How to Crack

TEST OF
REASONING

IN ALL COMPETITIVE
EXAMINATIONS

Contains More Than 2500 Objective Questions on

Verbal, Analytical &
Non-Verbal Reasoning

Jaikishan • Premkishan

How to Crack

TEST OF
REASONING

IN ALL COMPETITIVE
EXAMINATIONS

Contains More Than 2500 Objective Questions on

Verbal, Analytical &
Non-Verbal Reasoning

Jaikishan • Premkishan

✳ **arihant**

ARIHANT PUBLICATIONS (INDIA) LTD.

✱arihant

Arihant Publications (India) Ltd.

PREFACE

Reasoning is the process of thinking in logical way in order to form the conclusion or judgement from information. Reasoning basically tests candidates logical thinking and skill to draw inferences. Importance of reasoning is increasingly moving centre stage in general competitive or entrance examinations. The questions that are asked in different examinations are not easy to solve and one cannot solve these problems without having a proper practice, once you know the basic concepts behind problems, you can solve them in least time.

The book 'How to Crack Test of Reasoning' will certainly help the candidates to become familiar with the concepts and approaches, which are used to solve the various reasoning problems. The book covers all the three types of reasoning comprehensively i.e. Verbal, Analytical and Non-Verbal Reasoning divided into chapters. Each chapter is further divided into types of questions asked in competitive exams. Each section also contains previous year questions asked in different competitive exams (like UPSC Civil Services, State PSCs, Bank (PO & Clerk), LIC (AAO & ADO), SSC (CGL, CPO, 10+2, MTS) Railway recruitment, etc.)

Latest trends and level of difficulty of questions being asked in various competitive exams have been incorporated in this book. The questions and their accurate solutions will help the candidates to practice more in minimum time.

Some prominent features of this book are

1. Each chapter in the book is incorporated with basic theory supported with the help of example to make the chapter not only interesting, but comprehensible in a friendly manner. This will certainly help the candidate to grasp the topic in an effective manner.

2. The exercises in each chapter, in the book is being divided into two parts i.e., 'Base level' and 'Expert level' depending upon the difficulty level of the questions.

3. Detailed explanation with answers have been provided at the end of each chapter to help the candidate.

We are very thankful to Mohd. Shahid Saifi and Mr. Amogh Goel for their sincere efforts for the compilation of this book.

We are sure that this book will add a new dimension to the preparation for 'The Test of Reasoning' for various competitive examinations and prove a great help in cracking the examination.

Jai Kishan, Prem Kishan

CONTENTS

VERBAL REASONING

ANALYTICAL REASONING

NON-VERBAL REASONING

01 »

Analogy

Analogy means similarity or correspondence, i.e. having similar features.

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.

Types of Analogy

Analogy may be broadly divided into the following types

   (i) Word Analogy
  (ii) Number Analogy
 (iii) Alphabet Analogy
 (iv) Mixed Analogy

Word Analogy

This type of analogy covers every type of relationship that one can think. There are many ways of establishing a relationship like quantity and unit, worker and tools, cause and effect, word-synonym, word-antonym, country and capital, state and capital, country and currency, animal and its young one (kid), male and female, animal and its resting place, game and place of playing, occupation, the working place and the work, study and topic etc.

In word analogy, the candidates are required to discover the relationship between question pair and then to find the required pair of words that is most similar to that relationship.

Direction (Illustration 1) *In this question, there is a certain relationship between two given terms on one side of (::) and one term is given on another side (::) while another term is to be found from the given alternatives, having the same relation with this term as the terms of the given pair bear. Choose the correct alternative.*

Illustration 1. Newspaper : Press :: Cloth : ?
   (a) Tailor　　　　　　　(b) Fibre
   (c) Mill　　　　　　　　(d) Textile

Solution (c) As, 'Newspaper' is prepared in 'Press', in the same way, 'Cloth' is manufactured in the 'Mill'.

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

Country	Capital	Currency
Bangladesh	Dhaka	Taka
Iraq	Baghdad	Dinar
China	Beijing	Yuan
India	New Delhi	Rupee
UK	London	Pound
Japan	Tokyo	Yen
USA	Washington DC	Dollar
Russia	Moscow	Ruble
Greece	Athens	Euro

Occupation	Working Place	Job Profile
Lawyer	Court	Legal Practice
Servant	House	Service
Beautician	Parlour	Make up
Mechanic	Garage	Repairing
Waiter	Restaurant	Serving
Farmer	Field	Farming
Chef	Kitchen	Cooking
Sailor	Ship	Sailing

States of India	Capital	States of India	Capital
Sikkim	Gangtok	Maharashtra	Mumbai
West Bengal	Kolkata	Madhya Pradesh	Bhopal
Goa	Panaji	Andhra Pradesh	Amaravati
Tamil Nadu	Chennai	Haryana	Chandigarh
Odisha	Bhubaneshwar	Telangana	Hyderabad
Bihar	Patna	Rajasthan	Jaipur

Male	Female	Male	Female
Dog	Bitch	Horse	Mare
Bull	Cow	Cock	Hen
Stag	Doe	Monk	Nun
Nephew	Niece	Drone	Bee

Individual	Class	Individual	Class
Frog	Amphibian	Rat	Rodent
Cattle	Herd	Snake	Reptile
Man	Mammal	Ostrich	Bird
Whale	Mammal		

Animal	Sound	Animal	Sound
Cock	Crow	Duck	Quack
Cat	Mew	Frog	Croak
Snake	Hiss	Owl	Hoot
Jackal	Howl	Donkey	Bray

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

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

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

Individual	Dwelling (Place)	Individual	Dwelling (Place)
Lion	Den	Spider	Web
Horse	Stable	Bird	Nest
King	Palace	Eskimo	Igloo

Instrument	Measurement
Hygrometer	Humidity
Sphygmomanometer	Blood pressure
Seismograph	Earthquake
Barometer	Pressure
Ammeter	Current
Speedometer	Speed
Thermometer	Temperature
Balance	Mass
Anemometer	Wind
Screw Gauge	Thickness
Taseometer	Stress

Game	Place of Playing
Tennis	Court
Wrestling	Arena
Boxing	Ring
Race	Track
Badminton	Court
Hockey	Ground
Athletics	Stadium
Exercise	Gymnasium
Cricket	Pitch

Occupation	Product	Occupation	Product
Farmer	Crop	Architect	Designs
Producer	Films	Teacher	Education
Tailor	Clothes	Choreographer	Dance

Animal	Young One	Animal	Young One
Dog	Puppy	Hen	Chick
Cat	Kitten	Cow	Calf
Bear	Cub	Insect	Larva

Study	Topic	Study	Topic
Anthropology	Human beings	Botany	Plants
Taxonomy	Classification of organisms	Ornithology	Birds
Seismology	Earthquake	Herpetology	Amphibians
Hematology	Blood	Physiology	Body

Specialist	Subject	Specialist	Subject
Cardiologist	Heart	Anthropologist	Man
Orthopaedist	Bone	Pedologist	Soil
Dermatologist	Skin	Mycologist	Fungi
Ophthalmologist	Eye	Pathologist	Diseases
Nephrologist	Kidney	Phycologist	Algae

Number Analogy

In this type of analogy, numbers are given in a pair or group on one side. The candidate has to find the relationship between them and then find the number or group of numbers which will replace the question mark in the other pair on other side.

The relationship in number analogy can be of following types

- Even and odd numbers
- Multiplication and division of numbers
- Addition and subtraction of numbers
- Square and cube roots of numbers, etc.

Directions (Illustrations 2-4) *In the following questions, select the related number pair from the given alternatives.*

Illustration 2. 23 : 13 : : 54 : ?   **BSSC (CGL) 2015**
  (a) 40   (b) 41   (c) 44   (d) 39

Solution (c) Firstly, we will check the relation between first pair i.e. 23 and 13
We can see, $23 - 10 = 13$
Similarly, the number in the place of ? will be
$$54 - 10 = \boxed{44}$$

Illustration 3. 14 : 225 : : 17 : ?
  (a) 250   (b) 340   (c) 300   (d) 324

Solution (d) Firstly, we will check the relation between first pair i.e. 14 and 225.
We can see,
$$(14 + 1)^2 = (15)^2 = 225$$
Similarly, the number in the place of ? is obtained as
$$(17 + 1)^2 = (18)^2 = \boxed{324}$$

Illustration 4. 20 : 11 : : 102 : ?
  (a) 49   (b) 52
  (c) 65   (d) 85

Solution (b) Firstly, we will check the relation between first pair i.e. 20 and 11
We can see, $\dfrac{20}{2} + 1 = 10 + 1 = 11$
Similarly, the number in the place of ? is obtained as
$$\dfrac{102}{2} + 1 = 51 + 1 = \boxed{52}$$

Alphabet Analogy

In this type of analogy, there is a relationship between the given alphabets or group of letters. The candidate has to remember the position of letters in English alphabetical order and find out the relationship between the given letters or group of letters in the first pair and then find a set of letters to fit in place of question mark in second pair. The relationships between the letters can be of following types

- Vowels or consonants
- Increasing/decreasing position of letters.
- Reverse order of position of letters.
- Skipped letter relation.

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

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

Directions (Illustrations 5-7) *Choose the word/letter(s) which will replace the question mark.*
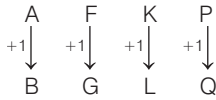
Illustration 5. AFKP : BGLQ : : CHMR : ?
                       BSSC (CGL) 2015
  (a) DINS   (b) DNIS   (c) DFKP   (d) DJOT

Solution (a) Firstly, we will check the relation between first pair i.e. AFKP and BGLQ

We can see,

$$A \quad F \quad K \quad P$$
$$\downarrow{+1} \quad \downarrow{+1} \quad \downarrow{+1} \quad \downarrow{+1}$$
$$B \quad G \quad L \quad Q$$

Similarly, the term in the place of ? is obtained as

$$C \quad H \quad M \quad R$$
$$\downarrow{+1} \quad \downarrow{+1} \quad \downarrow{+1} \quad \downarrow{+1}$$
$$\boxed{D \quad I \quad N \quad S}$$
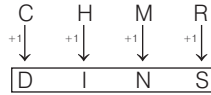
Illustration 6. SNOP : ONSP : : CLAY : ?

CISF (ASI) 2017

(a) ALCY   (b) LCYA
(c) LYCA   (d) ACLY

Solution (a) Firstly, we will check the relation between first pair i.e. SNOP and ONSP

As,

1	2	3	4		3	2	1	4
S	N	O	P	→	O	N	S	P

Similarly, the term in the place of ? is obtained as

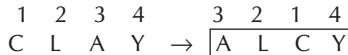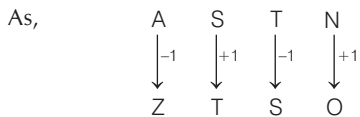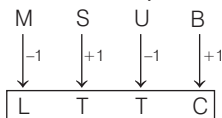| 1	2	3	4		3	2	1	4
C	L	A	Y	→	A	L	C	Y

Illustration 7. ASTN : ZTSO : : MSUB : ?

(a) LTTC   (b) LRRC
(c) LTTA   (d) LRRO

Solution (a) Firstly, we will check the relation between first pair i.e. ASTN and ZTSO

As,

$$A \quad S \quad T \quad N$$
$$\downarrow{-1} \quad \downarrow{+1} \quad \downarrow{-1} \quad \downarrow{+1}$$
$$Z \quad T \quad S \quad O$$

Similarly, the term in the place of ? is obtained as

$$M \quad S \quad U \quad B$$
$$\downarrow{-1} \quad \downarrow{+1} \quad \downarrow{-1} \quad \downarrow{+1}$$
$$\boxed{L \quad T \quad T \quad C}$$

Mixed Analogy

In this type of analogy, there is a certain relationship between the given group of letters and numbers on one side. The candidates are asked to find out the correct alternative based on the given relationship. The relationship in mixed analogy can be of following types

- The position of the alphabets or letters
- Sum or product of the position of alphabets or letters etc.

Directions (Illustrations 8-9) *Choose the number which will replace the question mark.*

Illustration 8. 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

Solution (c) Given,

$$N \quad E \quad W \quad S$$
$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$
$$14 \quad 5 \quad 23 \quad 19$$

Each letter assigned its position from left in English alphabet.

So, PAPER → 16,1,16,5,18

Illustration 9. FILM : 10 : : HOTEL : ?

(a) 12   (b) 15
(c) 18   (d) 30

Solution (a) As,

$$F \quad I \quad L \quad M$$
$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

Position value $6 + 9 + 12 + 13 = 40$, $40 \div 4 = 10$

[∵ number of letters = 4]

Similarly,

$$H \quad O \quad T \quad E \quad L$$
$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

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

[∵ number of letters = 5]

Hence, $60 \div 5 = \boxed{12}$

Types of Questions

Different types of questions based on analogy that are asked in various competitive exams, have been given below

❯❯ Type 1
Direct/Simple Analogy

In this type of analogy, two elements are given which are related to each other in a particular manner and other element is given followed by four alternatives. Firstly, the candidate is required to identify the relationship between the first two elements. Then, the candidate is required to pick that element from the alternatives which bear exactly the same relationship to the third element, as the first two bear.

Illustration 10. 'College' is related to 'Student' in the same way as 'Hospital' is related to
(a) Doctor   (b) Nurse
(c) Medicine   (d) Patient

Solution (*d*) In the 'College', education is given to 'Students', in the same way, treatment is given to the 'Patient' in 'Hospital'.

Illustration 11. 'Major' is related to 'Lieutenant' in the same way as 'Squadron Leader' is related to
(a) Group Captain   (b) Flying Attendent
(c) Flying Officer   (d) Pilot Officer

Solution (*c*) 'Major' and 'Squadron Leader' are equivalent ranks in the Army and the Air Force, respectively. Same as 'Lieutenant' and 'Flying Officer' are equivalent ranks in the Army and Air force, respectively.

》 Type 2
Completing/Choosing the Analogous Pair

In this type of questions, two components are given, which are related to each other in a particular way. The candidate is required to find out the relationship between the first two components and choose the component/pair from the given alternatives, which have the same relationship as there in between the first two.

Directions (Illustrations 12-13) *In each of the following questions, select the related word/letters group from the given alternatives.*

Illustration 12. Boat : Oar : : Bicycle : ?
(a) Pedal   (b) Seat
(c) Road   (d) Wheel

Solution (*a*) Second denotes that part of the first, on which the effort is applied to move it.

Illustration 13. FLOWER : REWOLF : : FRUITS : ?   **BSSC (CGL) 2015**
(a) STUIRF   (b) STUIFR
(c) STIURF   (d) STRUIF

Solution (*c*) In first pair, second term is the reverse order of first term.
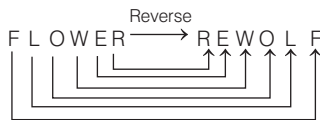
Similarly, in second pair,
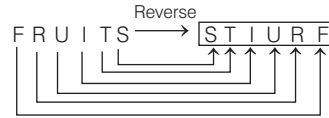
Directions (Illustrations 14-15) *The following questions, consist of two words/numbers having a certain relationship to each other, followed by same pair of words/numbers select the related pair that has the same relationship as the original pair of words.*

Illustration 14. Pigeon : Peace : : ?
(a) Crown : Head   (b) White Flag : Surrender
(c) Laurels : Victory   (d) War : Liberty

Solution (*b*) As, 'Pigeon' is a symbol of 'Peace'. Similarly, 'White Flag' is a symbol of 'Surrender'.

Illustration 15. 9 : 50 : : ?   **SSC (CGL) 2015**
(a) 20 : 105   (b) 22 : 110
(c) 18 : 190   (d) 15 : 225

Solution (*a*) In first pair, we have relation between 9 and 50 as $(9 \times 5) + 5 = 45 + 5 = 50$
Similarly, $(20 \times 5) + 5 = 100 + 5 = 105$

》 Type 3
Choosing a Similar Word/Number

In this type of questions, a group of three words/numbers is given, followed by four alternatives. The candidate is required to choose the alternative, which is similar to the given group of words/numbers.

Directions (Illustrations 16-17) *In each of the following questions, choose that number/word which has the same relationship among the given the three numbers/words.*

Illustration 16. 144, 256, 324
(a) 625   (b) 175
(c) 188   (d) 189

Solution (*a*) The given numbers are perfect squares.
As, $144 = (12)^2$; $256 = (16)^2$; $324 = (18)^2$
Similarly, $\boxed{625} = (25)^2$

Illustration 17. Bhilai, Durgapur, Bokaro
  (a) Baroda   (b) Chennai
  (c) Chandigarh   (d) Rourkela

Solution (*d*) All cities are famous for steel plants.

›› Type 4
Multiple Word/Number Analogy

In this analogy, a group of three inter-related words/numbers is given. The candidate is required to trace out the relationship among these words/numbers and choose another group with similar relationship from the given alternatives.

Directions (Illustrations 18-19) *In each of the following questions, choose that set of numbers/words from the four alternatives sets that is similar to the given set.*

Illustration 18. Pen : Pencil : Ink
  (a) Orange : Banana : Juice
  (b) Table : Chair : Wood
  (c) Cow : Milk : Curd
  (d) Fish : Shark : Water

Solution (*a*) 'Pen', 'Pencil' belong to the same category i.e. stationary and pen contains 'Ink'. Similarly, 'Orange' and 'Banana' belong to the same category i.e. fruits and orange contains 'Juice'.

