

How to Crack
**TEST OF
REASONING**

**IN ALL COMPETITIVE
EXAMINATIONS**

Contains More Than 2500 Objective Questions on
**Verbal, Analytical &
Non-Verbal Reasoning**

Jaikishan • Premkishan

**COMPLETELY
REVISED
EDITION**

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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

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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 (::) 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	Bhubaneswar	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

$$\text{We can see, } \frac{20}{2} + 1 = 10 + 1 = 11$$

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

$$\frac{102}{2} + 1 = 51 + 1 = \boxed{52}$$

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.*

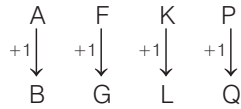
Illustration 5. AFKP : BGLQ :: CHMR : ?

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,



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

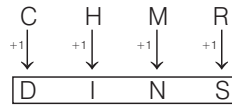


Illustration 6. SNOP : ONSP :: CLAY : ?

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	S	T	N
$\downarrow -1$	$\downarrow +1$	$\downarrow -1$	$\downarrow +1$
Z	T	S	O

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

M	S	U	B
$\downarrow -1$	$\downarrow +1$	$\downarrow -1$	$\downarrow +1$
L	T	T	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 E W S

N	E	W	S
\downarrow	\downarrow	\downarrow	\downarrow
14	5	23	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 I L M

F	I	L	M
\downarrow	\downarrow	\downarrow	\downarrow
6	9	12	13

Position value $6 + 9 + 12 + 13 = 40$, $40 \div 4 = 10$
[: number of letters = 4]

Similarly, H O T E L

H	O	T	E	L
\downarrow	\downarrow	\downarrow	\downarrow	\downarrow
8	15	20	5	12

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 Attendant
(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.

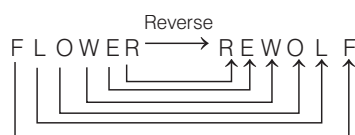
Illustration 13. FLOWER : REWOLF ::

FRUITS : ?

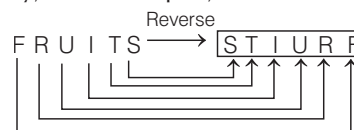
BSSC (CGL) 2015

- (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, $625 = (25)^2$

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

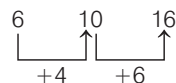
- (a) Orange : Banana : Juice
(b) Table : Chair : Wood
(c) Cow : Milk : Curd
(d) Fish : Shark : Water

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'.

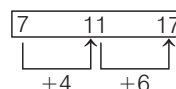
Illustration 19. Given set (6, 10, 16)

- (a) 9, 12, 18 (b) 5, 10, 15
(c) 6, 11, 12 (d) 7, 11, 17

Solution (d) As,



Similarly,



» 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) HSNIIV
32. AZBY : CXDW :: EVFU : ? **SSC (Steno) 2016**
 (a) GHYS (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)

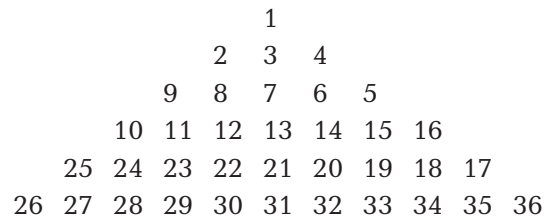
66. Given set : (7, 77, 140)
 (a) (8, 80, 166) (b) (9, 88, 180)
 (c) (8, 88, 160) (d) (10, 110, 300)
67. Given set : (31, 19, 41) **SSC (CPO) 2015**
 (a) (27, 29, 47) (b) (23, 33, 51)
 (c) (29, 17, 37) (d) (16, 27, 11)

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 : ?



Now, choose the numbers which will replace the question mark.

