

## 4. BLOOD RELATIONS

In this topic questions are asked on various blood relations given in a complex form. Basically two types of questions are asked from this topic. To excel at these questions one should have good knowledge of various types of blood relations, for example the word spouse means either husband or wife. Some of the important relationships and different stages are given below:

1 <sup>st</sup> Stage	GRAND PARENTS	(Grand father, Grandmother, Grand uncle, Grand aunt)
2 <sup>nd</sup> Stage	PARENTS & IN – LAWS	(Father, Mother, Uncle, Aunt, Father-in-law, Mother-in-law)
3 <sup>rd</sup> Stage	SIBLINGS, SPOUSE & IN-LAWS	(Brother, Sister, Cousin, Wife, Husband, Brother-in-law, Sister-in-law)
4 <sup>th</sup> Stage	CHILDREN & IN-LAWS	(Son, Daughter, Niece, Nephew, Son-in-law, Daughter-in-law)
5 <sup>th</sup> Stage	GRAND CHILDREN	(Grandson, Granddaughter)

For the easy understanding of candidates a table containing few main relations is given here under. The study of the table will prove to be very useful for the students in solving questions on blood relations.

1. Grandfather's/Grandmother's son : Father or uncle
2. Grandfather's/Grandmother's only son : Father
4. Mother's/Father's mother : Grandmother
5. Mother's/Father's father : Grandfather
6. Grandfather's/Grandmother's only daughter-in-law : Mother
8. Mother's/Father's son : Brother
9. Mother's/Father's daughter : Sister
10. Mother's/Father's brother : Uncle
11. Mother's/Father's sister : Aunt
12. Husband's/Wife's sister : Sister-in-law
13. Husband's or wife's brother : Brother-in-law
14. Son's wife : Daughter-in-law
15. Daughter's husband : Son-in-law
16. Brother's son : Nephew
17. Brother's daughter : Niece
18. Uncle or Aunt's son or daughter : Cousin
19. Sister's husband : Brother-in-law
20. Brother's wife : Sister-in-law

Common nomenclature:

- → female
- → male
- → husband - wife
- == → brother - brother / brother - sister / sister - sister
- | → father/mother - son/daughter

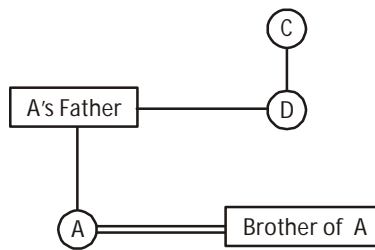
**Ex.1.** A's father's wife's mother is C, whose only child is D. How is D related to A's brother?

a) Mother

b) Aunt

c) Sister

d) Grandmother

**Sol :**

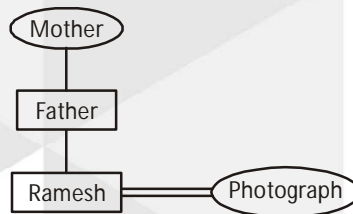
A's father wife is A's mother. A's mother's mother is C whose only child is D. Hence, D is the mother of A. Similarly, D is the mother of A's brother. So, the answer is (a).

**Ex.2.** Pointing to a photograph Ramesh said, "she is the sister of my father's mother's only child's son." How is the person in the photograph related to Ramesh?

a) Sister  
d) Cousin

b) Aunt

c) Mother

**Sol :**

My father's mother's only child is my father. My father's son's sister is in the photograph. Hence, she is Ramesh's sister. So, the answer is (a).

**Ex.3.** Pointing to a man in a photograph, a woman said, "The father of his brother is the only son of my grandfather." How is the woman related to the man in the photograph?

a) Mother

b) Aunt

c) Daughter

d) Sister

**Sol :** From the information, it is clear that the only son of woman's grandfather is the father of the woman and the father of the man's brother is the father of the man. Combining these two information together a single information emerges i.e. the man's father is the woman's father. Hence, woman is the sister of the man in the photograph. The answer is (d).

