



SNS COLLEGE OF TECHNOLOGY

AN AUTONOMOUS INSTITUTION

ACCREDITED BY NBA – AICTE AND ACCREDITED BY NAAC – UGC WITH ‘A’ GRADE APPROVED BY AICTE,
NEW DELHI & AFFILIATED TO ANNA UNIVERSITY, CHENNAI



**COURSE NAME : 23GET275 VQAR-I
II YEAR /III SEMESTER**

Blood Relations

BLOOD RELATION

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

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


TYPES OF QUESTIONS ON BLOOD RELATION

1. Dialogue / Conversation Based
2. Based on Puzzles
3. Symbol Based
4. Caselets

GENERATION

- A ——— Great Grand Parents
- B ——— Grandfather / Grand Mother
- C ——— Mother / Father / Uncle / Aunt
- D ——— Me / Brother / Sister / Wife / Husband
- E ——— Son / Daughter / Nephew / Neice
- F ——— Grandson / Grand daughter
- G ——— Great Grand Children

NOTATIONS


If A is male \longrightarrow 


If A is female \longrightarrow 

If A is child \longrightarrow A

If A is Brother of B \longrightarrow 

If A is wife of B \longrightarrow 

If C is father of D \longrightarrow 

If C is grandfather of D \longrightarrow 

NOTATIONS

NOTE:

- Gender of the person can not be assumed based on Name.
- If the statement says X is the son of Y, the gender of Y cannot be determined unless mentioned in the question
- Friends / Girlfriends / Boyfriends are not included in the tree of Blood Relation Pictorial Representation.
- Only relationships with the Blood and Marriage are included.

Dialogue / Conversation Based

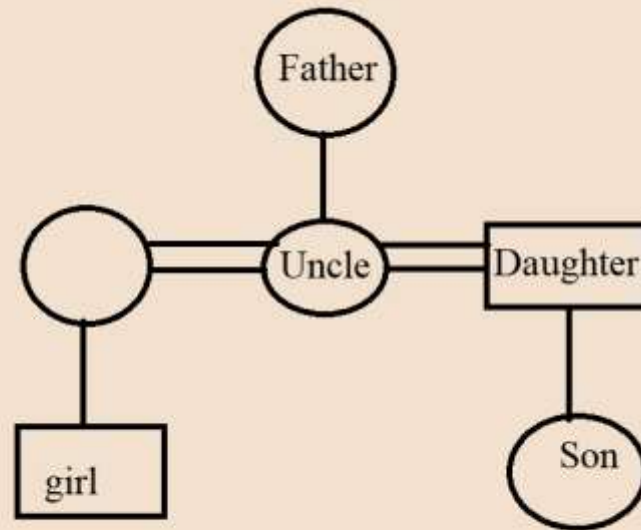
1. Introducing a boy, a girl said, “He is the son of the daughter of the father of my uncle.” How is the boy related to the girl?

a) Brother

b) Nephew

c) Uncle

d) Cousin



Dialogue / Conversation Based

PRACTICE PROBLEM STATEMENT:

1) Pointing to a photograph, Suresh said, "He is the son of the only son of my mother." How is Suresh related to that boy?

- a) Brother b) Father c) Cousin d) can not be determined

2) Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?

- a) Brother b) Nephew c) Uncle d) Cousin

3) If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?

- a) Brother b) Sister c) Nephew d) CBD

4) Pointing to a photograph Lata says, "He is the son of the only son of my grandfather." How is the man in the photograph related to Lata?

- a) Brother b) Uncle c) Cousin d) Data is inadequate

5) Pointing a photograph X said to his friend Y, "She is the only daughter of the father of my mother." How X is related to the person of photograph?

- a) Daughter b) Son c) Nephew d) Cannot be decided

Puzzles Based

PRACTICE PROBLEM STATEMENT:

1. D is the brother of B. M is the Brother B. K is the father of M. T is the wife of K. How is B related to T?
(1) Son (2) Daughter (3) Son or Daughter (4) Data Inadequate (5) None of these
2. If 'A' is the mother of 'B' and 'C'; and 'D' is the husband of 'C', then what is 'A' to 'D'?
(1) Mother (2) Son-in-law (3) Mother-in-law (4) Aunt (5) Can't be determined
3. P and Q are sisters. R and S are brothers. P's daughter is R's sister. What is Q's relation to S?
(1) Mother (2) Grandmother (3) Sister (4) Aunt (5) None of these
4. A family has three generations and six members. Following information about the family is known. W is mother of U. V has only 1 daughter. X is the sister of V. S is T's husband. T has a son V who is married. There are two couples in the family. How is U related to S?
1) Daughter 2) Son 3) Son-in-law 4) Granddaughter 5) Can't be determined
5. P is the father of D, D is the only son of T. T is the daughter of J. T is the mother of G. G is the sister of V. If J is married to B, then how is B related to G?
1) Daughter-in-law 2) Son-in-law 3) Grandfather 4) Grandmother 5) Cannot be determined

Puzzles Based

PRACTICE PROBLEM STATEMENT:

6. P is the father of D, D is the only son of T. T is the daughter of J. T is the mother of G. G is the sister of V. How is V related to P?

