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ENTRANCE EXAM (AISSEE) 2023

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# SAINIK SCHOOL

ENTRANCE EXAM 2023

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Prepared by:

Examcart Experts



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# CURRENT AFFAIRS!

## की 100% सटीक तैयारी कैसे करें?

अपने Current Affairs के Section को Strong करने के लिए आपको रोज़ एक घंटा देश-विदेश की ऐसी घटनाओं (समाचारों) को पढ़ना होगा जो परीक्षा के दृष्टिकोण से महत्वपूर्ण हैं, लेकिन काफी बार हमसे काफी महत्वपूर्ण घटनाएँ पढ़ने से छूट जाती हैं, आपकी इसी समस्या को हल करने के लिए Hitesh Sir हर दिन के रात 10 बजे तक के सभी महत्वपूर्ण समाचारों को लगभग 15 प्रामाणिक स्रोत से इकट्ठा करते हैं, जिससे उस दिन का कोई भी महत्वपूर्ण Current Affair आपके पढ़ने से न छूटे। अगले दिन सुबह 6 बजे, Hitesh Sir Examcart Live Youtube Channel पर अपनी Live Class में सभी Current Affairs को विस्तार रूप से समझाते हैं जिससे आप परीक्षा में उस समाचार से सम्बंधित किसी भी तरह के प्रश्न को आसानी से हल कर सकें।

“मेरा और मेरी Team का केवल एक ही उद्देश्य है कि आपको एक ही जगह Current Affairs की ऐसी तैयारी मिले जिससे आप परीक्षा के सभी प्रश्नों को आसानी से हल कर सकें।”

– Hitesh Sir



Jan 2022 से आज तक के सभी Current Affairs की पूरी Playlist को Date-wise देखने के लिए QR Code को Scan करें।



इतना पढ़ लो काफी है !!

## Analytical chart of Previous Years Question Papers for Sainik School Entrance Examination

Mathematics						
S.N.	Chapter's Name	2022	2021	2020	2019	2018
1.	Number System	11	5	9	3	12
2.	LCM and HCF	2	5	4	9	1
3.	Fraction and Decimal Numbers	9	4	1	2	5
4.	Simplification	—	5	3	2	4
5.	Square Roots and Cube Roots	1	—	1	1	—
6.	Average	—	5	2	2	2
7.	Percentage	—	3	4	1	3
8.	Profit-Loss	1	3	1	4	4
9.	Ratio and Proportion	—	3	1	2	—
10.	Work and Time	—	—	1	1	—
11.	Speed , Time and Distance	—	1	1	4	1
12.	Simple Interest	—	1	2	2	1
13.	Area and Perimeter	4	2	4	5	5
14.	Volume and Surface Area	1	2	1	1	1
15.	Geometry	2	4	5	2	4
16.	Algebra	1	—	1	1	—
17.	Unitary methods	4	3	1	5	3
18.	Data Representation	5	—	5	—	—
19.	Units and Measurement	3	1	2	1	2
20.	Number Series	—	—	—	1	—
21.	Clock	3	1	1	1	1
22.	Temperature	—	2	—	—	1

General Knowledge			
S.N.	Chapter's Name	2022	2021
1.	Scientific Instruments and Their Applications	1	1
2.	National Symbols of India	1	2
3.	Major Religions of India	—	—
4.	Folk and Classical Dances and Music of India	1	1
5.	Defence System of India	—	1
6.	Sports and Games	1	1
7.	Animals and Their Surroundings	—	2

S.N.	Chapter's Name	2022	2021
8.	Cooking and Preservation Techniques	1	1
9.	Germination and Dispersal of Seed	1	1
10.	Water Conservation, Pollution, Microbial Diseases & Deficiency	3	3
11.	Mountainous Terrains and Lifestyle	1	1
12.	Historical Monuments	—	1
13.	Shape of the Earth and Gravitation	2	1
14.	Non-Renewable Resources of India	1	1
15.	Food, Culture, Habits and Languages of India	1	1
16.	Functions of Parts of Plants and Animals	1	3
17.	International Organisations	1	1
18.	Literary and Cultural Awards	1	1
19.	Natural Disasters	1	
20.	Evaporation, Condensation and Water Cycle	1	1
21.	Farmer and Farming Techniques	—	
22.	Tribal Communities and Forest Produce	—	1
23.	Miscellaneous	3	
24.	Current Affairs	2	
	<b>Total</b>	<b>25</b>	<b>25</b>

English						
S.N.	Chapter's Name	2022	2021	2020	2019	2018
1.	Comprehension	3	3	5	5	5
2.	Articles	1	1	1	—	—
3.	Types of Sentence	1	1	—	—	—
4.	Noun : Kinds of Noun	2	1	—	—	1
5.	Noun : Singular & Plural	1	1	—	1	2
6.	Noun : Gender	—	—	1	2	—
7.	Pronoun	1	1	1	2	1
8.	Verb	3	3	2	2	3
9.	Adjective	2	1	1	2	2
10.	Adverb	1	1		1	—
11.	Preposition	1	2	2	2	—
12.	Conjunction	1	—	2	2	—
13.	Interjection	—	—	—	—	—
14.	Tenses	—	—	—	—	1
15.	Question Tag	—	1	1	—	2

S.N.	Chapter's Name	2022	2021	2020	2019	2018
16.	Ordering of words in sentence	2	2	3	2	2
17.	Synonyms	2	2	2	2	1
18.	Antonyms	1	1	2		1
19.	One word Substitution	1	1	2	2	2
20.	Idioms & Phrases	1	1			
21.	Correct Spelling	1	1			2
	<b>Total Questions</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>

Intelligence Test						
S.N.	Chapter's Name	2022	2021	2020	2019	2018
1.	Coding-Decoding	3	3	3	-	1
2.	Analogy Test	2	4	5	3	6
3.	Series Test	3	5	2	1	3
4.	Classification	1	2	4	3	3
5.	Venn Diagram	1	--	2	1	1
6.	Mathematical Operations	2	1	1	2	2
7.	Ranking Test	2	2	1	2	1
8.	Arranging the Words According to Dictionary	--	--	1	--	1
9.	Blood Relation	1	1	1	--	2
10.	Mathematical Reasoning	1	--	1	--	--
11.	Clock	1	1	1	--	--
12.	Direction Test	1	3	--	1	1
13.	Word Formation	1	--	--	1	--
14.	Find the Missing Terms	2	1	--	--	--
15.	Non-Verbal Reasoning	--	--	--	--	--
16.	Figure Classification	--	--	--	1	--
17.	Paper Folding	--	--	2	1	--
18.	Embedded Figures	1	--	1	1	--
19.	Water Image	1	--	--	1	1
20.	Figure Series	3	--	--	--	1
21.	Figure Counting	--	1	--	---	1
22.	Mirror Image	--	--	--	4	1
23.	Complete Figure	--	--	--	3	--
24.	Figure Analogy	--	1	--	--	--
25.	Assertion and Reason	1	--	--	--	--
26.	Dice	1	--	--	--	--
	<b>Total Questions</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>25</b>

# Chapter 1

## Scientific Devices and Their Daily Uses

### Inventions – Home Appliances

Inventions	Year	Inventor
Ball Point Pen	1888	John J Loud
Mechanica Clock	1725	I Hsing and Lang Ting Tsan
Pendulum Clock	1656	Christiaan Huygens
Electric Lamp	1879	Thomas Alva Edison
Electric Bulb	1876	Thomas Alva Edison
Neon Lamp	1910	George Clyde
Fountain Pen	1884	Lewis Edson Waterman
Gramophone	1878	Thomas Alva Edison
Matchbox	1826	John Walker
Fridge	1850	James Hanson and Alexander Catlin
Sewing Machine (Chain Stitch)	1841	Barthelemy Thimonnier
Sewing Machine (Lock Stitch)	1846	Elias Howe
TV (Mechanical)	1926	J. L. Baird
TV (Electronic)	1927	P. T. Farnsworth
Typewriter	1867	Christopher L. Sholes
Telephone	1876	Alexander Graham Bell
Thermos Flask	1892	James Dever
Thermometer (Mercury)	1714	Daniel Gabriel Fahrenheit
Nylon	1937	Wallace Carothers
Penicillin	1928	Alexander Fleming
Waterproof Rubber	1823	Charles Mackintosh
Pressure Cooker	1679	Denis Papin
Plastic	1862	Alexander Parkes
Terylene	1941	Whinfield and Dickson
Telegraph (mechanical)	1787	Monsieur Lomond
Telegraph Code	1837	Samuel Morse
Film (Without Audio)	1855	Louis Le Prince
Film (With Audio)	1922	Jay Musoli and Hans Vogt
Mechanical Lift	1852	Elisha Otis
Razor (Electrical)	1931	Jacob Schick
Razor (Safety)	1850	King Gillette
Electric Fan	1776	Healer
Washing Machine	1907	Hurley
Electric Battery	1800	Alessandro Volta
Safety Pin	1849	Walter Hunt

## Invention – Vehicle

Inventions	Year	Inventor
Bicycle	1839-40	Kirkpatrick MacMillan
Bicycle Tire	1888	John Boyd Dunlop
Scooter	1919	G. Bradshaw
Petrol Car	1888	Karl Benz
Carburetor	1876	Gottlieb Daimler
Diesel Engine	1895	Rudolf Diesel
Ship (Steam)	1775	J. C. Perrier
Ship (Turbine)	1894	Sir C. Parsons
Submarine	1776	David Bushnell
Motorcycle	1885	Konstadt's G. Daimler
Tractor	1892	John Froelich
Diesel Engine	1895	Rudolf Diesel
Steam Engine (Condenser)	1769	James Watt
Steam Engine (Piston)	1712	Thomas Newcomen
Helicopter (Typical)	1784	Launoy and Bienvenu
Helicopter (Manned)	1905	E. R. Mumford
Harvesting Machine	1779	Samuel Crompton

## Sainik School Previous Years (2018-2021) Questions

1. Which device is used to measure the speed of vehicles ?

- (A) Gravometer (B) Speedometer  
(C) Gyroscope (D) Kilometer

[Sainik School Entrance Exam.  
(Class VI) 2021]

1. (B) Speedometer is used to measure the speed of vehicles while Gravometer is used to measure gravitational acceleration. Gyroscope is used to measure angular velocity.

2. Who invented Telephone in 1876 ?  
(A) Alexander Graham Bell

- (B) James Hickey  
(C) Guglielmo Macron  
(D) Logie Baird

[Sainik School Entrance Exam.  
(Class VI) 2020]

2. (A) Alexander Graham Bell invented Telephone in 1876.

