

Series

Series

A series is a specific sequence of number, letters, words or figure. We need to point out the defined rule or the pattern on which the given series is based. In order to identify the pattern, we will consider all possible arrangements or order that will provide the methodology to solve the series.

Some common types of relationships which are asked in the exam -

1. Number series -
 - a. Perfect square series
 - b. Perfect cube series
 - c. Same difference series
 - d. Multiple of a number series
 - e. Two mixed series
 - f. Wrong number series
 - g. Addition of last two digits in the series
 - h. Incorrect number series
2. Letter series
 - a. Common difference between the letters
 - b. Difference between the numbers are increasing or decreasing by some number
 - c. Opposite pairs of letters
3. Word series
 - a. Word forming with the last letter of the word
 - b. Number of vowels in the word is same
4. Fillers
5. Figure series
6. Mix series
 - a. Letter + Number mix series

Below we are going to share the types of series with examples to explain it,

1. Number series – It is a sequence formed out of numbers in which we have to identify the rule that will solve the series.

Examples-

1. In the following number series, two numbers have been put within brackets. Select the most appropriate option for these numbers in relation to their inclusion in the series.

11, 20, 31, (54), 59, 76, 95, (106), 139

- A. Both the bracketed numbers are incorrect.
- B. Both the bracketed numbers are correct.
- C. The first bracketed number is correct and the second is incorrect.
- D. The first bracketed number is incorrect and the second is correct.

Ans. A

Correct Series is- 11, 20, 31, (44), 59, 76, 95, (116), 139

Logic:

$$3^2+2=11$$

$$4^2+4=20$$

$$5^2+6=31$$

$$6^2+8=44$$

$$7^2+10=59$$

$$8^2+12=76$$

$$9^2+14=95$$

$$10^2+16=116$$

$$11^2+18=139$$

So, Both the bracketed numbers are incorrect. Hence, the correct answer is option A.

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

7, 10, 15, 24, 41, 74, ?

- A. 149
- B. 169
- C. 159

D. 139

Ans. D

Logic:

$$2^1 + 5 = 7$$

$$2^2 + 6 = 10$$

$$2^3 + 7 = 15$$

$$2^4 + 8 = 24$$

$$2^5 + 9 = 41$$

$$2^6 + 10 = 74$$

$$2^7 + 11 = 139$$

So, Missing Number = 139

Hence, option (D) is the correct response.

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

5, 12, 31, 68, 129, ?

A. 220

B. 218

C. 131

D. 190

Ans. A

The series will be,

$$\begin{array}{cccccc}
 5 & 12 & 31 & 68 & 129 & 220 \\
 \vee & \vee & \vee & \vee & \vee & \\
 7 & 19 & 37 & 61 & 91 & \\
 \vee & \vee & \vee & \vee & \vee & \\
 12 & 18 & 24 & 30 & & \\
 \vee & \vee & \vee & & & \\
 6 & 6 & 6 & & &
 \end{array}$$

Hence, option (A) is the correct answer.

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

19, 26, 45, 71, 116, ?

A. 166

B. 172

C. 184

D. 187

Ans. D

$$19 + 26 = 45$$

$$26 + 45 = 71$$

$$45 + 71 = 116$$

$$71 + 116 = 187$$

Hence, the correct option is D.

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

21, 25, 52, 68, 193, ?

A. 229

B. 242

C. 257

D. 409

Ans. A

$$25 - 21 = 4 \Rightarrow 2^2$$

$$52 - 25 = 27 \Rightarrow 3^3$$

$$68 - 52 = 16 \Rightarrow 4^2$$

$$193 - 68 = 125 \Rightarrow 5^3$$

$$? - 193 = 6^2 \Rightarrow ? = 193 + 36 = 229$$

Hence, the correct option is A.

2. Letter series - It is a sequence formed out of letters in which we have to identify the rule that will solve the series.

Examples -

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

ILLUMINATION, LLUMINATIO, LUMINATI, ?