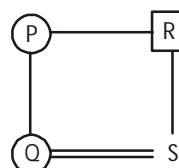
**Ex.4.**  $A@B$  means A is the mother of B,  $A * B$  means A is the father of B,  $A \$ B$  means A is the son of B,  $A - B$  means A is the daughter of B. If  $P @ Q - R * S$ , then how is R related to Q?

a) Uncle

b) Father

c) Brother

d) Grandfather

**Sol :**

$P @ Q - R * S$  means P is the mother of Q, Q is the daughter of R and R is the father of S. P is the mother of Q and Q is the daughter of R means R is the father of Q and S. Hence R is the father of Q. So, the answer is (b).

**Ex.5.** If  $P @ Q$  means P is the brother of Q,  $P \sqcup Q$  means P is the mother of Q and  $P \phi Q$  means P is the sister of Q, then which of the following would mean A is the uncle of B.

- a)  $A \Delta PQB$                       b)  $A \Delta B @ P$                       c)  $A @ P \Delta B$                       d)  $A \phi P \Delta B$

**Sol :** A is the uncle of B means A is the brother of the mother of B. According to the given expressions, it must be  $A @ P \Delta B$ . So, the answer is (c).

**Directions for examples 6 to 10:** Read the following information carefully and answer the questions that follows.

In family, there are 10 members. G and N are married couple while K is the husband of X. In this family, there are four housewives and four working husbands while other members are non-working. The husband in the last generation is a doctor and the husband of S is a teacher. L is a married woman but her husband is not P. Q and K are associated with the profession of engineer and accountant but K is not an accountant. P is the brother of T and both have a sister C. N is the daughter of L and X is the mother of P.

**Ex.6.** The family consists of how many generation?

- a) 6                      b) 1                      c) 4                      d) 2

**Ex.7.** Who is the husband of S?

- a) T                      b) T                      c) L                      d) P

**Ex.8.** Who is the housewife in the third generation?

- a) L                      b) P                      c) N                      d) X

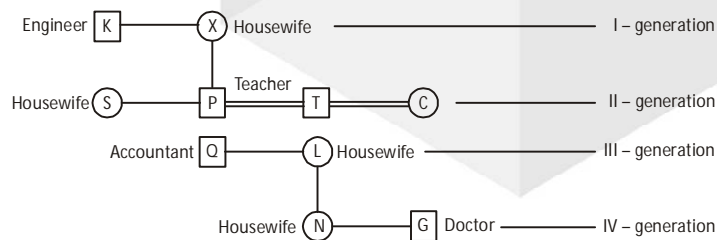
**Ex.9.** How is K related to N?

- a) Grand mother                      b) Father  
c) Uncle                      d) Great grand father

**Ex.10.** Which of the following statement is not true?

- a) Husband of X is engineer.  
b) Second generation members are S, P, T and C.  
c) The number of female members in the family is 5.  
d) Accountant and his wife belong to the 4th generation.

**Solutions for examples 6 to 10:**



6. (c)  
Clear from the family tree.
7. (d)  
Clear from the family tree.
8. (a)  
Housewife in the third generation is L who is the wife of Q.
9. (d)  
N is the daughter of Q; Q is the son of P while P is the son of K. Hence, K is the great grandfather of N.
10. (d)  
It is clear from the family tree that the accountant Q and his wife L belong to the third generation.