## Important Questions

1. Diesel Engine was invented by \_\_\_\_\_.

- (A) Sir Frank Whittle, England  
(B) Rudolf Diesel, Germany  
(C) Richard Trevithick, England  
(D) Edward Butler, England

2. What was invented by J. B. Dunlop?

- (A) Airplane  
(B) Car  
(C) Rubber Tyre  
(D) Rubber Boot

3. Who invented Mercury Thermometer?

- (A) Galileo  
(B) Michael Faraday  
(C) J. J. Thompson  
(D) Fahrenheit

4. Penicillin was invented by

- (A) William Harvey  
(B) Louis Pasteur  
(C) Alexander Fleming  
(D) Edward Jenner

5. Who invented the battery?

- (A) Roentgen (B) Volta  
(C) Faraday (D) Maxwell

6. Which of the following was invented by Walter Hunt?

- (A) Ship  
(B) Scooter  
(C) Safety lamp  
(D) Safety pin

7. Who invented Razor?

- (A) King C. Gillette  
(B) Henri Giffard  
(C) Karl Benz  
(D) William Harvey

8. Who among the following is an inventor of the electric telegraph?

- (A) Samuel F. B. Morse  
(B) William Austin Burt  
(C) Hans Lippershey  
(D) William Stanley
9. Who invented the fountain pen?  
(A) Dresser  
(B) Lewis Edson Waterman

- (C) Alexander Fleming  
(D) Edward Jenner
10. 'Neon Lamp' was invented by which scientist?  
(A) Georges Claude  
(B) Thomas Alva Edison

- (C) Humphrey Davy  
(D) J.S. Fleming

### Answer Key

1. (B) 2. (C) 3. (D) 4. (C) 5. (B)  
6. (D) 7. (A) 8. (A) 9. (B) 10. (A)





# Chapter 2

## LCM & HCF

### 1. INTRODUCTION

**I. Factors-** A factor of a number is an exact divisor of that number. For example, Suresh wants to find those numbers which exactly divide 6. He divides 6 by numbers less than or equal to 6, i.e. 1, 2, 3, 4, 5, 6. He found that the numbers 1, 2, 3, and 6 are exact divisors of 6. These numbers are called **factors** of 6.

**II. Multiple-** A number is a **multiple** of each of its factors. In other words, if a number is multiplied by 1, 2, 3..., etc. then the obtained result is called a multiple of that number.

For example,

- (i) Multiples of 2 are 2, 4, 6, 8, 10, ... etc.
- (ii) Multiples of 3 are 3, 6, 9, 12, 15, ... etc.
- (iii) Multiples of 5 are 5, 10, 15, 20, 25, ... etc.

#### Interesting facts about factors and multiples

- 1 is a factor of every number.
- Every number is a factor of itself.
- Every factor of a number is an exact divisor of that number.
- Every factor is less than or equal to the given number.
- Number of factors of a given number are finite.
- Every multiple of a number is greater than or equal to that number.
- The number of multiples of a given number is infinite.
- Every number is a multiple of itself.

**III. Perfect Number-** A number for which sum of all its factors is equal to twice the number is called a perfect number. For example, 6 and 28 are perfect numbers.

The factors of 6 are 1, 2, 3, and 6. Also,  $1 + 2 + 3 + 6 = 12 = 2 \times 6$ . It is clear that the sum of all factors of 6 is twice the number 6. Similarly, we can try for the number 28.

**IV. Prime Numbers :** The numbers other than 1 whose only factors are 1 and the number itself are called Prime numbers. For example, 2, 3, 5, 7, 11, 13 and so on. 2 is the smallest prime number which is even and odd otherwise.

**V. Composite numbers :** Numbers having more than two factors are called Composite numbers. For example, 4, 6, 8, 9, 10, 12 and so on.

#### Note

1 is neither a prime nor a composite number.

### VI. Common factors and Common Multiples

For example, Factors of 8 are 1, 2, 4, and 8.

Factors of 12 are 1, 2, 3, 4, 6, and 12.

Here, the numbers 1, 2 and 4 are the factors of both 8 and 12. These numbers are called the **common factors** of 8 and 12.

Take another example, Multiples of 3 are 3, 6, 9, 12, 15, 18, 24, 27, ... etc.

Multiples of 4 are 4, 8, 12, 16, 20, 24, 32, 36, ... etc.

Here, the numbers 12, 24, 36, ... etc. are the **common multiples** of the numbers 3 and 4.

**VII. Co-prime Numbers-** Two numbers having only 1 as a common factor are called **co-prime numbers**. For example, 4 and 5 are co-prime numbers.

**VIII. Prime Factorization-** In a factorization, if the only factors are prime numbers such as 2, 3, 5, 7, 11, etc. Such a factorization of a number is called a prime factorization. For example, 12 is factorized as  $2 \times 2 \times 3$ . In this factorization, the only factors are prime numbers. So, it is called prime factorization of the number 12.

### 2. HIGHEST COMMON FACTOR (HCF)

The Highest Common Factor of two or more given numbers is the highest (or greatest) of their common factors. It is also called Greatest Common Divisor (GCD). There are various methods of finding out the HCF of the given numbers.

**I. Division Method-** We can find the HCF of the given numbers by using the following steps :

**Step 1 :** Divide the larger number by the smaller number.

**Step 2 :** Consider the obtained remainder as divisor and divide the divisor of Step 1.

**Step 3 :** Again, consider the remainder (obtained in step 2) as divisor and divide the divisor of Step 2.

**Step 4 :** Repeat this process until we get the final remainder as zero. The last divisor is the required HCF of the given numbers.

**Example :** Find the HCF of the numbers 18, 24.

**Solution :**

$$\begin{array}{r} 18 \overline{) 24} \quad (1 \\ \underline{-18} \phantom{0} \\ 6 \overline{) 18} \quad (3 \\ \underline{-18} \\ 0 \end{array}$$

Hence, the HCF of the numbers 18 and 24 is 6.

**II. Factorization Method-** We can find the HCF of the given numbers by using the following steps:

**Step 1 :** First find the factors of each given number.

**Step 2 :** Choose common factors among them.

**Step 3 :** Find HCF by taking the product of these factors.

**Example :** Find the HCF of 12, 18, 24.

**Solution :** First find the factors for all given numbers.

$$12 = 2 \times 2 \times 3; \quad 24 = 2 \times 2 \times 2 \times 3;$$

$$32 = 2 \times 2 \times 2 \times 2 \times 2$$

Hence, HCF =  $2 \times 2 = 4$  [Apply step 2 and 3]

### 3. LEAST COMMON MULTIPLE (LCM)

The Lowest Common Multiple of two or more given numbers is the lowest (or smallest or least) of their common multiples. There are various methods of finding out the LCM of the given numbers.

**I. Division Method :** we can find the LCM of the given numbers by using following steps.

**Step 1 :** Write the given number in a series.

**Step 2 :** Divide by the smallest possible numbers that cannot be divided by that number are written as it is in the next line.

**Step 3 :** Continue the process till all numbers are divided completely.

**Step 4 :** The multiplication of divisors of each row is the required LCM of given numbers.

**Example :** Find out the LCM of 14, 18, 20

**Solution :**

2	14	18	20
2	7	9	10
3	7	9	5
3	7	3	5
5	7	1	5
7	7	1	1
	1	1	1

Hence, the required LCM =  $2 \times 2 \times 3 \times 3 \times 5 \times 7 = 1260$

**II. Prime Factorization Method-** we can find the LCM of the given numbers by using the following steps :

**Step 1 :** First find the factors of each given number.

**Step 2 :** Choose highest power of each factor among them.

**Step 3 :** Find LCM by taking the product of these factors with highest power of each.

**Example :** Find out the LCM of the given numbers 14, 18, 20.

**Solutions :** First find the factors for all given numbers.

$$14 = 2 \times 7; \quad 18 = 2 \times 3 \times 3 = 3^2 \times 2^1$$

$$20 = 2 \times 2 \times 5 = 2^2 \times 5^1$$

Hence, the required LCM =  $2 \times 2 \times 3 \times 3 \times 5 \times 7$   
[Apply step 2 and 3] = 1260

### 4. IMPORTANT FORMULAE

- Product of two numbers = HCF  $\times$  LCM
- LCM of numbers =  $\frac{\text{Product of two numbers}}{\text{HCF of numbers}}$
- HCF of numbers =  $\frac{\text{Product of two numbers}}{\text{LCM of numbers}}$
- LCM of fractions =  $\frac{\text{LCM of Numerators}}{\text{HCF of Denominators}}$
- HCF of fractions =  $\frac{\text{HCF of Numerators}}{\text{LCM of Denominators}}$

### 5. EXAMPLES

**Example 1 :** Find the LCM of the fractions  $\left(\frac{5}{2}, \frac{8}{9}, \frac{11}{14}\right)$ .

**Solution :** LCM of fractions =  $\frac{\text{LCM of Numerators}}{\text{HCF of Denominators}}$

$$\text{LCM of fractions} = \frac{\text{LCM of } 5, 8, 11}{\text{HCF of } 2, 9, 14}$$

$$\text{LCM of fractions} = \frac{440}{1} = 440$$

**Example 2 :** 14 and 16 be the two numbers. Find the Product of their HCF and LCM.

**Solution :** Using formula,

$$\text{Product of two numbers} = \text{HCF} \times \text{LCM}$$

$$14 \times 16 = \text{HCF} \times \text{LCM}$$

$$\text{or, HCF} \times \text{LCM} = 224$$

## Sainik School Previous Years (2018-2021) Questions

1. The HCF and LCM of two numbers are 6 and 864 respectively. If one number is 96, find the other number.

- (A) 84                      (B) 45  
(C) 54                      (D) 24

[Sainik School Entrance Exam.  
(Class VI) 2021]

1. (C) Given,

$$\text{HCF} = 6$$

$$\text{LCM} = 864$$

$$\text{First number} = 96$$

$$\text{Second number} = ?$$

We know that

$$\begin{aligned}\text{First number} \times \text{Second number} \\ &= \text{HCF} \times \text{LCM}\end{aligned}$$

$$96 \times \text{second no.} = 6 \times 864$$

$$\begin{aligned}\text{Second number} &= \frac{6 \times 864}{96} \\ &= 54\end{aligned}$$

2. The HCF of two numbers is 12 and their difference is 12. Which of the following can be the numbers ?

- (A) 84, 96 (B) 66, 78  
(C) 70, 82 (D) 62, 78

[Sainik School Entrance Exam.  
(Class VI) 2021]

2. (A) From option (A),

$$\text{HCF of numbers 84 and 96} = 12$$

$$\text{Their difference} = 12$$

$$\text{From option (B),}$$

$$\text{HCF of numbers 66 and 78} = 2$$

$$\text{From option (C),}$$

$$\text{HCF of numbers 62 and 78} = 2$$

$$\text{Hence, option (A) is correct}$$

3. Find the smallest number that is divisible by each one of 9, 12 and 15.

- (A) 60 (B) 90  
(C) 120 (D) 180

[Sainik School Entrance Exam.  
(Class VI) 2021]

