01

Analogy

- An Analogy is a comparison of two things to show their similarities. An analogy explains one thing in terms of another to highlight the ways in which they are alike.
- In questions based on analogy, a particular relationship between words/letters/numbers is given and another similar relationship has to be identified from the alternatives provided.

Analogy may be broadly classified into the following types :

Word Analogy

In such type of questions, two words related to each other is a particular manner are given, which are followed by another word and a question mark '?'. The Candidate is required to identify the relationship between the first two words and then choose that word from the given alternatives which is related to the third word in the same way as first two words are related.

Here, some relationships are given, which are useful for solving questions based on word analogy.

States of India	Capital
Sikkim	Gangtok
West Bengal	Kolkata
Goa	Panaji
Tamil Nadu	Chennai
Odisha	Bhubaneshwar
Bihar	Patna

Quantity	Unit	Quantity	Unit
Power	Watt	Time	Second
Pressure	Pascal	Mass	Kilogram
Current	Ampere	Work	Joule
Area	Hectare	Volume	Litre
Force	Newton		

Word	Synonym	Word	Synonym
Assign	Allot	Dissipate	Squander
Substitute	Replace	Brim	Edge
Abduct	Kidnap	Dearth	Scarcity
Haughty	Proud		

Word	Antonym	Word	Antonym
Robust	Weak	Gentle	Harsh
Deep	Shallow	Notice	Ignore
Chaos	Peace	Lethargy	Alertness
Cruel	Kind	Mourn	Rejoice

The relationship is word analogy can also be of following types.
- Country and Currency
- Occupation and working place
- Game and place of playing
- Animal and Sound
- Worker and tool
- Individual and its dwelling etc.

Example 1 Mathematics is related to Numbers in the same way as History is related to

(a) Wars   (b) Events   (c) Dates   (d) People

Sol. (*b*) As, Mathematics is the theory of numbers in the same way History is the theory of past events.

Example 2 Complete the second pair by choosing the appropriate alternative.

Teacher : School : : Nurse :?

(a) Doctor   (b) Patients
(c) Hospital   (d) Medicine

Sol. (*c*) As, Teacher teaches in the School, in the same way Nurse looks after patients in Hospital.

Number Analogy

- In this type of analogy, numbers are given in a pair following a particular relationship. The candidates are required to find out the relationship among them to complete the incomplete pair.
- The relationship of numbers can be based upon the following.

   Addition and Subtraction of numbers.
   Multiplication and Division of numbers.
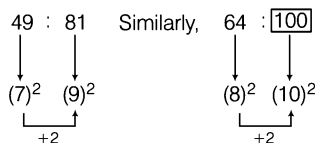   Even and odd numbers.
   Square/Square root and cube/cube roots of numbers.

Example 3 Complete the second pair by choosing the appropriate alternative.

49 : 81 : : 64 : ?

(a) 36   (b) 121   (c) 100   (d) 144

Sol. (*c*) As,

$$49 : 81 \quad \text{Similarly,} \quad 64 : \boxed{100}$$
$$(7)^2 \quad (9)^2 \qquad\qquad (8)^2 \quad (10)^2$$
$$\underset{+2}{\longleftrightarrow} \qquad\qquad\qquad \underset{+2}{\longleftrightarrow}$$

Letter Analogy

- Questions in this type are based on English letters or group of letters. Candidates are required to find the relationship between the letters or group of letters in a pair and the complete the incomplete pair by choosing the correct letter or group of letters from the given alternatives.

- The relationship between letters can be based upon the following.

   Addition and Subtraction in position of letters.
   Reverse order or opposite pair of letters.
   Vowels and consonants.

Here, following table is showing letters' position in English alphabetical series.

Forward	Alphabet	Backward
1	A	26
2	B	25
3	C	24
4	D	23
5	E	22
6	F	21
7	G	20
8	H	19
9	I	18
10	J	17
11	K	16
12	L	15
13	M	14
14	N	13
15	O	12
16	P	11
17	Q	10
18	R	9
19	S	8
20	T	7
21	U	6
22	V	5
23	W	4
24	X	3
25	Y	2
26	Z	1

Example 4 Complete the second pair by choosing the appropriate alternative.

BOQD : ERTG : : ANPC : ?