A. UMINTA

B. UIMTAN

C. UMITAN

D. UMINAT

Ans. D.

The original series is ILLUMINATION, LLUMINATIO, LUMINATI, ?

We can see that each term in the above series is obtained by removing two letters from the preceding term - one from the beginning and one from the end. So, the missing term is UMINAT.

Hence, D is the required answer.

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

CHM, RWB, GLQ, VAF, ?

A. KPU

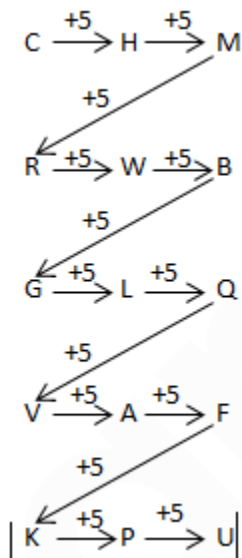
B. LQW

C. JNR

D. MTA

Ans. A

The series will be,



Thus, KPU is the required answer.

Hence, option A is the correct answer.

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

RS, ? , BC, GH

A. WX

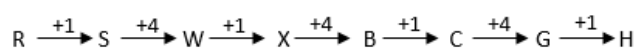
B. BY

C. UV

D. GE

Ans. A

The letters are related as follows,



Thus the missing term is WX.

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

G, S, C, ?, Q, U

A. M

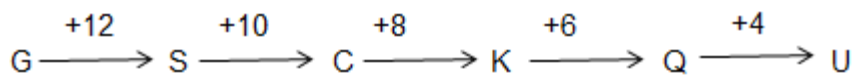
B. K

C. F

D. O

Ans. B

Given series follows the pattern given below:



Hence, the correct answer is option B.

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

MNO, TUV, BCD, KLM, ?

A. UVW

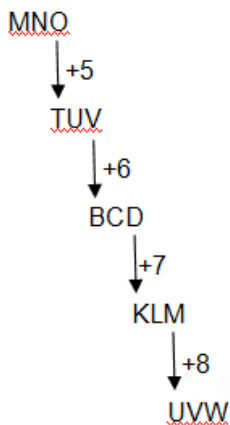
B. UVW

C. WUV

D. VUW

Ans. B

In this question, we show that-



So ? = UVW

So the correct answer is option B.

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

DS, FR, HQ, JP, ?

A. IK

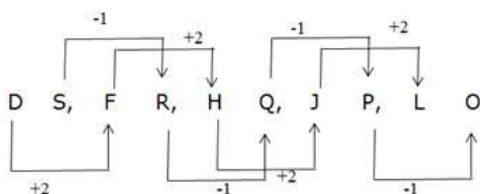
B. VG

C. KR

D. LO

Ans. D

Given series follows the pattern given below:



Hence, the correct answer is option D.

3. Word series - It is a sequence formed out of words in which we have to identify the rule that will solve the series.

Examples –

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

Boxing, Tennis, Doubles, Volleyball, ?

- A. Cricket
- B. Chess
- C. Basket Ball
- D. Badminton

Ans. A

The sports events are arranged as per the number of players in increasing order in each of the sports. Thus the next sport in series is Cricket.

Boxing (1 player) < Tennis (1 or 2 players) < Doubles (4 players) < Volleyball (6 players) < Cricket (11 players)

Hence, option (A) is the right answer.

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

Director General of Police, Additional Director General of Police, Inspector General of Police, ?

- A. Deputy Inspector General of Police
- B. Senior Superintendent of Police
- C. Superintendent of Police
- D. Assistant Superintendent of Police

Ans. A

In this question, the state police designation is mentioned in the decreasing order from top to bottom as,

Director General of Police, Additional Director General of Police, Inspector General of Police, Deputy Inspector General of Police.

So, the correct answer is option A.

3. A series is given, with one word missing. Choose the correct alternative from the given ones that will complete the series.