Illustration 19. Given set (6, 10, 16)
  (a) 9, 12, 18   (b) 5, 10, 15
  (c) 6, 11, 12   (d) 7, 11, 17

Solution (*d*) As,

$$6 \quad 10 \quad 16$$
$$+4 \quad +6$$

Similarly,

$$7 \quad 11 \quad 17$$
$$+4 \quad +6$$
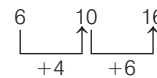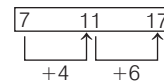
›› Let us Practice

1. A 'Cow' is to a 'Calf' as 'Goat' is to
UPPSC (RO) 2014
  (a) Puppy (b) Kid   (c) Lamb   (d) Colt

2. 'Pitch' is related to 'Cricket', in the same way as 'Arena' is related to
  (a) Tennis   (b) Gymnastic
  (c) Badminton   (d) Wrestling

3. Choose the option that expresses the same relationship as the following.
Tobacco : Cancer
  (a) Milk : Food   (b) Bud : Flower
  (c) Soil : Erosion   (d) Mosquito : Malaria

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. 'Doctor' is related to 'Patient', in the same way as' Lawyer' is related to
UP (B.Ed.) 2008
  (a) Customer   (b) Criminal
  (c) Magistrate   (d) Client

6. As 'Bald' is related to 'Blond', in the same way, as 'Barren' is related to   **SSC (FCI) 2012**
  (a) Vegetation   (b) Farm
  (c) Fertile   (d) Inhibited

7. 'Atom' is related to 'Molecule', in the same way as 'Cell' is related to   **RRB (ASM) 2006**
  (a) Matter   (b) Nucleus
  (c) Organism   (d) Battery

8. 'Flower' is related to 'Petal', in the same way as 'Book' is related to   **LIC (AAO) 2005**
  (a) Pages   (b) Content
  (c) Author   (d) Library
  (e) None of these

9. 'Duma' is related to 'Russia', in the same way as 'Shora' is related to
  (a) Malaysia   (b) Afghanistan
  (c) France   (d) Germany

10. 'Konkani' is related to 'Goa', in the same way as 'Dogri' is related to
  (a) Madhya Pradesh   (b) Odisha
  (c) Jammu and Kashmir (d) Gujarat

Directions (Q. Nos. 11-43) *In each of the following question, there is a certain relationship between two given terms on one side of (::) and one term is given on another side (::) while another term is to be found from the given alternatives, having the same relation with this term as the terms of the given pair bear. Choose the correct alternative.*

11. Maharashtra : India :: Texas : ? **SSC (10+2) 2014**
(a) Canada (b) Mexico (c) Brazil (d) USA

12. Bow : Arrow :: Pistol: ?
(a) Bullet (b) Gun (c) Shoot (d) Rifle

13. Axe : Woodcutter :: Needle : ?
UP Police (Constable) 2018
(a) Butcher (b) Carpenter
(c) Tailor (d) Painter

14. King : Throne :: Rider : ? **SSC (FCI) 2012**
(a) Chair (b) Horse (c) Seat (d) Saddle

15. Coins : Mint :: Bricks : ? **WBSC 2018**
(a) Foundry (b) Cemetery
(c) Furnace (d) Kiln

16. River : Stream :: Ocean : ? **SSC (CGL) 2017**
(a) Current (b) Pond
(c) Dam (d) Sea

17. Prediction : Future :: Regret :? **SSC (Steno) 2016**
(a) Past (b) Present (c) Sin (d) Time

18. Hongkong : China :: Vatican : ?
SSC (Multitasking) 2013
(a) France (b) Mexico
(c) Canada (d) Rome

19. Moderate : Intensify :: Nominal : ?
(a) Memorial (b) Expensive
(c) Distance (d) Chacs

20. Oxygen : Burn :: Carbon dioxide : ?
IBPS (Clerk) 2012
(a) Isolate (b) Foam
(c) Extinguishes (d) Explode
(e) None of these

21. Sitar : Guitar :: Tanpura : ? **CLAT 2015**
(a) Trumpet (b) Violin
(c) Harmonium (d) Mridanga

22. Money : Misappropriation :: Writing : ?
SSC (CGL) 2014
(a) Deception (b) Mistake
(c) Plagiarism (d) Theft

23. Hive : Bee :: Eyrie : ? **SSC (CPO) 2015**
(a) Parrot (b) Sparrow
(c) Eagle (d) Pigeon

24. Nightingale : Warble :: Frog :? **UPPSC (RO) 2014**
(a) Yell (b) Cackle (c) Squeak (d) Croak

25. Apes : Gibber :: Camels : ? **SSC (CGL) 2016**
(a) Grunt (b) Cheep (c) Bleat (d) Whine

26. Adversary : Enemy :: Adversity : ?
SSC (Steno) 2016
(a) Friend (b) Dynamic
(c) Love (d) Difficulty

27. YTOJ : XSNI :: WRMH : ? **SSC (CGL) 2014**
(a) VQLG (b) TOJE (c) RMHC (d) UPKF

28. TSR : FED :: WVU : ? **SSC (CGL) 2016**
(a) CAB (b) MLK (c) PQS (d) GFH

29. MAD : JXA :: RUN : ? **SSC (Steno) 2016**
(a) OSQ (b) PRJ (c) UXQ (d) ORK

30. UHCDN : VIDEO :: OKZXDQ : ?
SSC (10+2) 2017
(a) REPLAY (b) REPOSE
(c) PLAYER (d) OPPOSE

31. ECEIN : NIECE :: VANISH : ? **SSC (10+2) 2017**
(a) HSINVA (b) SHINAV
(c) HSINAV (d) HSNIAV

32. AZBY : CXDW :: EVFU : ? **SSC (Steno) 2016**
(a) GHTS (b) TGSH (c) GTHS (d) GSTH

33. AHOP : CKSU :: BJMR : ? **SSC (CGL) 2013**
(a) EZUQ (b) DMQW (c) DQKM (d) CJWN

34. DCBA : WXYZ :: IJKL : ? **SSC (CPO) 2015**
(a) SRQP (b) QPON (c) RQPO (d) PONM

35. 63 : 21 :: 27 :?
(a) 6 (b) 9 (c) 1 (d) 3

36. 85 : 42 : : 139 : ? **SSC (CGL) 2016**
(a) 68 (b) 69 (c) 70 (d) 67

37. 9 : 24 :: ? : 6 **SSC (CPO) 2015**
(a) 1 (b) 2 (c) 5 (d) 3

38. 08 : 66 :: ? : 38 **SSC (10+2) 2013**
(a) 2 (b) 6 (c) 12 (d) 19

39. 64 : 8 :: 289 : ? **SSC (10+2) 2017**
(a) 17 (b) 27 (c) 26 (d) 19

40. 23 : 72 :: 38 : ? **SSC (CPO) 2017**
(a) 110 (b) 117 (c) 123 (d) 112

41. 13 : 156 :: 17 : ?   SSC (10+2) 2017
(a) 135   (b) 270   (c) 272   (d) 130

42. 25 : 625 :: 35 : ?   SSC (CGL) 2012
(a) 1575   (b) 1205   (c) 875   (d) 635

43. 354 : 351 :: 478 : ?   SSC (10+2) 2018
(a) 481   (b) 447   (c) 475   (d) 477

Directions (Q. Nos. 44-45) *In the following questions, select the related number pair from the given alternatives.*

44. 63 : 36 :: ? : ?   SSC (10+2) 2018
(a) 94 : 49   (b) 35 : 54   (c) 47 : 72   (d) 73 : 39

45. 62 : 145 :: ? : ?   SSC (CPO) 2017
(a) 79 : 168   (b) 119 : 226
(c) 167 : 291   (d) 34 : 122

Directions (Q. Nos. 46-53) *Choose the word/letter(s)/number which will replace the question mark.*

46. XMAE : 16 :: VTNG : ?
(a) 21   (b) 17   (c) 35   (d) 18

47. CEGI : RTVX :: IKMO : ?
(a) JKNP   (b) MNQP   (c) LNPR   (d) DFHI

48. Palaeontology : Fossil : : Phrenology : ?
                                       SSC (CGL) 2015
(a) Pancreas   (b) Thyroid
(c) Lungs   (d) Skull

49. F : 216 :: L : ?   SSC (CGL) 2013
(a) 1728   (b) 1700   (c) 1600   (d) 1723

50. PST : 01 :: NPR : ?
(a) 3   (b) 4   (c) 1   (d) 7

51. GREAT : 25 :: NUMBER : ?   SSC (FCI) 2012
(a) 36   (b) 38   (c) 27   (d) 24

52. $\sqrt{AFI} = M : \sqrt{ADD} = L :: \sqrt{ABA} = ?$
                                       SSC (CGL) 2015
(a) I   (b) K   (c) N   (d) O

53. 1, 2, 4, 7 : 3, 4, 6, 9 :: ? : 2, 3, 5, 8   SSC (10+2) 2012
(a) 0, 1, 3, 6   (b) 2, 4, 5, 8
(c) 1, 3, 4, 7   (d) 3, 5, 6, 8

Directions (Q. Nos. 54-64) *The following questions, consist of two words having a certain relationship to each other, followed by same pair of words. Select the related pair that has the same relationship as the original pair of words.*

54. Rabbit : Animal :: ? : ?   SSC (10+2) 2018
(a) Sun : Moon   (b) Pentagon : Figure
(c) Lion : Bird   (d) Animal : Cow

55. Horse : Hoof :: ?   SSC (DEO & LDC) 2012
(a) Man : Foot   (b) Dog : Black
(c) Paise : Rupee   (d) Pen : Pencil

56. Sailor : Compass :: ?   PNB (Clerk) 2011
(a) Student : Exam   (b) Doctor : Stethoscope
(c) Pen : Officer   (d) Painter : Artist
(e) Bricks : Plumber

57. Create : Destroy :: ?   SSC (CPO) 2017
(a) Thin : Small   (b) Long : Short
(c) Fat : Huge   (d) Long : Topmost

58. Bird : Worm :: ?   SSC (Steno) 2016
(a) Horse : Stable   (b) Trap : Cheese
(c) Lion : Cave   (d) Cat : Mouse

59. Cells : Cytology :: ?   RRB (ASM) 2009
(a) Worms : Ornithology (b) Insects : Entomology
(c) Diseases : Physiology (d) Tissues : Morphology

60. Mendacity : Honesty :: ?   MPPSC 2018
(a) Truth : Beauty
(b) Sportsmanship : Fortitude
(c) Courageous : Craven
(d) Turpitude : Depravity

61. Crumb : Bread :: ?   CLAT 2017
(a) Water : Vessel   (b) Powder : Face
(c) Splinter : Wood   (d) Inch : Unit

62. Nuts : Bolts :: ?   CLAT 2013
(a) Nitty : Gritty   (b) Bare : Feet
(c) Naked : Clothes   (d) Hard : Soft

63. Book : Author :: ?   CLAT 2013
(a) Rain : Flood
(b) Light : Switch
(c) Symphony : Composer
(d) Song : Music

64. Preamble : Constitution :: ?   SSC (CGL) 2016
(a) Word : Dictionary   (b) Contents : Magazine
(c) Explanation : Poetry (d) Preface : Book

Directions (Q. Nos. 65-67) *In each of the following questions, choose that set of numbers from the four alternatives sets that is similar to the given set.*

65. Given set : (6 : 12 : 18)   SSC (10+2) 2013
(a) (4 : 8: 14)   (b) (12 : 24 : 36)
(c) (6 : 20 : 26)   (d) (30 : 36 : 45)

66. Given set : (7, 77, 140)
(a) (8, 80, 166)   (b) (9, 88, 180)
(c) (8, 88, 160)   (d) (10, 110, 300)

67. Given set : (31, 19, 41)   **SSC (CPO) 2015**
(a) (27, 29, 47)   (b) (23, 33, 51)
(c) (29, 17, 37)   (d) (16, 27, 11)

Directions (Q. Nos. 68-71) *In each of the following questions, choose that word which has the same relationship among the given three words.*

68. Yuan, Kyat, Lira
(a) Dirham   (b) Turkey   (c) Madrid   (d) Mass

69. Yellow, Blue, Red
(a) Black   (b) Orange   (c) White   (d) Paint

70. 525, 813, 714
(a) 353   (b) 329   (c) 606   (d) 520

71. 8, 1331, 4913
(a) 121   (b) 1330   (c) 64   (d) 9

72. In given question, choose that word which has the same relationship among the given three words Bhopal, Panaji, Gandhinagar
(a) Amritsar   (b) Allahabad   (c) Patna   (d) Baroda

73. Consider the relationship given below.
Road : Bus : Driver
Now, choose the group of words from the following which show the same relationship as given below.   **CGPSC 2014**
(a) Water : Ship : Driver
(b) Sky : Aeroplane : Pilot
(c) Paper : Letter : Reader
(d) Track : Train : Passenger
(e) None of the above

74. In this pyramid if 11 22 31 : 12 21 32 :: 9 12 21 : ?

```
                    1
                2   3   4
            9   8   7   6   5
        10  11  12  13  14  15  16
      25  24  23  22  21  20  19  18  17
   26  27  28  29  30  31  32  33  34  35  36
```

Now, choose the numbers which will replace the question mark.
(a) 2, 7, 14   (b) 8, 13, 20
(c) 6, 15, 18   (d) 10, 23, 30

›› Answers

1.	(b)	2.	(d)	3.	(d)	4.	(d)	5.	(d)	6.	(c)	7.	(c)	8.	(a)	9.	(b)	10.	(c)
11.	(d)	12.	(a)	13.	(c)	14.	(d)	15.	(d)	16.	(a)	17.	(a)	18.	(d)	19.	(b)	20.	(c)
21.	(b)	22.	(c)	23.	(c)	24.	(d)	25.	(a)	26.	(d)	27.	(a)	28.	(b)	29.	(d)	30.	(c)
31.	(c)	32.	(c)	33.	(b)	34.	(c)	35.	(b)	36.	(b)	37.	(d)	38.	(b)	39.	(a)	40.	(b)
41.	(c)	42.	(d)	43.	(c)	44.	(a)	45.	(b)	46.	(d)	47.	(c)	48.	(d)	49.	(a)	50.	(a)
51.	(a)	52.	(b)	53.	(a)	54.	(b)	55.	(a)	56.	(b)	57.	(b)	58.	(d)	59.	(b)	60.	(c)
61.	(c)	62.	(c)	63.	(c)	64.	(d)	65.	(b)	66.	(c)	67.	(c)	68.	(a)	69.	(b)	70.	(c)
71.	(c)	72.	(c)	73.	(b)	74.	(b)												

›› Answer with Explanations

1. (*b*) 'Calf' is the young one of 'Cow'. Similarly, 'Kid' is the young one of 'Goat'.

2. (*d*) 'Cricket' is played on 'Pitch'. Similarly, 'Wrestling' is done in 'Arena'.

3. (*d*) As, 'Tobacco' is a cause of 'Cancer'. Similarly, 'Mosquito' is the cause of 'Malaria'.

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

5. (*d*) 'Doctor' deals with 'Patient'. Similarly, 'Lawyer' deals with 'Client'.

6. (*c*) As, 'Bald' is related to 'Blond' in the same way, 'Barren' is related to 'Fertile'.

7. (*c*) First constitutes the second. As combining 'Atom' we get 'Molecule' in the same way combining 'Cell' we get 'Organism'.

8. (*a*) 'Flower' is made of 'Petals'. Similarly, 'Book' is made of 'Pages'.

9. (*b*) 'Russian' Parliament is called 'Duma'. Similarly, 'Afghanistan's Parliament is called 'Shora'.

10. (*c*) 'Konkani' is the language of 'Goa'. Similarly, 'Dogri' is the language of 'Jammu and Kashmir'.

11. (*d*) As, 'Maharashtra' is one of the states in 'India', in the same way, 'Texas' is one of the states in 'USA'.

12. (*a*) As, 'Arrow' is released from 'Bow'. Similarly, 'Bullet' is released from 'Pistol'.

13. (*c*) As, 'Woodcutter' cuts wood by 'Axe'. Similarly, 'Tailor' stitches clothes by 'Needle'.

14. (*d*) As, 'King' sits on the 'Throne'. in the same way 'Rider' sits on the 'Saddle'.

15. (*d*) 'Coins' are made in 'Mint', same as 'Bricks' are made in 'Kiln'.

16. (*a*) As, 'Stream' is produced by 'River', same as 'Current' is produced by 'Ocean'.

17. (*a*) 'Predictions' are made for 'Future', same as, 'Regrets' are made for 'Past'.

18. (*d*) As, 'Hongkong' is in 'China'. Similarly, 'Vatican' is in 'Rome'.

19. (*b*) 'Moderate' and 'Intensify' are antonyms and 'Nominal' and 'Expensive' are antonyms.

20. (*c*) 'Oxygen' enhances the fire and 'Carbon dioxide' extinguishes the fire.

21. (*b*) 'Sitar', 'Guitar', 'Tanpura' and 'Violin' are all string instruments.

22. (*c*) As, 'Money' can be 'Misappropriation', in the same way 'Writing' can be 'Plagiarism'.

23. (*c*) As, 'Bee' residence is called 'Hive', in the same way 'Eagle' residence is called 'Eyrie'.

24. (*d*) As, sound of 'Nightingale' is 'Warble'. Similarly, the sound of 'Frog' is 'Croak'.

25. (*a*) 'Gibber' is the sound made by 'Apes' whereas 'Grunt' is the sound made by 'Camels'.

26. (*d*) Synonym of 'Adversary' is 'Enemy'. Similarly, Synonym of 'Adversity' is 'Difficulty'.

27. (*a*)

28. (*b*)

29. (*d*)

30. (*c*)
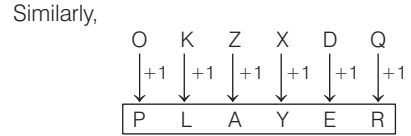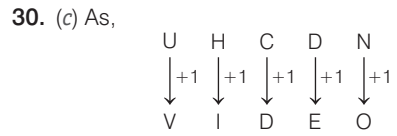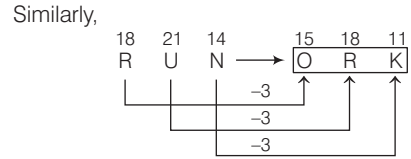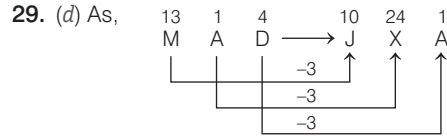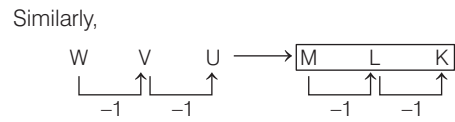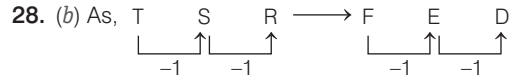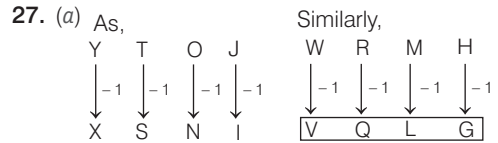
31. (*c*) The alphabets of the words are written in reverse order.

32. (*c*)

Similarly,

| 5 | 22 | 6 | 21 | | 7 | 20 | 8 | 19 |
| E | V | F | U | $\longrightarrow$ | G | T | H | S |

+2
−2
+2
−2

∴ ? = GTHS

33. (*b*) As,

A   H   O   P
+2   +3   +4   +5
C   K   S   U

Similarly,

B   J   M   R
+2   +3   +4   +5
D   M   Q   W
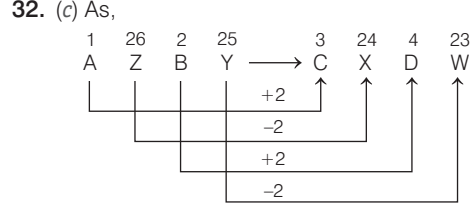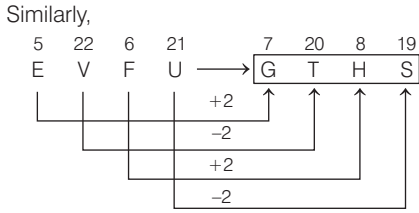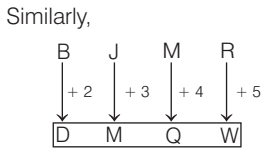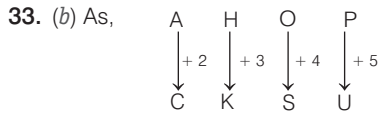
34. (*c*) Here, each letter has its opposite letter.