3. (D) LCM of numbers 9, 12 and 15

2	9, 12, 15
2	9, 6, 15
3	9, 3, 15
3	3, 1, 5
5	1, 1, 5
	1, 1, 1

$$\begin{aligned}\text{LCM} &= 2 \times 2 \times 3 \times 3 \times 5 \\ &= 180\end{aligned}$$

4. Three numbers are in the ratio of 3 : 4 : 5 and their L.C.M. is 2400. Their H.C.F. is :

- (A) 120 (B) 60  
(C) 80 (D) 40

[Sainik School Entrance Exam.  
(Class VI) 2020]

4. (D) We know that,

$$\text{L.C.M.} = \text{Product of ratios} \times \text{H.C.F.}$$

$$\therefore \text{H.C.F.} = \frac{2400}{3 \times 4 \times 5}$$

$$= \frac{2400}{60} = 40$$

5. The least common multiple of 3, 4 and 9 is :

- (A) 36 (B) 12  
(C) 27 (D) 45

[Sainik School Entrance Exam.  
(Class VI) 2020]

5. (A) Required LCM = LCM (3, 4, 9)  
 $= 2 \times 2 \times 3 \times 3 = 36$

6. What will be HCF of 216, 288 and 720 ?

- (A) 12 (B) 24  
(C) 84 (D) 72

[Sainik School Entrance Exam.  
(Class VI) 2020]

$$\begin{aligned}6. (D) \quad 216 &= 6 \times 6 \times 6 \\ 288 &= 6 \times 6 \times 8 \\ 720 &= 6 \times 6 \times 5 \times 4 \\ \therefore \text{H.C.F.} &= 2 \times 6 \times 6 = 72\end{aligned}$$

7. What are Prime factors of 37800 ?

- (A)  $2 \times 2 \times 3 \times 3 \times 5 \times 5 \times 7 \times 7$   
(B)  $2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5 \times 5 \times 7$   
(C)  $8 \times 27 \times 25 \times 7$   
(D)  $2 \times 4 \times 25 \times 27 \times 7$

[Sainik School Entrance Exam.  
(Class VI) 2020]

$$\begin{aligned}7. (B) \quad 37800 \\ &= 2 \times 2 \times 2 \times 3 \times 3 \times 3 \times 5 \times 5 \times 7\end{aligned}$$

8. Find out the smallest number which is divisible by 6, 12, and 18.

- (A) 360 (B) 180  
(C) 120 (D) 60

[Sainik School Entrance Exam.  
(Class VI) 2019]

$$\begin{aligned}8. (B) \quad \text{Smallest number} \\ &= \text{L.C.M. (6, 12, 18)} \\ &= 36\end{aligned}$$

$$\therefore 180 \text{ is the required number in given option.}$$

9. The LCM of two prime numbers is:

- (A) difference of the number  
(B) product of the number  
(C) sum of the number  
(D) None of these.

[Sainik School Entrance Exam.  
(Class VI) 2019]

9. (B) The LCM of two prime is number product of the number  
for e.g. LCM of 3 and 5 is  $3 \times 5 = 15$

10. From a basket of mangoes when counted in twos there was one extra, counted in threes there were two extra, counted in fours there were three extra, counted in fives there were four extra, counted in sixes there were five extra. But counted in sevens there were no extra. Atleast how many mangoes were there in the basket ?

- (A) 119 (B) 110  
(C) 111 (D) 126

[Sainik School Entrance Exam.  
(Class VI) 2019]

$$\begin{aligned}10. (A) \quad \text{Required number} \\ &= \text{L.C.M. } [7, (6-5), (5-4), (4-3), \\ &\quad (3-2), (2-1)] \\ &= \text{L.C.M. } (7, 1, 1, 1, 1, 1) = 7 \\ \text{So, Least number divisible by 7} \\ &= 119\end{aligned}$$

11. What is the greatest number which when divides 3026 and 5053 leaves remainders 11 and 13 respectively ?

- (A) 15 (B) 30  
(C) 45 (D) 60

[Sainik School Entrance Exam.  
(Class VI) 2019]

$$\begin{aligned}11. (C) \quad \text{Using option,} \\ 3026 &= 45 \times 67 + 11 \text{ (Remainder)} \\ 5053 &= 45 \times 112 + 13 \text{ (Remainder)} \\ \text{So, the required number} &= 45\end{aligned}$$

12. Ram, Shyam and Mohan run at speed of 75, 50 and 30 m/min respectively. After how much time will they meet together for the first time running with the same speed ?

- (A) 5 h (B) 2 h  
(C) 3 h (D) 5/2 h

[Sainik School Entrance Exam.  
(Class VI) 2019]

$$\begin{aligned}12. (D) \quad \text{Required time} &= \text{LCM (75, 50, 30)} \\ &= 150 \text{ Min.}\end{aligned}$$

$$= 2\frac{1}{2} \text{ or } \frac{5}{2} \text{ hours}$$

13. The LCM of two numbers is 28 times of their HCF. The sum of their LCM and HCF is 1740. If one number is 240 then what is the other number ?

- (A) 420 (B) 460  
(C) 500 (D) 380

[Sainik School Entrance Exam.  
(Class VI) 2019]

13. (A) Let, L.C.M. = L and H.C.F. = M  
According to question,  
 $L = 28M$  .... (1)  
and  $L + M = 1740$  ... (2)  
On solving eqn (1) & (2)  
 $M = 60$  and  $L = 60 \times 28 = 1680$   
 $\therefore A \times B = \text{LCM} \times \text{HCF}$  (Formula)  
 $240 \times B = 1680 \times 60$   
 $B = \frac{1680 \times 60}{240} = 420$

14. Four clocks ring at the time interval of 6s, 8s, 12s and 18s respectively. If they ring together at 12 a.m., then how many times will they ring together within the time span of 6 min ?  
(A) 6 times (B) 4 times  
(C) 7 times (D) 5 times  
[Sainik School Entrance Exam. (Class VI) 2019]

14. (D) Again meeting time  
= LCM (6, 8, 12, 18) = 72 seconds

$\therefore$  In 6 minutes, they will ring

$$= \frac{6 \times 60}{72} = 5 \text{ times.}$$

15. What is the least multiple of 23 which when divided by 18, 21 and 24 leaves remainders 7, 10, and 13 respectively ?  
(A) 1240 (B) 3013  
(C) 2364 (D) 7628

[Sainik School Entrance Exam. (Class VI) 2019]

15. (B) LCM of 18, 21, 24 = 504  
So, required number  
= 504 m – Common difference  
= 504 m – 11  
= 504  $\times$  6 – 11 [Let m = 6]  
= 3013

16. A milkman has two cans of milk containing 75 L and 45 L of milk respectively. What

will be the capacity of largest vessel that can measure the milk of the two cans exactly ?

- (A) 12 L (B) 18 L  
(C) 15 L (D) 10 L

[Sainik School Entrance Exam. (Class VI) 2019]

16. (C) Required measurement  
= HCF (75, 45)  
= 15 L

17. The greatest number that divides 38 and 68 leaves 8 as remainder in each case, is :  
(A) 10 (B) 15  
(C) 60 (D) 30

[Sainik School Entrance Exam. (Class VI) 2018]

17. (D)  $\because 38 = 1 \times 30 + 8$  (Remainder)  
 $68 = 2 \times 30 + 8$  (Remainder)  
So, required number = 30

## Important Questions

- What is the least number to be added to 7700 to make it a perfect square ?  
(A) 131 (B) 121  
(C) 77 (D) 44
- Find two natural numbers whose sum is 85 and the least common multiple is 102.  
(A) 30, 55 (B) 17, 68  
(C) 35, 55 (D) 51, 34
- The least positive integer which is a perfect square and also divisible by each of 21, 36 and 66 is :  
(A) 213444 (B) 254016  
(C) 156816 (D) 186624
- The HCF and LCM of two numbers are 12 and 72. Find the numbers :  
(A) 12, 96 (B) 24, 36  
(C) 12, 8 (D) None of these
- The ratio of two numbers is 3 : 4 and their H.C.F. is 4 then their L.C.M. is—  
(A) 48 (B) 12  
(C) 24 (D) 36
- The ratio of two numbers is 5 : 6 and their L.C.M. is 480; then their H.C.F. is—  
(A) 20 (B) 16  
(C) 6 (D) 5
- The smallest number which when divided by 5, 7, 11 and 13 leaves respective remainders of 2, 4, 8 and 10 is—  
(A) 5005 (B) 5002  
(C) 5008 (D) 5029

- The L.C.M. of three different numbers is 120. Which of the following cannot be their H.C.F. ?  
(A) 8 (B) 12  
(C) 24 (D) 35
- The greatest number, which when subtracted from 5834, gives a number exactly divisible by each of 20, 28, 32 and 35, is—  
(A) 1120 (B) 4714  
(C) 5200 (D) 5600
- Two numbers are in the ratio 3 : 4. Their L.C.M. is 84. The greater number is—  
(A) 21 (B) 24  
(C) 28 (D) 84
- Four metal rods of lengths 78 cm, 104 cm, 117 cm and 169 cm are to be cut into parts of equal lengths. Each part must be as long as possible. What is the maximum number of pieces that can be cut ?  
(A) 27 (B) 36  
(C) 43 (D) 48
- The number of pair of positive integers whose sum is 99 and H.C.F. is 9, is—  
(A) 5 (B) 4  
(C) 3 (D) 2
- The ratio of two numbers is 3 : 4 and their L.C.M. is 120. The sum of numbers is—  
(A) 70 (B) 140  
(C) 35 (D) 105
- The greatest four digit number which is exactly divisible by each one of the numbers 12, 18, 21 and 28.