1) Daughter 2) Father 3) Mother 4) Son 5) Cannot be determined

7. A and B are a married couple, A being the male member. D is the only son of C, who is the brother of A. E is the sister of D. B is the daughter-in-law of F, whose husband has died. How many male members are there in the family?

(a) 2 (b) 4 (c) 1 (d) 3

Symbol Based

PRACTICE PROBLEM STATEMENT:

1. If $A + B$ means A is the brother of B ; $A - B$ means A is the sister of B and $A \times B$ means A is the father of B . Which of the following means that C is the son of M ?

a) $M - N \times C + F$

b) $F - C + N \times M$

c) $N + M - F \times C$

d) $M \times N - C + F$

2. If $A + B$ means A is the sister of B ; $A \times B$ means A is the wife of B , $A \% B$ means A is the father of B and $A - B$ means A is the brother of B . Which of these means T is the daughter of P ?

a) $P \times Q \% R + S - T$

b) $P \times Q \% R - T + S$

c) $P \times Q \% R + T - S$

d) $P \times Q \% R + S + T$

3. If $A + B$ means A is the father of B ; $A - B$ means A is the brother B ; $A \% B$ means A is the wife of B and $A \times B$ means A is the mother of B , which of the following shows that M is the maternal grandmother of T ?

a) $M \times N \% S + T$

b) $M \times N - S \% T$

c) $M \times S - N \% T$

d) $M \times N \times S \% T$

4. If $A + B$ means A is the mother of B ; $A - B$ means A is the brother B ; $A \% B$ means A is the father of B and $A \times B$ means A is the sister of B , which of the following shows that P is the maternal uncle of Q ?

a) $Q - N + M \times P$

b) $P + S \times N - Q$

c) $P - M + N \times Q$

d) $Q - S \% P$

CASELETS

PRACTICE PROBLEM STATEMENT:

1. There are eight members in a family. P is the father of Q. R is the brother of Q. S is the son of Q. T and S are brothers. U is the mother of T. Z is the grandson of V. Q and R are the children of V.

A. How is U related to P?

- 1) Daughter 2) Daughter-in-law 3) Wife 4) Granddaughter 5) cannot be determined

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

- 1) Two 2) Three 3) Four 4) Five 5) Six

C. Who is the father of Z?

- 1) P 2) R 3) Q 4) Either Q or R 5) Either P or R

CASELETS

PRACTICE PROBLEM STATEMENT:

2. There is family of six persons A, B, C, D, E and F. They are Teacher, Doctor, Lawyer, Student, Businessman and Architect.

- 1) There are two married couples in the family.
- 2) B is the mother of E and F.
- 3) The Businessman is the grandfather of F, who is a teacher.
- 4) The doctor D is married to the Businessman.
- 5) C, the lawyer is married to the lady Architect.

A. What is the profession of E?

- 1) Doctor 2) Teacher 3) Businessman 4) Student 5) Can't be determined

B. Who are the two married couples in the family?

- 1) EB and FC 2) AD and BC 3) EF and CB 4) AD and FC 5) None of these

Dialogue/ Conversation Based

➤ **PRACTICE PROBLEM STATEMENT:** (DIY)

1. Pointing to a woman in a photograph a man says: “She is the only daughter of my father’s mother-in-law”. How is the woman related to the man?

(1) Daughter 2) Mother 3) Daughter-in-law 4) Mother-in-law 5) None of these

2. Pointing a girl, Arun said, “She is the only daughter of my grandfather’s son.” How is girl related to Arun?

(1) Daughter (2) Sister 3) Cousin 4) Data Inadequate 5) None of these

3. Pointing a woman Nirmal said “She is the only daughter of my wife’s grandfather’s only child.” How is the woman related to Nirmal?

1) Wife 2) Sister-in-law 3) Sister 4) Data Inadequate 5) None of these

4. Pointing to a picture hanging over the wall, Rohan says “ She is the wife of my father’s only son’s son”. How is the lady in the picture related to Rohan?

1) Daughter 2) Sister-in-law 3) Sister 4) Daughter-in-law 5) None of the above

5. Pointing to a girl in the photograph, Raju said, "Her mother's brother is the only son of my mother's father." How is the girl's mother related to Raju?