### PRACTICE EXERCISE

1. A lady said, "The person standing there is my grandfather's only son's daughter". How is the lady related to the standing person?  
a) Sister                      b) Mother  
c) Aunt                      d) Cousin
2. Mayank said, "My mother is the sister of Rajat's brother." What is Rajat's relation with Mayank?  
a) Cousin                      b) Maternal Uncle  
c) Uncle                      d) Brother-in-law
3. A man introduced the boy coming with him as "He is son of the father of my wife's daughter". What relation did the boy bear to the man?  
a) Father                      b) Son  
c) Brother                      d) Son-in-law
4. Pointing to a man, a lady said, "His brother's father is my grandfather's only son. How is the lady related to the man?  
a) Mother                      b) Sister  
c) Daughter                      d) Aunt
5. If Amit's father is Billoo's father's only son and Billoo has neither a brother nor a daughter, what is the relationship between Amit and Billoo?  
a) Uncle - Nephew                      b) Father - Daughter  
c) Father-son                      d) Cousins
6. Pointing to a man, a woman said, "He is the only son of my mother's mother". How is the woman related to the man?  
a) Aunt                      b) Daughter  
c) Niece                      d) Sister
7. Pointing to a woman in the photograph a man said, "She is the daughter of my grandmother's only son. How is the woman related to the man?  
a) Mother                      b) Daughter  
c) Sister                      d) Sister-in-law
8. Pointing to Suman, Amit said, "He is my sister's only brother's son". How is Suman related to Amit?  
a) Grandson                      b) Son  
c) Nephew                      d) Can't be determined
9. Sandeep's mother is the only daughter of Rekha's father. How is Rekha's husband related to Sandeep?  
a) Uncle                      b) Brother  
c) Father                      d) Grandfather
10. Pointing towards a person in a photograph, Aruna said, "He is the only son of the father of my sister's brother". How is that person related to Aruna?  
a) Mother                      b) Maternal Uncle  
c) Father                      d) None of these
11. Pointing to a photograph a lady tells Mohan, "I am the only daughter of this lady and her son is your maternal uncle." How is the speaker related to Mohan's father?  
a) Wife                      b) Sister-in-law  
c) Either of the two                      d) Neither of the two
12. A is the mother of B. B's father C has three children. Based on this information, state which of the following statements is definitely true?  
a) C has three daughters  
b) C has three sons  
c) B is male child  
d) None of these
13. Is 'C' mother of 'D'? To find out the answer which of the following information given in the statements 'I' and 'II' is/are sufficient?  
I. B has two children of which D is one.  
II. D's sister is daughter of C.  
a) Both I and II together are needed  
b) Both I and II together are not sufficient  
c) Only I is sufficient  
d) Only II is sufficient
14. A is B's brother. A is C's brother. To find out how B is related to C, which of the following is the minimum further information necessary, is any.  
I. C's gender                      II. B's gender  
a) Only I is necessary  
b) Only II is necessary  
c) Either I or II is necessary d) Both I and II are needed
15. Is D brother of F? To find out the answer which of the following information given in the statements A and B is/are sufficient?  
A. B has two sons of which F is one.  
B. D's mother is married to B.  
a) Both A and B together are needed  
b) Both A and B together are not sufficient  
c) Only A is sufficient  
d) Only B is sufficient

16. Introducing a man, a woman said, "His mother is the only daughter of my father." How is the man related to the woman?  
 a) Son                                      b) Uncle  
 c) Husband                                d) Brother
17. Introducing a lady, a man said that her mother's husband's sister is his mother. What is the man's relationship with the lady?  
 a) Cousin                                  b) Nephew  
 c) Father                                    d) Data insufficient
18. If Neha says, "Amrita's father Raj is the only son of my father-in-law Mahesh," then how Bindu, who is the sister of Amrita is related to Mahesh?  
 a) Granddaughter                      b) Wife  
 c) Niece                                    d) Daughter-in-law
19. Pointing to a woman in a photograph, Vijay said, "She is the daughter of the father of the sister of my brother". How is that lady in photograph related to Vijay?  
 a) Daughter                                b) Wife  
 c) Mother                                    d) Sister
20. Poonam said to her friend, "Yesterday I attended the birthday party of the son of the only son-in-law of my mother's mother." How is Poonam related to the man, whose birthday party she attended?  
 a) Cousin                                    b) Son  
 c) Brother                                    d) Father
21. Pointing to boy, Aruna said to Pushpa, "The mother of his father is the wife of your grandfather (Mother's father)". How is Pushpa related to that boy?  
 a) Sister                                      b) Niece  
 c) Wife                                        d) Cousin-sister

**Directions for questions 22 to 26:** Read the statements carefully and answer the following questions :

P is the father of R, but R is not his son. T is the daughter of R. U is the spouse of P. Q is the brother of R. S is the son of Q. V is the spouse of Q. W is the father of V.

22. Who is the Grandmother of S?  
 a) W                      b) P                      c) R                      d) U
23. Who is the son of U?  
 a) Q                      b) R                      c) T                      d) S

24. Who is the father-in-law of Q?  
 a) R                      b) P                      c) T                      d) W
25. Who is the sister-in-law of R?  
 a) S                      b) V                      c) U                      d) T
26. Who is the cousin of T?  
 a) R                      b) Q                      c) W                      d) S

**Directions for questions 27 to 31:** Read the following statements and answer the questions given below :-

Radha and Minnilal have two children Simmi and Divya, Divya is married to Anuj who is the son of Madhu and Jabbar. Resham is daughter of Anuj. Kiran who is Anuj's sister is married to Subodh and has two sons Tarun and Aman. Tarun is grandson of Madhu and Jabbar.