As,

D   C   B   A
↓   ↓   ↓   ↓
W   X   Y   Z

Similarly,

I   J   K   L
↓   ↓   ↓   ↓
R   Q   P   O
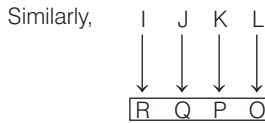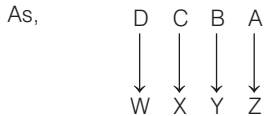
35. (*b*) As, $63 \div 3 = 21$

Similarly, $27 \div 3 = \boxed{9}$

36. (*b*) As,

$85 \longrightarrow 42$

$\times \frac{1}{2} - \frac{1}{2}$

Similarly,

$139 \longrightarrow \boxed{69}$

$\times \frac{1}{2} - \frac{1}{2}$
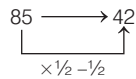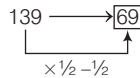
37. (*d*) As, $9 \times 3 - 3 = 27 - 3 = 24$

Similarly, $? \times 3 - 3 = 6$

$\Rightarrow \quad ? \times 3 = 6 + 3 = 9$

$\Rightarrow \quad ? = \frac{9}{3} = 3 \Rightarrow ? = \boxed{3}$

38. (*b*) As, $(08)^2 + 2 = 64 + 2 = 66$

Similarly, $(06)^2 + 2 = 36 + 2 = \boxed{38}$

39. (*a*) As, $64 \Rightarrow \sqrt{64} = 8$

Same as, $289 \Rightarrow \sqrt{289} = 17$

40. (*b*) As,

$23 \longrightarrow 72$

$\times 3 + 3$

Same as, $38 \longrightarrow \boxed{117}$

$\times 3 + 3$

41. (*c*) As, $13 \longrightarrow 156$

$(13)^2 - 13$

Similarly, $17 \longrightarrow \boxed{272}$

$(17)^2 - 17$

42. (*d*) As, New Number

$25 : 625$

Similarly, New Number

$35 : 635$
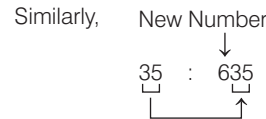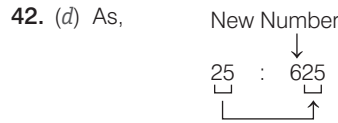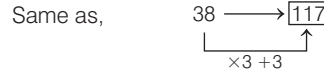
43. (*c*) As, $354 - 3 = 351$

Similarly, $478 - 3 = \boxed{475}$

44. (*a*) As,

$63 : 36$

Similarly,

$94 : 49$

45. (*b*) As,

62   145
↓   ↓
$(8)^2 - 2$ $(12)^2 + 1$

+4

Similarly,

119   226
↓   ↓
$(11)^2 - 2$ $(15)^2 + 1$

+4

46. (*d*) As,

	X	M	A	E
	↓	↓	↓	↓
Positional values	24	13	1	5
	↓	↓	↓	↓
	(2+4)	(1+3)	(0+1)	(0+5)
	↓	↓	↓	↓
	6 +	4 +	1 +	5 = 16

Similarly,

$$
\begin{array}{cccc}
V & T & N & G \\
\downarrow & \downarrow & \downarrow & \downarrow
\end{array}
$$

Positional values $22 \quad 20 \quad 14 \quad 7$

$$
\begin{array}{cccc}
\downarrow & \downarrow & \downarrow & \downarrow \\
(2+2) & (2+0) & (1+4) & (0+7) \\
\downarrow & \downarrow & \downarrow & \downarrow \\
4 & + \ 2 \ + & 5 \ + & 7 \ = \boxed{18}
\end{array}
$$

47. (*c*) As,

$$
\begin{array}{cccccccc}
C & E & G & I & & R & T & V & X
\end{array}
$$

opposite
opposite
opposite
opposite

Similarly,

$$
\begin{array}{cccccccc}
I & K & M & O & & \boxed{L \ N \ P \ R}
\end{array}
$$

opposite
opposite
opposite
opposite
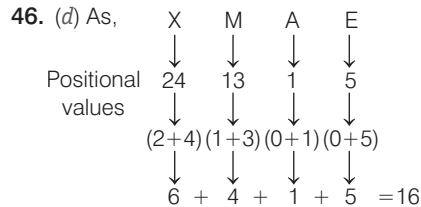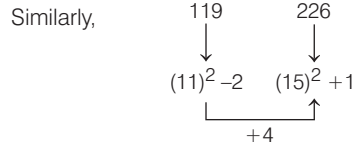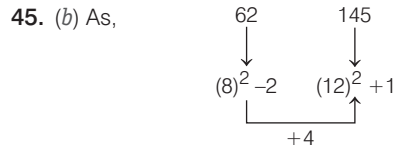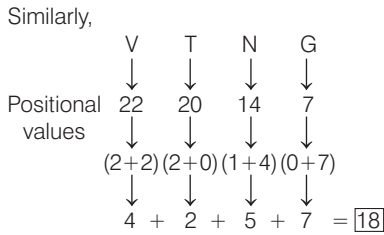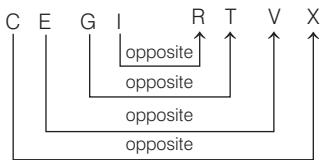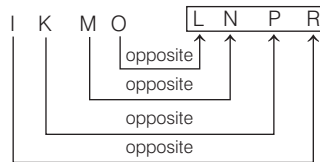
48. (*d*) As, 'Palaeontology' is the study of 'Fossils' in the same manner 'Phrenology' is the study of 'Skull'.

49. (*a*) As, F $\longrightarrow (6)^3 = 216$

[since, positional value of F is 6]

Similarly, L $\rightarrow (12)^3 = 1728$

[since, positional value of L is 12]

50. (*a*) As,

Positional value

$$
\begin{array}{ccc}
P & S & T \\
\downarrow & \downarrow & \downarrow \\
16 \ + & 19 \ + & 20 \ = 55
\end{array}
$$
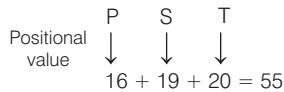
Digits's sum $= 5 + 5 = 10$

Again, digits's sum $= 1 + 0 = 1$

Similarly,

Positional value

$$
\begin{array}{ccc}
N & P & R \\
\downarrow & \downarrow & \downarrow \\
14 \ + & 16 \ + & 18 \ = 48
\end{array}
$$
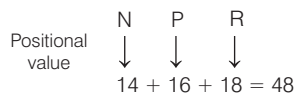
Digit's sum $= 4 + 8 = 12$

Again, digit's sum $= 1 + 2 = 3$

51. (*a*) In word GREAT, the number of alphabets $= 5$

$\therefore$ GREAT $= (5)^2 = 25$

In the same way, in word NUMBER, the number of alphabets $= 6$

$\therefore$ NUMBER $= (6)^2 = 36$

52. (*b*) As, $\sqrt{AFI} = \sqrt{169}$

$= 13 = M$

and $\sqrt{ADD} = \sqrt{144}$

$= 12 = L$

Similarly, $\sqrt{ABA} = \sqrt{121}$

$= 11 = K$

53. (*a*) As,

$$
\begin{array}{cccc}
1 & 2 & 4 & 7 \\
+2 \downarrow & +2 \downarrow & +2 \downarrow & +2 \downarrow \\
3 & 4 & 6 & 9
\end{array}
$$

Similarly,

$$
\boxed{0 \quad 1 \quad 3 \quad 6}
$$
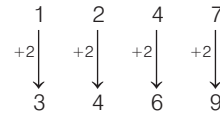
$$
\begin{array}{cccc}
-2 \downarrow & -2 \downarrow & -2 \downarrow & -2 \downarrow \\
2 & 3 & 5 & 8
\end{array}
$$
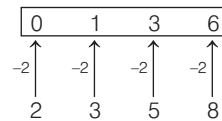
54. (*b*) As, 'Rabbit' is a kind of 'Animal'. Similarly, 'Pentagon' is a kind of 'Figure'.

55. (*a*) The 'Hoof' is the hard lower part of 'Horse' feet. In the same way, 'Foot' is the lower part of 'Man'.

56. (*b*) 'Sailor' judges the direction through 'Compass' same as 'Doctor' judges the breathing and heart beat through 'Stethoscope'.

57. (*b*) As opposite word of 'Create' is 'Destroy', same as opposite word of 'Long' is 'Short'.

58. (*d*) As 'Bird' eats 'Worm'. Similarly, 'Cat' eats. 'Mouse'.

59. (*b*) 'Cytology' is the science of study of 'Cells'. In the same way 'Entomology' is the science of study of 'Insects'.

60. (*c*) Both are antonyms of each other. 'Mendacity' means untruthfulness, which is opposite of 'Honesty'. In the same way, 'Craven' means coward which is antonym of 'Courageous'.

61. (*c*) 'Crumb' is small piece of 'Bread' and 'Splinter' is small piece of 'Wood'.

62. (*c*) As, 'Nuts' are covered with 'Bolts'. Similarly, 'Naked' is covered with 'Clothes'.

63. (*c*) 'Book' is written by 'Author'. Similarly, 'Symphony' is composed by 'Composer'.

64. (*d*) As 'Constitution' have 'Preamble', same as 'Book' have 'Preface'.

65. (*b*) As,

$$
\begin{array}{cc}
6 \qquad 12 & 6 \qquad 18 \\
\underset{6 \times 2}{\rule{1.5em}{0.4pt}} & ; \quad \underset{6 \times 3}{\rule{1.5em}{0.4pt}}
\end{array}
$$

Similarly,

$$\underset{12 \times 2}{12 \quad \overset{\uparrow}{24}} \quad \underset{12 \times 3}{12 \quad \overset{\uparrow}{36}}$$

66. (*c*) As,

$$\underset{7 \times 11}{7 \quad \overset{\uparrow}{77}} \quad ; \quad \underset{7 \times 20}{7 \quad \overset{\uparrow}{140}}$$

Similarly,

$$\underset{8 \times 11}{8 \quad \overset{\uparrow}{88}} \quad ; \quad \underset{8 \times 20}{8 \quad \overset{\uparrow}{160}}$$
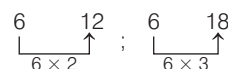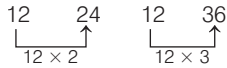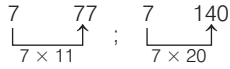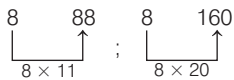
67. (*c*) All the numbers in the given group are prime numbers. Similarly, the numbers in option (c) are prime numbers.

68. (*a*) All are the currencies of different countries.

69. (*b*) All are the colours of rainbow.

70. (*c*) $5 + 2 + 5 = 12$

$8 + 1 + 3 = 12$

$7 + 1 + 4 = 12$

Similarly, $6 + 0 + 6 = 12$

71. (*c*) All the numbers are perfect cubes.

Let us see

As, $8 = 2^3$

$1331 = 11^3$

$4913 = 17^3$

Similarly, $64 = 4^3$

72. (*c*) All are the capitals of Indian states.

73. (*b*) As, bus runs on the road and for running it we need driver. In the same way, aeroplane flies in the sky and for flying it we need pilot.

74. (*b*)
```
                1
            2   3   4
         9  8   7   6   5
      10 11 12 13 14 15 16
   25 24 23 22 21 20 19 18 17
26 27 28 29 30 31 32 33 34 35 36
```
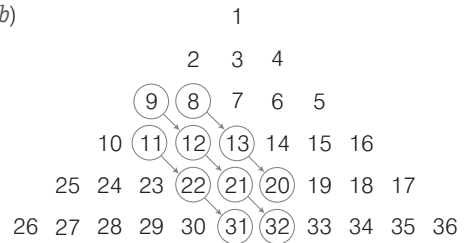
In this pyramid, you can see the pattern.
So, the correct option is 8, 13, 20.

02

Classification

Classification means to group the given items on the basis of certain common quality that they possess.

In this chapter, the questions consist of four/five elements. All the elements except one, follow a certain pattern/rule or have some common quality and thus form a group. The candidate has to find the element that does not belong to the group.

Types of Classification

Classification may be broadly divided into the following types:

  (i) Word Classification
 (ii) Number Classification
(iii) Letter Classification

Word Classification

In word classification, the candidate is given a group of words in which all except one are related to one another in a particular manner thus form a group. The candidate has to identify the odd word that does not belong to the group.

Illustration 1. Choose the odd one. **WBPSC 2018**
  (a) Square   (b) Circle
  (c) Parallelogram   (d) Rectangle

Solution (*b*) Except circle, all other given shapes are made up of straight lines.

Illustration 2. Choose the odd one.
  (a) Eyes   (b) Nose   (c) Ears   (d) Lungs

Solution (*d*) Except lungs, all others are external body parts, but lungs are internal parts of body.

Number Classification

In number classification, there is a similarity among the given numbers or group of numbers. The candidate has to identify the odd number or group of numbers which does not belong to the group.

The number classification is generally based on the following similarities:

- Square and square root of a number
- Cube and cube root of a number
- Even and odd number
- Prime number
- Divisibility test of a number
- Sum of digits of a number

Illustration 3. Choose the odd one.

  (a) 27   (b) 35   (c) 18   (d) 9

Solution (*b*) Except 35, all others are multiples of 9, but 35 is the multiple of 5 and 7.

Illustration 4. Choose the odd one.
  (a) 16 — 28 (b) 32 — 84 (c) 12 — 52 (d) 49 — 77

Solution (*c*) $2 \times 8 = 16$
$$8 \times 4 = 32$$
$$7 \times 7 = 49$$
But, $5 \times 2 = 10$

Thus, 12— 52 is an odd pair.

Letter Classification

In letter classification, there is a similarity or pattern among the letters in the group and the candidate has to identify the pattern and select the one which does not follow the common pattern in the group.

The relationship among the letters is generally based on the following similarities:

- Position of letters
- Vowel and consonant
- Reverse order of letters
- Addition or multiplication of positional value

Illustration 5. Choose the odd one.

   (a) H   (b) Q
   (c) T   (d) Z

Solution (*b*) All other letters except Q, occupy the even-numbered positions in the English alphabets.

   As,   H → 8 (even),   Q → 17 (odd)

             T → 20 (even),   Z → 26 (even)

Illustration 6. Choose the odd one.

   (a) LNJ   (b) RTP
   (c) NPK   (d) FHD

Solution (*c*)
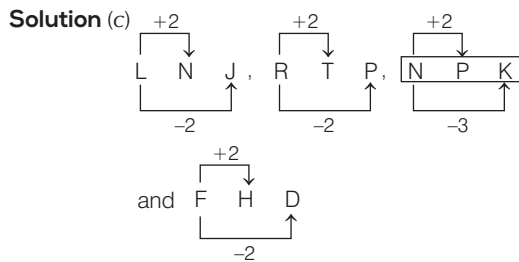
Clearly, letters group NPK follows different pattern from others.

Hence, NPK does not belong to the group.

Note : *Besides word, letter and number classification, there also exists mixed classification in which combination of letters and numbers are given.*

Illustration 7. Choose the odd one.

   (a) OE3   (b) XD6   (c) JB5   (d) VK2
   (e) PH3

Solution (e) Here, putting the positional values of letters according to English alphabetical order as

$$A = 1, B = 2, C = 3, \ldots, Z = 26$$

and solving the alternatives, we have

$$OE3 \Rightarrow OE = O \div E = 15 \div 5 = 3;$$
$$XD6 \Rightarrow XD = X \div D = 24 \div 4 = 6;$$
$$JB5 \Rightarrow JB = J \div B = 10 \div 2 = 5;$$
$$VK2 \Rightarrow VK = V \div K = 22 \div 11 = 2;$$
$$PH3 \Rightarrow PH = P \div H = 16 \div 8 = \boxed{2} \neq 3$$

In PH3, the numerical value should be 2 instead of 3 because $16 \div 8 = 2$.

Hence, PH3 does not belong to the group.

Types of Questions

There are several types of questions that can be asked from classification. Some of the types are discussed below:

》 Type 1

Choosing the Odd Word/Letter /Letters' Group/Number

In this type of problems, four/five words/letters /letters' groups/numbers are given having some common features except the odd one. You are required to find the 'odd one out'.

Illustration 8. Choose the odd one.

   (a) Strong   (b) Hesitant
   (c) Daring   (d) Brave

Solution (*b*) Hesitant is different as all others are synonyms of each other.

Illustration 9. Choose the odd one.

                            SSC (CPO) 2015

   (a) Marigold   (b) Tulip   (c) Lotus   (d) Rose

Solution (*b*) Except Tulip, all others are flowers whereas Tulip is a kind of plant.

Illustration 10. Choose the odd one.

                        BSSC (CGL) 2015

   (a) MTF   (b) SLE
   (c) RKD   (d) UNG

Solution (a) Here, the letters' groups follow the below pattern
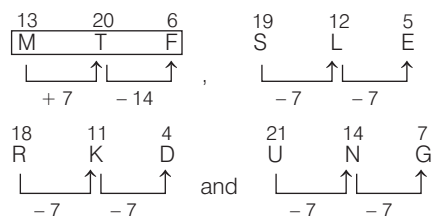
Except MTF, all others follow similar pattern. So, letters' group MTF is different from others.

Illustration 11. Choose the odd one. **MPPSC 2014**

   (a) HGFED   (b) PONML
   (c) NLKJI   (d) TSRQP

Solution (*c*) Except option (c), in all the other groups the consecutive letters are given in reverse order But in option (c), letter M is missing.

Illustration 12. Choose the odd one.
  (a) 144   (b) 169   (c) 256   (d) 288
  (e) 324

Solution (*d*) Except 288, all other numbers are square of natural numbers.

  As, $12^2 = 144, 13^2 = 169$
              $16^2 = 256, 18^2 = 324$

Illustration 13. Choose the odd one.
                                                    [SSC (10+2) 2014]
  (a) 512   (b) 625   (c) 1296   (d) 2401

Solution (*a*) Here, 512 is the cube of 8, whereas other numbers are square of 25, 36 and 49, respectively. So, 512 is different from others.

» Type 2
Choosing the Odd Pair of Words/Numbers

In this type of questions, different pairs of words/numbers having some common features/ properties like names, places, uses, situations, origin, operations etc. are given, except one pair. You have to identify the odd pair.

Illustration 14. Choose the odd pair.
  (a) Gold : Ornaments   (b) Cloth : Garments
  (c) Wood : Furniture   (d) Leather : Footwear
  (e) Earthen pots : Clay

Solution (*e*) Except pair (e), in all other pairs, the first is the raw material used to make the second.

Illustration 15. Choose the odd pair.
  (a) Broad - Wide   (b) Light - Heavy
  (c) Tiny - Small   (d) Big - Large

Solution (*b*) Light is an antonym of heavy. But in other pairs, words are synonyms of each other.

Illustration 16. Choose the odd pair.
  (a) (21 : 24)   (b) (28 : 32)
  (c) (14 : 16)   (d) (70 : 80)
  (e) (54 : 62)

Solution (e) Here, $\dfrac{21}{24} = \dfrac{7}{8}$; $\dfrac{28}{32} = \dfrac{7}{8}$;

  $\dfrac{14}{16} = \dfrac{7}{8}$; $\dfrac{70}{80} = \dfrac{7}{8}$

  and $\dfrac{54}{62} = \dfrac{27}{31}$

Clearly, 54 : 62 is different from others.

