Reasoning

BLOOD RELATIONSHIP

Questions on Blood Relationship are related to our day to day life. We are bound by our kith and kin through a chain of relationships. The examiner defines the simple relationships by using rather complicated set of definitions and expects from us to comprehend these definitions rather quickly. In order to solve these problems, analyse the given statements carefully and systematically. For examples:

(i) My father’s only child means I (Myself).
(ii) Ritu’s husband’s father-in-law’s only daughter means Ritu (Herself).

Pay particular attention to the information given in the question itself without your personal biases and pre-conceived notions and assumptions coming to the fore.

Questions on Blood Relationship can be solved by any of the following methods:

(i) Deduction Method and
(ii) Pictorial Method

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 co-relate 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. Is it possible to define relationship between two persons without knowing their sex? Consider the following illustration:

A is the child of P and Q.

From this statement we can conclude that P is the father of A. No, it is not possible. Without knowing the sex of either P or Q, it is not possible to conclude that P is the father of A. What we can conclude from the above statement is that P and Q are parents of A.

Thus, we see that the knowledge about the sex of persons is necessary to conclude relationship between the two persons.

Some Important Tips:

(i) First of all choose the two persons, between whom relationship is to be established.
(ii) Next, pin-point the intermediate relationship i.e., such relationship through which long drawn relationship can be established between the required persons.
(iii) Finally, conclude the relationship directly between the two persons as per the requirement of the question.
(iv) From a particular name we cannot ascertain the sex (gender) of that person. The name does not always show the gender beyond reasonable doubt.

For example, we often hear the same name for male and female in the Punjabi community.

The names, Harvinder, Sukhwinder, Gurinder etc. are used for both the sexes in the Punjabi community.

There are certain other names which are used for both the sexes all over the country. For example, Suman, Kamal etc.

The list given below is quite helpful in recognising some indirect relationships:

<table>
<thead>
<tr>
<th>Father's or mother's son</th>
<th>Brother</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father's or mother's daughter</td>
<td>Sister</td>
</tr>
<tr>
<td>Father's or mother's brother</td>
<td>Uncle</td>
</tr>
<tr>
<td>Father's or mother's sister</td>
<td>Aunt*</td>
</tr>
<tr>
<td>Father's or mother's mother</td>
<td>Grandmother</td>
</tr>
<tr>
<td>Father's or mother’s father</td>
<td>Grandfather</td>
</tr>
<tr>
<td>Son's wife</td>
<td>Daughter-in-law</td>
</tr>
<tr>
<td>Husband’s or wife’s sister</td>
<td>Sister-in-law</td>
</tr>
<tr>
<td>Brother or Sister’s son</td>
<td>Nephew</td>
</tr>
<tr>
<td>Brother’s daughter</td>
<td>Niece</td>
</tr>
<tr>
<td>Aunt’s or Uncle’s son or daughter</td>
<td>Cousin</td>
</tr>
<tr>
<td>Sister’s husband</td>
<td>Brother-in-law</td>
</tr>
<tr>
<td>Brother’s wife</td>
<td>Sister-in-law</td>
</tr>
<tr>
<td>Grandfather’s or Grandmother’s son</td>
<td>Father or Uncle</td>
</tr>
<tr>
<td>Grandfather’s or Grandmother’s only daughter-in-law (or daughter)</td>
<td>Mother</td>
</tr>
<tr>
<td>Only son of Grandfather (Paternal)</td>
<td>Father</td>
</tr>
<tr>
<td>Only daughter of Grandfather (Maternal)</td>
<td>Mother</td>
</tr>
<tr>
<td>Uncle’s wife</td>
<td>Aunt</td>
</tr>
<tr>
<td>Father of father or mother</td>
<td>Grandfather</td>
</tr>
<tr>
<td>Mother of father or mother</td>
<td>Grandmother</td>
</tr>
<tr>
<td>Father of Grandfather or Grandmother</td>
<td>Great Grandfather</td>
</tr>
<tr>
<td>Mother of Grandfather or Grandmother</td>
<td>Great Grandmother</td>
</tr>
<tr>
<td>Only Daughter-in-law of Grandfather (Paternal)</td>
<td>Mother</td>
</tr>
<tr>
<td>Wife of Father</td>
<td>Mother</td>
</tr>
<tr>
<td>Husband of Mother</td>
<td>Father</td>
</tr>
</tbody>
</table>

The questions on Blood Relationship are asked in various formats but substantially there is no difference between them. However, consider the pattern of the question we are obliged to discuss them separately.