(a) DQSF   (b) FSHU   (c) SHFU   (d) DSQF

Sol. (*a*) As,   B   O   Q   D
$$\downarrow_{+3} \quad \downarrow_{+3} \quad \downarrow_{+3} \quad \downarrow_{+3}$$
E   R   T   G

Similarly,   A   N   P   C
$$\downarrow_{+3} \quad \downarrow_{+3} \quad \downarrow_{+3} \quad \downarrow_{+3}$$
D   Q   S   F

Hence, DQSF will be the required answer.

Example 5 Complete the second pair by choosing the appropriate alternative

N : 14 : : P : ?

(a) 16
(b) 15
(c) 10
(d) 18

Sol. (*a*) The positional value of N in English alphabetical order is 14, similarly the positional value of P is 16.

Practice Exercise

1. Neck is related to Tie in the same way as Waist is related to
(a) Belt   (b) Watch
(c) Shirt   (d) Pants

2. Doctor is related to Patient, in the same way Lawyer is related to
(a) Criminal   (b) Judge
(c) Client   (d) Customer

3. Bouquet is related to Flowers in the same way as Sentence is related to
(a) Words   (b) Letters
(c) Paragraph   (d) Noun

4. 'Cyclone' is related to 'Anti-cyclone' in the same way as Flood is related to
(a) Devastation   (b) Havoc
(c) river   (d) Drought

5. Tree is related to Sapling in the same way as Horse is related to
(a) Pony   (b) Mule
(c) Cub   (d) Foal

Directions (Q. Nos. 6-10) *In each of the following questions. Choose the word which will replace the question mark(?)*

6. Thermometer : Temperature : : Hygrometer : ?
(a) Pressure   (b) Density
(c) Stress   (d) Humidity

7. Jewellery : Gold : : Furniture : ?
(a) Wood   (b) Paint   (c) Table   (d) Tree

8. Man : House : : Beast : ?
(a) Cave   (b) Den   (c) Cage   (d) House

9. Bird : Feather : : Fish :?
(a) Gill   (b) Tail   (c) Fin   (d) Scale

10. Maharashtra : India : : Texas : ?
(a) Canada (b) Mexico (c) Brazil (d) USA

Directions (Q. Nos. 11-25) *In each of the following questions. Select the related letter/ number from the given alternatives.*

11. 4 : 64 : : 5 : ?
(a) 121   (b) 125   (c) 144   (d) 100

12. 5 : 36 : : 6 : ?
(a) 48   (b) 50   (c) 49   (d) 56

13. 24 : 60 : : 120 : ?
(a) 160   (b) 220   (c) 300   (d) 108

14. 27 : 125 : : 64 : ?
(a) 517   (b) 62   (c) 216   (d) 273

15. 10 : 101 : : 20 : ?
(a) 200   (b) 400   (c) 201   (d) 401

16. MAT : NCW : : APE : ?
(a) CRH   (b) BRH
(c) BSG   (d) BSH

17. BOQD : ERTG : : ANPC :?
    (a) DQSF   (b) FSHU   (c) SHFU   (d) DSQF

18. TALE : LATE : : FACE : ?
    (a) CAFG   (b) CAFE   (c) FEAC   (d) CEFA

19. AZBY : CXWD : : EVUF :?
    (a) GTHS   (b) GTSH   (c) GSHT   (d) GSPH

20. MINIMUM : MUMINIM : : MAXIMUM : ?
    (a) IXAMUMM   (b) MAMXIMI
    (c) MUMIXAM   (d) AMXIMUM

21. WINNER : IWNNRE : : LOOSER : ?
    (a) OOSERL   (b) OLSORE
    (c) LSOERO   (d) LROEOS

22. CAD : FDG : : XZW : ?
    (a) IQJ   (b) CAD   (c) ZBY   (d) UWT

23. NEWS : 14,5,23,19 : : PAPER : ?
    (a) 16,5,16,1,18
    (b) 18,5,16,1,16
    (c) 16,1,16,5,18
    (d) 32,2,32,10,36

24. FILM : 40 : : HOTEL : ?
    (a) 60   (b) 45
    (c) 80   (d) 30

25. F : 216 :: L : ?
    (a) 1728   (b) 1700   (c) 1600   (d) 1723

Answers

1	(a)	2	(c)	3	(a)	4	(d)	5	(d)	6	(d)	7	(a)	8	(b)	9	(d)	10	(d)
11	(b)	12	(c)	13	(c)	14	(c)	15	(d)	16	(b)	17	(a)	18	(b)	19	(b)	20	(c)
21	(b)	22	(d)	23	(c)	24	(a)	25	(a)										

Hints & Solutions

1. (a) As, tie is worn in the neck. Similarly, Belt is Worn on the waist.