- (A) 9288 (B) 9882  
(C) 9828 (D) 9928
- The HCF and LCM of two numbers are 44 and 264 respectively. If the first number is divided by 2, the quotient is 44. The other number is—  
(A) 147 (B) 528  
(C) 132 (D) 264
- The H.C.F. and L.C.M. of two numbers are 8 and 48 respectively. If one of the numbers is 24, then the other number is—  
(A) 48 (B) 36  
(C) 24 (D) 16
- Find the greatest number that will exactly divide 200 and 240—  
(A) 40 (B) 50  
(C) 60 (D) 120
- If  $x : y$  be the ratio of two whole numbers and  $z$  be the HCF, then the LCM of those two numbers is—  
(A)  $yz$  (B)  $\frac{xz}{y}$   
(C)  $\frac{xy}{z}$  (D)  $xyz$
- Three numbers are in the ratio 1 : 2 : 3 and their HCF is 12. The numbers are—  
(A) 4, 8, 12  
(B) 5, 10, 15  
(C) 10, 20, 30  
(D) 12, 24, 36
- The greatest number that will divide 729 and 901 leaving remainders 9 and 5 respectively, is—

- (A) 15 (B) 16  
(C) 19 (D) 20
21. LCM of two numbers is 2079 and their HCF is 27. If one of the numbers is 189, the other number is—  
(A) 189 (B) 216  
(C) 297 (D) 584
22. The sum of two numbers is 528 and their HCF is 33. How many pairs of such numbers can be ?  
(A) 1 (B) 2  
(C) 3 (D) 4
23. LCM of  $\frac{2}{3}, \frac{4}{9}, \frac{5}{6}$  is—  
(A)  $\frac{20}{3}$  (B)  $\frac{10}{3}$   
(C)  $\frac{20}{27}$  (D)  $\frac{8}{27}$
24. The greatest number of four digits which when divided by 3, 5, 7, 9 leaves remainders 1, 3, 5, 7 respectively is—  
(A) 9765 (B) 9763  
(C) 9764 (D) 9766
25. The least number which, when divided by 16, 18, 20, and 25 leaves 4 as remainder in each case but when divided by 7 leaves no remainder is—  
(A) 17004 (B) 18000  
(C) 18002 (D) 18004

## Solutions

1. (D)  $7700 + 44 = 7744$   
 $\Rightarrow \sqrt{7744} = 88$   
Which is perfect square.
2. (D) From option (D),  
 $51 + 34 = 85$ , and  
 $51 \times 2 = 102$   
 $34 \times 3 = 102$
3. (A)  $\therefore$  LCM of 21, 36 and 66 = 2772  
and  $2772 = 2 \times 2 \times 3 \times 3 \times 7 \times 11$   
 $\therefore$  Required least positive number  
 $= 2772 \times 7 \times 11 = 213444$
4. (B) Let the number are  $ax$  and  $bx$ .  
 $\therefore$  LCM =  $a \times b \times \text{HCF}$   
 $\Rightarrow a \times b = \frac{\text{LCM}}{\text{HCF}} = \frac{72}{12} = 6$   
 $\Rightarrow a \times b = 3 \times 2$   
 $\therefore$  The numbers are  $ax$  and  $bx$ , i.e., 3  
 $\times 12$  and  $2 \times 12$  or 36 and 24.
5. (A) Let the two numbers be  $3x$  and  $4x$ , then their  
HCF =  $x$   
 $\therefore x = 4$   
( $\therefore$  HCF = 4)  
 $\Rightarrow$  The numbers are = 12 and 16  
 $\therefore$  Their LCM =  $\frac{12 \times 16}{4} = 48$
6. (B) Let the two numbers be  $5x$  and  $6x$ , then their  
LCM =  $5 \times 6 \times x = 30x$   
 $\therefore 30x = 480$  ( $\therefore$  LCM = 480)  
or  $x = 16$   
 $\Rightarrow$  Their HCF = 16
7. (B)
- | Divisor   | 5 | 7 | 11 | 13 |
|-----------|---|---|----|----|
| Remainder | 2 | 4 | 8  | 10 |
- is equal to  $(5-3) (7-3) (11-3) (13-3)$   
that smallest number will be  
LCM of (5, 7, 11, 13) - 3 = 50053  
= 5002
8. (D) Number 120, Factor of all numbers except 35. Hence, 35 is not the HCF of 120.
9. (B) LCM of 20, 28, 32 and 35 = 1120  
 $\therefore$  Required number =  $5834 - 1120$   
= 4714
10. (C) Let the numbers be  $3x$  and  $4x$ , then  
their LCM =  $12x = 84$   
 $\Rightarrow x = 7$   
So, greater number =  $4 \times 7 = 28$
11. (B) According to condition, HCF should be taken.  
HCF of 78, 104, 117 and 169 = 13  
 $\therefore$  Number of parts from 78 cm rod  
 $= \frac{78}{13} = 6$   
Similarly, number of parts from other rods are  $\frac{104}{13} = 8$ ,  $\frac{117}{13} = 9$  and  $\frac{169}{13} = 13$  respectively.  
 $\therefore$  Maximum number of pieces  
=  $6 + 8 + 9 + 13 = 36$ .
12. (A) Let the two numbers be  $ax$  and  $bx$ , then their HCF =  $x$   
 $\therefore x = 9$   
 $\therefore ax + bx = 99$   
 $x(a + b) = 99$   
or  $9(a + b) = 99$
- $\Rightarrow a + b = 11$   
 $\therefore$  The number of pair of positive integers is (9, 90), (18, 81), (27, 72), (36, 63), (45, 54) i.e. 5.
13. (A) Let the number be  $3x$  and  $4x$ .  
Then their LCM =  $12x$   
 $\therefore 12x = 120$   
or  $x = 10$   
 $\therefore$  The numbers are = 30 and 40  
 $\Rightarrow$  Their sum =  $30 + 40 = 70$
14. (C) LCM of 12, 18, 21, 28 = 252  
So, the greatest no. of four digits = 9999  
Here,  $\frac{9999}{\text{LCM}} = \frac{9999}{252} = 39.67$   
 $\Rightarrow$  Greatest number of four digits  
=  $252 \times 39 = 9828$
15. (C)  $1^{\text{st}}$  number =  $2 \times \text{Quotient}$   
=  $2 \times 44 = 88$   
 $\therefore 1^{\text{st}}$  number  $\times 2^{\text{nd}}$  number  
= LCM  $\times$  HCF  
 $\therefore 2^{\text{nd}}$  number =  $\frac{264 \times 44}{88}$   
= 132
16. (D) Product of numbers = HCF  $\times$  LCM  
 $24 \times s = 8 \times 48$   
 $\Rightarrow s = \frac{8 \times 48}{24} = 16$
17. (A) H.C.F. of 200 and 240 will be the greatest number  
 $\therefore 200 = 40 \times 5$   
 $240 = 40 \times 6$   
 $\therefore$  HCF = 40  
 $\Rightarrow$  Greatest number = 40
18. (D) Let,  $1^{\text{st}}$  number =  $xz$   
 $2^{\text{nd}}$  number =  $yz$   
 $1^{\text{st}} \times 2^{\text{nd}}$  = HCF  $\times$  LCM  
 $\Rightarrow \text{LCM} = \frac{xz \times yz}{z} = xyz$
19. (D) Let the three numbers be  $x$ ,  $2x$ ,  $3x$  then their HCF =  $x$   
 $\Rightarrow x = 12$  (given)  
 $\therefore$  The three numbers are = 12, 24, 36
20. (B) Required number  
= HCF of (729 - 9) and (901 - 5)  
= HCF of (720 and 896) = 16
21. (C) Let the two numbers are  $27a$  and  $27b$   
Therefore  $27a = 189$  (given)  
 $\Rightarrow a = 7$   
Now, LCM of both numbers = 2079  
 $27ab = 2079$

$$b = \frac{2079}{27 \times 7} = 11$$

Thus, other number =  $27b = 27 \times 11 = 297$ .

22. (D) Let both the numbers be  $33a, 33b$ .

$$\text{Then, } 33a + 33b = 528$$

$$\Rightarrow a + b = 16$$

Hence, Values of  $a$  and  $b$  can be (1, 15), (3, 13), (5, 11) (7, 9)

$$\Rightarrow \text{Required number of pairs} = 4$$

23. (A) LCM of  $\frac{2}{3}, \frac{4}{9}, \frac{5}{6} = \frac{\text{LCM of } 2, 4, 5}{\text{HCF of } 3, 9, 6}$

$$= \frac{20}{3}$$

24. (B) LCM of 3, 5, 7, 9 = 315

$$\therefore \text{Largest 4 digit number} = 9999$$

$$\text{Now, } \frac{9999}{315} = 31 \frac{234}{315}$$

$$\therefore \text{Remainder} = 234$$

$$\begin{aligned} \therefore \text{Largest possible 4 digit number} \\ \text{divisible by 3, 5, 7, 9} \\ = 9999 - 234 \end{aligned}$$

$$= 9765$$

$$\begin{aligned} \text{Also } k &= (3 - 1) = (5 - 3) \\ &= (7 - 5) = (9 - 7) = 2 \end{aligned}$$

$$\begin{aligned} \therefore \text{Required number} &= 9765 - k \\ &= 9765 - 2 \\ &= 9763 \end{aligned}$$

25. (D) LCM of 16, 18, 20 and 25 = 3600

$$\therefore \text{Number} = 3600 \times k + 4$$

$$\text{On putting value } k = 5$$

$$\begin{aligned} \therefore \text{Number} &= 3600 \times 5 + 4 \\ &= 18004 \end{aligned}$$

□□

# Chapter 1

## PART-3 : ENGLISH

### Comprehension Passage

#### Sainik School Previous Years (2018-2021) Questions

##### Direction (Question No. 1 to 3)

Read the following passage and answer the questions by choosing the most appropriate option :

##### Zeus and Prometheus

From the very first, humans had trouble with the Greek Gods. Most Gods thought of humans as toys. But Gods made friends with the humans. One of those Gods was Prometheus. The first people created by the Gods lived happily together. They thought the Gods were wonderful. But their children were not as grateful or as content. The children argued among themselves, and sometimes even argued with the Gods. Zeus was very disappointed at mankind. He decided to punish mankind by depriving them of a very important tool – fire. Prometheus felt sorry for his human friends. Fire was important for many things such as heat and cooking. Prometheus stole a lightning bolt from Zeus and gave it to mankind. That's when man discovered fire.

Zeus was furious as Prometheus had defied Zeus. He ordered Prometheus be chained to a rock as punishment for stealing his lightning bolt and for going behind his back to help the humans. To make Prometheus even more miserable, Zeus sent storms to beat angry waves against Prometheus, helplessly chained to his rock. Zeus made the sun shine really brightly now and then to burn his skin. It was Hercules who finally released the helpless God from his chains.

1. Which one of the following statements is not true about Zeus and Prometheus ?

- (A) Most Greek Gods saw humans as a means of their entertainment.
- (B) Prometheus was chained to a rock as he was a God.
- (C) Zeus was an unforgiving God who did not like to be disobeyed.
- (D) Hercules emerged as the saviour of Prometheus.

[Sainik School Entrance Exam.  
(Class VI) 2021]

1. (B) Prometheus was tied to a rock with a chain because he had gone against the order of Zeus and gave fire to the humans.

2. What is the meaning of the underlined word : 'Prometheus had defied Zeus' ?

- (A) Prometheus had worshipped Zeus all his life.
- (B) Prometheus had defamed Zeus.
- (C) Prometheus detested Zeus for his attitude.
- (D) Prometheus had disregarded the authority of Zeus.