TYPR-I

Ex.1. Pointing to a man, a woman said, “His mother is the only daughter of my mother”. How is the woman related to man?

(1) Mother (2) Grandmother
(3) Sister (4) Daughter
(5) None of these
Ex. 2. Pointing to a man, a woman said, “His mother is the daughter of my mother’s only daughter. How is the man related to that woman?
(1) Son (2) Father
(3) Brother (4) Grandson
(5) None of these

Ex. 3. Pointing towards Waman, Madhav said “I am the only son of his father’s one of the sons”. How Waman is related to Madhav?
(1) Nephew (2) Uncle
(3) Either father or uncle (4) Father
(5) None of these

Ex. 4. Pointing to a man in the photograph, a woman said, “He is the only son of my mother’s father”. How is the woman related to the man in the photograph?
(1) Niece (2) Sister
(3) Mother (4) Daughter
(5) None of these

Ex. 5. Pointing to a gentleman, Deepak said, “His only brother is the father of my daughter’s father”, How is the gentleman related to Deepak?
(1) Father (2) Grandfather
(3) Uncle (4) Brother-in-law
(5) None of these

Ex. 6. Pointing towards Neeru, Asha said, “I am the only daughter of her mother’s son”. How is Neeru related to Asha?
(1) Aunt (2) Cousin
(3) Niece (4) Mother
(5) None of these

Ex. 7. If Neha says, “Amruta’s father Raj is the only son of my father-in-law, Mahesh”; then how Bindu, who is sister of Amruta, is related to Mahesh?
(1) Daughter (2) Wife
(3) Daughter-in-law (4) Niece
(5) None of these

Ex. 8. Pointing towards a photograph of a girl, Rajan said, “She has no sisters or daughters but her mother is the only daughter of my mother”. How is the girl in the photograph related to Rajan’s mother?
(1) Sister-in-Law (2) Grand-daughter
(3) Daughter-in-law (4) Cannot be determined
(5) None of these

Ex. 9. Pointing towards a person in a photograph, Raman said, “She is the only daughter of the mother of my brother’s sister”. How is the person in photograph related to Raman?
(1) Daughter (2) Sister
(3) Wife (4) Cousin
(5) None of these

Ex. 10. 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?
(1) Sister (2) Mother
(3) Grandmother (4) Aunt
(5) Daughter

**ANSWERS WITH EXPLANATION**

1. (1) The two persons between whom relationship is to be established:
   Man ———— Woman
   Only daughter of woman’s mother means woman (herself). Only daughter of woman’s mother is the mother of the man in the photograph.

   **PICTORIAL METHOD**
   
   Woman’s Mother
   
   Only daughter
   
   Woman
   
   Mother
   
   Son
   
   Man

   **Note:** The dotted arrows show doubtful relationship.

2. (4) The two persons between whom relationship has to be established.
   Man ——— Woman
   My (Woman’s) mother’s only daughter means the woman herself. Woman’s daughter is the mother of man in question. Therefore, the woman (speaker) is the grandmother of the man.
   Thus, man is the grandson of the woman (speaker).

   **PICTORIAL METHOD**
   
   Woman’s Mother
   
   Only daughter
   
   Woman
   
   Daughter
   
   Man’s Mother

3. (3) The two persons between whom relationship is to be established.
   Madhav ——— Waman
   Waman’s father has more than one son.
   Madhav is the only son of one of the sons of Waman’s father.
   Therefore, Waman is either father or uncle of Madhav.
4. (1) The two persons between whom relationship is to be established.

Woman  Man
Woman's mother's father means grandfather of woman. Only son of woman's grandfather (from mother's side) means maternal uncle of the woman. Therefore, the woman is the niece of the man in the photograph.

5. (3) The two persons between whom relationship is to be established.

