GATE

ALL BRANCHES

GENERAL APTITUDE

Analytical Aptitude

Blood Relation

Lecture No: 11

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TOPICS TO BE COVERED

1. Understanding Concept
2. Rules for Answering
3. Limitations of Relations
4. Questionnaire

Q. What is the compound interest on ₹2500 for two years at the rate of interest 4% per annum?

Assignment

₹2500 × 1.04 × 1.04

= 2704

204

A. ₹180

B. ₹204

C. ₹210

D. ₹220

Q. In what time a sum of money will double itself at a rate of S.I. of 6% per annum?

Assignment

A. 6 ⅓ years

B. 33 ⅓ years

C. 16 ⅔ years

D. 21 years

$$A = P\left(1 + \frac{TR}{100}\right)$$

$$2\cancel{P} = \cancel{P}\left(1 + \frac{T \times \cancel{6}^{3}}{\cancel{100}_{50}}\right)$$

$$1 = \frac{3T}{50}$$

$$T = \frac{50}{3}$$

$$= 16\frac{2}{3} \text{ yrs}$$

Q. A sum of money was invested at simple interest at a certain rate for 3 years. Had it been invested at a 4% higher rate, it would have fetched ₹480 more. Find the principal.

Assignment

A. ₹4000

B. ₹5000

C. ₹6000

D. ₹3000

3 years ⇒ 480

1 year → 160

4% ⇒ 160

100% ⇒ $160 \times \frac{100}{4} = 4000$

Q. Raju invested ₹5488 for 3 years at C.I. and received an amount of ₹6750 on maturity. What is rate percent?

A. $7\frac{1}{7}\%$

B. $9\frac{2}{3}\%$

C. $3\frac{1}{3}\%$

D. $6\frac{1}{3}\%$

$$A = P\left(1+\frac{r}{100}\right)^n$$

$$\Rightarrow 6750 = 5488\left(1+\frac{r}{100}\right)^3$$

$$\Rightarrow \frac{\cancel{6750}^{3375}}{\cancel{5488}_{2744}} = \left(\frac{100+r}{100}\right)^3$$

$$\Rightarrow \left(\frac{15}{14}\right)^3 = \left(\frac{100+r}{100}\right)^3$$

$$\Rightarrow \frac{15}{14} = \frac{100+r}{100}$$

$$\Rightarrow 1500 = 1400 + 14r$$

$$r = \frac{100}{14} = \frac{50}{7}$$

$$\boxed{7\frac{1}{7}\%}$$

Assignment

Q. The repayment of a loan after 6 years at rate of 24% simple interest is ₹ 73200. What is the amount borrowed?

Assignment

$P = ?$

$A = P\left(1 + \frac{TR}{100}\right)$

A. 45000

B. 30000

C. 42000

D. 30800

$\Rightarrow 73200 = P\left(1 + \frac{6 \times 24}{100}\right)$

$\Rightarrow \frac{73200}{P} = \frac{100 + 144}{100}$

$\Rightarrow \frac{73200}{P} = \frac{244}{100}$

$\Rightarrow \frac{\cancel{73200}^{300} \times 100}{\cancel{244}_{1}} = P$

$\Rightarrow P = 30000$

BLOOD RELATIONS

G.G.F | G.G.M.

forefather

Mother Father

Son daughter

Brother Sister

Cousins

Uncle Aunt

Nephew Niece

Grand Father Grand Mother

Husband Wife

Grand son Grand Daughter

~~Step~~

~~CD~~

A is brother of B ? Paternal / Maternal

(parent)

Mother : Father

Brother : Sister

(Siblings)

Uncle : Aunt

(Grand parent)

Grand Father : Grand Mother

Grand son : Grand daughter

(Grand Child)

(Child)

Son : Daughter

Cousins

Nephew : Niece

Husband : Wife

(Spouse)

Great Grand Father : Great Grand Mother

Forefather / Ancestors

Generations:

1st

2nd

3rd

4th

5th

G.F / G.M → G.G.F / G.G.M → forefather

Mother Father → Uncle Aunt

A ~ B

Cousins ← Me → brother Sisters → Spouse

Nephew Niece ← Son daughter

Grandson Granddaughter

Family Tree:

In laws:

Before

father in law

Mother in law

Brother in law

sister in law

After

son in law

daughter in law

In laws:

Spouse Mother = Mother in law
Spouse Father = Father in law
Spouse Brother = Brother in Law
Spouse Sister = Sister in law

Son in Law
Daughter in Law

Spouse son = son
Spouse daughter = daughter

Q. Pointing to a boy in the photograph Manasa said, "His sister is the only daughter of my father". How is the boy related to Manasa's father?