[Sainik School Entrance Exam.  
(Class VI) 2021]

2. (D) 'defied' means to 'openly disobey someone's authority'.

3. Why was Zeus angry and disappointed at humans ?

- (A) They kept asking him for fire.
- (B) The humans misused his lightning bolt.
- (C) The humans were quarrelsome and didn't respect the Gods.
- (D) The humans were not intelligent enough to discover fire.

[Sainik School Entrance Exam.  
(Class VI) 2021]

3. (C) Humans created by Zeus were good and morally correct. But their offspring (children) were not so good. They fought with each other and did not pay due respect to God. This made Zeus angry.

##### Direction (Q. No. 4 to 8)

Read the following passage and answer the questions :

Midas, the king was a greedy person. He loved gold more than anything in the world. He had lots of wealth but he was never really a happy person.

One day God Bacchus came to Midas. Midas had once helped god Bacchus and in return Bacchus offered him a gift, What Shall I give you to make you happy, "God asked him, Midas thought for a while and then said, "Please give me the power to turn everything I touch into gold." Bacchus laughed and said, "Your

wish is granted As soon as the Sun rises tomorrow, you will have the golden touch."

The next morning Midas woke up and he had his golden touch. He touched his bed, the chairs, doors, windows and all became gold.

Suddenly, he felt very hungry. He sat at the table but as soon as the food touched his lips, it turned into gold. So did the water. It seemed he could no longer eat or drink. After some time, his daughter came to him. When he put his hand on her, she became a gold statue. In the end, Midas became very sad and prayed God Bacchus to take away the golden touch from him.

[Sainik School Entrance Exam.  
(Class VI) 2020]

4. What kind of man was Midas ?

- (A) A greedy person
- (B) A great miser
- (C) A brave man
- (D) Wise man

4. (A) Midas was a greedy person, see the first line of the passage.

5. Who came to Midas one day ?

- (A) God Jesus
- (B) God Bacchus
- (C) God Zeus
- (D) God

5. (B) One day God Bacchus came to Midas. See the First line of second para of the passage.

6. Why did Bacchus offer him a gift ?

- (A) Because he had helped God once
- (B) Because he had pleased Bacchus
- (C) Because he had annoyed Bacchus
- (D) Because he cared for Bacchus

6. (A) God Bacchus offered him a gift because once he (king Midas) had helped God Bacchus. So the option (A) is correct.

7. What was 'Midas' wish?

- (A) To become rich
- (B) To turn anything into gold
- (C) To turn his daughter a golden doll
- (D) To become powerful



7. (B) The king 'Midas' wished to turn anything into gold. Thus, option (B) is correct.

8. Who turned into gold statue when Midas touched ?

- (A) Daughter (B) Son  
(C) Uncle (D) Aunt

8. (A) When the king Midas touched his daughter. She turned into gold statue. So option (A) is correct.

**Direction (Q. No. 9 to 13)**

Read the following passage and answer the questions.

From far out in space, Earth looks like a blue ball. Since water covers three-fourths of the Earth's surface, blue is the colour we see most. The continents look brown, like small islands floating in the huge, blue sea. White clouds wrap around the Earth like a light blanket. The Earth is shaped like a sphere or a ball. It is 25,000 miles around ! It would take more than a year to walk around the whole planet. A spaceship can fly around the widest part of the sphere in only 90 minutes.

Even though spaceships have travelled to the Moon, people cannot visit the Moon without special suits. The Moon has no air or water. Plants and animals can't live there either. Astronauts first landed on the Moon in 1969. After that, there were six more trips to the Moon. They brought back Moon rocks, which scientists are still studying. There are holes or craters, all over the Moon's surface. Scientists believe that meteorites smashed into the Moon millions of years ago and formed the craters.

The Sun is the closest star to Earth. A star is a hot ball of burning gas. The Sun looks very big because it is so close. But the Sun is just a medium sized star. Billions of far-away stars are much bigger than our Sun. The burning gases from the Sun are so hot that they warm the Earth from 93 million miles away ! Even though the Sun is always glowing, the night here on Earth is dark. That's because the Earth rotates around, every 24 hours. During the day, the Earth faces the Sun, then we see light. During the night, the Earth turns away from the Sun, then it faces the darkness of space. Each day we learn more about the Earth, the Moon and the Sun.

[Sainik School Entrance Exam.  
(Class VI) 2019]

9. Why is blue the colour we see most when looking at Earth from outer space ?

(A) Because most of the Earth is covered in land.

(B) Because the Sun's rays make the Earth look blue

(C) Because most of the Earth is covered in water

(D) Because clouds wrap around the Earth.

9. (C) Because most of the Earth is covered in water.

10. What does 'formed' mean ?

- (A) hit (B) made  
(C) broke (D) stopped

10. (B) The word 'Formed' means 'made'. So option (B) is correct.

11. What causes daylight of Earth ?

- (A) The full Moon causes daylight  
(B) Daylight is caused by the Earth facing away, from the Sun.  
(C) The heat of the Sun's rays causes daylight  
(D) Daylight is caused by the Earth facing toward the Sun.

11. (D) Daylight is caused by the Earth facing toward the sun. See the third para of the passage.

12. Which of the following sentences best describes the Sun ?

- (A) The Sun looks small because it is so far from Earth  
(B) The Sun is a ball of burning gases that gives the Earth heat and light.  
(C) The Sun is a small star.  
(D) The Sun is not as hot as it looks.

12. (B) The Sun is a ball of burning gases that gives the Earth heat and light' best describes the Sun. So the option (B) is correct.

13. Why did the astronauts bring rocks back from the Moon ?

- (A) Because they didn't know if they would return to the Moon ever again.  
(B) Because they wanted to prove that they went to the Moon.  
(C) Because they wanted to remember how the Moon looked.  
(D) Because they wanted to study them and learn more about the Moon.

13. (D) The astronauts brought rocks back from the Moon because they wanted to study them and learn more about the Moon.

**Direction (Q. No. 14 to 19)**

Read the following passage and answer the questions.

Everyone thought that Horace Denby was a good and honest citizen. He was about fifty years old and unmarried, and he lived with a housekeeper who worried over his health. In fact, he was usually very well and happy, except for attacks of hay fever in summer. He made expensive locks and was successful enough at his business to have two helpers. Yes, Horace Denby was good and respectable-but not completely honest. Fifteen years ago, Horace had served his first and only sentence in prison for stealing jewels. The priest at the prison had liked Horace-everyone did- and had tried to help him to live an honest life. But Horace did not want to become honest. He only wanted to make sure that his dishonesty never got him into trouble again.

[Sainik School Entrance Exam.  
(Class VI) 2018]

14. Horace Denby was :

- (A) old  
(B) unmarried  
(C) handicapped  
(D) Both (A) and (B)

14. (B) Horace Denby was about fifty years old and unmarried. So, the option (B) is correct.

15. .... worried about the health of Horace.

- (A) his wife  
(B) the priest  
(C) his housekeeper  
(D) None of these

15. (C) His housekeeper worried about the health of Horace.

16. For stealing jewels, Horace was sent to prison :

- (A) only once (B) twice  
(C) thrice (D) never

16. (A) Only once is correct. See the 6th sentence of the passage.

17. The profession of Horace was :

- (A) businessman (B) thief  
(C) housekeeper (D) locksmith

17. (D) The profession of Horace was 'locksmith' means one who makes and repairs locks.

18. Choose the word, which means the opposite of EXPENSIVE.

- (A) cheap (B) luxurious  
(C) costly (D) heavy

18. (A) The word Cheap is the apposite word of 'Expensive'. Luxurious—extremely comfortable, elegant, costly—expensive, heavy of great weight, difficult to lift or move.

19. Choose the word which means almost same as UNMARRIED.

- (A) handsome (B) widow  
(C) young (D) bachelor

19. (D) The word 'bachelor' is the synonym of 'unmarried' handsome—(of a man) good-looking, widow—a woman who has lost her husband by death, young adolescent, existed for only short time.

## Important Questions

### Direction (Q. No. 1 to 100)

Read the following passage carefully and answer the questions given below.

#### Passage-1

There is an old proverb 'Early to bed and early to rise makes a man healthy wealthy and wise.' I am in the habit of getting up early in the morning and have formed the habit of taking long morning walks in the past two years. It is a light exercise and best for physical fitness. The morning air which is fresh and pure is beneficial for the lungs. The early rays of the rising sun are good for healthy skin. 'Health is wealth' and doctors also recommend morning walk to their patients for gaining sound health and freshness of energy.

1. What is good for lungs ?  
(A) Sunrays (B) Fresh air  
(C) Sound sleep (D) Light exercise
2. What is a light exercise ?  
(A) Early to bed  
(B) Early to rise  
(C) Morning walk  
(D) Gaining sound health
3. What is good for skin ?  
(A) Fresh air  
(B) Morning air  
(C) Morning walk  
(D) Rising sun's rays
4. What is best for physical fitness ?  
(A) Light exercise  
(B) Long morning walk  
(C) Early to rise  
(D) Fresh and pure air
5. Long morning walk  
(A) bring sound sleep  
(B) ensures physical fitness  
(C) ensures healthy skin  
(D) keeps healthy, wealthy and wise

#### Passage-2

Mahatma Gandhi lived a splendid long life and has set great moral standards before us. He showed to the world the true way to peace. He wished to see India prosper but he became a martyr for the noble cause of Hindu-Muslim unity at the time of partition when a religious fanatic, Nathuram Godse, shot him dead on

January 30, 1948. His last words were 'Hey Ram'. He lived and died for his country and countryman.

6. Mahatma Gandhi showed the world the true way to :  
(A) prosperity (B) love  
(C) truth (D) peace
7. Mahatma Gandhi became a martyr for the noble cause of :  
(A) truth  
(B) non-violence  
(C) freedom of India  
(D) Hindu-Muslim unity
8. Mahatma Gandhi was shot dead :  
(A) before India achieved independence  
(B) by a mad man  
(C) by an intolerant religious person  
(D) by a non-religious person
9. Mahatma Gandhi set great moral standards. It means :  
(A) he was a great religious teacher  
(B) he was a great moralist  
(C) he made India morally stronger  
(D) moral was everything to him
10. Gandhiji lived and died for his country and countryman. It means :  
(A) he was born in India and died in India  
(B) he was a patriot  
(C) he was a great moralist  
(D) he sacrificed his life for India and her people

#### Passage-3

On one hot day a crow felt very thirsty. He flew from one place to another in search of water. After long hours of labour he found a pitcher. Eagerly, he perched on the mouth of the pitcher. He found that time the family shall be together during the holidays. The children were happy with the holiday plan.