Gentleman  Deepak
Father of my (Deepak's) daughter's father means Deepak's father. Deepak's father is the only brother of gentleman. Therefore, gentleman is the uncle of Deepak.

6. (1) The two persons between whom relationship is to be established.

Nee ru  Asha
Female  Female
Her (Nee ru's) mother's son means brother of Nee ru. Daughter of Nee ru's brother means niece of Nee ru. Therefore, Nee ru is the aunt of Asha.

7. (5) The two persons between whom relationship is to be established.

Bindu  Mahesh
(Sister of Amruta)
Only son of Neha's father-in-law (Mahesh) means husband of Neha. Thus, Amruta's father Raj is the husband of Neha and son of Mahesh. Therefore, Amruta's and Bindu are daughters of Raj and Neha; and granddaughters of Mahesh.

8. (2) The two persons between whom relationship is to be established.

Girl  Rajan's mother
Only daughter of my (Raj an's) mother means sister of Rajan. Sister of Rajan is the mother of the girl in the photograph. Therefore, the girl is the granddaughter of Rajan's mother.

9. (2) The two persons between whom relationship is to be established.

Person  Raman
Female
Mother of my (Raman's) brother's sister means mother of Raman. Only daughter of Raman's mother means sister of Raman.

10. (1) The two persons between whom relationship is to be established.

Woman  Man
Only son of my (Woman's) grandfather means the father of woman. Woman's father is man's brother's father. Therefore, woman is the sister of man in the photograph.
TYPE-II

Ex.1. If A is B's brother, B is C's sister and C is D's father, D is A's...
(1) Brother (2) Sister (3) Nephew (4) Cannot be determined (5) None of these
Ex.2. P is brother of Q. R is the sister of Q. How P is related to R?
(1) Brother (2) Sister (3) Uncle (4) Data inadequate (5) None of these
Ex.3. Aparna's mother is the daughter of Vishnu's sister. How is Vishnu's mother related to Aparna's mother?
(1) Mother (2) Daughter (3) Sister (4) Grandmother (5) None of these
Ex.4. 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?
(1) Father (2) Grandfather (3) Grandmother (4) Either grandfather of grandmother (5) None of these
Ex.5. Ankit is the son of Zubin. Manju is the daughter of Anil. Sheela is the mother of Manju. Mohan is the brother of Manju. How is Mohan related to Sheela?
(1) Brother (2) Father (3) Son (4) Cannot be determined (5) None of these
Ex.6. Prakash is the son of Pramod. Neha is the daughter of Abhishek. Ruchi is the mother of Neha. Awadhesh is the brother of Neha. How is Awadhesh related to Ruchi?
(1) Brother (2) Father (3) Son (4) Cannot be determined (5) None of these

Directions (7-10) : Study the following information carefully and answer the questions given below :
Five persons are sitting around dining table, - K, L, M, N and O - K is the mother of M, M is the wife of O. N is the brother of K and L is the husband of K.
Ex.7. How is L related to O?
(1) Father (2) Mother-in-law (3) Brother-in-law (4) Father-in-law (5) Neice
Ex.8. How is K related to O?
(1) Sister (2) Mother (3) Mother-in-law (4) Brother-in-law (5) Aunt
Ex.9. How is N related to L?
(1) Son (2) Cousin (3) Brother (4) Brother-in-law (5) Uncle
Ex.10. How is M related to L?
(1) Aunt (2) Niece (3) Daughter (4) Daughter-in-law (5) Mother

ANSWERS WITH EXPLANATION

1. (4) A is the brother of B. (A is male)
B is sister of C. (B is female)
C is father of D. (C is male)
The sex of D is not known.
A and C are brothers of B.
A is the uncle of D.
Since, sex of D is not clear, we cannot determine what is D to A.
2. (1) P is brother of Q. (P is male)
R is sister of Q. (R is female)
Therefore, P is the brother of R.
3. (4) Aparna's mother is the daughter of Vishnu's sister.
Therefore, Vishnu's mother is the grandmother of Aparna's mother.