Son

A. Father

B. Brother

C. Son

D. Cousin

Q. Pointing to Neha, Mahesh said, "Her mother's only daughter is my daughter". How is Mahesh related to Neha?

Neha

Father

A. Brother

B. Son

C. Uncle

D. Father

Q. A is brother of B.
C is son of D.
Then what is B to F?

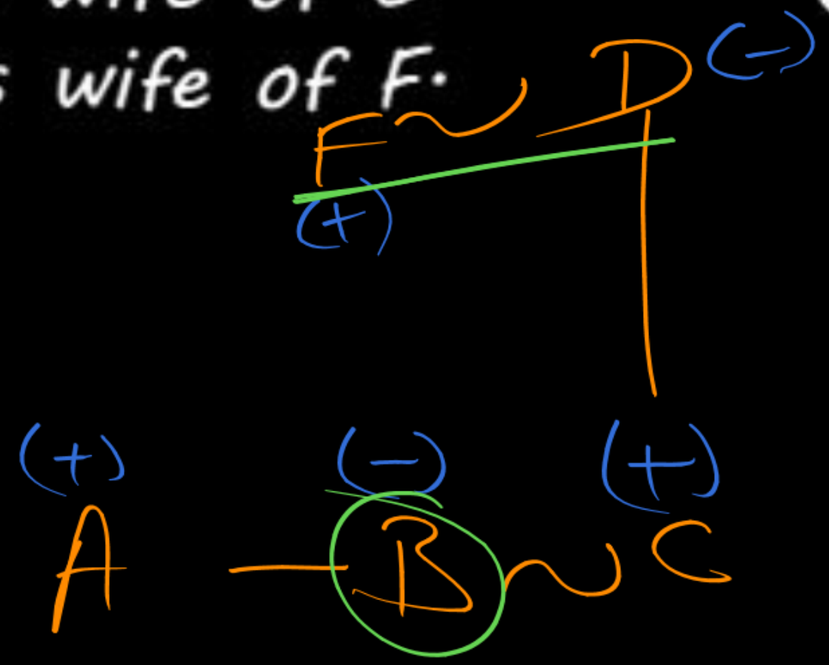
B is wife of C.
D is wife of F.

A. Son-in-law

B. Daughter-in-law

C. Cousin

D. None of these



Q. Pointing towards a person in a photograph, Raman said, "She is the only daughter of the mother of my brother's sister". How is that person related to Raman?

Assignment

A. Uncle

B. Mother

C. Father

D. Sister

Q. If Neena says, "Anita's father Raman is the only son of my father-in-law Mahipal", then how is Bindu, who is the sister of Anita, related to Mahipal?

Assignment

A. Daughter

B. Wife

C. Daughter-in-law

D. None of these

Q. Pointing to a photograph, a woman says, "This man's son's sister is my mother-in-law." How is the woman's husband related to the man in the photograph?

Assignment-

A. Son

B. Grand son

C. Son-in-law

D. Nephew

Q. When Amit saw Manoj, he recalled and said "He is the son of the father of the mother of my daughter". What is Manoj to Amit?

Assignment

A. Brother-in-law

B. Brother

C. Cousin

D. Uncle

Q. Direction:
X+Y means X is the father of Y, X-Y means X is the wife of Y, X × Y means X is the brother of Y, X ÷ Y means X is the daughter of Y.

Assignment

A x B - C means _____

A. A is brother-in-law of C

B. A is the husband of C

C. A is the son of C

D. None of these

Q. Direction:
X+Y means X is the father of Y, X-Y means X is the wife of Y, X × Y means X is the brother of Y, X ÷ Y means X is the daughter of Y.

Assignment

In A x B ÷ C, which of the following statement is true?

A. A is the uncle of C

B. A is the father of C

C. A is the son of C

D. A is the brother of C

Q. Rohit said to Mohit, "The boy playing basket ball is younger brother of the two brothers of the daughter of my father's wife". How is the boy playing basket ball related to Rohit?

Assignment

A. Brother-in-law

B. Nephew

C. Cousin

D. Brother

Q. Introducing Swapna, Madhavi said, "She is the only daughter of my father's only daughter". How is Madhavi related to Swapna?

Assignment

A. Niece

B. Aunt

C. Cousin

D. None

Q. A, the son of B was married to C, whose sister D was married to E, the brother of A. How is D related to B?

Assignment

A. Daughter-in-law

B. Sister

C. Cousin

D. Sister-in-law

Thank You !