Student, Elephant, Among, Orange, National, ?

- A. Mango
- B. Notation
- C. Apple
- D. Caught

Ans. B

In this question, the next word in the series starts with the third last letter of the previous letter.

Student – third last letter is 'E'

Elephant – third last letter is 'A'

Among – third the last letter is 'O'

Orange – third last letter is 'N'

National – third last letter is 'N'

So the next word should start with 'N'.

Thus the next word in the series is 'Notation'

So the correct answer is option B.

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

Systaltic, Carabineer, Roaching, Gabardine, ?

- A. Junction
- B. Abacus
- C. Eagle
- D. Fabian

Ans. C

In this question, next in the series start with the last letter of the previous letter.

Systaltic – the last letter is 'C'

Carabineer – last letter is 'R'

Roaching – the last letter is 'G'

Gabardine – last letter is 'E'

So the next word should start with 'E'.

Thus the next word in the series is 'Eagle'

So correct answer is option C.

4. Fillers – These type of questions contains blank spaces which need to be filled by the letters to form a pattern.

Examples-

1. In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

_ yzaa _ y _ xy _ aazy _

A. xxzzx

B. xxaza

C. xzxzx

D. aazzx

Ans. C

'xyza' and 'azyx' are mentioned in the series alternatively

So let's put the letters.

xyzaa _ y _ xy _ aazy _

xyza/azyx/xyza/azyx

Hence, option (C) is the correct response.

2. In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

mnpq_rqpon_mno_qrss_qponmmnopqrs_

A. rmprs

B. mrrpt

C. rmprr

D. trpmr

Ans. C

The series is:

mnpqrr/qponm/mnopqrs/srqponm/mnopqrst

Thus, the pattern 'mnpqrr/qponm/mnopqrs' is repeated.

3. In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

ab_d_bb_a_bd

A. badd

B. babd

C. badb

D. abdd

Ans. C

Given series: ab_d_bb_a_bd

Inserting letters of option C we get,

abbd/abbd/abbd

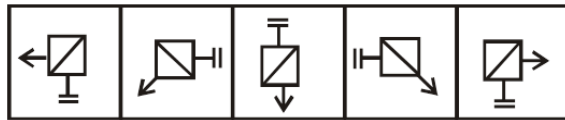
Hence the correct answer is option C.

5. Figure series - It is a sequence formed out of figures in which we have to identify the rule that will solve the series.

Examples-

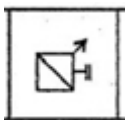
1. In the question given below which of the option figures will come after the problem figures, if the sequence were continued?

Problem Figures



- A.
- B.
- C.
- D.

Ans. B



The straight line inside the rectangle is changing alternatively. '=' sign is changing in anti clock wise direction and arrow sign is changing in clock wise direction. Hence option B is correct.

2. In the question given below which of the option figures will come after the problem figures, if the sequence were continued?



- A.
- B.
- C.
- D.