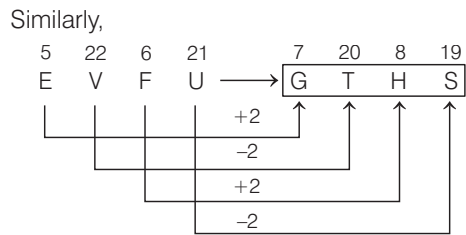
- (a) 2, 7, 14 (b) 8, 13, 20
 (c) 6, 15, 18 (d) 10, 23, 30

» Answers

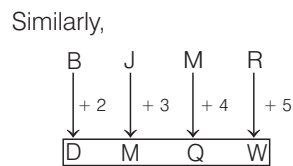
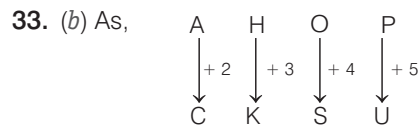
1.	(b)	2.	(d)	3.	(d)	4.	(d)	5.	(d)	6.	(c)	7.	(c)	8.	(a)	9.	(b)	10.	(c)
11.	(d)	12.	(a)	13.	(c)	14.	(d)	15.	(d)	16.	(a)	17.	(a)	18.	(d)	19.	(b)	20.	(c)
21.	(b)	22.	(c)	23.	(c)	24.	(d)	25.	(a)	26.	(d)	27.	(a)	28.	(b)	29.	(d)	30.	(c)
31.	(c)	32.	(c)	33.	(b)	34.	(c)	35.	(b)	36.	(b)	37.	(d)	38.	(b)	39.	(a)	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

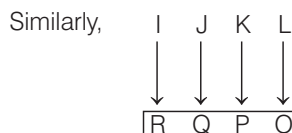
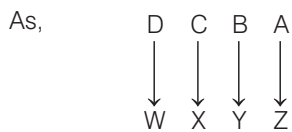
1. (b) 'Calf' is the young one of 'Cow'. Similarly, 'Kid' is the young one of 'Goat'.
2. (d) 'Cricket' is played on 'Pitch'. Similarly, 'Wrestling' is done in 'Arena'.
3. (d) As, 'Tobacco' is a cause of 'Cancer'. Similarly, 'Mosquito' is the cause of 'Malaria'.
4. (d) As, 'Cyclone' is opposite of 'Anti-cyclone'. 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'.



∴ ? = GTHS



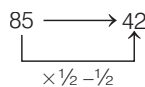
34. (c) Here, each letter has its opposite letter.



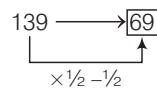
35. (b) As, $63 + 3 = 21$

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

36. (b) As,



Similarly,



37. (d) As, $9 \times 3 - 3 = 27 - 3 = 24$

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

⇒ $? \times 3 = 6 + 3 = 9$

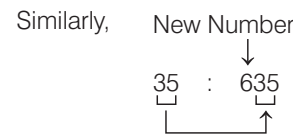
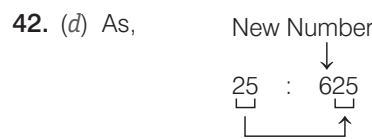
⇒ $? = \frac{9}{3} = 3 \Rightarrow ? = \boxed{3}$

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

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

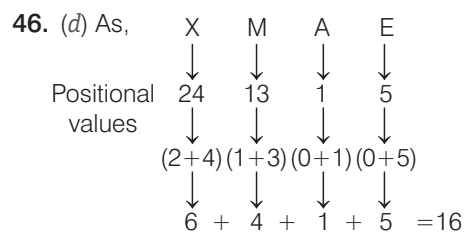
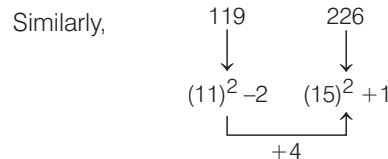
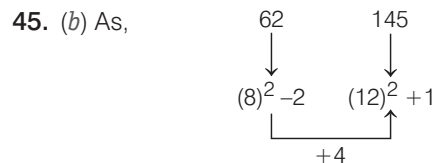
39. (a) As, $64 \Rightarrow \sqrt{64} = 8$