» Let us Practice

Directions (Q. Nos. 1-30) *In the following question, three/four out of the four/five alternatives are same in a certain way and so form a group. Find the odd one that does not belong to the group.*

1. (a) Sun   (b) Mercury
    (c) Mars   (d) Venus
                                        SSC(10+2) 2017

2. (a) Cloth   (b) Plastic
    (c) Thread   (d) Cotton   **OPSC 2018**

3. (a) Barter   (b) Purchase
    (c) Sale   (d) Borrow
                                        SSC (10+2) 2013

4. (a) Flower   (b) Stem
    (c) Branch   (d) Roots   **OPSC 2018**

5. (a) Sky   (b) Star
    (c) Planet   (d) Comet
    (e) Moon

6. (a) Shimla   (b) Ooty
    (c) Darjeeling   (d) Agra
                                        BSSC (CGL) 2015

7. (a) Bridge   (b) Escalator
    (c) Ladder   (d) Staircase
                                        SSC (10+2) 2017

8. (a) Tired   (b) Tardy
    (c) Slow   (d) Late
                                        SSC (Steno) 2016

9. (a) Islamabad   (b) Kabul
    (c) Canberra   (d) Sydney
                                        SSC (10+2) 2017

10. (a) Mother-in-law   (b) Nephew
    (c) Grandson   (d) Great Grandfather
                                        SSC (CGL) 2017

11. (a) Geometry   (b) Trigonometry
    (c) Algebra   (d) Mathematics

12. (a) Sea   (b) River
     (c) Ocean   (d) Swimming Pool
                              SSC (CPO) 2017

13. (a) Gold   (b) Silver   (c) Bronze   (d) Iron

14. (a) Exact estimate   (b) Only choice
     (c) Clearly visible   (d) Open secret
                              CLAT 2017

15. (a) Rival   (b) Opponent
     (c) Foe   (d) Ally   **SSC (CGL) 2014**

16. (a) Brass   (b) Gun metal
     (c) Bronze   (d) Germanium
                              SSC (Steno) 2013

17. (a) Rain   (b) Shower (c) Sleet   (d) Raisin

18. (a) Distinguish   (b) Scatter
     (c) Differentiate   (d) Classification
                              SSC (CGL) 2016

19. (a) Disperse   (b) Congregate
     (c) Accumulate   (d) Aggregate **OPSC 2018**

20. (a) Mis deed   (b) Corruption
     (c) Failure   (d) Offence
     (e) Villainy

21. (a) Shorthand   (b) Morse
     (c) Semaphore   (d) Record   **MPPSC 2018**

22. (a) Chameleon   (b) Crocodile
     (c) Alligator   (d) Locust
                              SSC (10+2) 2014

23. (a) Cruise   (b) Crusade
     (c) Campaign   (d) Expedition **CLAT 2017**

24. (a) Blackmail   (b) Smuggling
     (c) Snobbery   (d) Forgery
     (e) Sabotage

25. (a) Scurvy   (b) Rickets
     (c) Night-blindness   (d) Influenza
                              SSC (CGL) 2013

26. (a) Herd   (b) Flight
     (c) Hound   (d) Swarm
                              SSC (Steno) 2013

27. (a) Foal   (b) Hen   (c) Lamb   (d) Leveret
                              BSSC (CGL) 2015

28. (a) Agitation   (b) Confusion
     (c) Commotion   (d) Annihilation
                              SSC (Steno) 2016

29. (a) Poland   (b) Korea
     (c) Spain   (d) Greece
                              SSC (10+2) 2014

30. (a) Bang   (b) Hiss
     (c) Whistle   (d) Wink

Directions (Q. Nos. 31-49) *In each of the following question, some groups of letters are given, all of which, except one, share a common feature while one is different. Choose the odd one out.*

31. (a) MNW   (b) OPY
     (c) JKT   (d) GHO   **OPSC 2018**

32. (a) PLH   (b) MHD   (c) NJF   (d) KGC
                              SSC (10+2) 2017

33. (a) HKI   (b) UXV   (c) CFD   (d) MQN
     (e) GJH

34. (a) EDC   (b) MLK   (c) NPR   (d) XWV
                              SSC (Steno) 2016

35. (a) HJN   (b) JLP   (c) PRU   (d) QSW
     (e) ACG   **PNB (Clerk) 2011**

36. (a) TPLI   (b) YUQM (c) RNJF   (d) SOKJ
                              SSC (CGL) 2015

37. (a) MORV (b) CEHL (c) CENT   (d) JLOS
                              SSC (CGL) 2013

38. (a) NQTW (b) PSVZ (c) WZCF   (d) BEHK
                              SSC (CPO) 2017

39. (a) MOQS   (b) ZADE
     (c) CEGI   (d) SUWY
                              SSC (Steno) 2016

40. (a) DACB   (b) EBCD
     (c) SPQR   (d) XUVW

41. (a) XTCG   (b) NJMQ
     (c) EAUZ   (d) SOHL

42. (a) BdEg   (b) PrSu
     (c) KmNp   (d) TwXz
     (e) HjKm   **SSC (CPO) 2017**

43. (a) FIJL   (b) RUVX
     (c) DGHJ   (d) NPQS

44. (a) AEFJ   (b) KOPT
     (c) UYZD   (d) EHIL **SSC (CGL) 2016**

45. (a) ABYZ   (b) CDWX
     (c) EFUV   (d) GHTV
                              RRB (ASM) 2012

46. (a) DFIMR   (b) CEHLQ
     (c) GILPU   (d) HJMPT **SNAP 2012**

47. (a) B C D G   (b) G I J L
     (c) P R S U   (d) U W X Z
                              SSC (10+2) 2014

48. (a) CDFE   (b) JKLM
     (c) STVU   (d) WXZY
     (e) HIKJ   **LIC (ADO) 2012**

49. (a) ZOIV (b) QIEM (c) HIUL (d) TEAP
SSC (CPO) 2015

50. Arrange these letters of each group to make a meaningful word and then find the odd one out. **SSC (CGL) 2015**
(a) GHIET (b) VEENS (c) ORFU (d) VIDEID

Directions (Q. Nos. 51-61) *In each of the following question, four/five numbers are given. Out of these, three/four are alike in a certain way but one is different. Choose the one which is different from the rest three/four.*

51. (a) 144 (b) 169 (c) 196 (d) 210

52. (a) 8110 (b) 9100 (c) 1189 (d) 1234
SSC (CPO) 2015

53. (a) 68 (b) 85 (c) 153 (d) 174
SSC (CPO) 2015

54. (a) 120 (b) 168 (c) 290 (d) 380
(e) 728

55. (a) 84 (b) 120 (c) 72 (d) 108
(e) 98 **BOI (PO) 2008**

56. (a) 143 (b) 257 (c) 195 (d) 15
(e) 63 **SBI (PO) 2008**

57. (a) 2378 (b) 7562 (c) 6662 (d) 1155
SSC (10+2) 2017

58. (a) 272 (b) 210 (c) 240 (d) 304
SSC (CGL) 2013

59. (a) 4867 (b) 5555 (c) 6243 (d) 6655
RRB (Group 'D') 2011

60. (a) 1256 (b) 5397 (c) 8765 (d) 9842
SSC (10 + 2) 2017

61. (a) 26 (b) 34 (c) 72 (d) 46
(e) 38 **Vijaya Bank (PO) 2008**

Directions (Q. Nos. 62-63) *Choose the odd term from the given alternatives.*

62. (a) KQ14 (b) AY13 (c) MR11 (d) GW15
MAT 2014

63. (a) A8C (b) D22G (c) H42M (d) F34H

Directions (Q. Nos. 64-80) *In each of the following question, four/five word pairs of words are given. Out of these words, one pair does not bear the common relationship which others bear. You are required to find that odd pair.*

64. (a) Lion-Roar (b) Snake-Hiss
(c) Bees-Hum (d) Frog -Bleat
(e) Dog-Bark **IBPS (Clerk) 2011**

65. (a) Death : Disease (b) Milk : Butter
(c) Grape : Wine (d) Water : Electricity

66. (a) Pen, Stationery (b) Earth, Moon
(c) Sun, Star (d) Painter, Artist
SSC (Steno) 2016

67. (a) Circle : Arc (b) Line : Dot
(c) Hexagon : Angle (d) Square : Line
SSC (10+2) 2013

68. (a) Captain-Team
(b) Boss-Gang
(c) Prime Minister-Cabinet
(d) Artist-Troupe **RRB (Group 'D') 2012**

69. (a) Apple : Jam (b) Lemon : Citrus
(c) Orange : Squash (d) Tomato : Purie

70. (a) Cow : Fodder (b) Crow : Carrion
(c) Poultry : Farm (d) Vulture : Prey

71. (a) Gold : Ornaments (b) Pitcher : Pottery
(c) Twigs : Nest (d) Wood : Furniture

72. (a) Flag : Flagship (b) Court : Courtship
(c) War : Worship (d) Friend : Friendship

73. (a) Tree : Stem (b) Face : Eye
(c) Chair : Sofa (d) Plant : Flower

74. (a) Lion : Fox (b) Dog : Cat
(c) Crow : Cuckoo (d) Chief Minister : MLA
(e) Husband : Wife

75. (a) Needle-Prick (b) Gun-Fire
(c) Auger-Bore (d) Chisel-Carve
SSC (10+2) 2012

76. (a) Chandragupta : Mauryan
(b) Babar : Mughal
(c) Kanishka : Kushan
(d) Mahavira : Jainism **SSC (10+2) 2012**

77. (a) Principal : School (b) Soldier : Battalion
(c) Artist : Troupe (d) Singer : Chorus

78. (a) Stale : Fresh (b) Truth : Lie
(c) Slow : Sluggish (d) Teach : Learn
(e) Kind : Cruel **IBPS (PO) 2013**

79. (a) Cockroach : Antennae
(b) Lizard : Flagella
(c) Hydra : Tentacles
(d) Plasmodium : Cilia

80. (a) Social Science : Physics
(b) Mathematics : Algebra
(c) University : Harvard
(d) Fruits : Banana **UP Police (Constable) 2018**

Directions (Q.Nos. 81-99) *Choose the odd numeral pair/group in each of the following question.*

81. (a) 57 – 53 (b) 47 – 41
(c) 67 – 63 (d) 71 – 67
SSC (10+2) 2017

82. (a) (29, 31) (b) (47, 49) (c) (5, 7) (d) (11, 13)
SSC (CPO) 2015

83. (a) 8-15 (b) 25-36 (c) 49-64 (d) 81-100
UP (B.Ed.) 2011

84. (a) 46, 57 (b) 38, 49 (c) 41, 52 (d) 64, 73

85. (a) 12-24 (b) 14-28 (c) 23-46 (d) 36-70
SNAP 2011

86. (a) (42, 14) (b) (69, 23) (c) (108, 36) (d) (56,19)
SSC (CGL) 2015

87. (a) (81, 243) (b) (16, 64) (c) (64, 192) (d) (25, 75)
SSC (CGL) 2016

88. (a) 14, 17, 23 (b) 19, 22, 28
   (c) 17, 20, 26 (d) 21, 23, 30
SSC (Steno) 2013

89. (a) 20, 16, 18 (b) 14, 11, 13
   (c) 18, 14, 16 (d) 16, 12, 14

90. (a) 9, 49 (b) 13, 121 (c) 10, 61 (d) 7, 25
SSC (CPO) 2013

91. (a) 5-21 (b) 29-45 (c) 48-68 (d) 71-87
SSC (10+2) 2013

92. (a) 7 : 98 (b) 9 : 162 (c) 12 : 288 (d) 7 : 572
SSC (CPO) 2014

93. (a) 9 – 72 (b) 8 – 56 (c) 11 – 115 (d) 10 – 90
SSC (CGL) 2014

94. (a) 1 : 2 (b) 3 : 28 (c) 4 : 65 (d) 2 : 7

95. (a) 22 : 42 (b) 4 : 6
   (c) 11 : 20 (d) 5 : 14

96. (a) 6 : 23 (b) 3 : 11
   (c) 1 : 3 (d) 5 : 18

97. (a) (13, 2028) (b) (11, 1210)
   (c) (7, 336) (d) (9, 648)
SSC (CPO) 2017

98. (a) 2,15,13 (b) 7,12,4
   (c) 4,15,11 (d) 6,18,12

99. (a) 0-3-8 (b) 9-12-16
   (c) 17-20-24 (d) 51-54-58
SSC (Steno) 2011

100. Which one set of the following sets of numbers (3, 5, 19, 13), (11, 19, 2, 3), (3, 29, 2, 13), (2, 31, 11, 4) is different (if any) from the other sets, in accordance with some rule?
CGPSC (Pre) 2014

(a) (3, 5, 19, 13) (b) (11, 19, 2, 3)
(c) (3, 29, 2, 13) (d) (2, 31, 11, 4)
(e) None of these

≫ Answers

1.	(a)	2.	(b)	3.	(d)	4.	(a)	5.	(a)	6.	(d)	7.	(a)	8.	(d)	9.	(d)	10.	(a)
11.	(d)	12.	(d)	13.	(c)	14.	(d)	15.	(d)	16.	(d)	17.	(d)	18.	(a)	19.	(a)	20.	(c)
21.	(d)	22.	(d)	23.	(a)	24.	(c)	25.	(d)	26.	(c)	27.	(b)	28.	(b)	29.	(b)	30.	(d)
31.	(d)	32.	(b)	33.	(d)	34.	(c)	35.	(c)	36.	(c)	37.	(c)	38.	(b)	39.	(b)	40.	(a)
41.	(c)	42.	(d)	43.	(d)	44.	(d)	45.	(d)	46.	(d)	47.	(a)	48.	(b)	49.	(c)	50.	(d)
51.	(d)	52.	(c)	53.	(d)	54.	(d)	55.	(e)	56.	(b)	57.	(d)	58.	(c)	59.	(d)	60.	(d)
61.	(c)	62.	(c)	63.	(d)	64.	(d)	65.	(a)	66.	(b)	67.	(c)	68.	(d)	69.	(b)	70.	(c)
71.	(b)	72.	(c)	73.	(c)	74.	(d)	75.	(a)	76.	(d)	77.	(a)	78.	(c)	79.	(b)	80.	(a)
81.	(b)	82.	(b)	83.	(a)	84.	(d)	85.	(d)	86.	(d)	87.	(b)	88.	(d)	89.	(b)	90.	(c)
91.	(c)	92.	(d)	93.	(c)	94.	(d)	95.	(d)	96.	(d)	97.	(c)	98.	(b)	99.	(a)	100.	(d)

≫ Answer with Explanations

1. (*a*) Except Sun, all other are planets.

2. (*b*) Cotton is used to make thread and thread is used to make cloth. So, plastic is the odd one.

3. (*d*) Except 'Borrow', all the options are the terms of business.

4. (*a*) Stem, branch and roots supply water to different parts of the plant. So, flower is the odd one.

5. (*a*) Except 'Sky', all others belong to the same class i.e. celestial bodies.

6. (*d*) Except Agra, all others are hill stations.

7. (*a*) Escalater, ladder and staircase are used to climb to next floor, whereas bridge is used to join two mountains or cliffs.

8. (*d*) Late is the result of the other given options. A tired, tardy or slow attitude makes a work late.

9. (*d*) Except Sydney, all others are the capitals of different countries while Sydney is one of the city in Australia.

10. (*a*) Except mother-in-law, all others are males whereas mother-in-law is a female. Hence, mother-in-law is different from others.

11. (*d*) Except Mathematics, all others come under the field of Mathematics.

12. (*d*) Except Swimming pool, all others are natural resources of water.

13. (*c*) Except Bronze, all others are pure metals whereas bronze is an alloy.

14. (*d*) Except open secret, all other given options represent certainity. Open secret is odd as it alludes uncertainity.

15. (*d*) Except Ally, all others are harmful for us.

16. (*d*) Brass, bronze and gun metal are alloys while Germanium is an element.

17. (*d*) Here, all options are related to rain or water except Raisin. 'Raisin' is a partially dried grapes, which is different from all others.

18. (*a*) Except distinguish, all others are related to separation.

19. (*a*) Except Disperse, all others are synonyms.

20. (*c*) Except 'Failure', all others are illegal activities.

21. (*d*) All except Record are the brief notations in a language, while Record is a detailed account.

22. (*d*) Except Locust, all others belong to reptile category.

23. (*a*) Cruise is a journey by ship, while all others are synonyms.

24. (*c*) Except 'Snobbery', all other words are related to crime.

25. (*d*) Except 'Influenza', all other diseases are caused by the lack of vitamins.

26. (*c*) Except Hound, all others represent group of insects or animals. While Hound is a special breed of dog.

27. (*b*) Except Hen, all others are young ones of different animals.

28. (*b*) Except confusion, all others are done in group. Confusion can be felt by an individual.

29. (*b*) Except Korea, all others are European countries while Korea is an Asian country.

30. (*d*) Except wink, all others are different types of sound.

31. (*d*) Here,

M   N   W   O   P   Y
$+1$ $+9$ $+1$ $+9$

J   K   T   G   H   O
$+1$ $+9$ $+1$ $+7$
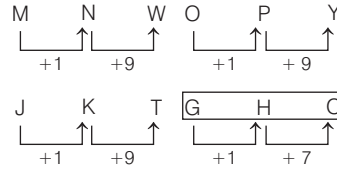
So, it is clear from above that GHO is different from others.

32. (*b*) Here,

P   L   H   M   H   D
-4 -4 -5 -4

N   J   F   K   G   C
-4 -4 -4 -4
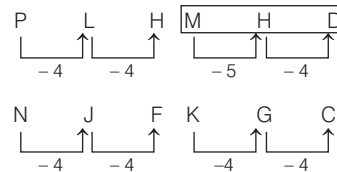
So, it is clear from above that MHD is different from others.

33. (*d*) H   K   I   U   X   V   C   F   D
$+3$ -2 $+3$ -2 $+3$ -2

M   Q   N   and   G   J   H
$+4$ -3 $+3$ -2
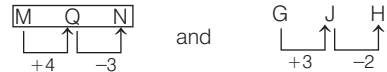
So, it is clear from above that MQN is different from others.

34. (*c*) E   D   C   M   L   K
-1 -1 -1 -1

N   P   R   X   W   V
$+2$ $+2$ -1 -1
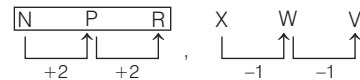
So, it is clear from above that NPR is different from others.

35. (*c*) H   J   N   J   L   P   R   U   Q   S   W
$+2$ $+4$ $+2$ $+4$ $+2$ $+3$ $+2$ $+4$

and   A   C   G
$+2$ $+4$
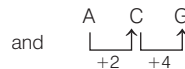
So, it is clear from above that PRU is different from others.

36. (*c*) Except RNJF, all others contain one vowel.

37. (*c*) M   O   R   V   C   E   H   L
+2   +3   +4   ,   +2   +3   +4

C   E   N   T   J   L   O   S
+2   +9   +6   and   +2   +3   +4
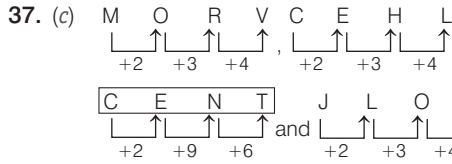
From above, it is clear that letters' group CENT is different from all others.

38. (*b*) N   Q   T   W   P   S   V   Z
+3   +3   +3   ,   +3   +3   +4

W   Z   C   F   B   E   H   K
+3   +3   +3   ,   +3   +3   +3
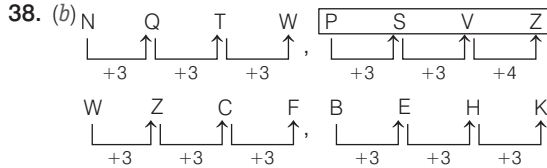
So, it is clear from above that PSVZ is different from others.