27. What is the relationship between Aman and Resham?  
 a) Uncle-Niece                              b) Father - Daughter  
 c) Husband - Wife                            d) Cousins
28. How is Subodh related to Jabbar?  
 a) Son-in-law                                  b) Son  
 c) Brother                                        d) Father-in-law
29. How is Resham related to Kiran?  
 a) Niece                                        b) Daughter  
 c) Mother                                        d) Aunti
30. How is Kiran related to Divya?  
 a) Aunt                                        b) Grandmother  
 c) Sister-in-law                                d) Sister
31. Which of the following statements is definitely true?  
 a) Aman is the son of Simmi  
 b) Madhu is the mother-in-law of Subodh  
 c) Resham is the cousin of Kiran  
 d) All the three are true.
32. If  $S - T$  means 'S' is the wife of 'T',  $S + T$  means 'S' is the daughter of 'T' and  $S \div T$  means 'S' is the father of 'T'. What will  $M + J \div K$  mean ?  
 a) 'K' is the father of 'M'  
 b) 'M' is the grand-daughter of K  
 c) 'J' is wife of 'K'  
 d) 'K' and 'M' are brothers
33.  $A \times B$  means 'A' is the mother of 'B',  $A \div B$  means 'A' is the Son of 'B',  $A - B$  means 'A' is the sister of 'B', which of the following means 'P' is the nephew of 'Q'?

- a)  $P \div R - Q$                       b)  $Q \div R - P$   
 c)  $Q \times R + P$                       d)  $P \times R - Q$

34. If  $A + B$  means 'A' is the brother of 'B'  $A \times B$  means 'A' is the mother of 'B'  $A \div B$  means 'A' is the sister of 'B', which of the following would mean 'P' is the uncle of 'S'?

- a)  $P \div S \times R$                       b)  $Q \div S \times P$   
 c)  $P + R \times S$                       d) Data inadequate

35. If  $M + N$  means 'M' is the brother of 'N',  $M - N$  means 'M' is the sister of 'N',  $M \times N$  means 'M' is the mother of 'N' and  $M \div N$  means 'M' is the father of 'N'.

Which of the following would mean 'E' is the paternal Aunt of 'F' ?

- a)  $E - G \div F$                       b)  $E + G \times F$   
 c)  $E \times F - G$                       d)  $F \times G + E$

36. If  $A \div B$  means 'A' is the father of 'B',  $A \times B$  means 'A' is the mother of 'B',  $A + B$  means 'A' is the sister of 'B' and  $A - B$  means 'A' is the grandfather of 'B', which of the following would mean 'M' is the grandson of 'N' ?

- a)  $M - O + N$                       b)  $N \times O \div M$   
 c)  $M + N \times O$                       d) None of these

**Directions for questions 37 and 38:** Read the following information to answer the given questions :

- (I) ' $P + Q$ ' means 'P is the brother of Q'.  
 (II) ' $P \times Q$ ' means 'P is the father of Q'.  
 (III) ' $P \div Q$ ' means 'P is the mother of Q'.

37. Which of the following would mean 'R' is the son of 'M'?

- a)  $M + R \times S$                       b)  $M \times S \div R$   
 c)  $M \div R \times S$                       d)  $M \times S \times R$

38. To arrive at the answer to the above question, which of the statements can be dispensed with ?

- a) Only A                              b) B or C  
 c) A or B                              d) Only B

**Directions for questions 39 and 40 :** Read the following information to answer the questions given below :

- (I) ' $P + Q$ ' means 'P is the mother of Q'.  
 (II) ' $P \div Q$ ' means 'P is the father of Q'.  
 (III) ' $P - Q$ ' means 'P is the Sister of Q'.