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

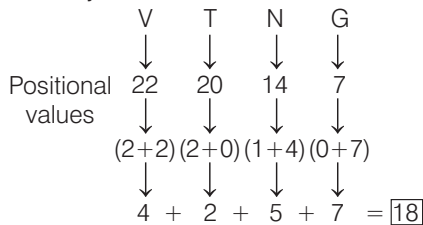


43. (c) As, $354 - 3 = 351$

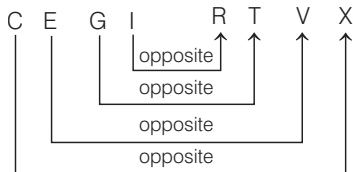
Similarly, $478 - 3 = \boxed{475}$



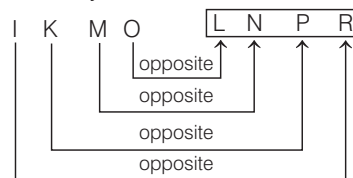
Similarly,



47. (c) As,



Similarly,



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

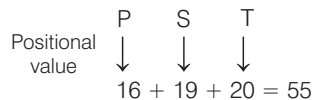
49. (a) As, $F \rightarrow (6)^3 = 216$

[since, positional value of F is 6]

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

[since, positional value of L is 12]

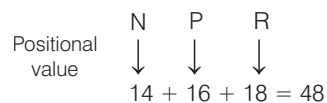
50. (a) As,



Digits's sum = $5 + 5 = 10$

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

Similarly,



Digit's sum = $4 + 8 = 12$

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

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

$\therefore \text{GREAT} = (5)^2 = 25$

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

$\therefore \text{NUMBER} = (6)^2 = 36$

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

$= 13 = \text{M}$

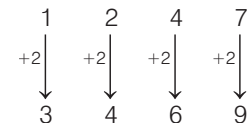
and $\sqrt{\text{ADD}} = \sqrt{144}$

$= 12 = \text{L}$

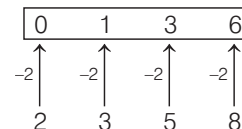
Similarly, $\sqrt{\text{ABA}} = \sqrt{121}$

$= 11 = \text{K}$

53. (a) As,



Similarly,



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'.

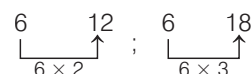
61. (c) 'Crumb' is small piece of 'Bread' and 'Splinter' is small piece of 'Wood'.

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

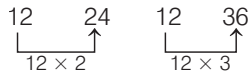
63. (c) 'Book' is written by 'Author'. Similarly, 'Symphony' is composed by 'Composer'.

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

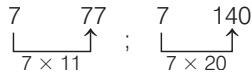
65. (b) As,



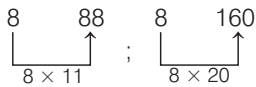
Similarly,



66. (c) As,



Similarly,



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) $5 + 2 + 5 = 12$

$$8 + 1 + 3 = 12$$

$$7 + 1 + 4 = 12$$

$$\text{Similarly, } 6 + 0 + 6 = 12$$

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

Let us see

$$\text{As, } 8 = 2^3$$

$$1331 = 11^3$$

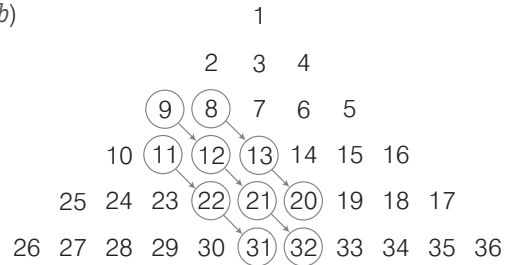
$$4913 = 17^3$$

$$\text{Similarly, } 64 = 4^3$$

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)



In this pyramid, you can see the pattern.

So, the correct option is 8, 13, 20.

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. **WBPS 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.

SSC (CGL) 2014

- (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.

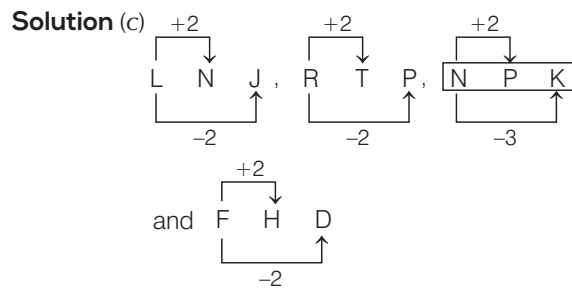
- (a) H (b) Q
(c) T (d) Z

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



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, ..., Z = 26

and solving the alternatives, we have

OE3 ⇒ OE = O ÷ E = 15 ÷ 5 = 3;

XD6 ⇒ XD = X ÷ D = 24 ÷ 4 = 6;

JB5 ⇒ JB = J ÷ B = 10 ÷ 2 = 5;

VK2 ⇒ VK = V ÷ K = 22 ÷ 11 = 2;

PH3 ⇒ PH = P ÷ H = 16 ÷ 8 = 2 ≠ 3

In PH3, the numerical value should be 2 instead of 3 because 16 ÷ 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.