39. (*b*) M   O   Q   S   Z   A   D   E
+2   +2   +2   ,   +1   +3   +1

C   E   G   I   S   U   W   Y
+2   +2   +2   ,   +2   +2   +2
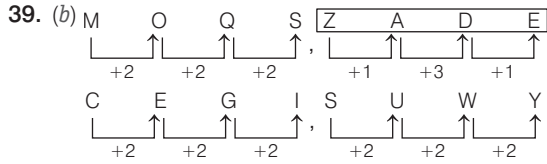
So, it is clear from above that ZADE is different from others,

40. (*a*) $D \xrightarrow{-3} A \xrightarrow{+2} C \xrightarrow{-1} B$
$E \xrightarrow{-3} B \xrightarrow{+1} C \xrightarrow{+1} D$
$S \xrightarrow{-3} P \xrightarrow{+1} Q \xrightarrow{+1} R$
$X \xrightarrow{-3} U \xrightarrow{+1} V \xrightarrow{+1} W$
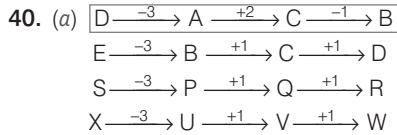
So, it is clear from above that DACB is different from others.

41. (*c*) X   T   C   G   N   J   M   Q
−4   +4   −4   +4

E   A   U   Z   S   O   H   L
−4   +5   −4   +4
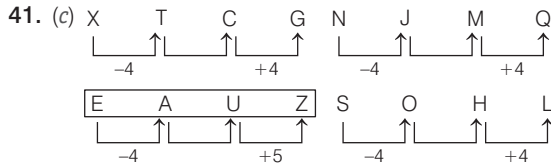
So, it is clear from above that EAUZ is different from others.

42. (*d*) B   d   E   g   P   r   S   u
+2   +1   +2   ,   +2   +1   +2   ,

K   m   N   p
+2   +1   +2

T   w   X   z   H   j   K   m
+3   +1   +2   and   +2   +1   +2
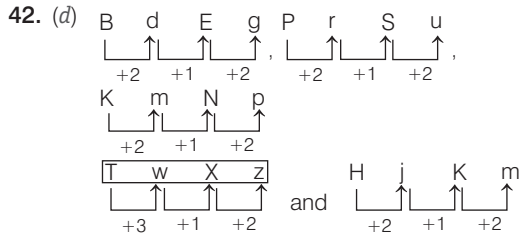
So, it is clear from above that TwXz is different from others.

43. (*d*) F   I   J   L   R   U   V   X
+3   +1   +2   ,   +3   +1   +2

D   G   H   J   N   P   Q   S
+3   +1   +2   and   +2   +1   +2
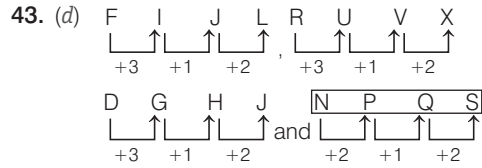
So, it is clear from above that NPQS is different from others.

44. (*d*) A   E   F   J
+4   +1   +4

K   O   P   T
+4   +1   +4

U   Y   Z   D
+4   +1   +4
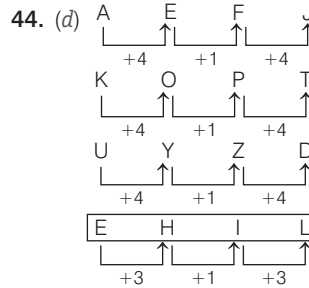
E   H   I   L
+3   +1   +3

So, it is clear from above that EHIL is different from others.

45. (*d*) Except option (d), all three are same because in those three options first and fourth and second and third are opposite letters.

46. (*d*) D   F   I   M   R   C   E   H   L   Q
+2   +3   +4   +5   ,   +2   +3   +4   +5   ,

G   I   L   P   U   H   J   M   P   T
+2   +3   +4   +5   and   +2   +3   +3   +4
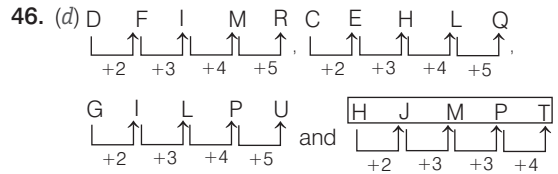
So, it is clear from above that HJMPT is different from others.

47. (*a*) B   C   D   G   G   I   J   L
+1   +1   +3   ,   +2   +1   +2   ,

P   R   S   U   U   W   X   Z
+2   +1   +2   and   +2   +1   +2
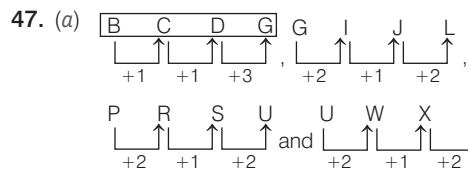
So, it is clear from above that BCDG is different from others.

48. (*b*) C   D   F   E   J   K   L   M
+1   +2   −1   ,   +1   +1   +1

S   T   V   U   W   X   Z   Y
+1   +2   −1   ,   +1   +2   −1

H   I   K   J
and   +1   +2   −1
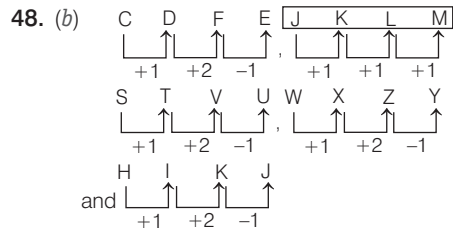
So, it is clear, from above that JKLM is different from others.

49. (*c*) Z O̲ I̲ V, Q I̲ E̲ M, H I U L and T E̲ A̲ P

Except H I U L, all others have two consecutive vowels. But in H I U L, one vowel is skipped between I and U. i.e. O.

50. (*d*) As, GHIET → EIGHT

VEENS → SEVEN

ORFU → FOUR

VIDEID → DIVIDE

So, it is clear that DIVIDE does not belong to group.

51. (*d*) Except 210, all others are square of natural numbers.

52. (*c*) Except 1189, sum of digits of all other numbers is 10.

53. (*d*) Except 174, all others are multiple of 17.

54. (*d*) Each of the numbers except 380, is either one less or one more than the square of a certain number.

55. (*e*) Except '98', all others are multiples of 6.

$84 \to 6 \times 14, 120 \to 6 \times 20,$

$72 \to 6 \times 12, 108 \to 6 \times 18$

56. (*b*) Here, $143 \to 12^2 - 1, 257 \to 16^2 + 1, 195 \to 14^2 - 1,$

$15 \to 4^2 - 1, 63 \to 8^2 - 1$

Hence, '257' is the odd one.

57. (*d*) Here, $2378 \Rightarrow 2 + 3 + 7 + 8 = 20$

$7562 \Rightarrow 7 + 5 + 6 + 2 = 20$

$6662 \Rightarrow 6 + 6 + 6 + 2 = 20$

$1155 \Rightarrow 1 + 1 + 5 + 5 = \boxed{12}$

Clearly, 1155 is the odd one.

58. (*c*) Here, $272 = 2 + 7 + 2 = 11$ (Prime)

$210 = 2 + 1 + 0 = 3$ (Prime)

$240 = 2 + 4 + 0 = 6$ (Non-prime)

$304 = 3 + 0 + 4 = 7$ (Prime)

Clearly, 240 is the odd one.

59. (*d*) As, $4867 \to 4 + 8 + 6 + 7 = 25,$ which is divisible by 5.

$5555 \to 5 + 5 + 5 + 5 = 20,$ which is divisible by 5.

$6243 \to 6 + 2 + 4 + 3 = 15,$ which is divisible by 5.

But, $\boxed{6655} \to 6 + 6 + 5 + 5 = 22,$ which is not divisible by 5.

So, 6655 is different.

60. (*d*) Here,
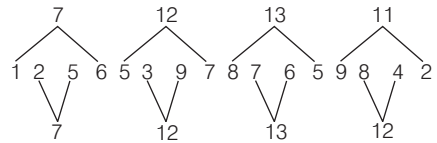
Sum of middle two digits and of extreme two digits are same, but in 9842, it is different.

61. (*c*) Except '72' all others give a prime number, when divided by 2.

62. (*c*) In all other groups except (c), number at the end is half of the sum of positional value of first and second letters in the alphabet.

63. (*d*) In all other groups except (d), number between first and second letters is twice the sum of their positional values.

64. (*d*) Except frog-bleat, in all other pairs the sound of the given animal is written. Frog-bleat is different because frogs don't bleat, they croak.

65. (*a*) In all other pairs, second is a product obtained from the first.

66. (*b*) Except (b), in all others, first thing falls under the second. Earth is a planet not moon.

67. (*c*) Circle is made from arcs, line is made from dots and square is made from lines but hexagon is not made from an angle.

68. (*d*) In all pairs except (d), first is the head of second.

69. (*b*) In all pairs except (b), second is made from first.

70. (*c*) In all pairs except (c), second is the food for first.

71. (*b*) In all pairs except (b), first is the material used to make the second.

72. (*c*) In all other pairs except (c), second is the abstract noun of first.

73. (*c*) In all other pairs except (c), second is a part of the first.

74. (*d*) In all other pairs except (d), the first is masculine and the other is feminine.

75. (*a*) Except Needle-Prick, in all other options the work of the given instrument is written on the right.

76. (*d*) In all pairs except (d), first is the founder of second.

77. (*a*) In all other pairs, except (a) second is a collective group of the first.

78. *(c)* In all other pairs except (c), both the words are antonyms of each other.

79. *(b)* In all other pairs except (b), second is the organ used by first for its movement.
But, when bacteria senses either presence of nutrients or harmful conditions, the flagella play its role. If bacteria requires nutrients, flagella starts the movement towards it.

80. *(a)* In all pairs except (a), second completely belongs to first.

81. *(b)* Except 47 – 41, all other number pairs have a difference of 4.

82. *(b)* Except (47, 49), all other options have prime numbers.

83. *(a)* Except 8-15, in all other options, both the numbers are the square of natural numbers.

84. *(d)* Except 64-73, all others are having a difference of 11.

85. *(d)* Except in option (d), the second number is twice of first number in all other options.

86. *(d)* The pattern is as follows

$$(42, 14) \rightarrow 14 \times 3 = 42$$
$$(69, 23) \rightarrow 23 \times 3 = 69$$
$$(108, 36) \rightarrow 36 \times 3 = 108$$
But $(56, 19) \rightarrow 19 \times 3 = 57 \neq 56$

So, option (d) is the odd one.

87. *(b)* Here, $81 \xrightarrow{\times 3} 243$; $16 \xrightarrow{\times 3} 48 \neq 64$

$64 \xrightarrow{\times 3} 192$; $25 \xrightarrow{\times 3} 75$

Hence, (16, 64) is different from all others.

88. *(d)* Here, $14 + 3 = 17 \rightarrow 17 + 6 = 23$
$19 + 3 = 22 \rightarrow 22 + 6 = 28$
$17 + 3 = 20 \rightarrow 20 + 6 = 26$
$\boxed{21 + 2 = 23 \rightarrow 23 + 7 = 30}$

So, (21, 23, 30) is different.

89. *(b)* The pattern is as follows
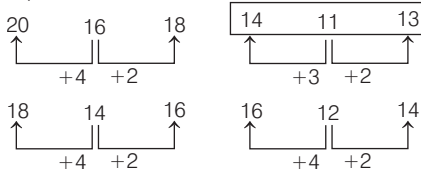
Hence, (14, 11, 13) is the odd one.

90. *(c)* Here, $9 - 2 = 7 \rightarrow 7^2 = 49$
$13 - 2 = 11 \rightarrow 11^2 = 121$
$10 - 2 = 8 \rightarrow 8^2 = 64 \neq 61$
$7 - 2 = 5 \rightarrow 5^2 = 25$

So, (10, 61) is different from others.

91. *(c)* Here, $5 \xrightarrow{+16} 21$, $29 \xrightarrow{+16} 45$

$71 \xrightarrow{+16} 87$ and $\boxed{48 \xrightarrow{+20} 68}$

So, '48-68' is different from other three.

92. *(d)* Except (d), in all other options, second number is the multiple of the first number.

93. *(c)* As, $9 \times (9 - 1) \Rightarrow 9 \times 8 = 72$
$8 \times (8 - 1) \Rightarrow 8 \times 7 = 56$
$10 \times (10 - 1) \Rightarrow 10 \times 9 = 90$
But, $11 \times (11 - 1) \Rightarrow 11 \times 10 = 110 \neq 115$

So, 11-115 is different from others.

94. *(d)* In all other pairs except (d), second number is one more than the cube of the first number.

95. *(d)* In all other pairs except (d), first number is one more than the half of the second number.

96. *(d)* In all other pairs except (d), second number is one less than four times the first number.

97. *(c)* Here, $13 - 2028 \rightarrow (13)^3 - (13)^2 = 2028$
$11 - 1210 \rightarrow (11)^3 - (11)^2 = 1210$
$7 - 336 \rightarrow (7)^3 - (7)^2 = \boxed{294}$
$9 - 648 \rightarrow (9)^3 - (9)^2 = 648$

So, it is clear from above that $7 - 336$ is different from others.

98. *(b)* Except (b) in all others, middle number is the sum of other two numbers.

99. *(a)* Here,
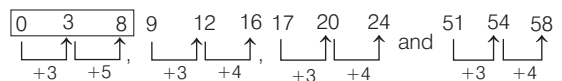
Hence, 0-3-8 is different from other three.

100. *(d)* Except set in option (d), all other sets contain only prime numbers. But set (d) contains one composite number, i.e. 4.

03

Alphabet Test

'Alphabet Test' has questions based on letters of English alphabet. These questions require

- the understanding of the position of letters in English alphabet.
- detection of the rule in which letters are arranged.
- finding a letter or number following a particular rule in an alpha-numeric sequence etc.

Some important points related to Alphabet test are given below:

1. Positional values of letters in English alphabet.

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

2. A, E, I, O and U are vowels of English alphabet and remaining letters are consonants of English alphabet.
3. A to M letters are called the first half of English alphabet.
4. N to Z letters are called the second half of English alphabet.

5. Opposite letter of a letter can be obtained by subtracting the position of letter from 27. The answer obtained is the position of the opposite letter. You can also remember the opposite letters of English alphabet by following the below trick:

Opposite Letters	Trick	Opposite Letters	Trick
A – Z	A to Z or Aaza	B – Y	By
C – X	CT Scan-X-RAY	D – W	Dew
E – V	Evening	F – U	First U (You)
G – T	GT Road	H – S	High School
I – R	Indian-Railway	J – Q	Jack-Queen
K – P	Kevin Peterson	L – O	Light ON
M – N	Man		

Types of Questions

There are four types of questions based on the alphabet test which are generally asked in various competitive examinations.

» Type 1
Finding a Particular Letter in English Alphabet

In this type, the questions asked are based on finding out the letter at a specific position with respect to another letter in the English alphabetical order.

Some important formulae to find the position of a letter in English Alphabet are given below:

1. nth letter to the left of mth letter from right end $= (m + n)$th letter from the right end.
2. nth letter to the right of mth letter from left end $= (m + n)$th letter from the left end.
3. nth letter to the left of mth letter from left end $= (m - n)$th letter from the left end.
4. nth letter to the right of mth letter from right end $= (m - n)$th letter from the right end.
5. Total number of letters between mth letter from left and nth letter from right $= 26 - $ (Position of mth letter + Position of nth letter)

Illustration 1. Find the 11th letter to the left of 20th letter from left in the English alphabet.

(a) D   (b) J   (c) K   (d) I

Solution (*d*) Let us see
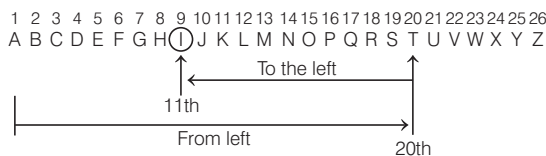
Hence, 11th letter to the left of 20th letter from left is I.

Alternate Method (By Formula 3)

In English alphabet, 11th letter to the left of
20th letter from left $= (20 - 11)$th letter from left
$= $ 9th letter from left $= $ I

Illustration 2. If English alphabet is written in backward order, then what will be the 13th letter to the left of the 3rd letter from right?

(a) P   (b) N
(c) R   (d) Q

Solution (*a*) Backward order is written as
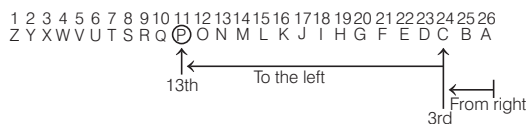
Therefore, the 13th letter to the left of the 3rd letter from right is P.

Alternate Method (By Formula 1)

In backward order of alphabet, 13th letter to the left of 3rd letter from right $= (3 + 13)$th letter from right
$= $ 16th from right $= $ P

Illustration 3. How many letters are there between 8th letter from left and 7th letter from right in the English alphabet?

(a) 7   (b) 11   (c) 8   (d) 9

Solution (*b*) Let us see
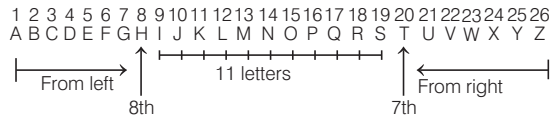
So, there are 11 letters between 8th letter from left and 7th letter from right.

Alternate Method (By Formula 5)

Total number of letters in the English alphabet $= 26$
Number of letters in between

$= $ Total number of letters in English alphabet
$- $ (letter from the left + letter from the right)

$\therefore$ Required number of letters $= 26 - (8 + 7) = 11$

Illustration 4. If 1st half of the English alphabet is written in reverse order, then find the 15th letter from right.   **Canara Bank (Clerk) 2008**

(a) A   (b) B
(c) C   (d) D
(e) E

Solution (*b*) According to the question,
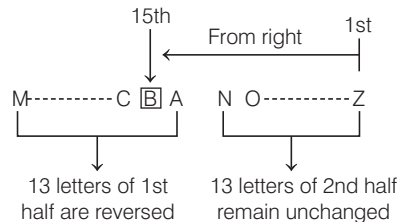
$\therefore$ The required letter is B.

›› Type 2
Alpha-Numeric Sequence

In this type of questions, a jumbled sequence of some letters, numbers and symbols are given. Sometimes only English alphabets from A to Z are given.

The candidate is required to find the number of times a particular letter/number/symbol occurs in the sequence following a certain condition.

Illustration 5. In the following letter series, how many times do PQR occur in such a way that Q is in the middle of P and R?

QMPNPQRROPQNOPPQRPMQROPQRPPRR PQRP

(a) 5   (b) 6   (c) 4   (d) 3

Solution (*c*) Here, Q M P N P Q R R O P Q N O P P Q R P M Q R O P Q R P P R R P Q R P

So, in the above arrangement, PQR occur 4 times in such a way that Q is in the middle of P and R.

Directions (*Illustrations 6-8) Study the following arrangement carefully and answer the questions given below.*

F @ 3 9 H © A D I % 4 E ★ $ M K 2 U R P 5 W δ 8 1 T J V 7

Illustration 6. How many consonants are there in the given arrangement, which are preceded by a number and not followed by a letter?

(a) None   (b) One   (c) Two   (d) Three
(e) More than three

Solution (*c*) Here, F @ 3 9 H © A D I % 4 E ★ $ M K 2 U R P 5 W δ 8 1 T J V 7

In the given arrangement, 2 such consonants are there *viz.* 9 H © and 5 W δ which are preceded by a number and not followed by a letter.