PICTORIAL METHOD

4. (4) Q's mother is sister of P. (Sex of P is not clear).
Q's mother is daughter of M. (Sex of M is not clear).
S is daughter of P and sister of T. (The sex of P and T is not clear)
M's Children : Q's mother and P.
P's children : S (female) and T.
Therefore, M is either grandfather or grandmother of T.
5. (3) Manju is the daughter of Anil. Sheela is the mother of Manju.
Therefore, Mohan is the son of Sheela.
6. (3) Neha is the daughter of Abhishek and Ruchi.
Abhishek and Ruchi are husband and wife respectively.
Awadhesh is the brother of Neha and hence, he is the son of Abhishek and Ruchi.

(7-10) : K is the mother of M. M is the wife of O.
So, K is the mother-in-law of O, who is the husband of M.
N is the brother of K. L is the husband of K.
Therefore, N is the brother-in-law of L.
L is the father-in-law of O.
M is the daughter of L and K.
7. (4) L is the father-in-law of O.
8. (3) K is the mother-in-law of O.
9. (4) N is the brother-in-law of L.
10. (3) M is the daughter of L.

SOLVED QUESTIONS

1. If A is the mother of D, B is not the son of C, C is the father of D. D is the sister of B, then how is A related to B?
   (1) Mother (2) Brother (3) Step son (4) Sister

2. What will come in the place of the question mark, to establish that Q is mother of N in the expression:
   ‘N + O – P ? Q’
   (1) + (2) x (3) – (4) +
   (5) Either (1) or (2)

3. Which of the following relations are true based upon the relations given in the equation:
   ‘S + T x V – W + Y’?
   (1) T is brother of Y
   (2) S is daughter-in-law of W
   (3) S is daughter-in-law of Y
   (4) Y is daughter of V
   (5) None is true

4. In the expression ‘A x B + R > S’ how is S related to A?
   (1) Daughter-in-law (2) Daughter (3) Wife (4) Sister
   (5) Cannot be determined

5. In the expression ‘P + Q = A – B’ how is P related to B?
   (1) Daughter (2) Son (3) Niece (4) Nephew
   (5) Cannot be determined

6. In the expression ‘W > X < Y ? Z’ how is W related to Z?
   (1) Nephew (2) Uncle (3) Son (4) Brother-in-law
   (5) None of these

7. Which of the following means P is the father of S?
   (1) P x Q < R + S (2) R x P < Q – S
   (3) R + S > Q + P (4) S + Q - R = P
   (5) Cannot be determined

8. Which of the following means D is the aunt of C?
   (1) D > B x A x C (2) D + B = C x A

9. (3) D – B = A x C (4) D + B x A x C
   (5) None of these

10. M and F are a married couple. A and B are sisters. A is the sister of F. Who is B to M?
    (1) Sister (2) Sister-in-law (3) Niece (4) Daughter

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Directions (4 – 8): Read the following information carefully and answer the questions which follow:

If ‘P x Q’ means ‘P is the mother of Q’.
If ‘P + Q’ means ‘P is the father of Q’.
If ‘P – Q’ means ‘P is the sister of Q’.
If ‘P = Q’ means ‘P is the brother of Q’.
If ‘P > Q’ means ‘P is the son of Q’.
If ‘P < Q’ means ‘P is the daughter of Q’.

1. (1) A is mother of B and D.
2. (2) N + O = R is daughter of O.
   O – P = Q is father of P.
   P x Q = R is son of Q.
   Thus, Q is mother of N.
3. (3) S + T = S is wife of T.
   T x V = T is son of V.
   V – W = V is father of W.
   W + Y = W is daughter of Y.
   T is son of Y.
   S is sister-in-law of W.
   S is daughter-in-law of Y.
   Y is wife of V.
4. (3) A x B → A is the father of B.
   B + R → B is the sister of R.
   R > S → R is the son of S.
   Therefore, S is the wife of A.
5. (3) P + Q → P is the sister of Q.
   Q x A → Q is the son of A.
   A – B → A is the brother of B.
   Therefore, P is the niece of B.
6. (1) W > X = W is the son of X.
   X = Y → X is the daughter of Y.
   Y + Z → Y is the mother of Z.
   Therefore, W is the nephew of Z.
7. (1) P x Q → P is the father of Q.
   Q < R → Q is the daughter of R.
   R x S → R is the mother of S.
   Therefore, P is the father of S.
8. (5) D > B → D is the son of B.
   D is a male.
   D + B → D is the sister of B.
   B – C → B is the brother of C.
   Therefore, D is the sister of C.
   D – B → D is the brother of B.
   D is a male.
   D + B → D is the sister of B.
   B x A → B is the father of A.
   A x C → A is the father of C.
   Therefore, D is the grand aunt of C.
9. (2) B is sister of F.
   Therefore, B is sister-in-law of M.
10. (3) C is daughter of B and A is father of B.
    E is son of A. Therefore, C is niece of E.
Directions (1-5): In each of the following questions, choose the word which expresses nearly the same meaning to the word printed in bold at the question place.