(A) Daughter (B) Mother (C) Grandmother (D) Aunt



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Directions and Puzzles



Direction Sense



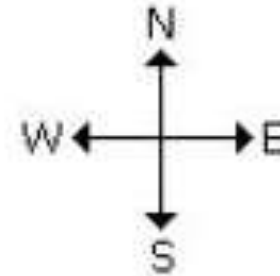


- Direction sense is one of the prime topics in logical reasoning.
- Questions from this topic generally involve an individual travelling certain distances in certain directions.
- The best way to solve these problems is to represent the traces of the path traversed by the person, as found in the information provided by the question.

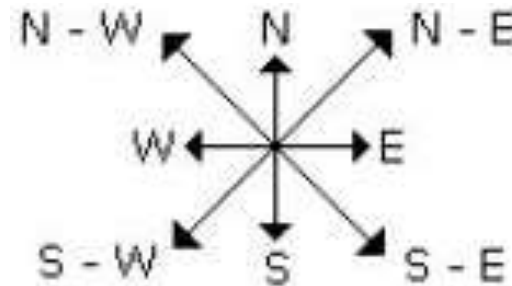




- There are four main directions – **North, South, East and West.**



- There are four cardinal directions – **North-East(N-E), North-West(N-W), South-East(S-E), South-West(S-W).**





Type of questions:

- A man walks 5 km north and then turns to his left, and walks 3 km. He again turns to his left and walks 5 km.
- Q1- How far is he from starting point?
- Q2-In which direction is he with respect to starting point?
- Q3-In which direction is he moving now?
- Q4-In which direction should he move to reach starting point?



Things to be noted:

- At the time of sunrise if a man stands facing the east, his shadow will be towards west.
- At the time of sunset the shadow of an object is always in the east.
- If a man stands facing the North, at the time of sunrise his shadow will be towards his left and at the time of sunset it will be towards his right.
- At 12.00 noon, the rays of the sun are vertically downward hence there will be no shadow.
- Always rainbow will occur opposite to the sun.
- Always shortest distance should be calculated.



Practice Questions

1. Santosh goes first 7 Km north then turns left and move 10 Km, again he turns left and moves 7 Km, how far is he from the starting point?

[A] 7 Km

[B] 10 Km

[C] 17 Km

[D] 24 Km



2. Mohan travels 7 Km to north direction from where he is standing and turns to his right. He then walks straight for another 3 Km. Turning to his right he moves 7 Km. How many Km away from starting point is he?

[A] 1

[B] 2

[C] 3

[D] 5



3. A man walks 5 Km towards south and then turns to the right. After walking 3 Km he turns to the left and walks 5 Km. Now in which direction is he from the starting place?

[A] West

[B] South

[C] North east

[D] South west



4. Ranuka started walking from her house, she first walked for 3 Km towards west, then she turned towards north and moved 4 Km in that direction. How far is Ranuka from her house?

- [A] 3 Km South
- [B] 3 Km South-East
- [C] 5 Km West
- [D] 5 Km North-West



5. Ashiq walks southwards, then takes a half right turn and then a left turn.
In which direction is he walking now?

[A] South-East

[B] South-West

[C] South

[D] North



6. A man walks northwards. After a while he turns to his right and a little further to his left. Finally, after walking a distance of 1km, he turns towards his left again. In which direction is he moving now?

[A] South

[B] North

[C] West

[D] East



7. A man started walking positioning his back towards the sun. After sometime, he turned left, then turned right and then towards the left again. In which direction is he going now?

[A] North or South

[B] East or West

[C] North or West

[D] South or West



8. A man went 10 Km towards south. Then turned East and covered 10 Km and turned to the right. Again after 10 Km he turned to the left and covered 10kms to reach the destination. How far and in which direction is he to his starting point?

[A] $20\sqrt{2}$ km, South- East

[B] $20\sqrt{2}$ km, North- East

[C] $20\sqrt{2}$ m, South- East

[D] 20 km, South East



9. A man went 15 Km to the North. Then he turned West and covered 10 Km. Then he turned south and covered 5 Km. Finally, turned to East, he covered 10 Km. In which direction is he from his house?

[A] West

[B] East

[C] North

[D] South



10. If South-East becomes North, North-East becomes West and so on. What will West become?

[A] North East

[B] North West

[C] South East

[D] South West



11. Rahul put his timepiece on the table in such a way that at 6 PM hour hand points to north. In which direction the minute hand will point at 9:15 PM?

[A] South East

[B] South

[C] North

[D] West



12. K is 40m South-West of L. If M is 40m South-East of L, then M is in which direction of K?

[A] East

[B] West

[C] North-East

[D] South



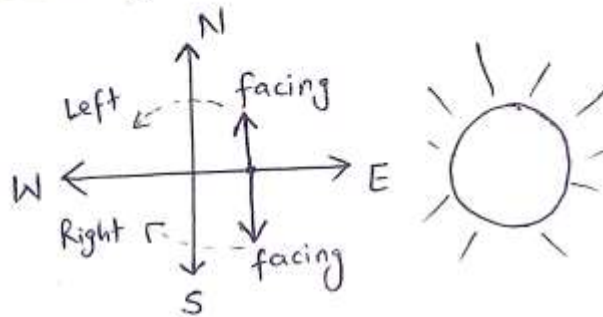
Shadow Type Questions:

- Shadow of any object is always opposite of SUN, if it is the case of **Morning** then Shadow will fall in the **WEST** and if it is the case of **Evening** then shadow will fall in the **EAST**.