Illustration 7. Four of the following five options are alike in a certain way, based on their positions in the above arrangement and so form a group. Which is the one that does not belong to that group?   **SSC (CPO) 2015**

(a) D % ©   (b) 5 δ R   (c) T V 8   (d) E % $

Solution (*d*) Here, F @ 3 9 H © A D I % 4 E ★ $ M K 2 U R P 5 W δ 8 1 T J V 7

In all the groups except 'E % $', second element is two positions ahead of first element and the third element is two positions behind to the first element.

Illustration 8. If all the symbols from the above arrangement are dropped, then which of the following will be the twelfth from the left end?

(a) 4   (b) K   (c) 2   (d) U
(e) None of these

Solution (*c*) After dropping all the symbols, the resultant arrangement will be

F 3 9 H A D I 4 E M K 2 U R P 5 W 8 1 T J V 7

12th from left

So, twelfth element from the left is 2.

❯❯ Type 3
Letter-Word Problems

In this type of questions, a word is given and candidates are required to answer the questions asked on the basis of given word e.g. how many letter(s) in the word is as far from the beginning of the word as it is from the beginning of the English alphabet, how many letters remain same in its position, if they are arranged in alphabetical order etc.

Illustration 9. How many such pairs of letters are there in the word 'CHANNEL', which have as many letters between them in the word as in the English alphabet?

(a) None   (b) One
(c) Two   (d) Three
(e) More than three

Solution (*c*) According to the question,

C   H   A   N   N   E   L

So, there are two such pairs i.e. AC and LN.

Illustration 10. How many such letters are there in the word 'PMCLNOB' which remain same in its position, if they are arranged in an alphabetical order?

(a) None   (b) One
(c) Two   (d) Three
(e) More than three

Solution (*c*) According to the question,

Given word   P M C L N O B
Alphabetical order   B C L M N O P

So, such type of letters are N and O.

Illustration 11. If each vowel in the word 'GLADIOLUS' is substituted with the next letter of the English alphabetical series and each consonant is substituted with the letter preceding it. How many vowels are present in the new arrangement?

(a) None   (b) One   (c) Two   (d) Three
(e) None of these

Solution (*a*) According to the question,

Given word   G L A D I O L U S
                  ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
New word   F K B C J P K V R

So, no vowel is present in the new arrangement.

》 Type 4

Rule Detection

In this type of questions, the alternatives are given as the group of letters and out of these groups, candidates are asked to choose the correct alternative which follows the rule given in the question.

Illustration 12. Find out the correct alternative in which number of letters skipped in between adjacent letters in the series, is two.

    (a) LORTW
    (b) GJMPS
    (c) KNPSV
    (d) EHKLO

Solution (*b*) According to the question,
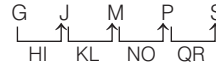
$$G \quad J \quad M \quad P \quad S$$
$$\underset{HI}{} \quad \underset{KL}{} \quad \underset{NO}{} \quad \underset{QR}{}$$

Hence, GJMPS follows the pattern.

Illustration 13. Number of letters skipped in between adjacent letters in the series decreases by one. Which of the following series is observing the rule?

    (a) OXMYA (b) AZXUA (c) QUXZA (d) AEIKL

Solution (*c*) According to the question,
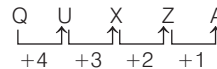
$$Q \quad U \quad X \quad Z \quad A$$
$$\underset{+4}{} \quad \underset{+3}{} \quad \underset{+2}{} \quad \underset{+1}{}$$

Hence, QUXZA follows the pattern.

》》 Let us Practice

⤤ Base Level Exercise

1. Which of the following letters is 14th to the right of 6th letter from the left in the English alphabet?
(a) R   (b) P   (c) W   (d) T

2. Which letter is between midway of 8th letter from left and 7th letter from right in the English alphabet?
(a) N   (b) M   (c) P   (d) O

3. If the English alphabet is written in backward order, then which letter will be 5th to the left of letter M?   **MAT 2011**
(a) G   (b) H   (c) S   (d) R

4. If English alphabet is written in the backward order, then which letter is 7th to the right of K?   **UP (B.Ed.) 2011**
(a) A   (b) B   (c) C   (d) D

5. If the English alphabet is written in reverse order, then which letter is 7th to the left of 11th letter from right?   **SSC (10+2) 2008**
(a) W   (b) H   (c) R   (d) D

6. If the 2nd half of the English alphabet is written in the reverse order, then find the 15th letter from right.   **LIC (ADO) 2009**
(a) M   (b) L   (c) K   (d) J
(e) O

7. If the 1st half of the English alphabet is reversed and so is the 2nd half, then which letter is 7th to the right of the 12th letter from the left side?
(a) S   (b) U   (c) R   (d) T

8. All the English alphabets are arranged alphabetically in the reverse order. The difference of the positions of two vowels which appear in the beginning and in the end, is   **CGPSC 2014**
(a) 6   (b) 12
(c) 16   (d) 18
(e) None of these

9. In the following series, how many KGN occur in such a way that 'G' is in the middle and 'K' and 'N' are adjacent to it on both sides?   **SSC (CGL) 2014**
AKGLMNDQKGCSNGKTGKGNDZPUXGKE
(a) 3   (b) 5
(c) 1   (d) 2

10. In the following letter series, how many M's are followed by N, but not preceded by N?   **SSC (CPO) 2014**
NMWVMNMVWNMNMMNWVMN
(a) 1   (b) 2   (c) 3   (d) 4

11. If the following series is written in reverse order and then all the vowels are deleted, which will be the 8th letter from the right in the new series?

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z   **OPSC 2018**

(a) L   (b) H
(c) K   (d) None of these

12. In the following letter series, how many BCN occur in such a way that C is in the middle and B and N are on any one side?

[SSC (10+2) 2013]

B C M X N C X N B X N C B N C B Y B C X N B C N A B O N M Z C B

(a) 4   (b) 2   (c) 5   (d) 3

13. How many T's are both immediately preceded and followed by 'E' in the following series?   **UP Police (Constable) 2018**

E T E T T M E E E T E T E T E T T E E T T T E E E T E T E T E T T E E T E

(a) 7   (b) 6
(c) 5   (d) 8

Directions (Q. Nos. 14-15) *Study the following alphabetical sequence and answer the questions based on it.*   **IBPS Clerk (Pre) 2017**

    ABBCDEFEIBCAFECBBACAOBNUVW

14. If all the vowels are dropped from the series, then which alphabet will be eighth from the left end?

(a) C   (b) B   (c) N   (d) F
(e) None of these

15. How many vowels are there in the alphabetical series which are immediately preceded by a consonant?

(a) One   (b) Two
(c) Four   (d) More than five
(e) None of these

16. If the letters of the word 'DOLPHIN' are arranged as they appear in the English alphabetical order, which of the following letter will be the 5th from left?   **UP (B.Ed.) 2011**

(a) O   (b) D
(c) I   (d) None of these

17. Which letter in the word 'WASHINGTON' is at the same position in the word (counting from the beginning) as it is in the English alphabet?   **UPPSC (RO) 2014**

(a) N   (b) T   (c) O   (d) G

18. How many such pairs of letters are there in the word 'PREAMBLE', each of which has as many letters between them as in the English alphabet?

(a) None   (b) One   (c) Two   (d) Three

19. How many such pairs of letters are there in the word 'STREAMING' each of which has as many letters between them in the word as in the English alphabet (in both forward and backward directions)?   **IBPS (Clerk) 2011**

(a) None   (b) One   (c) Two   (d) Three
(e) More than three

20. How many such pairs of letters are there in the word 'SUBSTANCE', each of which has as many letters between them in the word (in both forward and backward directions) as in the English alphabet?   **IBPS (PO) 2012**

(a) None   (b) One   (c) Two   (d) Three
(e) More than three

21. How many such pairs of letters are there in the word 'STONED', each of which has as many letters between them in the word (in both forward and backward directions) as they have between them in the English alphabetical series?

Punjab Grameen Bank (Clerk) 2011

(a) None   (b) Three   (c) Two   (d) One
(e) More than three

22. If the first and fifth letters of the word 'BILINGUAL' were interchanged, also the second and sixth letters, and so on, which of the following would be 7th letter from your right?   **OPSC 2018**

(a) A   (b) I   (c) G   (d) U

23. How many such pairs of letters are there in the word REFRESHING, each of which has as many letters between them in the word as they have in the English alphabet?

RBI Astt. (Mains) 2017, 2016

(a) None   (b) One   (c) Two   (d) Three
(e) More than three

24. How many such pairs of letters are there in the word 'TEACH' each of which has as many letters between them in the word (in both forward and backward directions) as they have between them in the English alphabetical series?   **SBI (Clerk) 2016**

(a) More than three   (b) None
(c) Two   (d) Three
(e) One

25. If in the word EQUALITY, the positions of first and the fifth letters are interchanged, similarly the positions of the second and the sixth letters are interchanged and so on, which letter will be third from the right end?

RBI Astt. (Mains) 2017, 2016

(a) Q   (b) U   (c) I   (d) T
(e) None of these

26. The positions of how many alphabets will remain unchanged if each of the alphabets in word 'FORGET' is arranged in alphabetical order from left to right?   UBI (PO) 2011
(a) None   (b) One   (c) Two   (d) Three
(e) More than three

27. If the letters of the word 'VERTICAL' are arranged alphabetically, how many letters will remain at the same position?

Syndicate Bank (Clerk) 2009

(a) Four   (b) Three   (c) Two   (d) One
(e) None of these

28. If the first and second letters in the word 'COMMUNICATIONS' were interchanged, also the third and the fourth letters, the fifth and sixth letters, and so on.

Which letter would be the tenth letter counting from your right?   SSC (CGL) 2012
(a) U   (b) A   (c) T   (d) N

29. In the word 'MATHEMATICS', if M is replaced by P, A by D, T by W and so on, then in the new arrangement of the letters, the letter of the 9th place from left is

UPPSC (RO/ARO) 2014

(a) K   (b) L   (c) F   (d) W

⏱ Expert Level Exercise

1. How many such pairs of letters are there in the word 'JOURNEY', each of which has as many letters between them in the word (in both forward and backward directions) as they have between them in the English alphabetical order?   UCO Bank (Clerk) 2011
(a) None   (b) One   (c) Two   (d) Three
(e) More than three

2. How many such pairs of letters are there in the word 'CONFUSED' each of which has as many letters between them in the word as in the English alphabet?   LIC (ADO) 2011
(a) Nil   (b) One   (c) Two   (d) Three

30. Each consonant in the word 'TIRADES' is replaced by the previous letter and each vowel is replaced by the next letter in the English alphabet and the new letters are rearranged alphabetically. Which of the following will be the fourth from the right end?
(a) F   (b) J   (c) Q   (d) C
(e) None of these

Directions (Q. Nos. 31-33) *In each of the following questions, find out which of the letter-series follows the given rule.*

31. Number of letters skipped in reverse order in between adjacent letters in the series is constant.
(a) SQOLJ   (b) SPNLJ   (c) SPMJG   (d) WUTRQ

32. Number of letters skipped in between the adjacent letters in the series is equal
(a) SUXADF   (b) RVZDHL
(c) HKNGSW   (d) RVZDFG

33. Number of letters skipped in between the adjacent letters in the series is one.

SSC Matric Level 2011

(a) KMPQR   (b) HJLMO   (c) PRSUW   (d) EGIKM

34. In a series of letters, find the group in which the number of letters skipped in between the adjacent letters in the series is constant.
(a) ZXTN   (b) EZUP   (c) PRTX   (d) RSAB

35. In the series given below, find the group in which two letters are skipped in between adjacent letters.
(a) BEHKLM   (b) LQRUXY
(c) EHKNQT   (d) FHKOTZ

(e) More than three

3. The position of the first and the fifth letters of the word HERITAGE are interchanged, similarly, the position of second and sixth letters and third and seventh letters and fourth and eighth letters are interchanged. In the new arrangement thus formed, how many letters are there between the letters which is fourth from the left and first from the right in the English alphabetical series?

IBPS Clerk (Pre) 2016

(a) Two   (b) None
(c) More than three   (d) Three

4. Which single letter is exactly between the two letters–one is 22nd from left side and the other is 19th from right side in the following series?

CGPSC 2014

ZYXWVUTSRQPONMLKJIHGFEDCBA

(a) M   (b) N   (c) L   (d) K
(e) None of these

5. If the last four letters of the word 'TABULATION' are written in reverse order followed by next two in reverse order and next three in the reverse order, counting from the end, which letter would be eighth in the new arrangement?
(a) N   (b) T
(c) E   (d) None of these

6. If the 2nd half of the letters of the word 'TRANSPORTATIONAL' are reversed and placed before 1st half of the letters, which letter will be the third to the right of the 13th letter from the right?
(a) R   (b) N   (c) L   (d) A

Directions (Q. Nos. 7-10) *In the following word 'ELECTROCARDIOGRAPH', the first half of the letters are reversed, but one letter 'P', then prefixed and finally letter 'S' is suffixed.*

7. Which letters will be exactly in the middle?
(a) L and E (b) R and D (c) D and I (d) E and R

8. How many vowels will be to the left of the middle letter?
(a) 2   (b) 1   (c) 4   (d) 3

9. Which vowel will have a consonant to the left but a vowel to the right of it?
(a) I   (b) O   (c) A   (d) E

10. Name the letter sandwiched between two vowels?
(a) R and T   (b) C and L
(c) R and L   (d) None of these

11. In a series of letters, find the group in which the number of letters skipped in between adjacent letters are increasing as they move forward.
(a) A C F J L Q   (b) B D G K P V
(c) C E H L Q V   (d) A I L M U X

12. In a series of letters, find the group in which the number of letters skipped in between adjacent letters decrease as they move forward?
(a) BGKNPR   (b) ACEGI
(c) EJNQST   (d) LWUXAP

13. Number of letters skipped in between the adjacent letters in the series are 3 and 4 respectively.   **SSC Matric Level 2011**
(a) SWBFKPT   (b) NRWBFKO
(c) HLPUYDI   (d) EINRWAF

14. Number of letters skipped in between adjacent letters decrease in order.
(a) SYDHK (b) HNSWA (c) NSXCH (d) AGMRV

15. In the following question, number of letters skipped in between adjacent letters in the series increases by one. Which of the following series observe the rule?
(a) KORYBGJ   (b) LMEYIPK
(c) KMPTYEL   (d) KPTYELM
(e) RVZDFG

Directions (Q. Nos. 16-20) *Study the following arrangement carefully and answer the questions*

IBPS (Clerk) 2013

C E B A C D B C D A C E B E **D C A B A D A C** E D U B A U B D B U

16. How many such pairs of alphabets are there in the series of alphabets given in BOLD (D to C) in the given arrangement each of which has as many letters between them (in both forward and backward directions) as they have between them in the English alphabetical series?
(a) Three   (b) One
(c) Two   (d) None
(e) More than three

17. Which of the following is the ninth to the right of the twenty-second from the right end of the given arrangement?
(a) D   (b) E   (c) B   (d) C
(e) U

18. If all the alphabets of the series are written in reverse order, then which of the following will be 8th to the right of the 7th from the left end of the series?
(a) A   (b) B   (c) C   (d) D
(e) None of these

19. How many such A's are there in the given arrangement each of which is immediately preceded by a 'B' and also immediately followed by a consonant?
(a) One   (b) None
(c) More than three   (d) Two
(e) Three

20. How many such D's are there in the given arrangement each of which is immediately preceded by a consonant and also immediately followed by a vowel?
(a) More than four   (b) Four
(c) Two   (d) Three
(e) One

Directions (Q. Nos. 21-24) *Study the following arrangement of letters, numbers and symbols carefully to answer the given questions.*

RBI Astt. (Pre) 2016

9Ω1&LY©EKSR8%WH7$5UG4#62NA3@Z★D

21. As per the given arrangement, four of the following five are alike in a certain way and hence form a group, which one of the following does not belong to the group?
(a) W$H   (b) %H8   (c) U#G   (d) 3★@   (e) 1Y&

22. How many letters are there between the eighth element from the right and the seventh letter from the left end of the given arrangement?
(a) Nine   (b) Six
(c) Eight   (d) Five   (e) Ten

23. Which of the following will be ninth to the right of the sixteenth element from the right end of the given arrangement?
(a) #   (b) 3
(c) Z   (d) 6   (e) N

24. If all the letters from the given arrangement are deleted, then which of the following will represent the fifth element to the right of '4' and the fourth element to the left of '%' respectively?
(a) 3, &   (b) ★, @   (c) @, ©   (d) 3, 1   (e) @, 1

⟫ Answers

Base Level Exercise

1.	(d)	2.	(a)	3.	(d)	4.	(d)	5.	(c)	6.	(b)	7.	(b)	8.	(e)	9.	(d)	10.	(c)
11.	(c)	12.	(d)	13.	(d)	14.	(d)	15.	(d)	16.	(d)	17.	(d)	18.	(c)	19.	(d)	20.	(d)
21.	(b)	22.	(d)	23.	(d)	24.	(c)	25.	(a)	26.	(b)	27.	(e)	28.	(d)	29.	(b)	30.	(b)
31.	(c)	32.	(b)	33.	(d)	34.	(b)	35.	(c)												

Expert Level Exercise

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

» Answer with Explanations

Base Level Exercise

1. (*d*) 14th to the right of 6th letter from the left
$= (6+14)$th letter from left
$= 20$ th letter from left $=$ T   (by formula 2)

2. (*a*) 7th letter from right $= (27-7)$th
$= 20$ th letter from left
$\therefore$ Required middle letter $= \dfrac{8+20}{2}$
$= 14$th letter from left $=$ N

3. (*d*) 5th letter to the left of M in the backward order
$= 5$th letter to the right of M in the forward order
$= (13+5)$th letter in the forward order $= 18$ th letter
$\because$ Position of M in forward order $= 13$
$\therefore 18$th letter in the forward order $=$ R

4. (*d*) 7th letter to the right of K in backward order
$= 7$th letter to the left of K in forward order
$= (11-7)$th letter in the forward order
$= 4$ th letter in the forward order $=$ D

5. (*c*) 11th letter from right in reverse order
$= 11$th letter from left in forward order $=$ K
Now, 7th letter to the left of K in reverse order
$= 7$th letter to the right of K in forward order
$=$ Position of K in forward order $+ 7$
$= (11+7)$th letter in forward order
$= 18$th letter in forward order $=$ R

6. (*b*) 15th letter from the right falls in the 1st half which remains unchanged. Hence, 15th letter has no relation with the change of 2nd half, i.e. reverse order of the last 13 letters of English alphabet.
$\therefore$ Required 15th letter from right $= (27-15)$th
$= 12$th letter from left $=$ L

Alternate Method
Let us see
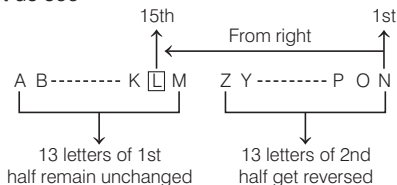
13 letters of 1st half remain unchanged

13 letters of 2nd half get reversed

7. (*b*) According to the question,

$\therefore$ Required letter $=$ U

8. (*e*) Reverse order of an English alphabet is as follows

Z Y X W V U T S R Q P O N M L K J I H G F E D C B A
  ↓   ↓   ↓   ↓   ↓
  6   12   18   22   26

Vowel that appear in beginning in new arrangement $=$ U
U's position in above arrangement $= 6$
and vowel that appear in end in new arrangement $=$ A
A's position in the above arrangement $= 26$
$\therefore$ Required difference $= 26-6 = 20$

9. (*d*) Given that,
A K G L M N D Q K G C S $\boxed{\text{N G K}}$ T G $\boxed{\text{K G N}}$ D Z P U X G K E
Hence, there are two KGN in the above series, in which G is in the middle and 'K' and 'N' are adjacent to it.

