SNS COLLEGE OF TECHNOLOGY

COIMBATORE-35

DEPARTMENT OF MECHANICAL ENGINEERING

QUANTITATIVE ABILITY II

Blood relation, Direction Problems &Puzzles

Introduction

Any relation in the world which either by birth or by marriage is called a Blood Relation.

Ex: Any relation by birth will be mother, father, son, daughter, etc. and any relation by marriage will be father-in-law, mother-in-law, etc.

- **Dialogue/ Conversation Based –** In such questions, one person describes his/her relation with another person (this may or may not be related to the person with whom the conversation is being made).

- **Based on Puzzles –** To make the questions complex, blood relation questions are also being asked in the form of a puzzle. A piece of brief information about multiple people being interrelated is given and sub-questions based on the same may be asked.

- **Coding-Decoding –** The relationship between two people may be denoted using symbols. This has become a common method of asking blood relation questions in competitive exams, nowadays.

There also are a few things which need to be kept in mind while solving the blood relation questions. Given below are few such important pointers:

- You cannot assume the gender of the person based on the name

- If the statement says X is the son of Y, the gender of Y cannot be determined unless mentioned in the question

- In puzzle based questions, a web of relations can be formed, so do not solve such questions in a haste

- These questions are scoring and easy to solve, so do not panic if the question seems lengthy

- In case of coding-decoding blood relation, use a pictorial description to solve the question. This will make the symbols and relation more clear

Family Tree

To solve the problems in blood relation, one should know how to draw a family tree.

A family tree is a pictorial representation of genealogical data.

The following points help in drawing a family tree.

1. All the female members of the family are represented by a circle. The name of the person is written inside the circle for convenience.

2. All the male members of the family are represented by a square. The name of the person is written inside the square for convenience.

3. The relation between two members of the family is shown by connecting a double-headed arrow.

4. The spouse relation is represented by the two ends of a double-headed arrow.

5. All the family members of the upper generation are represented above in the family tree. Ex: father, mother, uncle, aunt etc. The logic can be extended by representing the grandparents above the parents in the family tree. Ex: grandfather and grandmother.

6. All the family members of the same generation are represented in the middle of the family tree. Ex: brothers, Sisters, cousins, wife, husband, etc.

7. All the family members of the next generation are represented below in the family tree. Ex: Daughter, son, niece, nephew.

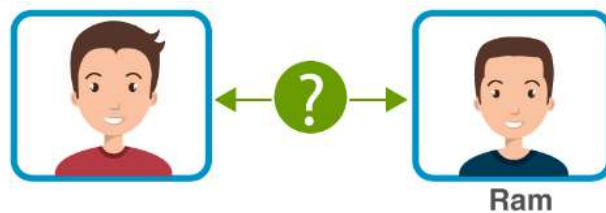| Type of Relationship	Terminology in Use
Mother's or Father's son	Myself/Brother
Mother's or Father's daughter	Myself/Sister
Mother's or Father's brother	Uncle

Mother's or Father's sister	Aunt
Mother's or Father's father	Grandfather
Mother's or Father's mother	Grandmother
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 son	Nephew
Brother's daughter	Niece
Uncle or aunt's son or daughter	Cousin
Sister's husband	Brother-in-law
Brother's wife	Sister-in-law
Grandson's or Granddaughter's daughter	Great-granddaughter

Question 1: Pointing to a photograph of a boy Mr.Ram said, "He is the son of the only son of my mother." How is Mr Ram related to that boy?
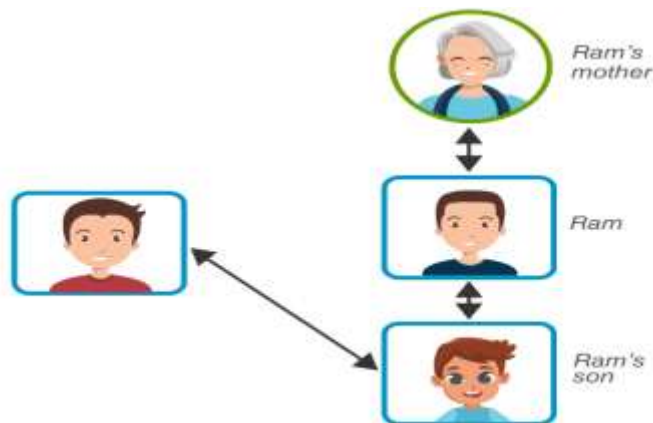
A. Brother

B. Uncle

C. Cousin

D. Father

Solution:

Step 1: There is a photograph and Mr.Ram. The photograph is of a man and hence two squares are represented. But the relationship of Mr.Ram with the person in the photograph is not known yet

Ram

Step 2: The second line says Mr Ram has a mother. Mr Ram is the only son of his mother and Ram has a son and that photograph belongs to Mr Ram's son.

Ram's mother

Ram

Ram's son

Decoded statement:

The boy in the photograph is the only son of the son of Ram's mother i.e., the son of Ram. Hence, Ram is the father of the boy.

Hence, option D is the correct answer.

Question 2: Rita told Mani, "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 Rita's friend?

1. **Cousin**
2. Daughter
3. Friend
4. Aunt

Relational puzzle

Question 1: Ravi is a son of Aman's father's sister. Sahil is the son of Divya who is the mother of Gaurav and grandmother of Aman. Ashok is the father of Tanya and grandfather of Ravi. Divya is the wife of Ashok.

How is Ravi related to Divya?

1. Nephew
2. Son
3. **Grandson**
4. Data inadequate

Solution: There is no requirement for drawing a family tree to solve this question. Since Divya is the grandmother of Aman and Aman and Ravi are cousins (from the first statement). Ravi should be a grandson to Divya.

Hence, option 3 is the correct answer.

Question 1: How is Gaurav's wife related to Tanya?

1. Niece
2. Sister
3. **Sister-in-law**
4. Mother

Solution: Since Divya is the wife of Ashok and Ashok is the father of Tanya. We already know the Divya is also the mother of Gaurav and Sahil, Gaurav and Tanya should be siblings. Hence **Gaurav's wife will be sister in law to Tanya.**

Coded relations

In this section, the relationships among the members of the family are represented by certain specific codes or symbols such as +._ $,*,&,#,@,! etc. The answers are obtained by decoded the relationships hidden in the symbols. The only tedious process here is to solve all the options to arrive at the final correct answer.

Example:

Question 1: Read the following instructions:

1. A + B indicates A is the brother of B;
2. A – B indicates A is the sister of B and
3. A x B indicates A is the father of B

Which of the following means that C is the son of M?

1. M – N x C + F
2. F – C + N x M
3. N + M – F x C
4. **M x N – C + F**

Solution: Option A: According to this option NxC indicates N is the father of c. Hence it is wrong. Option B: According to this option C is the brother of N who is the father of M. Hence it is wrong. Option C: According to this option Fx C indicates F is the father of C. Hence it is wrong. Option D: According to this option M is the father of N who is the sister of C hence C and N are siblings and C is the brother of F so, C is male, Hence C is the son of M.

Option 4 is the correct answer.

Question 2: Read the following instructions:

1. P $ Q means P is the brother of Q;
2. P # Q means P is the mother of Q;
3. P * Q means P is the daughter of Q

If the code of family is A # B $ C * D, who is the father in them?

1. **D**
2. B
3. C
4. A

Solution:

1. A # B indicates A is the mother in the family
2. B $ C indicates B is the brother of C.
3. C * D indicates C is the daughter of D.

Since B and C are siblings and A is the mother of B and D is the father of C, D is the father in the family.

Hence, option 1 is correct.