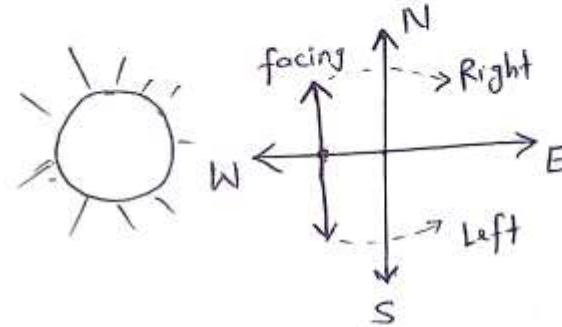


- Shadow Concepts : (1) At the time of sunrise shadow of object will be towards West direction.
- (2) At the time of sunset (Evening) shadow of object will be towards East direction.

Morning



Evening





- If a man stands facing **North** in the **Morning** his shadow will be towards his **left** and if he is facing **North** in **Evening** his shadow will be towards his **Right**.

- If a man stands facing **South** in the **Morning** his shadow will be towards his **Right** and if he is facing **South** in **Evening** his Shadow will be towards his **Left**.



13. One evening before sunset Rekha and Hema were talking to each other face to face. If Hema's shadow was exactly to the right of Hema, which direction was Rekha facing?

[A] North

[B] South

[C] East

[D] West



14. One morning Udai and Vishal were talking to each other face to face at a crossing. If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing?

[A] East

[B] West

[C] North

[D] South



15. Roshan walks 10 meters westwards, then turns left and walks 10 meters. He then again turns left and walks 10 meters. He takes a 45 degree turn to his right and walks straight. In which direction is he walking now?

[A] South-East

[B] South

[C] South West

[D] East



16. After his office hours in the evening, Gautam starts walking facing the sun. First he turns to his right, then he turns to his left and after walking for some meters to his left, he turns to his right. In what direction is he moving now?

[A] South

[B] North

[C] West

[D] East



17. Amit's office is situated 5 kilometers North of Ben's office. Ben starts from his office and walks 2 kilometers towards Amit's office. He then turns right and walks 3 kilometers and then turns left and walks 3 kilometers. To which direction will he turn to reach Amit's office?

[A] West

[B] North

[C] South

[D] East



18. A lady leaves her home and walks 30 meters in North-West direction and then 30 meters in South-West. Next, she walks 30 meters in South-East direction. Finally, she turns towards her house. In which direction is she moving now?

[A] North-East

[B] North-West

[C] South-East

[D] South-West



19. Deepak walks 8 kilometers East, turns South-West and walks another 8 kilometers. He again takes a turn towards North-West and walks another 8 kilometers. In which direction from his starting point is he standing now?

[A] North-East

[B] South

[C] West

[D] East



20. The school is to the West of the hospital. The hospital is to the South of the police post. The workshop is to the North of the school. If the 4 places are equidistant from each other, then to which direction of workshop is the police post?

[A] East

[B] West

[C] North

[D] South



Directions for Q21 to Q25:

Joe walks 2 kilometers towards North and turns to his right and walks 4 kilometers more. He then turns to his right and walks 4 kilometers and turns again to his right and walks another 4 kilometers. Here he meets Renu who is coming from the opposite direction. They both stop there.

21. After taking the first turn, in which direction was Joe going?

- [A] South
- [B] North
- [C] West
- [D] East**



22. If the starting point is marked 'A' and finishing point is marked 'B'.
What will be the distance between these points?

- [A] 10 Km
- [B] 8 Km
- [C] 6 Km
- [D] 2 Km**

23. From which direction was Renu coming?

- [A] West**
- [B] North
- [C] East
- [D] South-East



24. After taking the second turn, in which direction was Joe walking?

[A] South

[B] West

[C] North

[D] East

25. If Joe is to again reach the point from where he started, in which direction will he have to go from where he's standing now?

[A] East

[B] North

[C] North-East

[D] South-East



26. A clock is so placed that at 12 noon its minute hand points towards North-East. In which direction does its hour hand point at 1.30 pm?

- [A] North
- [B] South
- [C] East**
- [D] West

27. One evening before sunset, two friends Jane and Jackie were talking facing each other. If Jackie's shadow was exactly to his right side, which direction was Jane facing?

- [A] North
- [B] South**
- [C] East
- [D] West



thank you!