Ans. A

Considering the first 2 figures from left,
let the places of
T - 1st place

O - 2nd place

C - 3rd place

△ - 4th place

D - 5th place

Z - 6th place

Now in 2nd figure,

1st place is changed to 6th place with a new element,

2nd place is changed to 3rd place,

3rd place is changed to 5th place

4th place is changed to 2nd place

5th place is changed to 4th place

6th place is changed to 1st place

Now considering the figure 3rd and 4th from left,

1st place is changed to 6th place with a new element,

2nd place is changed to 3rd place,

3rd place is changed to 5th place

4th place is changed to 2nd place

5th place is changed to 4th place

6th place is changed to 1st place

Now considering the figure 5th figure from left, 6th figure will be,

1st place is changed to 6th place with a new element,

2nd place is changed to 3rd place,

3rd place is changed to 5th place

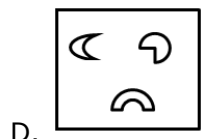
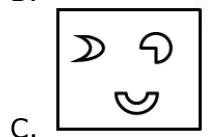
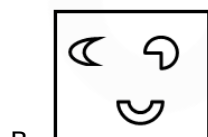
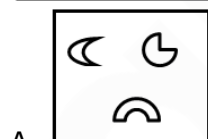
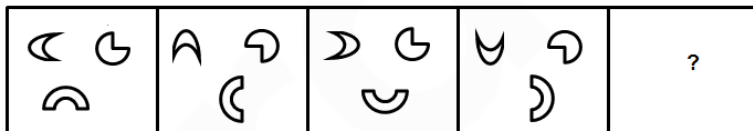
4th place is changed to 2nd place

5th place is changed to 4th place

6th place is changed to 1st place

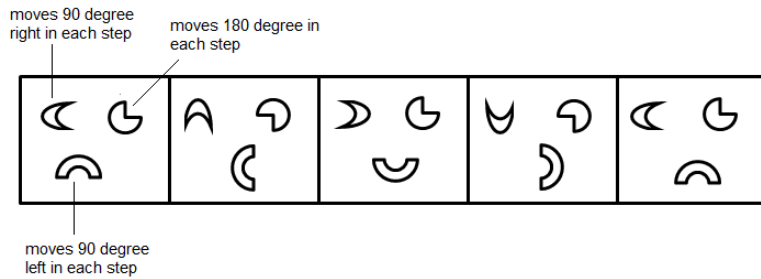


3. In the question given below which of the option figures will come after the problem figures, if the sequence were continued?



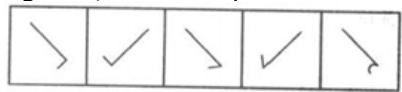
Ans. A

After observation, it is clear that, answer figure (A) will complete the question figure series after placing it at question marked place.



Here, option A is the correct answer.

4. In the question given below which of the option figures will come after the problem figures, if the sequence were continued?



- A.
- B.
- C.
- D.

Ans. C

In the above figure, figure (1 and 2), (3 and 4) are related.

Now, similarly for 5 and 6,

The lines are at 90 degrees to each other, also the figure at the end of the line is also in the same direction.

Hence, option C is the correct response.

6. Mix Series - It is a sequence formed out of the numbers and letters both, in which we have to identify the rule that will solve the series.

Examples -

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

AB10, DF101, GJ290, ?

- A. DE80
- B. JM580
- C. JN577
- D. JN359

Ans. C

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

For the first alphabet:

$$A + 3 = D, D + 3 = G, G + 3 = J$$

For the 2nd alphabet:

$$B + 4 = F, F + 4 = J, J + 4 = N$$

For the number:

$$101 - 10 = 91 \Rightarrow 13 \times 7$$

$$290 - 101 = 189 \Rightarrow 27 \times 7$$

$$X - 290 = 287 \Rightarrow 41 \times 7, X = 287 + 290 = 577$$

The missing term is JN577

Hence, the correct option is C

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

FK27, LQ64, RW125, ?

A. CX216

B. XB216

C. XC216

D. YB343

Ans. C

$$F + 5 \longrightarrow K + 3^3 = FK27$$

$$L + 5 \longrightarrow Q + 4^3 = LQ64$$

$$R + 5 \longrightarrow W + 5^3 = RW125$$

Similarly,

$$X + 5 \longrightarrow C + 6^3 = XC216$$

Hence the next term in the series will be XC216.

3. A series is given with one term missing, select the correct alternative from the given ones that will complete the series.

C11, V17, O23, ?

A. H30

B. H29

C. I29

D. I31

Ans. B

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

$$C - 7 = V, 11 + 6 = 17 \Rightarrow C11 \rightarrow V17$$

$$V - 7 = O, 17 + 6 = 23 \Rightarrow V17 \rightarrow O23$$

$$O - 7 = H, 23 + 6 = 29 \Rightarrow O23 \rightarrow H29$$

Hence, the correct option is B.