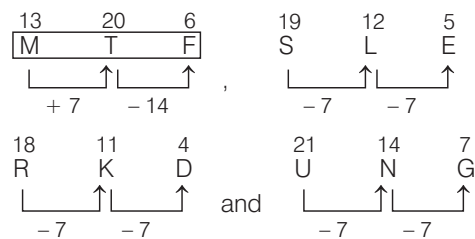
- (a) Marigold (b) Tulip (c) Lotus (d) Rose

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

Illustration 10. Choose the odd one.

- (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.

$$\text{As, } 12^2 = 144, 13^2 = 169 \\ 16^2 = 256, 18^2 = 324$$

Illustration 13. Choose the odd one.

- (a) 512 (b) 625 (c) 1296 (d) 2401
[SSC (10+2) 2014]

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, $\frac{21}{24} = \frac{7}{8}$; $\frac{28}{32} = \frac{7}{8}$;
 $\frac{14}{16} = \frac{7}{8}$; $\frac{70}{80} = \frac{7}{8}$
and $\frac{54}{62} = \frac{27}{31}$

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.*

- (a) Sun (b) Mercury
(c) Mars (d) Venus
SSC(10+2) 2017
- (a) Cloth (b) Plastic
(c) Thread (d) Cotton OPSC 2018
- (a) Barter (b) Purchase
(c) Sale (d) Borrow
SSC (10+2) 2013
- (a) Flower (b) Stem
(c) Branch (d) Roots OPSC 2018
- (a) Sky (b) Star
(c) Planet (d) Comet

- (a) Shimla (b) Ooty
(c) Darjeeling (d) Agra
BSSC (CGL) 2015
- (a) Bridge (b) Escalator
(c) Ladder (d) Staircase
SSC (10+2) 2017
- (a) Tired (b) Tardy
(c) Slow (d) Late
SSC (Steno) 2016
- (a) Islamabad (b) Kabul
(c) Canberra (d) Sydney
SSC (10+2) 2017
- (a) Mother-in-law (b) Nephew
(c) Grandson (d) Great Grandfather
SSC (CGL) 2017
- (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) ACCG 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
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

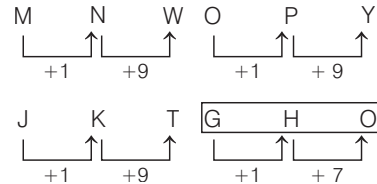
1.	(a)	2.	(b)	3.	(d)	4.	(a)	5.	(a)	6.	(d)	7.	(a)	8.	(d)	9.	(d)	10.	(a)
11.	(d)	12.	(d)	13.	(c)	14.	(d)	15.	(d)	16.	(d)	17.	(d)	18.	(a)	19.	(a)	20.	(c)
21.	(d)	22.	(d)	23.	(a)	24.	(c)	25.	(d)	26.	(c)	27.	(b)	28.	(b)	29.	(b)	30.	(d)
31.	(d)	32.	(b)	33.	(d)	34.	(c)	35.	(c)	36.	(c)	37.	(c)	38.	(b)	39.	(b)	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

- (a) Except Sun, all other are planets.
- (b) Cotton is used to make thread and thread is used to make cloth. So, plastic is the odd one.
- (d) Except 'Borrow', all the options are the terms of business.
- (a) Stem, branch and roots supply water to different parts of the plant. So, flower is the odd one.
- (a) Except 'Sky', all others belong to the same class i.e. celestial bodies.
- (d) Except Agra, all others are hill stations.

