



## **Reasoning Questions For SSC MTS PDF**

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### Instructions

For the following questions answer them individually

#### Question 1

If  $6 \# 8 = 10$  and  $5 \# 12 = 13$ , then  $9 \# 40 = ?$

- A 47
- B 63
- C 41
- D 53

**Answer:** C

#### Explanation:

The pattern followed is :  $a \# b = c \equiv a^2 + b^2 = c^2$

$$\text{Eg :- } (6)^2 + (8)^2 = 36 + 64 = 100 = (10)^2$$

$$\text{and } (5)^2 + (12)^2 = 25 + 144 = 169 = (13)^2$$

$$\text{Similarly, } (9)^2 + (40)^2 = 81 + 1600 = 1681 = (41)^2$$

=> Ans - (C)

#### Question 2

If "A" denotes "added to", "B" denotes "subtracted from", "C" denotes "multiplied by" and "D" denotes "divided by" then which of the following equation is true ?

- A  $12 \text{ A } 6 \text{ B } 3 \text{ C } 4 \text{ D } 3 = 14$
- B  $13 \text{ B } 6 \text{ D } 3 \text{ C } 2 \text{ A } 5 = 12$
- C  $72 \text{ D } 18 \text{ C } 14 \text{ B } 68 \text{ A } 10 = -4$
- D  $68 \text{ D } 4 \text{ A } 6 \text{ B } 3 \text{ C } 8 = 0$

**Answer:** A

#### Explanation:

$$(A) : 12 \text{ A } 6 \text{ B } 3 \text{ C } 4 \text{ D } 3 = 14$$

$$\equiv 12 + 6 - 3 \times 4 \div 3 = 14$$

$$\text{L.H.S.} = 12 + 6 - \left( \frac{3 \times 4}{3} \right)$$

$$= 18 - 4 = 14 = \text{R.H.S.}$$

=> Ans - (A)

#### Question 3

If "@" denotes "added to", "#" denotes "multiplied by", "®" denotes "divided by" and "%" denotes "subtracted from", then which of the following equation is true?

- A  $8 @ 8 \text{®} 8 \# 8 \% 8 = 9$
- B  $42 \% 26 \text{®} 13 \# 2 @ 8 = 46$
- C  $19 \% 84 \text{®} 4 @ 3 \# 4 = 12$
- D  $31 \% 4 \text{®} 2 \# 19 @ 3 = 4$

**Answer: B**

**Explanation:**

(A) :  $8 @ 8 \oplus 8 \# 8 \% 8 = 9$

$$\equiv 8 + 8 \div 8 \times 8 - 8$$

$$\text{L.H.S.} = 8 + 8 - 8 = 8 \neq \text{R.H.S.}$$

(B) :  $42 \% 26 \oplus 13 \# 2 @ 8 = 46$

$$\equiv 42 - 26 \div 13 \times 2 + 8$$

$$\text{L.H.S.} = 42 - 4 + 8 = 46 = \text{R.H.S.}$$

$\Rightarrow$  Ans - (B)

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**Question 4**

In a certain code language, "CONGO" is written as "RZPRD" and "TREAT" is written as "UQGWX". How is "PHONE" written in that code language ?

- A JNQIJ
- B KMQHK
- C MKQKH
- D LLPIL

**Answer: B**

**Explanation:**

"CONGO" is written as "RZPRD" and "TREAT" is written as "UQGWX"

The pattern followed is :

-3	+3	+2	-3	+3
C	O	N	G	O
X		X		
R	Z	P	R	D

-3	+3	+2	-3	+3
T	R	E	A	T
X		X		
U	Q	G	W	X

Similarly, for PHONE : **KMQHK**

-3	+3	+2	-3	+3
P	H	O	N	E
X		X		
K	M	Q	H	K

$\Rightarrow$  Ans - (B)

**Question 5**

In a certain code language, "RESTED" is written as "SDTSFC". How is "BANNED" written in that code language ?

- A CZOMFC
- B ABMODE
- C CZOODE
- D ABMMFC

**Answer: A**

**Explanation:**

Expression : "RESTED" is written as "SDTSFC"

The pattern followed is :

R	E	S	T	E	D
(+1)	(-1)	(+1)	(-1)	(+1)	(-1)
S	D	T	S	F	C

Similarly, for BANNED : **CZOMFC**

B	A	N	N	E	D
(+1)	(-1)	(+1)	(-1)	(+1)	(-1)
C	Z	O	M	F	C

=> Ans - (A)

### Question 6

In the following question, select the word which cannot be formed using the letters of the given word.  
**ENCOURAGING**

- A GRAIN
- B RAGING
- C GAUGE
- D ENCOURAGE

**Answer:** D

### Explanation:

The word ENCOURAGING does not contain any 'E', thus the term **Encourage** cannot be formed.

=> Ans - (D)

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### Question 7

If 'P 3 Q' means 'Q is daughter of P', 'P 5 Q' means 'Q is son of P', 'P 7 Q' means 'P is sister Q', 'P 9 Q' means 'P is brother of Q'. Which of the following Expression indicates A is nephew of D ?

- A B 9 D 5 C 5 A
- B B 7 D 9 C 5 A
- C B 7 D 7 C 3 A
- D B 7 D 9 C 3 A

**Answer:** B

### Explanation:

(A) : B 9 D 5 C 5 A

B is brother of D and D is son of C.

Also, C is son of A, => A is either grandfather or grandmother of D.

(B) : B 7 D 9 C 5 A

B is sister of D and D is brother of C.

Also, A is son of C, => A is nephew of D.