11. The purpose for which the family set down at the table was :  
(A) to decide a place to visit during the vacation  
(B) to educate the children how to carry articles during a visit to a hill station  
(C) to decide the date when they should start their journey  
(D) to tell the children that they will visit a hill station during this vacation

12. The final plan was to visit :  
(A) their village  
(B) a hill station  
(C) their village as well as a hill station  
(D) their home town
13. The final decision was made by :  
(A) the boys (B) the girls  
(C) the women (D) the elders
14. They decided first to go to their village and stay there for :  
(A) a day (B) a week  
(C) ten days (D) a fortnight
15. Why were children happy ?  
(A) Because a hill station was included in their holiday plan  
(B) Because a visit to their village was excluded from their holiday plan  
(C) Because their choice prevailed  
(D) Because they were going all alone to the hill station

#### Passage-4

Once Govind intended to go on pilgrimage with his family. He asked Mirind to accompany. But for his trade's reason, he did not go with him. So Govind thought it safe to leave the box of his jewellery with him, as it was dangerous to leave it in a lone house or take it on the journey. So he went to him with the box. He took him to a lonely place under a tree and handed it over to him. He told Mirind, "Keep it safe with you. I shall return from the journey after six month then I shall take it back from you." Mirind said, "Don't worry, I shall keep it as safe as own."

16. Govind intended to go :  
(A) for a business trip  
(B) to a hill station  
(C) on a long journey to a sacred place  
(D) to his home town for a long period

17. Why did Govind leave his box of jewellery with Mirind ?  
 (A) Because it was not safe to take the box with him on a long journey  
 (B) Because Mirind was his fast friend  
 (C) Because the box was very heavy  
 (D) Because his house was unsafe
18. Why did Govind take Mirind to a lonely place ?  
 (A) To tell him that the box contained valuable jewellery  
 (B) So that no third person could see box  
 (C) To show him what was within the box  
 (D) To tell him that the box will remain with him
19. Where did Govind hand over the box of jewellery to Mirind ?  
 (A) At Mirind's house  
 (B) At his own house  
 (C) In a lonely place  
 (D) In a lonely place under a tree
20. It was not safe to leave the box in a lone house. Here the word 'lone house' means :  
 (A) a house in a deserted place  
 (B) a house where none lives  
 (C) a house without door and lock  
 (D) a house near the forest

#### Passage-5

Our National Flag is tricolour. It has three equal horizontal strips. The strip at the top is saffron, in the middle is white and at the bottom is green. The ratio of width to length of the flag is 2 : 3. In the centre of the white strip is a wheel in navy blue. The wheel represents the *chakra*. Its design is similar to the wheel which appears on the abacus of the Sarnath Lion Capital of Ashoka. Its diameter approximates to the width of the white strip. The wheel has 24 spokes. It was adopted by Constituent Assembly on July 22, 1947. We love our national flag. We respect it. We are ready to sacrifice our life to protect its honour. It represents the nation. So it is a symbol of national honour.

21. In our national flag the wheel is located in the centre of :  
 (A) saffron strip (B) white strip  
 (C) green strip (D) blue strip
22. In our national flag which of the strips is at the bottom in our national flag ?  
 (A) blue (B) saffron  
 (C) white (D) green
23. Why do we love our national flag ?  
 (A) Because it is tricolour  
 (B) Because it has three strips

- (C) Because it has a wheel at the centre  
 (D) Because it is a symbol of national honour

24. Our national flag was approved by :  
 (A) President  
 (B) Lok Sabha  
 (C) Parliament  
 (D) Constituent Assembly
25. The diameter approximates to the width of the white strip. Here the word 'approximates' means :  
 (A) is more or less equal  
 (B) is exactly equal  
 (C) is not equal  
 (D) is related

#### Passage-6

A certain king once fell ill and doctors said that only a sudden fright would restore his health but the king was not a man for anyone to play tricks on, except his fool. One day, when the fool was with him in his boat he cleverly pushed the king into water but he was rescued and put to bed. The fright, the bath and bed cured the diseased king, but he was so angry with the fool that he turned him out of the country.

26. What did the doctor say about the king ?  
 (A) **Only** a sudden fright would restore the king's health  
 (B) Only fool would cure the king  
 (C) Only a boat trick could cure the king  
 (D) The king had suffered a sudden fright
27. He cleverly pushed the king into water but *he* was rescued and put to bed. In this sentence *he* refers to :  
 (A) the king (B) the fool  
 (C) the doctor (D) the river
28. When the fool pushed the king into water they were :  
 (A) in the palace (B) in the bed  
 (C) in the garden (D) in a boat
29. Who played the trick on the king ?  
 (A) The doctor (B) The boatman  
 (C) The fool (D) The fright
30. The fool who cured the king was :  
 (A) rewarded  
 (B) thrown into water  
 (C) turned out of the country  
 (D) put into jail

#### Passage-7

Vidyasagar was a very generous and charitable man. From his earliest years he helped the poor and needy to the utmost of his power.

As a boy at school, he often gave the little food he had to eat, to another boy who had none. If one of his schoolfellows fell ill, little Ishwar would go to his house, sit by his bed and nurse him. His name became a household word in Bengal. Rich and poor, high and low, all loved him alike. No beggar ever asked him for relief in vain. He would never have a Darwan at the gate of his house lest some poor man who wished to see him might be turned away.

31. As a boy at school, Vidyasagar often :  
 (A) ate the food of another poor boy  
 (B) gave his food to a boy who had none  
 (C) ate his food with another poor boy  
 (D) shared his food with other poor boys
32. His name became a *household* word in Bengal. In this sentence the word *household* means :  
 (A) a well-known name  
 (B) a respected name  
 (C) a helpful word  
 (D) a great word
33. No beggar ever asked him for relief in vain. It means :  
 (A) no beggar ever asked him for help  
 (B) he never disappointed any beggar. The beggar took relief in the hour of crisis  
 (C) he begged money to help the poor  
 (D) what ever help he gave to the beggars was fully compensated
34. Vidyasagar, a very generous man belonged to :  
 (A) Andhra Pradesh  
 (B) Maharashtra  
 (C) Bengal  
 (D) Gujarat
35. Vidyasagar helped the poor and needy :  
 (A) in his neighbourhood  
 (B) since his earliest years  
 (C) when he entered the college  
 (D) when he became a rich man

#### Passage-8

Kalidas is known as the Shakespeare of India. His name has been immortalised in the history of Sanskrit literature. He was at the head of the celebrated nine gems which adorned the court of Vikramaditya. The poems and dramas of Kalidas have elicited unreserved praise not only from Indian scholars but even from European critics like Maxmuller. The age in which Kalidas flourished and the place where he was born are matters of dispute. But true genius is independent of time and place and although the century of Kalidas is far more remote, his fame is shining with undiminished grandeur even in our own days.

36. Kalidas wrote :  
 (A) stories (B) novels  
 (C) dramas (D) songs
37. Kalidas is famous as a :  
 (A) *nav-ratna* (B) historian  
 (C) dramatist (D) scholar
38. Kalidas is known as the Shakespeare of India. It means :  
 (A) he lived in India when Shakespeare lived in England  
 (B) he wrote dramas as Shakespeare did  
 (C) his place in Sanskrit literature is as high as that of Shakespeare in English literature  
 (D) he wrote as many dramas as Shakespeare wrote
39. His fame is shining with undiminished grandeur even in our own days. To whom does it refer ?  
 (A) Shakespeare  
 (B) Vikramaditya  
 (C) Kalidas  
 (D) Both Shakespeare and Kalidas
40. Who was a true genius ?  
 (A) Kalidas  
 (B) Vikramaditya  
 (C) Shakespeare  
 (D) Both Kalidas and Vikramaditya

#### Passage-9

People sometimes get injured in accidents and require treatment from a doctor. But before a doctor can be brought or the person is taken to a doctor or a hospital, often the person needs immediate treatment. The help which is given to the injured before arrival of a doctor or reaching a hospital, is called 'First Aid'. In India some organisations like the Indian Red Cross Society, give first aid-training to students and others.

41. Red Cross Society :  
 (A) provides training to doctors  
 (B) selects students for blood donation  
 (C) gives training in first aid  
 (D) runs hospitals
42. Indian Red Cross Society :  
 (A) provides immediate treatment to the injured  
 (B) sends doctor to treat sick persons  
 (C) supplies medicines to poor patients  
 (D) gives first aid-training
43. First aid is the treatment given to an injured person :  
 (A) in the hospital  
 (B) at home  
 (C) before he is taken to a doctor or a hospital  
 (D) at the clinic
44. One needs first aid when :  
 (A) one is sick  
 (B) one is injured in an accident  
 (C) one's stomach is upset  
 (D) one is referred to a hospital
45. First Aid means :  
 (A) the treatment first given  
 (B) the treatment given by Red Cross Society  
 (C) immediate treatment before regular medical care service is obtained  
 (D) to take the injured to the nearest available doctor
46. The biggest desert in the world is in :  
 (A) India (B) Africa  
 (C) Arabia (D) America
47. In desert regions :  
 (A) there is no rainfall  
 (B) it rains heavily  
 (C) there is enough rain  
 (D) there is a little rain
48. The climate in a desert is :  
 (A) pleasant (B) difficult  
 (C) comfortable (D) cold
49. Date palms grow in :  
 (A) plains  
 (B) hilly regions  
 (C) deserts  
 (D) snowy regions
50. Very few trees grow in deserts because :  
 (A) most trees need water to grow  
 (B) there is sand all-around  
 (C) nights are very cold  
 (D) there is no one to take care of trees

#### Passage-11

There was a poor man. He was thought to bring bad luck. Akbar heard of this man's

reputation and wanted to see him. He was brought to Akbar. The emperor took a look at him and asked him to be brought back in the evening. That day Akbar was very busy and even forgot to eat. By the evening, he was very tired. He was informed that his son Prince Salim had fallen ill. It was that man's fault, Akbar decided. He called his courtiers and told them that he wanted to hang that man. All of them agreed immediately. But Birbal said, "Your face was the first face that man saw today and he has to die because of it." Akbar realised his mistake and rewarded Birbal for his wisdom.

51. Why had Akbar not eaten his food ?  
 (A) He was ill  
 (B) He had seen that man  
 (C) He was very busy  
 (D) He was not hungry
52. Who was not well on that day ?  
 (A) King Akbar  
 (B) His courtier  
 (C) The poor man  
 (D) Prince Salim
53. Why did the king decide to hang the poor man ?  
 (A) The poor man refused to meet him  
 (B) The poor man was really very unlucky  
 (C) Birbal advised him to do so  
 (D) The king had a very bad day
54. Birbal was rewarded because :  
 (A) he was in king's favour  
 (B) he brought the poor man to the king  
 (C) he made the king realise his mistake  
 (D) he taught the poor man a lesson
55. The opposite word for 'forget' is :  
 (A) forgive (B) active  
 (C) remember (D) meet

#### Passage-12

Issac Newton was a great scientist. He was born in 1642 and died in 1727. He discovered the law of gravitation. It was the falling of an apple in the garden that set him thinking. He was trying to find why the Earth went round the Sun and the Moon round the Earth. He asked himself, "Why does an apple fall to the Earth?" This led him to his discovery. Newton also found out that white light is made up of seven colours. We see these colours in the rainbow. He also made many other discoveries. Newton was a very learned man. But he was very humble. Shortly before his death, he said, "I seem to have been only like a boy playing

on the sea-shore while the great ocean of truth lay undiscovered before me.”