1. Deteriorate (1) to become better (2) to become worse (3) determinate (4) devalue
2. Susceptible (1) likely to be harmed (2) suspicion (3) surplus (4) unimpressionable
3. Compression (1) compunction (2) computation (3) pressure (4) compulsive
4. Obese (1) very weak (2) very strong (3) very thin (4) very fat
5. Dehydration (1) loses of water (2) gain of water (3) degrading (4) degeneration

Directions (6-10): In each of the following questions, choose the word opposite in meaning to the word printed in bold at the question place.

6. Complication (1) complex (2) problem (3) easiness (4) completion
7. Constriction (1) tightness (2) narrowness (3) restriction (4) relaxation
8. Fatal (1) causing death (2) life saving (3) very fat (4) disastrous
9. Superficial (1) shallow (2) true (3) on the surface (4) deep
10. Contraction ' (1) shrinkage (2) expansion (3) contractor (4) contradiction

Directions (11-15): Choose the correct meaning of the following idioms/phrases out of the four alternatives.

11. Touchdown (1) make something begin (2) land (3) improve some tiling (4) grope

12. Whisk away (1) take somebody somewhere quickly (2) beat somebody (3) embrace (4) whistle-stop

13. Carry out (1) to do and complete a task (2) to leave a task (3) to win (4) to be in love

14. Trigger off (1) to make something neater (2) act of cutting (3) to make something happen suddenly (4) trick somebody

15. Bulge out (1) irregular swelling (2) to be empty (3) to punish (4) carry out

EXPLANATIONS
1. (2) The word Deteriorate (Verb) means : to become worse, decline degenerate.

Look at the sentence:
He developed complications after a surgery.
Its antonym should be easiness.

2. (4) The word Susceptible (Adjec-tive) means : Very likely to be harmed or affected by somebody/something: easily influenced, harmed or affected by somebody/something; easily influenced by feelings and emotions; impressionable: responsive.

Look at the sentence:
He is highly susceptible to flattery.
Its antonym should be deep.

3. (3) The word Compression (Noun) means : pressure; to be pressed or squeezed to bring together; condensation; reduction of something to fit it into a smaller space.

Look at the sentence:
When crashed.
Superficial veins are damaged when crashed.
Its antonym should be expansion.

4. (4) The word superficial (Adjective) means: not studying or looking at something thoroughly; of or on the surface of something: shallow.

Look at the sentence:
Superficial veins are damaged when crashed.
Its antonym should be deep.

5. The word Obese (Adjective) means : very fat, in a way that is not healthy.

Look at the sentence:
Extensive tests have been carried out on the patient.

6. The word Dehydration (Noun) means : removal of water from something especially food; loss of water from your body.

Look at the sentence:
Extensive tests have been carried out on the patient.

7. The word Contraction (Noun) means : becoming tighter or narrower; limitation; restriction.

Look at the sentence:
Nuts can trigger off a violent allergic reaction.

8. The word Fatal (Adjective) means : causing or ending in death; causing disaster, lethal; deadly.

Look at the sentence:
If he gets ill again, it could prove fatal.
Its antonym should be life saving.

9. The word superficial (Adjective) means: not studying or looking at something thoroughly; of or on the surface of something: shallow.

Look at the sentence:
Superficial veins are damaged when crashed.
Its antonym should be deep.

10. The word contraction (Noun) means : the process of becoming smaller; a short form of a word; a sudden and painful contracting of muscles.