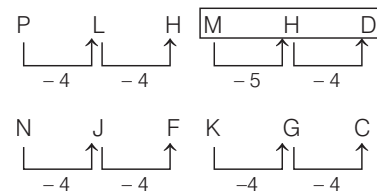
7. (a) Escalater, ladder and staircase are used to climb to next floor, whereas bridge is used to join two mountains or cliffs.
8. (d) Late is the result of the other given options. A tired, tardy or slow attitude makes a work late.
9. (d) Except Sydney, all others are the capitals of different countries 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 certainty. Open secret is odd as it alludes uncertainty.
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,



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

32. (b) Here,



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

33. (d) H, K, I, U, X, V, C, F, D are in a row with lines and '+3', '-2', '+3', '-2', '+3', '-2' below. M, Q, N are boxed together with lines and '+4', '-3' below. G, J, H are in a row with lines and '+3', '-2' below.

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

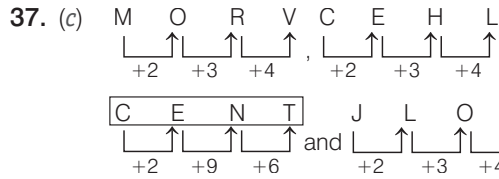
34. (c) E, D, C are in a row with lines and '-1', '-1' below. M, L, K are in a row with lines and '-1', '-1' below. N, P, R are boxed together with lines and '+2', '+2' below. X, W, V are in a row with lines and '-1', '-1' below.

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

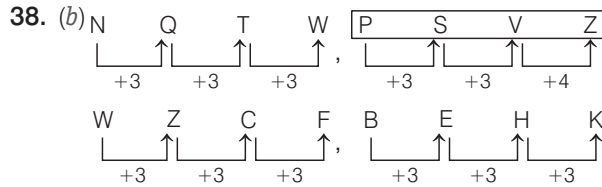
35. (c) H, J, N, J, L, P, P, R, U, Q, S, W are in a row with lines and '+2', '+4', '+2', '+4', '+2', '+3', '+2', '+4' below. A, C, G are in a row with lines and '+2', '+4' below.

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

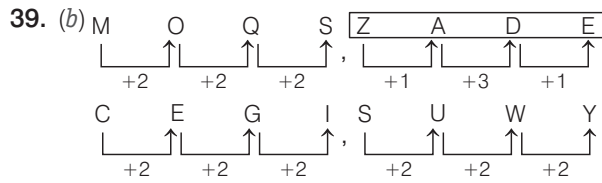
36. (c) Except RNJF, all others contain one vowel.



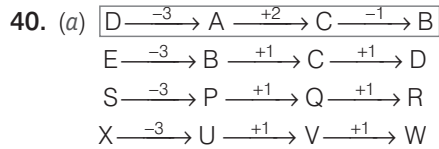
From above, it is clear that letters' group CENT is different from all others.



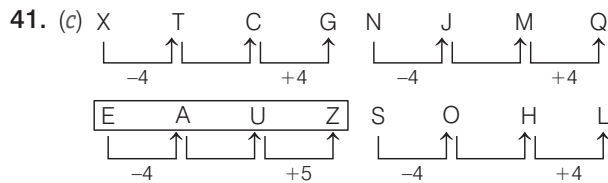
So, it is clear from above that PSVZ is different from others.



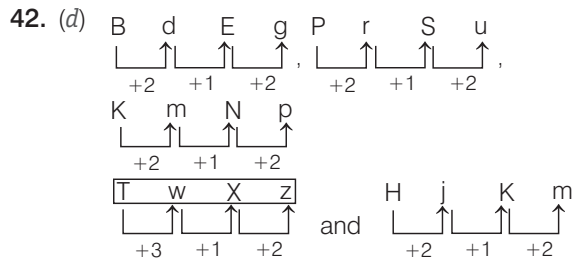
So, it is clear from above that ZADE is different from others.



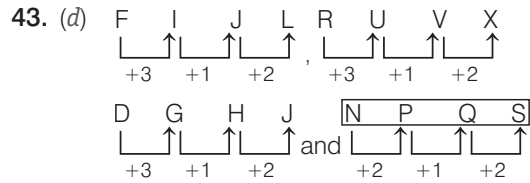
So, it is clear from above that DACB is different from others.



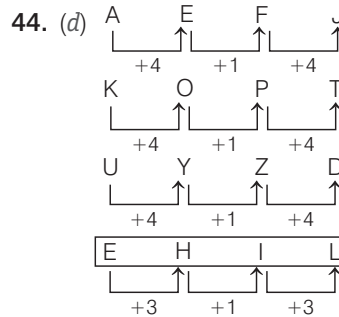
So, it is clear from above that EAUZ is different from others.