56. Issac Newton was a great :  
 (A) doctor (B) teacher  
 (C) leader (D) scientist
57. When was he born ?  
 (A) In 1727 (B) In 1627  
 (C) In 1642 (D) In 1742
58. What did set him thinking ?  
 (A) The falling of a fig  
 (B) The falling of an apple  
 (C) The falling of a coconut  
 (D) The falling of a man
59. How many colours do make the white light ?  
 (A) Five (B) Ten  
 (C) Three (D) Seven
60. The Earth moves round the :  
 (A) Moon (B) Sun  
 (C) Mars (D) Stars

#### Passage-13

The family sat down at the table and began to talk about the summer holidays. They had to decide a place to visit during the vacation. Should they go to their village or to a hill station ? The parents preferred the village while the children, wished to go to the hill station. After few moments of discussion, the elders decided to visit both the places. First they shall go to the village for a week and then stay at the hill station for the remaining days. For the first time, the family shall be together during the holidays. The children were happy with the holiday plan.

61. The purpose for which the family set down at the table was to :  
 (A) decide a place to visit during the vacation  
 (B) educate the children how to carry articles during a visit to a hill station  
 (C) decide the date when they should start their journey  
 (D) tell the children that they will visit a hill station during this vacation
62. The final plan was to visit :  
 (A) their village  
 (B) a hill station  
 (C) their village as well as a hill station  
 (D) their home town
63. The final decision was made by the :  
 (A) boys (B) girls  
 (C) women (D) elders
64. They decided first to go to their village and stay there for :

- (A) a day (B) a week  
 (C) ten days (D) a fortnight
65. Why were children happy ?  
 (A) Because a hill station was included in their holiday plan  
 (B) Because a visit to their village was excluded from their holiday plan  
 (C) Because their choice prevailed  
 (D) Because they were going all alone to the hill station

#### Passage-14

Prevention is better than cure and it is recognized that the only way to get rid of malaria completely is to get rid of the mosquitoes which cause it. Malaria is always associated with damp and marshy land. This is not because the land is damp, but because stagnant water is the breeding place of the mosquito which begins its life as a larva living in the water. Malaria does not frequently occur in dry desert countries because mosquitoes cannot breed there. The only way to destroy mosquitoes is to prevent their breeding in standing water.

66. What can be a suitable title for the passage ?  
 (A) Prevention is better than cure  
 (B) How to get rid of malaria ?  
 (C) The breeding ground of malaria  
 (D) The deadly mosquito
67. How does malaria occur ?  
 (A) It is caused by contaminated food  
 (B) It is caused by contaminated water  
 (C) It is caused by mosquitoes Breeding in damp and marshy land  
 (D) It is a seasonal disease, no cause is associated with it
68. How can we get rid of malaria ?  
 (A) We can get rid of malaria by destroying mosquitoes and preventing their breeding in standing water  
 (B) We can get rid of malaria by inoculation  
 (C) We can get rid of malaria by vaccination  
 (D) We can prevent malaria by taking quinine pills regularly
69. Why do we not get malaria in the dry desert ?  
 (A) Because the sand of the dry desert kills mosquitoes causing malaria  
 (B) Because mosquitoes causing malaria do not breed in dry desert  
 (C) Because there is no pollution in the atmosphere of a dry desert  
 (D) Because we develop immunity to malaria in the climate of dry desert

70. Give the opposite word of ‘stagnant’.  
 (A) still (B) deep  
 (C) shallow (D) flowing

#### Passage-15

The playground is as essential as the classroom. The student learns his lesson of the mind in the classroom and adds to his store of knowledge. But the playground trains his powers of mind and body both. Here he learns physical skill and endurance. He further learns how to remain alert and watchful; how to get an advantage over his opponent. Thus, the student gets mental and physical training in the playground together. But the greatest good derived by him is that he learns the team spirit. He is governed by no selfish or individual motives; he rather thinks of his team as a whole. This team spirit helps him to fight for noble causes in later life.

71. Where does a student learn physical skill ?  
 (A) Playground (B) Classroom  
 (C) School (D) Computer hall
72. Where does a student learn lessons of mind ?  
 (A) Playground (B) Classroom  
 (C) School (D) Computer hall
73. What is the greatest good learnt by the student ?  
 (A) Physical skill  
 (B) Mental training  
 (C) Selfish motive  
 (D) Team spirit
74. Choose the incorrect statement :  
 (A) Both playground and classroom are essential  
 (B) A student learns team spirit  
 (C) A student becomes careless and watchless  
 (D) He gets mental and physical training
75. Which one of the following words means ‘the ability to continue doing something painful or difficult for a long period of time without complaining’ ?  
 (A) Essential (B) Watchful  
 (C) Endurance (D) Advantage

#### Passage-16

The Earth is known as a ‘watery planet’ because it is the only planet of the solar system containing water in abundance. The presence of life on our planet is mainly due to water and air. More than two-thirds of the Earth’s surface is covered with water. Oceans contain about 97% of the total water available on the Earth’s surface. The fresh water found in the form of snow and ice on the ground and water in lakes and rivers accounts for the remaining 3%. Ocean

water is always saline. Hence, it is not of direct use to man. It is, however, important as it provides the bulk of water vapour that enters the atmosphere where it forms clouds.

76. The presence of life on our Earth is due to :
- good food and crops
  - good roads and motor cars
  - air and water
  - sunlight
77. .... surface of the Earth is covered with water.
- More than half
  - More than two-thirds
  - Less than half
  - Less than two-thirds
78. Spot the correct statement.
- Man uses ocean water directly
  - Fresh water is always saline
  - Ocean water is always saline
  - Earth gets water from Sun
79. Oceans contain :
- 55% of the total water
  - 3% of the total water
  - 97% of the total water
  - ice and snow
80. Clouds are formed :
- by the water vapours
  - by the sunlight
  - by the ice and snow
  - by air and sunlight

#### Passage-17

English is an international language. It is the language of trade and commerce all over the world. It has a rich literature and a vast store of knowledge. It has tremendously influenced our culture and regional languages. It is still needed for scientific and technical education. Higher studies in any field are not possible without the knowledge of English. Infact, English is a window on our modern world culture and civilization. If it is properly studied, it can make Indian languages rich. It may not be the official language of India, but it has come to stay as the library language in our country—a language of research and higher education.

The importance of English in India has increased during the Post-Independence years and now it is viewed not as a colonial legacy but as a useful medium of communication. The study of English needs greater emphasis today than ever before, without blunting the growth of our mother tongue.

81. Which is an international language ?
- English
  - Hindi
  - Sanskrit
  - Chinese

82. English is the.....of India.
- window
  - official language
  - library language
  - colonial legacy
83. Are higher studies possible without the knowledge of English ?
- Yes
  - Sometimes
  - No
  - Always
84. Choose the incorrect statement.
- English is the language of trade and commerce
  - English is a window to modern world
  - English is a library language in our country
  - English is a colonial legacy in our country
85. Which word in the passage is opposite of 'sharp' ?
- Legacy
  - Culture
  - Emphasis
  - Blunting

#### Passage-18

Pablo Picasso showed his truly exceptional talent from a very young age. His first word was lapiz (Spanish for pencil) and I learnt to draw before he could talk. He was the only son in the family and very good-looking, so he was thoroughly spoilt. I hated school and often refused to go unless his doting parents allowed him to take one of his father's pet pigeons with him.

Apart from pigeons, his great love was art and when in 1891 his father, who was an amateur artist, got a job as a drawing teacher a college, Pablo went with him to the college. He often watched his father paint and sometimes was allowed to help. One evening his father was painting a picture of their pigeons when he had to leave the room. He returned to find that Pablo had completed to picture and it was so amazingly beautiful and lifelike that he gave his son his own palette and brushes and never painted against Pablo was just thirteen.

86. As a boy Pablo Picasso was :
- ordinary looking but talented
  - handsome and talented
  - handsome and studious
  - handsome and hardworking
87. He was spoilt mostly because he was :
- a smart boy
  - loved by one and all
  - the only son in the family
  - always surrounded by notorious boys
88. Picasso went to school only when :
- his friends accompanied him
  - his father went with him

- he was allowed to paint at school
- he was allowed to carry a pet with him

89. When his father painted in the college, Pablo :
- occasionally helped him
  - rarely helped him
  - always helped him
  - invariably helped him
90. Pablo's father gave up painting because he :
- did not like the job
  - retired from the college
  - was impressed by his son's talent
  - lost interest in painting

#### Passage-19

We shall go on to the end, we shall fight in France, we shall fight on the seas and oceans, we shall fight with the growing confidence and strength in the air, we shall defend our island whatever the cost may be, we shall fight on the beaches, we should fight on the landing grounds we shall fight in the fields and in the streets, we shall fight in the hills. We shall never surrender and even if this island or a large part of it were subjugated and starving, then our empire beyond the seas would carry on the struggle, until the New World steps forth to the rescue and the liberation of the old.

91. On the basis of the passage which of the following statements may be said to be correct ?
- The speaker is encouraging his men for the conquest of France
  - The speaker is an aggressive and maniacal war-monger
  - The speaker is not satisfied with the conquest of the island
  - The speaker is a patriot urging the defence of his motherland
92. The speaker in the passage wants to go on fighting because :
- he is a raving lunatic
  - he is in a state of utter despair
  - he expects help from other quarters
  - he is the leader of a suicide squad
93. Which of the following pair of the phrases helps best to bring out the intention of the speaker ?
- "Go on to the end", "shall never surrender"
  - "Growing confidence", "subjugated and starving"
  - "Subjugated and starving", "fighting on the landing ground"
  - "Fighting in the streets", "subjugated and starving"

94. The passage consists of repetitive patterns in syntax and vocabulary. The effect of this style is that it :
- (A) reveals the speaker's defects in giving a speech
- (B) produces the impression of bad poetry
- (C) conveys the speaker's helpless situation
- (D) reinforces the speaker's basic intention
95. The tone of the speaker is :
- (A) pleading and urging
- (B) inspiring and encouraging
- (C) discouraging and gloomy
- (D) menacing and bullying

#### Passage-20

We stand poised precariously and challengingly on the razor's edge of destiny. We are now at the mercy of atom bombs and the like which would destroy us completely if we fail to control them wisely. And wisdom in this crisis means sensitiveness to the basic values of life; it means a vivid realization that we are literally living in one world where we must either swim together or sink together. We cannot afford to tamper with man's single minded loyalty to peace and international understanding. Anyone, who does it is a traitor not only to man's past and present, but also to his future, because he is mortgaging the destiny of unborn generations.

