A' is the son of 'P'

24. (c) A $\Rightarrow$ father of X. Y $\Rightarrow$ sister of X.

So, Y is the daughter of 'A'

Therefore, option (c) is definitely not true.

25. (d) D's father's mother $\Rightarrow$ D's grandmother.

So, D's grandmother's son $\Rightarrow$ D's father or uncle.

Therefore, wife of D's father $\Rightarrow$ D's mother

Or, wife of D's uncle $\Rightarrow$ D's aunt

26. (d) Male members in the family:

(*i*) Man himself (1),

(*ii*) Four sons (4)

(*iii*) Twelve grandson i.e., (3 × 4)

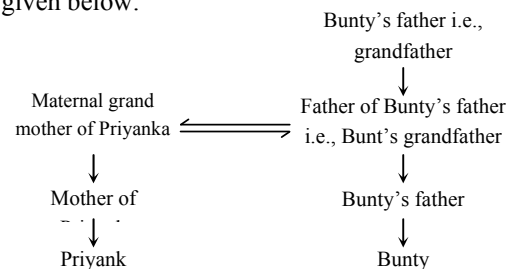Therefore, total number of male members in the whole family = (1 + 4 + 12) = 17

27. (d) Ravindra's sister's daughter $\Rightarrow$ Tanu.

So, Ravindra $\Rightarrow$ Tanu's maternal uncle.

But the relationship between Ravindra and Bunty is not given.

Therefore, the given data is inadequate.

28. (b) The blood relationship tree/chart can be constructed as given below:

Sonam $\Rightarrow$ sister of Bunty's father.

If Sonam $\Rightarrow$ only sister of Bunty's father.

Then, Sonam $\Rightarrow$ mother of Priyanka.

Therefore, we cannot determine exact relation.

29. (b) It is not clear that how many sons and daughters of the man (in the photograph).

Therefore, the given data is inadequate.

30. (d) P's father's father $\Rightarrow$ P's grandfather.

P's grandfather $\Rightarrow$ husband of Q's mother's mother i.e., grandmother.

So, P and Q $\Rightarrow$ Siblings or Cousins

The blood relationship tree/chart can be constructed as given below:

□ □ □