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

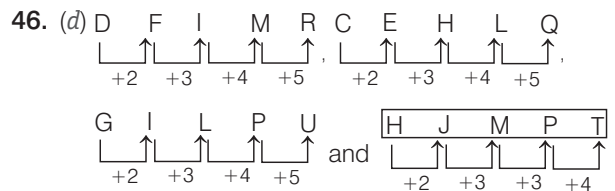


So, it is clear from above that NPQS is different from others.

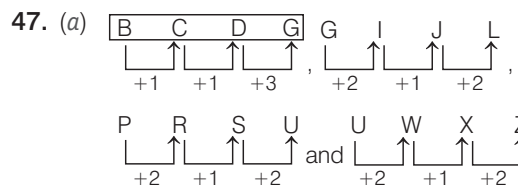


So, it is clear from above that EHIL is different from others.

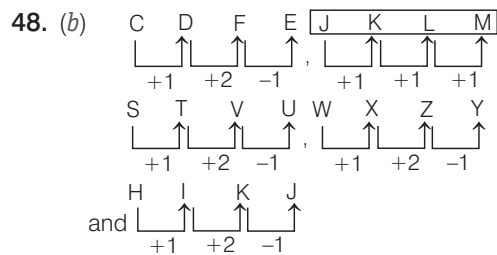
45. (d) Except option (d), all three are same because in those three options first and fourth and second and third are opposite letters.



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



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



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

49. (c) Z O I V, Q I E M, H I U L and T E A 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 → D I V I D E

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.
 $84 \rightarrow 6 \times 14$, $120 \rightarrow 6 \times 20$,
 $72 \rightarrow 6 \times 12$, $108 \rightarrow 6 \times 18$
56. (b) Here, $143 \rightarrow 12^2 - 1$, $257 \rightarrow 16^2 + 1$, $195 \rightarrow 14^2 - 1$,
 $15 \rightarrow 4^2 - 1$, $63 \rightarrow 8^2 - 1$
Hence, '257' is the odd one.
57. (d) Here, $2378 \Rightarrow 2 + 3 + 7 + 8 = 20$
 $7562 \Rightarrow 7 + 5 + 6 + 2 = 20$
 $6662 \Rightarrow 6 + 6 + 6 + 2 = 20$
 $1155 \Rightarrow 1 + 1 + 5 + 5 = 12$

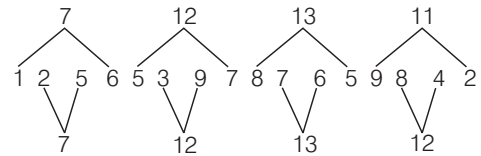
Clearly, 1155 is the odd one.

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, $4867 \rightarrow 4 + 8 + 6 + 7 = 25$,
which is divisible by 5.
 $5555 \rightarrow 5 + 5 + 5 + 5 = 20$,
which is divisible by 5.
 $6243 \rightarrow 6 + 2 + 4 + 3 = 15$,
which is divisible by 5.
But, 6655 $\rightarrow 6 + 6 + 5 + 5 = 22$,
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.

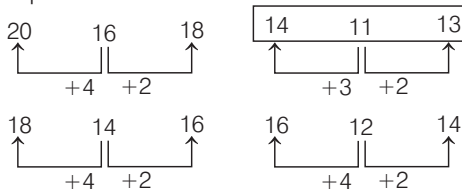
87. (b) Here, $81 \xrightarrow{\times 3} 243$; $16 \xrightarrow{\times 3} 48 \neq 64$
 $64 \xrightarrow{\times 3} 192$; $25 \xrightarrow{\times 3} 75$
 Hence, (16, 64) is different from all others.

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.

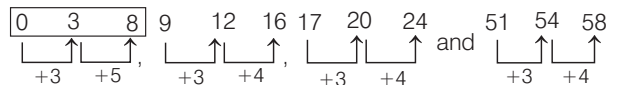
94. (d) In all other pairs except (d), second number is one more than the cube of the first number.
95. (d) In all other pairs except (d), first number is one more than the half of the second number.
96. (d) In all other pairs except (d), second number is one less than four times the first number.

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.