10. (*c*) Given series
N M W V Ⓜ N M V W N M N M Ⓜ N W V Ⓜ N
Hence, there are three M's, which are followed by N but not preceded by N.

11. (*c*) **Reverse Order: I Series :** Z Y X W V U T S R Q P O N M L K J I H G F E D C B A
II Series: Z Y X W V T S R Q P
N M L $\boxed{\text{K}}$ J H G F D C B
↑
8th letter from right

12. (*d*) B C M X N C X N B X Ⓝ Ⓒ Ⓑ Ⓝ Ⓒ Ⓑ Y B C X N Ⓑ Ⓒ Ⓝ A B O N M Z C B

So, 3 'BCN' occur in such a way, that C is in the middle and B and N are on any one side.

13. (*d*) $\boxed{\text{E T E}}$ T T M E E $\boxed{\text{E}}$ T $\boxed{\text{E}}$ T $\boxed{\text{E}}$ T E T T E E T
T T E E $\boxed{\text{E T E}}$ T $\boxed{\text{E}}$ T E T T E $\boxed{\text{E T E}}$

There are '8' T's here which are immediately preceded and followed by 'E'

14. (*d*) B B C D F B C $\boxed{\text{F}}$ C B B C B N V W

Hence, 'F' is eighth from the left end.

15. (*d*) A B B C D̲E̲ F̲E̲ I B C̲A̲ F̲E̲ C B
B̲A̲ C̲A̲ O B N̲U̲ V W

Hence, more than five vowels are there which are immediately preceded by a consonant.

16. (*d*) According to the question,
Original word   D O L P H I N
New word   D H I L N̲ O P
↑
5th from left

17. (*d*) In given word, letter G is at 7th place and it comes at 7th place in English alphabet too.

18. (*c*) According to the question,

P R É A M B L E

So, there are two such pairs i.e. AE and BE.

19. (*d*) According to the question,

S T R E A M I N G

So, there are three such pairs i.e. ST, GI and NT.

20. (*d*) According to the question,

S U B S T A N C E

So, there are three such pairs i.e. ST, AC and SU.

21. (*b*) According to the question,
S T O N E D

So, there are three such pairs i.e. ST, NO and DE.

22. (*d*) After interchanging the letters of the word,

N G U̲ A B I L I L
↑
7th from right

23. (*d*) According to the question,

R E F R E S H I N G

Hence, there are three such pairs i.e. EF, HI and GI.

24. (*c*) According to the question,
T E A C H

Hence, there are two such pairs i.e. EH and CE.

25. (*a*) Given word = EQUALITY

After interchanging the letters, new word is formed,
L I T Y E Q̲ U A

So, Q is the third from the right.

26. (*b*) Given word   F O R G E T̲
Alphabetical order E F G O R T̲

So, after arranging the letters alphabetically 'T' is the only letter whose position remain unchanged.

27. (*e*) Given word   V E R T I C A L
Alphabetical Order A C E I L R T V
There is no letter which will remain at the same position.

28. (*d*) According to the question,
Given word C O M M U N I C A T I O N S
New word   O C M M N̲ U C I T A O I S N
10th from right

Hence, required letter is N.

29. (*b*) According to the question,

Original Word – M A T H E M A T I C S
+3↓+3↓+3↓+3↓+3↓+3↓+3↓+3↓+3↓+3↓+3↓
After replacement – P D W K H P D W L̲ F V
9th from left

∴ Letter at 9th place from left = L

30. (*b*) According to the question,
Original word, T I R A D E S
i. Change,   S J Q B C F R
ii. Change,   B C F Ⓙ Q R S

So, J will be the fourth from the right end.

31. (*c*)   S   P   M   J   G
↑   ↑   ↑   ↑
Q, R   N, O   K, L   H, I

32. (*b*) R   V   Z   D   H   L
S, T, U   W, X, Y   A, B, C   E, F, G   I, J, K

33. (*d*)   5   7   9   11 13
E   G   I   K   M
F   H   J   L

34. (*b*)   E   Z   U   P
DCBA   YXWV   TSRQ

35. (*c*) E   H   K   N   Q   T
FG   IJ   LM   OP   RS

Expert Level Exercise

1. (*d*) According to the question,

J O U R N E Y

So, there are three such pairs i.e. JN, UY and EJ.

2. *(e)* According to the question,

C   O   N   F   U   S   E   D
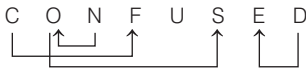
Hence, there are four such pairs i.e. CF, NO, OS and DE.

3. *(d)* According to the question,

Original word   H E R I T A G E
New word   T A G E H E R I
       ↑4th from left   ↑1st from right

Required number of letters = 3
i.e. F, G and H.

4. *(c)* In the given series, 22nd letter from left = E
and 19th letter from right = S
Now, total number of letters between
E and S = 13

∴ Letter exactly between E and S $= \dfrac{13+1}{2} = \dfrac{14}{2} = 7$

Hence, 7th letter = L

5. *(d)* The new word formed will be NOITALUBA', then eighth letter from the end would be O.

6. *(d)*   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
      L A N O I T A T T R A N S P O R

13th letter from right = (16 + 1 − 13) = 4 th letter
from left = O

∴ Required letter = 3 rd to the right of O
        = 4 + 3 = 7 th from left = A

7. *(d)* Following the instructions as given in the question, the new arrangement of letters would be

PACORTCEL⎡ER⎤DIOGRAPHS and therefore letters E and R exists exactly in the middle.

8. *(d)* There are three vowels A, O, E to the left of middle letter E.

9. *(a)* Vowel I has a consonant D to the left but a vowel to the right of it. P A C O R T C E L E R ⎡D I O⎤ G R A P H S

10. *(b)* Letters C and L are sandwiched between two vowels A (C) O and E (L) E.

11. *(b)*   B   D   G   K   P   V
         C   EF   HIJ   LMNO   QRSTU

12. *(c)*   E   J   N   Q   S   T
       FGHI   KLM   OP   R

13. *(d)* E   I   N   R   W   A   F
     FGH   JKLM   OPQ   STUV   XYZ   BCDE

14. *(a)* S   Y   D   H   K
    T, U, V, W, X   Z, A, B, C   E, F, G   I, J

15. *(c)* K   M   P   T   Y   E   L
     L   NO   QRS   UVW   ZABC   FGHI
                 X   D   JK
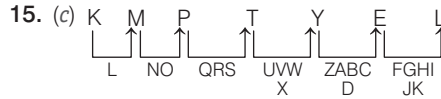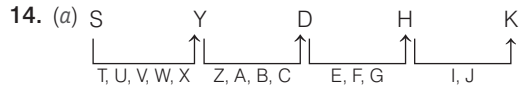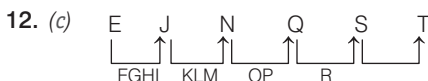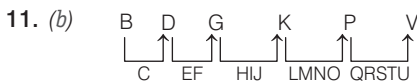
16. *(e)* Series of alphabets given in BOLD

D   C   A   B   A   D   A   C
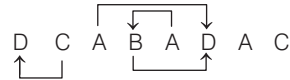
17. *(a)* Ninth to the right of the twenty second from the right end = (22 − 9) i.e., 13th from the right end = D
                         (By formula 4)

18. *(b)* The given series of alphabets in reverse order

U B ⎡D⎤ B U A B U D E C A D A ⎡B⎤ A C D E B E C A D C B D C A B E C

Now, 8th to the right of the 7th from the left end
= (8 + 7) th i.e., 15th from the left end = B

19. *(d)* C E ⎡B A C⎤ D B C D A C E B E D C A ⎡B A D⎤ A C E D U B A U B D B U

Thus, there are two such A's.

20. *(e)* C E B A C D B ⎡C D A⎤ C E B E D C A B A D AC E D U B A U B D B U

Thus, there is only one such D.

21. *(b)*

W $ H   ⎡%⎤   H   8   U   #   G
     +3   −2   +2   −3   +3   −2

3   ★   @   1   Y   &
   +3   −2   +3   −2
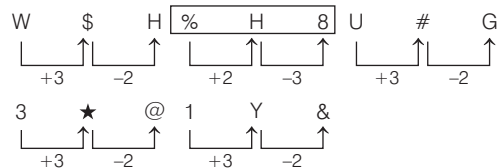
Hence, it is clear from above that %H8 is different from others.

22. *(c)* Eighth element from the right = 2
     Seventh element from the left = ©

∴ Number of letters between © and 2 = Eight.

23. *(e)* Sixteenth element from the right end = 7

Now, ninth element of the right of 7 = ⎡N⎤.

24. *(e)* After deleting all the letters from the given arrangement, new arrangement is as follows.

   9 Ω1&©8%7$54#623@★
Now, fifth element to the right of 4 = @
and fourth element to the left of % = 1
∴ Required elements = (@, 1)

04

Word Formation

In word formation, a word is given in question and we have to choose that word from the given options, which can or cannot be formed from the letters of the given word.

Sometimes, a set of English letters is given in a jumbled order and the candidates are asked to arrange them in a meaningful order. In some situations, we are asked to choose particular letters from a word and arrange them to form a meaningful word.

Types of Questions

There are three types of questions based on the word formation which are generally asked in various competitive examinations.

» Type 1

Word Formation Using Letters from a Given Word

In this type of questions, a word has been given, followed by four other words. The candidate has to identify the word which can or cannot be formed by using the letters of main word.

Directions (Illustrations 1-2) *In the following questions, select the word from the given alternatives which cannot be formed using the letters of the given word.* **SSC (CPO) 2015**

Illustration 1. CHARACTER
   (a) TRACER   (b) CHARTER
   (c) HEARTY   (d) CRATE

Solution (*c*) By using the letters of the given word, HEARTY can't be formed because in the given word, letter Y is absent.

Illustration 2. ADMINISTRATION
   (a) RATION   (b) MINISTER
   (c) MIND   (d) STATION

Solution (*b*) By using the letters of the given word, MINISTER can't be formed because in the given word letter E is absent.

Directions (Illustrations 3-4) *In each of the following question, a word has been given, followed by four other words, one of which can be formed by using the letters of the given word. Find that word.*

Illustration 3. DEMOCRACY   **SSC (CGL) 2014**
   (a) SECRECY   (b) MICRO
   (c) MARCY   (d) DEMON

Solution (*c*) MARCY—All the letters of this word are present in the main word.
Hence, 'MARCY' can be formed from the letters of the given word 'DEMOCRACY'.

Illustration 4. COMPENSATION
   (a) TINY   (b) COPY
   (c) MENTION   (d) MOTIVE

Solution (*c*) MENTION—All the letters of this word are present in the main word. Hence, 'MENTION' can be formed from the letters of the given word 'COMPENSATION'.

❯❯ Type 2
Forming Word with Selected Letters of Given Word

In this type of questions, a word has been given and the candidate is required to make new meaningful words using letters at different positions like 1st, 2nd, 5th, 8th etc of the given word.

Illustration 5. If it is possible to make only one meaningful word from the 3rd, the 6th, the 9th and the 10th letters of the word 'PARENTHESIS', using each letter only once, last letter of the word is your answer. If no such word can be formed, your answer is 'X' and if more than one such word can be formed, your answer is Y.

(a) R   (b) T   (c) X   (d) Y

Solution (a)

P A Ⓡ E N Ⓣ H E Ⓢ Ⓘ S
      ↓   ↓   ↓ ↓
    3rd   6th   9th 10th

Since, 3rd, 6th, 9th and 10th letters are R, T, S and I respectively. Hence, only one meaningful word STIR can be formed. Last letter of this word is R, so correct option is (a).

Illustration 6. If it is possible to make a meaningful word with the 1st, 4th, 7th and 11th letters from the word 'INTERPRETATION', then which of the following will be the third letter of that word? If more than one such word can be made, then give 'M' as the answer and if no such word can be formed, then give 'X' as the answer.

(a) T   (b) R   (c) M   (d) X

Solution (c)

Ⓘ N T Ⓔ R P Ⓡ E T A Ⓣ I O N
↓   ↓   ↓   ↓
1st   4th   7th   11th

Since, 1st, 4th, 7th and 11th letters are I, E, R and T, respectively. Hence, three meaningful words RITE, TIRE and TIER can be formed. Since, more than one words are formed from the given letters, so answer is M.

❯❯ Type 3
Forming Meaningful Words Using Given Letters

In this type of questions, a word has been given and the candidates are required to form as many meaningful English words as possible from the given word, using each letter only once in each word.

Illustration 7 How many meaningful English words can be formed by using letters of the word 'ALEP'?   **SC (10+2) 2012**

(a) One   (b) Two
(c) Three   (d) More than three

Solution (c) Such meaningful words are 'PEAL', 'LEAP' and 'PALE'.

Illustration 8. How many meaningful English words can be made with the letters IFEL, using each letter only once in each word?

(a) None   (b) One   (c) Two   (d) Three

Solution (c) Such meaningful words are 'FILE' and 'LIFE'.

❯❯ Type 4
Word Formation by Unscrambling Letters

In this type of questions, a set of English letters is given in a jumbled order. The candidate is required to arrange these letters to form a meaningful word.

Note *Always try to place the letters according to the numbers provided in options rather than doing it on the basis of your vocabulary knowledge.*

Illustration 9. Select the combination of numbers that forms a meaningful word.

    P   N   O   A   C   L   M   I
    1   2   3   4   5   6   7   8

(a) 2, 7, 8, 6, 4, 3, 1, 5   (b) 4, 7, 5, 2, 6, 8, 1, 3
(c) 7, 1, 8, 5, 6, 2, 4, 3   (d) 5, 3, 7, 1, 6, 4, 8, 2

Solution (d)

     C O M P L A I N
     ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
     5 3 7 1 6 4 8 2

Clearly, the given letters, when arranged in the order of '5, 3, 7, 1, 6, 4, 8, 2,' form the word 'COMPLAIN'.

Illustration 10. Rearrange the letters A, R, T, Y and D to form a meaningful word and select from the given alternatives, the word which is almost opposite in meaning to the word so formed.

(a) Dirty   (b) Quiet   (c) Quick   (d) Queek

Solution (c) The word that can be formed by rearranging the given letters is 'Tardy' which means 'Sluggish' and opposite of this word is 'Quick'.

》 Type 5
Formation of Meaningful word by adding letters/words in the given word(s)

In this type of questions, some words are given and the candidate has to either suffix or prefix same letter in each of the given words to make new meaningful words.

It also includes questions based on forming two meaningful words by inserting a word in between the given word.

Illustration 11. Given below are some group of letters. Which of the options can be joined at the end of these letters to make them meaningful words? **SSC (CGL) 2015**

LEN, SAN, WOR, SEE

(a) A (b) D
(c) B (d) K

Solution (*b*) Letter D is suffixed to the given words

LEN + D = LEND
SAN + D = SAND
WOR + D = WORD
SEE + D = SEED

Illustration 12. Which single letter can be prefixed to the following words to form entirely new words? **SSC (CGL) 2015**

TILL, TABLE, PILE, TAB, PRING

(a) H (b) S (c) B (d) C

Solution (*b*) Letter S is prefixed to the given words

S + TILL = STILL
S + TABLE = STABLE
S + PILE = SPILE
S + TAB = STAB
S + PRING = SPRING

Illustration 13. Choose the middle words.

MIRR ( ) ANGE

(a) ORED (b) AGE (c) ICK (d) OR

Solution (*d*) MIRR (OR) ANGE
The two words formed are MIRROR and ORANGE.

》》 Let us Practice

◈ Base Level Exercise

Directions (Q. Nos. 1-13) *In each of the following question, a word has been given, followed by four other words, one of which cannot be formed by using the letters from the given word. Find that word.*

1. LEGALIZATION **SSC (CPO) 2014**
(a) ALERT (b) ALEGATION
(c) GALLANT (d) NATAL

2. COMMUNICATION **SSC (Multitasking) 2014**
(a) ACTION (b) UNION
(c) NATION (d) UNISON

3. CONTEMPTUOUS **SSC (10+2) 2018**
(a) CON (b) TOM
(c) PRETTY (d) POST

4. INCARCERATION **SSC (CGL) 2014**
(a) RELATION (b) TERRAIN
(c) INACTION (d) CREATION

5. MERCHANDISE **BSSC (CGL) 2015**
(a) MESH (b) DICE
(c) CHARM (d) CHANCE

6. BENEVOLENT **SSC (10+2) 2018**
(a) BEEN (b) NEVIN
(c) LENT (d) BEN

7. SEGREGATION **SSC (CGL) 2016**
(a) EAGER (b) SEA (c) GATE (d) NATION

8. PORTFOLIO **SSC (Multitasking) 2014**
(a) RIFT (b) ROOF (c) FORT (d) PORTICO

9. AUTOBIOGRAPHY **Delhi Police (SI) 2016**
(a) TROOP (b) BRIGHT
(c) GRAPHIC (d) TROPHY

10. GEMDISTIONARY **Delhi Police (ASI) 2016**
(a) MEGASITY (b) DISTART
(c) STAR (d) GAME

11. RELINQUISHED   **SSC (10+2) 2017**
(a) LINE   (b) QUITE   (c) RELIED   (d) RUN

12. NUMISMATIC   **SSC (10+2) 2017**
(a) MUST   (b) SINCE   (c) MATIC   (d) MAT

13. ADMINISTRATION   **DSSSB (PRT) 2017**
(a) SITUATION   (b) STRAIN
(c) TRADITION   (d) RATION

Directions (Q. Nos. 14-18) *In each of the following question, a word has been given, followed by four other words. One of which can be formed by using the letters from the given word. Find that word.*

14. RECOMMENDATION   **SSC (FCI) 2012**
(a) COMMUNICATE   (b) REMINDER
(c) MEDICO   (d) MEDIATES

15. PREPARATION   **SSC (10+2) 2013**
(a) PAMPER   (b) REPEAT
(c) PARTITION   (d) PARROT

16. ULTRANATIONALISM   **SSC (CPO) 2014**
(a) ULTRAMONTANE   (b) ULTRAMODERN
(c) ULTRAIST   (d) ULULATE

17. PREMONITION   **SSC (CGL) 2017**
(a) ACTION   (b) NATION
(c) MONITOR   (d) REMOVE

18. COMPANIONSHIP   **SSC (10+2) 2013**
(a) OPEN   (b) OPIUM
(c) OPINION   (d) NATION

19. How many meaningful English words can be formed, starting with S, with the second, the fourth, the fifth and the eighth letters of the word PERISHED, using each letter only once in each word? (to be counted from left)
    IBPS (Clerk) 2011
(a) None   (b) One   (c) Two   (d) Three
(e) More than three

20. If by arranging the letters of the word 'NABMODINT', the name of a game is formed. What are the first and the last letters of the word so formed?   **SSC (CGL) 2016**
(a) B, T   (b) B, N   (c) N, D   (d) A, T

21. How many meaningful English words can be formed with the third, the fifth, the seventh and the ninth letters of the word 'DOWNGRADED' once in each word?
    IBPS (Clerk) 2012
(a) None   (b) One   (c) Two   (d) Three
(e) More than three