2. (c) Doctor deals with patients. Similarly, Lawyer deals with clients.

3. (a) Bouquet is a bunch or group of Flowers. In the same way a sentence is made up of Words.

4. (d) As, 'Cyclone' is opposite of 'Anti-Cyclone'. Similarly, 'Flood' is opposite of 'Drought'.

5. (d) Second is the young one of first. Hence, the young one of Horse is called as Foal.

6. (d) As Thermometer is used to measure Temperature in the same way Hygrometer is used to measure Humidity.

7. (a) As, Gold is used to make Jewellary. Similarly, Wood is used to make Furniture.

8. (b) As, Man lives in House. Similarly, Beast live in Den.

9. (d) The body of Bird remains covered with Feathers. Similarly the body of Fish remains covered with Scales.

10. (d) As, Maharashtra is one of the states in India, in the same way, Texas inone of the States in USA.

11. (b) Second is the cube of first number
$$4^3 \longrightarrow 64$$
Hence, $5^3 \longrightarrow 125.$

12. (c) As, $(5+1)^2 = (6)^2 = 36$
Similarly, $(6+1)^2 = (7)^2 = 49$

13. (c) As, $24 \times \dfrac{5}{2} = 60$. Similarly, $120 \times \dfrac{5}{2} = 300.$

14. (c) 27 : 125 : : 64 : 216

$$\begin{array}{cccc} 27 & : 125 & :: \; 64 & : 216 \\ (3)^3 & (5)^3 & (4)^3 & (6)^3 \end{array}$$
         +2   +2

15. (d) As $(10)^2 + 1 = 100 + 1 \Rightarrow 101$
Similarly $(20)^2 + 1 = 400 + 1 \Rightarrow 401$

16. (b) As,
$$\begin{array}{ccc} M & A & T \\ {\scriptstyle +1} & {\scriptstyle +2} & {\scriptstyle +3} \\ N & C & W \end{array}$$
Similarly,
$$\begin{array}{ccc} A & P & E \\ {\scriptstyle +1} & {\scriptstyle +2} & {\scriptstyle +3} \\ \boxed{B} & \boxed{R} & \boxed{H} \end{array}$$
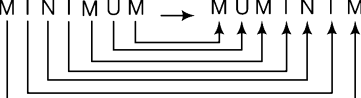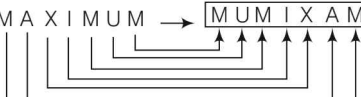
17. (a) As, B O Q D   Similarly, A N P C

+3↓ +3↓ +3↓ +3↓   +3↓ +3↓ +3↓ +3↓

E R T G   D Q S F
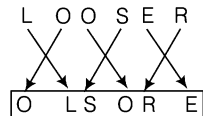
18. (b) As, TALE ⟶ LATE

The first and the third letters have been interchanged.

Therefore, F A C E ⟶ C A F E

19. (b) As,

A Z Y B

+2↓ −2↓ −2↓ +2↓

C X W D

Similarly,

E V U F

+2↓ −2↓ −2↓ +2↓

G T S H

20. (c) As, M I N I M U M ⟶ M U M I N I M

Similarly,

M A X I M U M ⟶ M U M I X A M

21. (b) As, W I N N E R

I W N N R E

Similarly, L O O S E R

O L S O R E

22. (d)

C A D : F D H :: X Z W : U W T

Pairs of opposite letters

23. (c) Each letter assigned its position from left.

So, PAPER → 16,1,16,5,18

24. (a) As, F I L M

↓ ↓ ↓ ↓

$6 + 9 + 12 + 13 = 40$,

Similarly, H O T E L

↓ ↓ ↓ ↓ ↓

$8 + 15 + 20 + 5 + 12 = 60$

25. (a) As, F ⟶ $(6)^3 = 216$ (Since, positional value of F is 6)

Similarly, L → $(12)^3 = 1728$

(Since, positional value of L is 12)