39. Which of the following represents 'M' is the daughter of 'R'?

- a)  $R \div M + N$                       b)  $R + N \div M$   
 c)  $R - M \div N$                       d) None

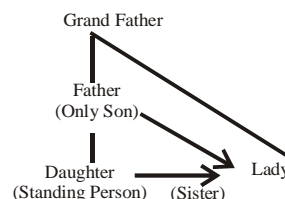
40. To find the answer to the above question, which of the statements can be dispensed with?

- a) Only A                              b) B or C  
 c) A or B                              d) Only C

BLOOD RELATIONS									
1	2	3	4	5	6	7	8	9	10
a	b	b	b	c	c	c	b	c	d
11	12	13	14	15	16	17	18	19	20
a	d	b	b	b	a	a	a	d	c
21	22	23	24	25	26	27	28	29	30
d	d	a	d	b	d	d	a	a	a
31	32	33	34	35	36	37	38	39	40
b	b	a	c	a	d	c	a	a	d

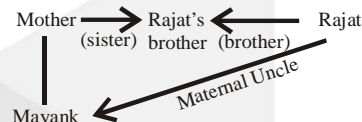
### Explanation

1)(a)



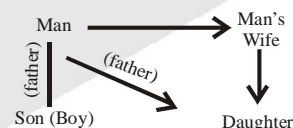
Lady's grandfather's son is lady's father and father's daughter will only be lady's sister.

2)(b)



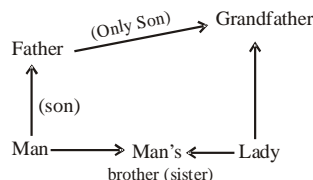
Mayank's mother is the sister of Rajat's brother. So Rajat is also the brother of Mayank's mother. Relation of the brother with his sister's child is maternal. So Rajat is Mayank's maternal uncle. The relationship chart based on problem is :

3)(b)



'Father of the man's wife's daughter's is the man himself and the boy is question is the man's son.

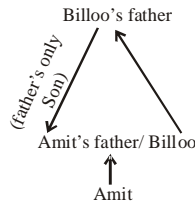
4)(b)



Man's brother's father is also the lady's father as he is the only son of lady's grandfather. So, the lady is man's sister.

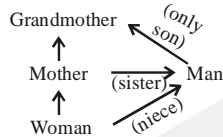
5)(c)

The relationship chart based on Problem is :



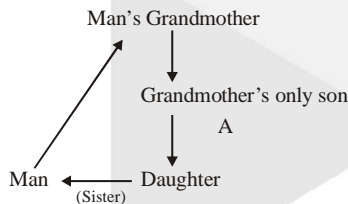
Amit's father is Billoo's father's only son means Billoo is the only son in question also, he is the father of Amit. It must be noted that Billoo has no brother which means he is single and also, when he has no daughter, Amit is his only son.

6)(c)



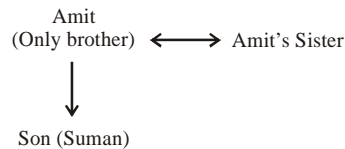
The man is the brother of the woman's mother. So, the woman is man's niece.

7)(c)



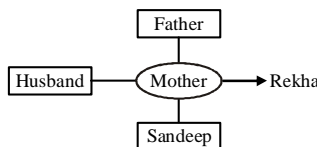
'My grandmother's only son is the father of the man, and 'daughter of my grandmother's only is the sister of the man.

8)(b)



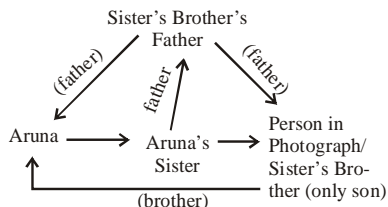
My sister's only brother's is Amit himself and 'Sister's only brother's son' is the son of Amit i.e., Suman is the son of Amit.

9)(c)



Sandeep's mother is Rekha so Rekha's husband is Sandeep's father.

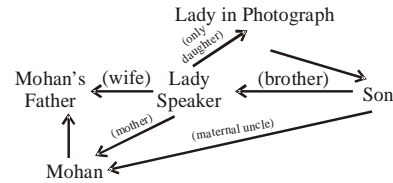
10)(d)



'The only son of the father of my sister's brother's is the brother

himself. Aruna's sister's brother is also the brother of Aruna.