Look at the sentence:
Extensive tests have been carried out on the patient.


Look at the sentence:
When crashed.
Superficial veins are damaged when crashed.
Its antonym should be expansion.

12. Phrase whisk away means: to take somebody/something very quickly and suddenly.

Look at the sentence:
The waiter whisked away the plates before we had finished.

13. Phrase carry out means : to do and complete a task.

Look at the sentence:
Extensive tests have been carried out on the patient.

14. Phrase trigger off means: to make something happen suddenly; set off.

Look at the sentence:
Nuts can trigger off a violent allergic reaction.

15. Phrase bulge out means: to be completely full and stick out from something in a round shape; irregular swelling.
Directions (1-5): In each of the following questions, choose the word which expresses nearly the same meaning to the word printed in bold at the question place.

1. Deteriorate
   (1) to become better  
   (2) to become worse  
   (3) determinate (4) devalue

2. Susceptible
   (1) likely to be harmed  
   (2) suspicion  
   (3) surplus (4) unimpressionable

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   (1) compunction  
   (2) computation  
   (3) pressure (4) compulsive

4. Obese
   (1) very weak  
   (2) very strong  
   (3) very thin (4) very fat

5. Dehydration
   (1) loses of water  
   (2) gain of water  
   (3) degrading (4) degeneration

Directions (6-10): In each of the following questions, choose the word opposite in meaning to the word printed in bold at the question place.

6. Complication
   (1) complex  
   (2) problem  
   (3) easiness (4) completion

7. Constriction
   (1) tightness  
   (2) narrowness  
   (3) restriction (4) relaxation

8. Fatal
   (1) causing death  
   (2) life saving  
   (3) very fat (4) disastrous

9. Superficial
   (1) shallow  
   (2) true  
   (3) on the surface (4) deep

10. Contraction
    (1) shrinkage  
    (2) expansion  
    (3) contractor (4) contraction

Directions (11-15): Choose the correct meaning of the following idioms/phrases out of the four alternatives.

11. Touchdown
    (1) make something begin  
    (2) land  
    (3) improve some tiling (4) grope

12. Whisk away
    (1) take somebody somewhere quickly  
    (2) beat somebody  
    (3) embrace (4) whistle-stop

13. Carry out
    (1) to do and complete a task  
    (2) to leave a task  
    (3) to win (4) to be in love

14. Trigger off
    (1) to make something neater  
    (2) act of cutting  
    (3) to make something happen suddenly (4) trick somebody

15. Bulge out
    (1) irregular swelling  
    (2) to be empty  
    (3) to punish (4) carry out

EXPLANATIONS
1. (2) The word Deteriorate (Verb) means: to become worse, decline degenerate.
   Look at the sentence: His health deteriorated rapidly and he died shortly afterwards.

2. (1) The word Susceptible (Adjective) means: Very likely to be influenced, harmed or affected by somebody/something; easily influenced by feelings and emotions; impressionable: responsive.
   Look at the sentence: He is highly susceptible to flattery.

3. (3) The word Compression (Noun) means: pressure; to be pressed.
   Look at the sentence: If he gets ill again, it could prove fatal. Its antonym should be life saving.

4. (4) The word superficial (Adjective) means: not studying or looking at something thoroughly; of or on the surface of something; shallow.
   Look at the sentence: Superficial veins are damaged when crashed.

5. (2) The word Fatal (Adjective) means: causing or ending in death; causing disaster, lethal; deadly.
   Look at the sentence: If he gets ill again, it could prove fatal. Its antonym should be life saving.

6. (2) Phrase touch down means: to land (of plane).

7. (4) The word contraction (Noun) means: the process of becoming smaller; a short form of a word; a sudden and painful contracting of muscles.
   Look at the sentence: Its antonym should be expansion.

8. (2) Phrase whisk away means: to take somebody/something very quickly and suddenly.
   Look at the sentence: The waiter whisked away the plates before we had finished.

9. (1) Phrase carry out means: to do and complete a task.
   Look at the sentence: Extensive tests have been carried out on the patient.

10. (3) Phrase trigger off means: to make something happen suddenly; set off.
    Look at the sentence: Nuts can trigger off a violent allergic reaction.