22. If it is possible to make a meaningful word with 1st, 5th, 6th and 11th letters of the word 'COURAGEOUSLY', which of the following will be third letter of that word? If no such word can be made, give 'X' as your answer and if more than one such word can be made, give 'M' as the answer.
(a) C   (b) A   (c) G   (d) X
(e) M

23. How many meaningful English words can be made with 'EPRY' using each letter only once in each word?   **UPPSC (RO) 2014**
(a) Two   (b) One
(c) Three   (d) More than four

24. How many meaningful English words can be made with the letters 'ERDU' using each letter only once in each word?
(a) None   (b) One   (c) Two   (d) Three
(e) More than three

25. How many meaningful English words can be made with the letters 'NWTI' using each letter only once in each word?
    Allahabad Bank (Clerk) 2012
(a) One   (b) Two   (c) None   (d) Three
(e) More than three

26. How many meaningful English words can be made with the letters 'LAME' using each letter only once in each word?   **SSC (10+2) 2012**
(a) None   (b) One   (c) Two   (d) Three
(e) More than three

Directions (Q. Nos. 27-30) *Letters of the words given below have been jumbled up and you are required to construct the words. Each letter has been numbered and each word is followed by four options. Choose the option which gives the correct order of the letters as indicated by the numbers to form words.*   **SSC (CGL) 2014**

27. 1   2   3   4   5   6
    G   I   C   O   D   N
(a) 2, 1, 4, 3, 6, 5   (b) 4, 3, 2, 6, 5, 1
(c) 6, 5, 2, 3, 1, 4   (d) 3, 4, 5, 2, 6, 1

28. V A R S T E
    1 2 3 4 5 6
(a) 2, 3, 1, 6, 4, 5   (b) 3, 2, 4, 5, 6, 1
(c) 4, 5, 2, 3, 1, 6   (d) 6, 3, 4, 5, 2, 1

29. E   M   I   H   T   R
   1   2   3   4   5   6
(a) 1, 2, 3, 4, 5, 6   (b) 4, 1, 6, 2, 3, 5
(c) 5, 1, 6, 4, 3, 2   (d) 6, 1, 2, 3, 5, 4

30. R T A N U E
    1 2 3 4 5 6
(a) 1, 3, 2, 6, 4, 5   (b) 3, 2, 4, 6, 1, 5
(c) 4, 3, 2, 5, 1, 6   (d) 4, 6, 5, 2, 3, 1

31. Name a single letter that can be suffixed to the following words to form new words.
                                                    SSC (CPO) 2015
      HAT BAR BAT PIN BATH
(a) A   (b) E   (c) B   (d) D

✈ Expert Level Exercise

1. When we arrange the letters of the word 'VRAKIE' in correct order, we get the name of a river. Fifth letter from left in that name, is   **CGPSC 2014**
(a) R   (b) E   (c) I   (d) K
(e) None of these

2. If a meaningful word can be formed by rearranging the letters 'USCALA'. The first letter of the word so formed is, the answer. If no such word can be formed the answer is X.
                                                    SSC (CGL) 2016
(a) C   (b) S   (c) A   (d) L

3. If it is possible to make a meaningful word with the 2nd, the 6th, the 9th and the 12th letters of the word 'CONTRIBUTION', which of the following will be the last letter of that word? If more than one such word can be formed, give 'M' as the answer and if no such word can be formed, give 'X' as the answer.   **SSC (FCI) 2012**
(a) T   (b) O   (c) M   (d) X

4. If it is possible to make a meaningful word with the second, the fifth, the tenth and the twelfth letters of the word 'METROPOLITAN', which of the following will be the third letter of that word? If no such word can be made, give X as the answer and if more than one such word can be made, give M as the answer.
                                                    UPSC (CSAT) 2012
(a) N   (b) Q   (c) M   (d) X

5. If it is possible to make only one meaningful word with the first, second, third and fifth letters of the word 'TECHNOLOGY', which of the following would be the third letter of that word? If no such word can be made, give 'X' as your answer and if more than one

such word can be formed, give your answer as 'Y'.   **IBPS (Clerk) 2012**
(a) C   (b) T   (c) N   (d) X   (e) Y

6. What is the last letter of the word which is formed by rearranging the following letters?
          C P A O E C K (a bird)   **EPFO 2011**
(a) E   (b) K   (c) P   (d) C
(e) None of these

7. The letters of the word 'NUMKIPP' are disorder. If they are arranged in proper order, the name of a vegetable is formed. What is the last letter of the word so formed?
                                                    SSC (CGL) 2016
(a) K   (b) M   (c) N   (d) P

8. If it is possible to make only one meaningful word with the first, the third, the fourth and the sixth letters of the word 'LEARNING', using each letter only once, which of the following will be the third letter of that word? If more than one such word can be formed, give 'Y' as the answer and if no such word can be formed, give Z as the answer.
(a) I   (b) R   (c) A   (d) Y   (e) Z

9. If it is possible to make only one meaningful word with the first, the second, the fifth and the ninth letters of the word MEDITATION, which of the following will be the third letter of that word? If no such word can be made, give 'X' as the answer and if more than one such word can be made, give Z as the answer.
(a) A   (b) N   (c) M   (d) X   (e) Z

Directions (Q. Nos. 10-12) *In each of the following questions, there are a set of words. Choose the option which can be put before the set of words to make them meaningful words.*

10. CLOSE, MISS, ABLE, COUNT
(a) EN   (b) DIS   (c) FORE   (d) RE

32. Which single letter can be prefixed to the following words in order to obtain entirely new words?
(Same letter has to be prefixed in all five words)   **SSC (CPO) 2015**
      EAT OUR IS AS AT
(a) S   (b) H
(c) C   (d) B

11. SULE, TAIN, ABLE, E
   (a) SAG   (b) MOV   (c) MAN   (d) CAP

12. MOVE, MARK, QUEST
   (a) RE   (b) MIS   (c) PRE   (d) LESS

Directions (Q. Nos. 13-14) *In each of the question given below, there are set of words. Choose the option which can be put after the set of words to make them meaningful words.*

13. ST, ENG, DAM, SEW
   (a) EIL   (b) ARM   (c) AGE   (d) RAP

14. H, CH, F, SW
   (a) REE   (b) ARM   (c) EAP   (d) EART

Directions (Q. Nos. 15-18) *In each of the following question two groups of letters are given on both sides of a bracket. Each question has four options. Which of the option has correct set of letters that will be brought inside the bracket so that two meaningful words are formed. The first word will be formed by including the bracket and the set of letters before the bracket. Whereas the second word will be formed by including the bracket and the letters after it.*

15. PLAT (?) ATION   **SSC (Steno) 2013**
   (a) TENT   (b) FORM   (c) TERR   (d) EAU

16. REA ( ) URCH
   (a) CT   (b) DER   (c) SON   (d) CH

17. PROFESS ( ) PHAN
   (a) ION   (b) OR   (c) ED   (d) TION

18. PRACT ( ) BERG
   (a) ICE   (b) ICAL   (c) DNA   (d) ORN

Directions (Q. Nos. 19-22) *Letters of the words given here have been jumbled up and you are required to construct the words. Each letter has been numbered and each word is followed by four options. Choose the option which gives the correct order of the letters as indicated by the numbers to form words.*

19. A L I R E M C
     1 2 3 4 5 6 7
   (a) 6, 3, 4, 1, 7, 2, 5   (b) 6, 5, 1, 4, 7, 3, 2
   (c) 7, 4, 5, 1, 6, 3, 2   (d) 7, 5, 4, 1, 6, 2, 3

20. C N A S P H I
     1 2 3 4 5 6 7
   (a) 5, 7, 4, 2, 6, 1, 3   (b) 2, 3, 7, 5, 4, 1, 6
   (c) 4, 5, 7, 2, 3, 1, 6   (d) 7, 2, 3, 4, 5, 1, 6

21. G E D E M E N L C K N O W A T
     1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
   (a) 14, 9, 10, 11, 12, 13, 8, 4, 3, 1, 2, 5, 6, 7, 15
   (b) 2, 4, 6, 8, 10, 12, 14, 1, 3, 5, 7, 9, 11, 13, 15
   (c) 8, 7, 5, 4, 3, 2, 1, 6, 9, 10, 11, 13, 12, 14, 15
   (d) 6, 7, 8, 9, 10, 1, 2, 3, 4, 5, 15, 14, 13, 12, 11

22. E C O T I H T Y H O N P A
     1 2 3 4 5 6 7 8 9 10 11 12 13
   (a) 13, 7, 12, 6, 11, 5, 10, 4, 9, 3, 8, 2, 1
   (b) 13, 12, 11, 10, 1, 2, 3, 4, 5, 6, 7, 8, 9
   (c) 10, 9, 8, 7, 6, 5, 4, 3, 2, 11, 12, 13, 1
   (d) 9, 8, 12, 3, 7, 6, 1, 2, 13, 4, 5, 10, 11

Directions (Q. Nos. 23-26) *In each of these question, jumbled letters of a meaningful word are given. You are required to rearrange these letters and select from the given alternatives, the word which is almost similar in meaning to the rearranged word.*
                    LIC (ADO) 2011

23. DAXEPN
   (a) INCREASE   (b) REDUCE
   (c) STILL   (d) DECREASE
   (e) None of these

24. HRADTE
   (a) DECREASE   (b) LOSS
   (c) REDUCTION   (d) SCARCITY
   (e) None of these

25. DNHBEI
   (a) FRONT   (b) SIDE   (c) BACK
   (d) LAST   (e) None of these

26. HNAGSRI
   (a) DECORATE   (b) COMPOSE
   (c) IMPRESS   (d) IMPOSE
   (e) None of these

❯❯ Answers

Base Level Exercise

1.	(a)	2.	(d)	3.	(c)	4.	(a)	5.	(d)	6.	(b)	7.	(d)	8.	(d)	9.	(c)	10.	(b)
11.	(b)	12.	(b)	13.	(a)	14.	(c)	15.	(d)	16.	(c)	17.	(c)	18.	(c)	19.	(b)	20.	(b)
21.	(b)	22.	(b)	23.	(b)	24.	(b)	25.	(a)	26.	(d)	27.	(d)	28.	(c)	29.	(b)	30.	(c)
31.	(b)	32.	(b)																	

Expert Level Exercise

1.	(a)	2.	(a)	3.	(b)	4.	(c)	5.	(c)	6.	(b)	7.	(c)	8.	(d)	9.	(e)	10.	(b)
11.	(d)	12.	(a)	13.	(c)	14.	(b)	15.	(b)	16.	(d)	17.	(b)	18.	(a)	19.	(a)	20.	(c)
21.	(a)	22.	(d)	23.	(a)	24.	(d)	25.	(c)	26.	(a)								

》 Answer with Explanations

Base Level Exercise

1. (*a*) By using the letters of given word, 'ALERT' cannot be formed from 'LEGALIZATION' due to absence of letter 'R'.

2. (*d*) By using the letters of given word, 'UNISON' cannot be formed because letter 'S' is not present in the given word.

3. (*c*) By using the letters of given word, 'PRETTY' cannot be formed because letters 'R' and 'Y' are not present in the given word.

4. (*a*) By using the letters of given word, 'RELATION' cannot be formed from 'INCARCERATION' due to absence of letter 'L'.

5. (*d*) By using the letters of given word 'CHANCE' cannot be formed from 'MERCHANDISE' because an extra 'C' is not present in 'MERCHANDISE'.

6. (*b*) By using the letters of given word, 'NEVIN' cannot be formed because letter 'I' is not present in the given word.

7. (*d*) By using the letters of the given word, 'NATION' cannot be formed because letter N' is used only once.

8. (*d*) By using the letters of given word, 'PORTICO' cannot be formed from 'PORTFOLIO' due to the absence of letter 'C'.

9. (*c*) By using the letters of given word, 'GRAPHIC' cannot be formed because letter 'C' is not present in the given word.

10. (*b*) By using the letters of given word, 'DISTART' cannot be formed because letter 'T' is used only once.

11. (*b*) By using the letters of given word, 'QUITE' cannot be formed from 'RELINQUISHED' due to absence of letter 'T'.

12. (*b*) By using the letters of given word, 'SINCE' cannot be formed from 'NUMISMATIC' due to absence of letter 'E'.

13. (*a*) By using the letters of given word, 'SITUATION' cannot be formed from 'ADMINISTRATION' due to absence of letter 'U'.

14. (*c*) 'MEDICO' can be formed from RECOMMENDATION.

15. (*d*) 'PARROT' can be formed from 'PREPARATION'.

16. (*c*) 'ULTRAIST' can be formed from 'ULTRANATIONALISM'.

17. (*c*) 'MONITOR' can be formed from 'PREMONITION'.

18. (*c*) 'OPINION' can be formed from 'COMPANIONSHIP'.

19. (*b*) Second, fourth, fifth and eighth letters of the word PERISHED → E, I, S, D

∴ Meaningful English word → SIDE

20. (*b*) The name of a game is 'BADMINTON'. The first and last letters are 'B' and 'N' respectively.

21. (*b*) Given, D O W N G R A D E D

Only one meaningful English word 'WAGE' can be formed by using the letters W, G, A and E.

22. (*b*) From letters C, A G and L, one meaningful word can be formed, i.e. 'CLAG'

23. (*b*) Only one meaningful word 'PREY' can be formed by using the letters of 'EPRY'.

24. (*b*) Only one meaningful word 'RUDE' can be formed by using the letters of 'ERDU'.

25. (*a*) Only one meaningful word 'TWIN' can be formed by using the letters of 'NWTI'.

26. (*d*) Three meaningful words 'LAME', 'MALE' and 'MEAL' can be formed by using the letters of 'LAME'.

27. (*d*) CODING → (3, 4, 5, 2, 6, 1)

28. (*c*) STARVE → (4, 5, 2, 3, 1, 6)

29. (*b*) HERMIT → (4, 1, 6, 2, 3, 5)

30. (*c*) NATURE → (4, 3, 2, 5, 1, 6)

31. (*b*) Letter E is suffixed to the following words

HAT + E → HATE

BAR + E → BARE

BAT + E → BATE

PIN + E → PINE

BATH + E → BATHE

32. (*b*) Letter H is prefixed to the following words

H + EAT → HEAT

H + OUR → HOUR

H + IS → HIS

H + AS → HAS

H + AT → HAT

Expert Level Exercise

1. (*a*) After arranging the given letters in proper sequence, we get the river name KAVERI and its fifth letter from left is 'R'.

2. (*a*) The correct word is CASUAL and first letter is 'C'.

3. (*b*) From letters O, I, T, N, only one meaningful word 'INTO' can be formed and last letter of this word is 'O'.

4. (*c*) The second, fifth, tenth and twelfth letters of the word METROPOLITAN are E, O, T and N, respectively. The words formed are 'NOTE' and 'TONE'.

5. (*c*) From letters T, E, C, N, only one meaningful word 'CENT' can be formed and third letter of this word is 'N'.

6. (*b*) The name of the bird is 'PEACOCK' and the last letter is 'K'.

7. (*c*) The name of that vegetable would be 'PUMPKIN' and last letter of the word is 'N'.

8. (*d*) The first, third, fourth and sixth letters of the word are L, A, R and I respectively.

L	E	A	R	N	I	N	G
1	2	3	4	5	6	7	8

Words formed using these letters are as follows.

(i) LAIR   (ii) LIAR   (iii) RAIL   (iv) LIRA

9. (*e*) The first, second, fifth and ninth letters of the words

M	E	D	I	A	T	I	O	N
1	2	3	4	5	6	7	8	9

are M, E, A and N respectively

Words formed using these letters are as follows.

(i) MANE   (ii) MEAN

(iii) NAME   (iv) AMEN

So, number of words formed by the given letters = 4.

Since, the number of meaningful words is more than one, so our answer is 'Z'.

10. (*b*) The meaningful words are 'DISCLOSE', 'DISMISS', 'DISABLE' and 'DISCOUNT'.

11. (*d*) The meaningful words are 'CAPSULE', 'CAPTAIN', 'CAPABLE' and 'CAPE'.

12. (*a*) The meaningful words are 'REMOVE', 'REMARK' and 'REQUEST'.

13. (*c*) The meaningful words are 'STAGE', 'ENGAGE', 'DAMAGE' and 'SEWAGE'

14. (*b*) The meaningful words are 'HARM', 'CHARM', 'FARM' and 'SWARM'.

15. (*b*) 'FORM' completes the first word as PLATFORM and begin the second as 'FORMATION'.

16. (*d*) REA (CH) URCH

The meaningful words are 'REACH' and 'CHURCH'.

17. (*b*) PROFESS (OR) PHAN

The meaningful words are 'PROFESSOR' and 'ORPHAN'.

18. (*a*) PRACT (ICE) BERG

The meaningful words are 'PRACTICE' and 'ICEBERG'.

19. (*a*) MIRACLE ⟶ (6, 3, 4, 1, 7, 2, 5)

20. (*c*) SPINACH ⟶ (4, 5, 7, 2, 3, 1, 6)

21. (*a*) According to the question,

14 9 10 11 12 13 8 4 3 1 2 5 6 7 15
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
A C K N O W L E D G E M E N T

22. (*d*) According to the question,

9 8 12 3 7 6 1 2 13 4 5 10 11
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
H Y P O T H E C A T I O N

23. (*a*) The word is 'EXPAND' and the meaning is 'INCREASE'.

24. (*d*) The word is 'DEARTH' and the meaning is 'SCARCITY'.

25. (*c*) The word is 'BEHIND' and the meaning is 'BACK'.

26. (*a*) The word is 'GARNISH' and the meaning is 'DECORATE'.

Coding-Decoding

Coding means to hide the meaning of any message and decoding means to understand the actual meaning of that message.

In questions based on coding-decoding, a word or sentence is coded in a particular way and the candidates are asked to code other word or sentence in the same way or to decode the word or sentence.

To solve these questions, the candidates are required to understand the rule that has been followed to code a particular word/message.

Position of Letters in English Alphabet

Sometimes a word or a sentence is coded by changing the position of English alphabet letters according to a definite pattern, so it is necessary to remember the positions of all the letters in English alphabetical order, both in forward and backward order.

Order of the English Alphabet

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

Methods to Remember the Position of Letters in English Alphabet

Some methods/techniques are given below to remember the positions of English alphabets in forward or backward order.

1. By using EJOTY and CFILORUX formulae, we can easily remember the position of letters of English alphabet in forward order.

$$
\begin{array}{cccccccc}
C & F & I & L & O & R & U & X \\
\downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\
3 & 6 & 9 & 12 & 15 & 18 & 21 & 24
\end{array}
$$

(sounds like a medicine name)

$$
\begin{array}{ccccc}
E & J & O & T & Y \\
\downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\
5 & 10 & 15 & 20 & 25
\end{array}
$$

(sounds like a girl's name Joti)

Note Backward order position of a letter
= 27 – Forward order position of letter
e.g. Backward order position of B
= 27 – Forward order position of B
= 27 – 2 = 25

2. By using V Q L G B and X U R O L I F C, we can easily remember the position of letters of English alphabet in reverse order.

$$
\begin{array}{cccccccc}
X & U & R & O & L & I & F & C \\
\downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\
3 & 6 & 9 & 12 & 15 & 18 & 21 & 24
\end{array}
$$

and

$$
\begin{array}{ccccc}
V & Q & L & G & B \\
\downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\
5 & 10 & 15 & 20 & 25
\end{array}
$$