=> Ans - (B)

#### Question 8

In a row of people, there are 12 people before Q. There are 4 people between P and Q. There are 15 people between Q and S. If there are 8 people between S and R, then how many minimum people are there in the row ?

- A 29
- B 32
- C 36
- D 37

**Answer:** A

#### Explanation:

There are 12 people before Q, => Let us assume Q is at 13th position from left end.

There are 15 people between Q and S, => S is at 29th position.

There are 4 people between P and Q, => P can be either at 8th or 18th position from left.

There are 8 people between S and R, => R is at 20th position.

Thus, there are minimum of **29 people** in the row.

=> Ans - (A)

#### Question 9

In a row of cars, red car is 14th from left and 23rd from right. How many cars are there in the row ?

- A 36
- B 37
- C 35
- D 34

**Answer:** A

#### Explanation:

Red car is 14th from left and 23rd from right

=> Total number of cars =  $(14 + 23) - 1 = 36$

=> Ans - (A)

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#### Question 10

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series:

B, E, I, S, K, ?

- A W
- B X
- C U

**D** V

**Answer:** A

**Explanation:**

The letters corresponding to the above series are : B(2), E(5), I(9), S(19), K(11 or 37)

$$2 \times 2 + 1 = 5$$

$$5 \times 2 - 1 = 9$$

$$9 \times 2 + 1 = 19$$

$$19 \times 2 - 1 = 37 \text{ (or 11)}$$

$$11 \times 2 + 1 = 23 \equiv W$$

=> Ans - (A)

**Question 11**

**A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.**

**B, G, N, W, ?**

**A** I

**B** G

**C** J

**D** H

**Answer:** D

**Explanation:**

Consecutive odd numbers are added.

$$B (+5) = G (+7) = N (+9) = W (+11) = H$$

=> Ans - (D)

**Question 12**

**Arrange the given words in the sequence in which they occur in the dictionary:**

- 1. Habit**
- 2. Habitat**
- 3. Handle**
- 4. Hammer**
- 5. Harvest**

**A** 21453

**B** 12435

**C** 21435

**D** 14253

**Answer:** B

**Explanation:**

As per the order of dictionary,

= Habit -> Habitat -> Hammer -> Handle -> Harvest

$\equiv$  12435

=> Ans - (B)

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**Question 13**

Arrange the given words in the sequence in which they occur in the dictionary:

1. Reputation
2. Reptile
3. Republic
4. Replicate
5. Repository

- A 42531  
B 43251  
C 45312  
D 45231

**Answer:** D

**Explanation:**

As per the order of dictionary,

= Replicate -> Repository -> Reptile -> Republic -> Reputation

≡ 45231

=> Ans - (D)

**Question 14**

In the following question, select the odd number-pair from the alternatives:

- A 8-72  
B 6-42  
C 12-156  
D 4-12

**Answer:** D

**Explanation:**

The numbers are of the form :  $n^2 + n$

(A) :  $(8)^2 + 8 = 72$

(B) :  $(6)^2 + 6 = 42$

(C) :  $(12)^2 + 12 = 156$

(D) :  $(4)^2 + 4 = 20 \neq 12$

=> Ans - (D)

**Question 15**

In the following question, select the odd number-pair from the given alternatives:

- A 15-45  
B 9-29

C 31-93

D 41-123

**Answer: B**

**Explanation:**

If we divide the second number by first number, quotient is 3.

$$(A) : \frac{45}{15} = 3$$

$$(B) : \frac{29}{9} = 3.22$$

$$(C) : \frac{93}{31} = 3$$

$$(D) : \frac{123}{41} = 3$$

=> Ans - (B)

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### Question 16

In the following question, select the odd letters from the given alternatives

A AEI

B IMQ

C EIL

D MQU

**Answer: C**

**Explanation:**

$$(A) : A (+4) = E (+4) = I$$

$$(B) : I (+4) = M (+4) = Q$$

$$(C) : E (+4) = I (+3) = L$$

$$(D) : M (+4) = Q (+4) = U$$

=> Ans - (C)

### Question 17

In the following question, select the odd letters from the given alternatives:

A GEF

B MLK

C IKJ

D VWY

**Answer: D**

**Explanation:**

In the first three options, the given combinations are groups of consecutive letters from English alphabetical series, i.e. (EFG), (KLM), (IJK), hence **VWY** is the odd one.

=> Ans - (D)



### Question 18

In the following question, select the odd word pair from the given alternatives:

- A Wheat - Rabi
- B Rice - Rabi
- C Maize - Kharif
- D Barley - Rabi

**Answer:** B

#### **Explanation:**

First is the type of second, Wheat and barley are rabi crops, while rice and maize are kharif crops, hence **Rice - Rabi** is the odd one.

=> Ans - (B)

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### Question 19

In the following question, select the odd word pair from the given alternatives:

- A Speaker - Sound
- B Bulb - Light
- C Fire - Heat
- D Earth - Land

**Answer:** D

#### **Explanation:**

First is the source of second, sound comes from speaker, light from a bulb and fire provides heat, hence **Earth - Land** is the odd one.

=> Ans - (D)

### Question 20

In the following question, select the related number from the given alternatives:

**36 : 27 :: 196 : ?**

- A 257
- B 89
- C 173
- D 343

**Answer:** D

#### **Explanation:**

Expression =  $36 : 27 :: 196 : ?$

The pattern followed is =  $(n)^2 : \left(\frac{n}{2}\right)^3$

Eg :-  $(6)^2 : \left(\frac{6}{2}\right)^3 = 36 : 27$

Similarly,  $(14)^2 = 196$

$$\Rightarrow \left(\frac{14}{2}\right)^3 = (7)^3 = 343$$

$\Rightarrow$  Ans - (D)

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