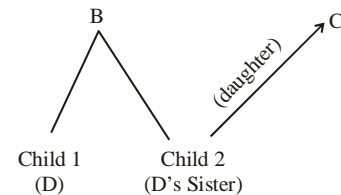
11)(a)



The lady who is speaking is the only daughter of the lady in photograph. The son of the lady in photograph is the brother of lady who is speaking. If the brother of the lady speaker is the maternal uncle of Mohan, then the lady speaker is the mother of Mohan, and so she is also the wife of Mohan's father.

12)(d) From the given statements 'A' and 'C' are the mother and father of 'B' and two more children. None of the given options can be true.

13)(b)

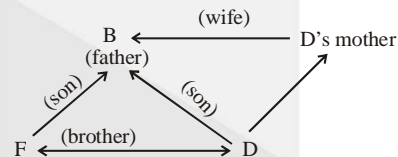


Through both the statements suggest that 'B' and 'C' are the parents of the two children; it cannot be said for certain that 'C' is the mother of 'D' as the sex of 'B' and 'C' is not given.

14)(b)

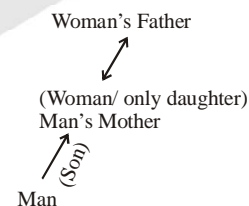
Only gender of 'B' is necessary to find how 'B' is related to 'C'.

15)(b)



Both the statements are not sufficient to know that 'D' is the brother of 'F'. D could be a female.

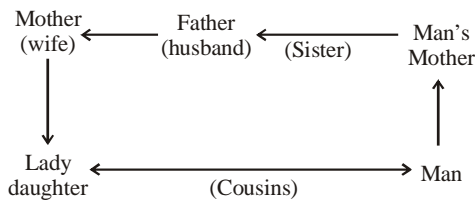
16)(a)



'Only daughter of my father' is the woman herself and 'His mother' means the man's mother. So, the man is the son of the woman.

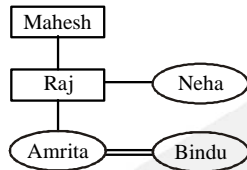
17)(a) The relationship chart based on problem :



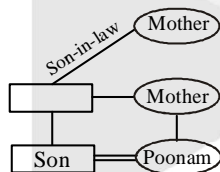


As the children of brother and sister are cousins, so are the man and the lady. Lady is the daughter of brother of man's mother and man is the son of brother's sister.

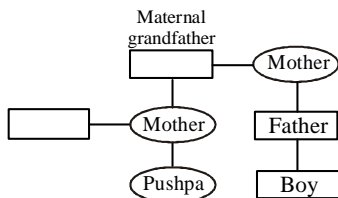
- 18)(a) Amrita's father is Neha's husband since Mahesh is father of Raj who is father Amrita and Bindu. So Bindu is grand-daughter of Mahesh.



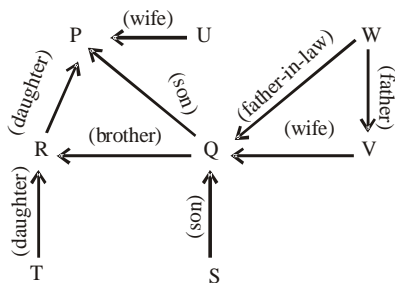
- 19)(d) The lady will be the sister of Vijay since the father of the lady is also the father of Vijay.  
20)(c) Poonam's mother's mother son-in-law is Poonam's father. So, Poonam attended the birthday party of her brother.



- 21)(d) Pushpa's mother and the boy's father are brother and sister. So, Pushpa will be cousin sister of that boy.



**Solutions for questions (22 to 26):** The relationship chart based on given statements is:

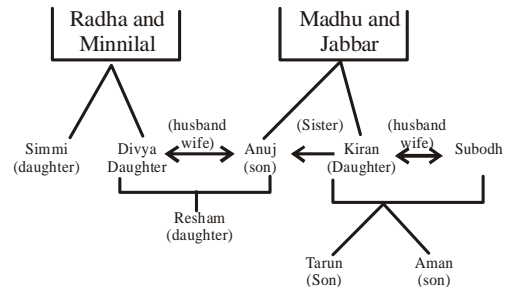


- 22)(d) 'P' is the father of 'R' and 'Q' is the brother of 'R'. So, 'Q' is the son of 'P'. 'U' is the wife of 'P' and so the mother 'Q'. 'S' is the son of 'Q' and Q's mother 'U' is the grandmother of 'S'.  
23)(a) 'P' is the father of 'R' and 'Q' is the brother of 'R' so 'Q' is the son

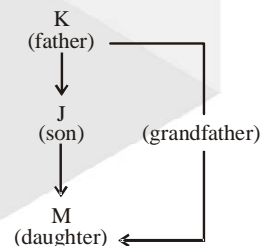
of 'P'. 'U' is the wife of 'P', so 'Q' is the son of 'U'.

- 24)(d) 'W' is the father of 'V' and 'V' is the wife of 'Q'. So, 'W' is the father-in-law of 'Q'.  
25)(b) 'Q' is the brother of 'R' and 'V' is the wife of 'Q'. So, 'V' is the sister-in-law of 'R'.  
26)(d) 'R' and 'Q' are sister and brother respectively. 'T' is the daughter of 'R' and 'S' is the son of 'Q'. So, 'S' is the cousin of 'T'.

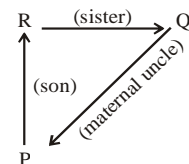
**Solutions for questions (27 to 31):** The relationship chart based on given statements is:



- 27)(d) As seen in the chart, Kiran is Anuj's sister. Aman is Kiran's son and Resham is Anuj's daughter. So Aman and Resham are children of Sister (Kiran) and brother (Anuj) respectively, hence, they are cousins.  
28)(a) Subodh is husband of Kiran who is the daughter of Madhu and Jabbar. So husband of Jabbar's daughter will be Jabbar's son-in-law.  
29)(a) Resham is daughter of Divya and Anuj. Kiran is sister of Anuj and aunt of Resham. So, Resham is the niece of Kiran.  
30)(a) Divya is wife of Anuj and Kiran is sister of Anuj. Brother's wife is a sister-in-law and so is the relation of Kiran with Divya.  
31)(b) Kiran is the daughter of Madhu and wife of Subodh. So, Madhu is the Mother-in-law of her daughter Kiran's husband Subodh.  
32)(b)  $M + J$  means 'M' is the daughter of 'J'.  $J \div K$  means 'J' is the son of 'K'.

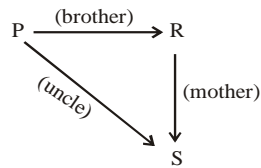


- 33)(a)  $P \div R$  means 'P' is the son of 'R' and  $R - Q$  means 'R' is the sister of 'Q'.

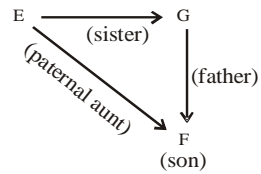


- 34)(c)  $P + R$  means 'P' is the brother of 'R' and  $R \times S$  means 'R' is the mother of 'S'.

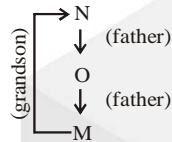




- 35)(a)  $E - G$  means 'E' is the sister of 'G' and  $G \div F$  means 'G' is the father of F.

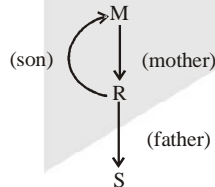


- 36)(d)  $N \times O$  means 'N' is the father of 'O' and  $O \times M$  means 'O' is the father of M.



**Solutions for questions (37 and 38):**

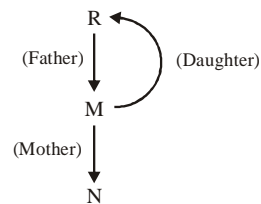
- 37)(c)  $M \div R$  means 'M' is the mother of 'R' and  $R \times S$  means 'R' is the father of 'S'.



- 38)(a) Information of a brother's relationship was not needed.

**Solutions for questions (39 and 40):**

- 39)(a)  $R \div M$  means 'R' is the father of 'M' and  $M + N$  means 'M' is the mother of 'N'.



- 40)(d) Information of a sister's relationship was not needed.