96. From the tone and style of the passage it appears that the writer is :
- (A) a prose writer with a fascination for images and metaphors
- (B) a humanist with a clear foresight

- (C) a traitor who wishes to mortgage the destiny of future generations
- (D) unaware of the global power situation
97. The best way to escape complete annihilation in an atomic war is to :
- (A) world or international understanding and harmony
- (B) invent more powerful weapons
- (C) turn to religion
- (D) ban nuclear weapons
98. The phrase 'razor's edge of destiny' means a/an :
- (A) enigma that cuts through the pattern of life like the edge of a razor
- (B) critical situation that foreordains the future
- (C) sharp line of division that marks the alternative courses of action in the future
- (D) destiny with sharp edges
99. According to the writer, 'wisdom' on the razor's edge of destiny means :
- (A) awareness that we stand poised precariously on the razor's edge of destiny
- (B) determination to ban nuclear weapons
- (C) responsibility to the 'unborn generations'
- (D) awareness of the basic values of life.
100. The author is concerned about the threat of nuclear weapons because he feels that :
- (A) a nuclear war will destroy human civilization

- (B) all countries are interlinked and one cannot escape the consequences of what happens to another country
- (C) the world is on the brink of disaster
- (D) his country is threatened by a nuclear war

#### Answers

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





# Chapter 1

## Coding-Decoding

### 1. CODING

When any letter/word/sentence is written and said in such a language that hides the actual meaning of that particular letter/word/sentence from others except the desired person.

### 2. DECODING

Decoding means to find out the actual meaning of a coded letter/word/sentence. Generally, decoding is done on the basis of the letters of the English alphabet and their corresponding positions.

### 3. THE POSITION OF LETTERS IN ENGLISH ALPHABET

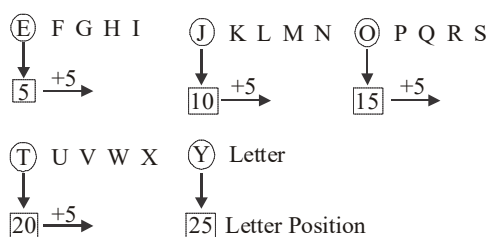
There are 26 letters (A to Z) in the English alphabet. The position of the letters are fixed in English alphabets *i.e.*, if letter A is 1, B is 2, C is 3.....X is 24, Y is 25 and Z is 26. *i.e.*,

English Alphabet	A	B	C	D	E	F	G	H	I	J	K	L	M
Forward Position	1	2	3	4	5	6	7	8	9	10	11	12	13

English Alphabet	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Forward Position	14	15	16	17	18	19	20	21	22	23	24	25	26

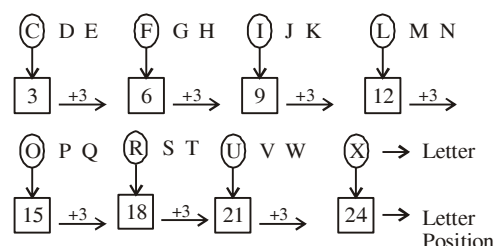
The position of letters in alphabetical order can be remembered in the following ways :

- I. It should be learnt by the formulae 'EJOTY'. Here is a gap of four letters between each letter.



**EJOTY** sounds like a girl that is 'JOTI', so it could be easily remembered by this name.

- II. It should be learnt by the formulae 'CFILORUX'. Here is a gap of two letters between each letter.



**CFILORUX** sounds like an injection name because the injections which are prescribed by doctors are having strange names.

### 4. OPPOSITE LETTERS

Questions based on Coding-Decoding are also found on the basis of the opposite letters. First we know that what are opposite letters ? Opposite letters can be learnt in the following way :

- e.g.* In the English alphabet, the first letter from left is A and the first letter from right is Z, are opposite to each other.

The second letter from left is B and the second letter from right is Y, are opposite to each other.

*i.e.*,

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

Now, it is clear that the above presentation of two letters is called opposite letters of each other.

#### Trick to Remember

A	B	C	D	E	F
↕	↕	↕	↕	↕	↕
Z	Y	X	W	V	U
(A to Z)	(Boy)	(Crax)	(Dew)	(Evening)	(Few)

G	H	I	J	K	L	M
↕	↕	↕	↕	↕	↕	↕
T	S	R	Q	P	O	N
(G.T. (Honey (Indian (Jaipur (Kanpur (Love) (Man)						
Road) Singh) Railway) Queen)						

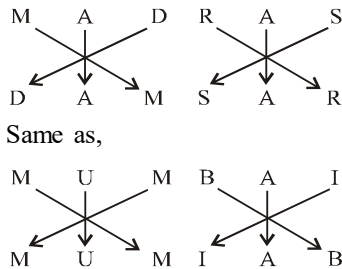
## 5. BASED ON LETTER CODING

### I. Coding based on re-arrangement of letters

Ex. : If in a certain code, 'MADRAS' is written as 'DAMSAR', then how will 'MUMBAI' be written in that code ?

- (A) BAIUMM (B) MBIAUM  
(C) MUMIAB (D) IMBUAM

Sol. (C) : As,



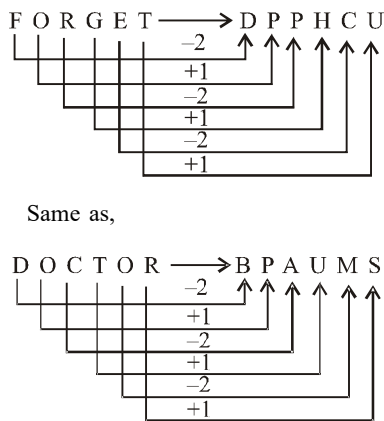
∴ MUMBAI → MUMIAB

### II. Coding based on replacement of letters forward/backward

Ex. : In a certain code, FORGET is written as DPPHCU then How will DOCTOR be written in that code ?

- (A) BPARPP (B) BPAUPS  
(C) EMDRPP (D) BPAUMS

Sol. (D) : As,



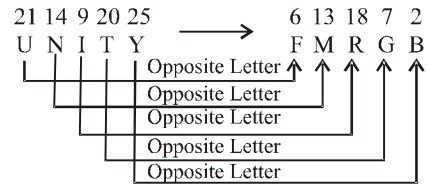
∴ DOCTOR → BPAUMS

### III. Coding based on opposite letters

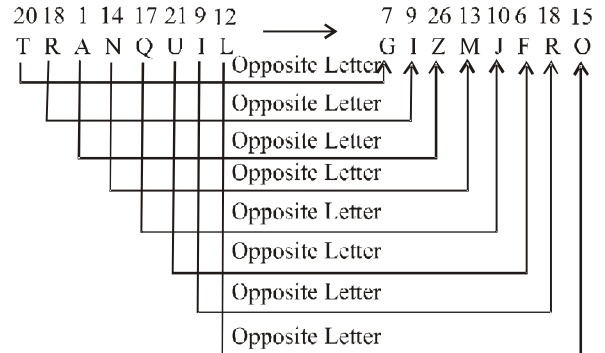
Ex. : In a certain code, 'UNITY' is written as 'FMRGB' then How is 'TRANQUIL' written in that code ?

- (A) GMPFZROI (B) MJROI ZBS  
(C) TZMFJROM (D) GIZMJFRO

Sol. (D) : As,



Same as,



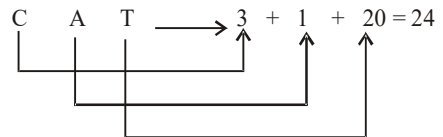
∴ TRANQUIL → GIZMJFRO

## 6. CODING BASED ON NUMBERS

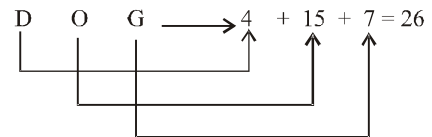
Ex. 1. If 'CAT' is coded as '24', then 'DOG' will be coded as,

- (A) 20  
(B) 23  
(C) 26  
(D) 28

Sol. (C) : As,



Same as,

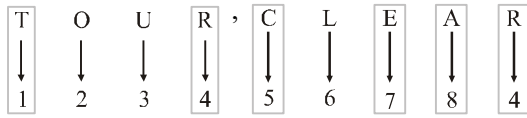


∴ DOG → 26

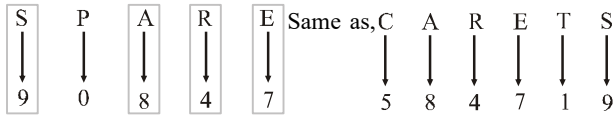
Ex. 2. A certain code, 'TOUR' is coded as '1234', 'CLEAR' is coded as '56784' and 'SPARE' is coded as '90847'. How would 'CARETS' be written in that code ?

- (A) 584719  
(B) 684729  
(C) 584279  
(D) 729580

Sol. (A) : As,



And



∴ CARETS → 584719

## 7. CODING BASED ON WORDS

Ex. : If 'flower' is called 'tree', tree is called 'red', red is called 'gold' and 'gold' is called 'white', then which of the following items, jewellery is made ?

- (A) Tree
- (B) Red
- (C) White
- (D) Gold

Sol. (C): 'Jewellery' is made of 'gold', but here gold is called 'white'. Hence in this case 'jewellery' is made of 'white'.

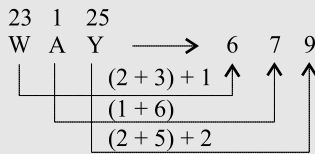
## Sainik Previous Years (2018-2021) Questions

1. If 'WAY' is coded as 679, 'MAY' is coded as 579, then 'YAW' will be coded as—

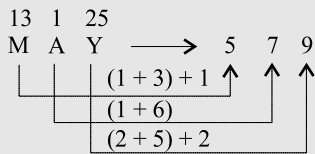
- (A) 976
- (B) 769
- (C) 679
- (D) 579

[Sainik School Entrance Exam.  
(Class VI) 2021]

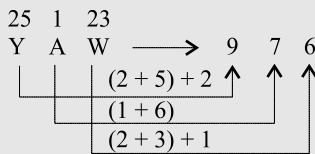
1. (A) As,



And,



Similarly,

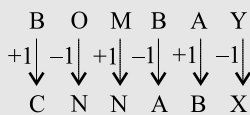


2. In a code, 'BOMBAY' is coded as 'CNNABX', then what will be the code of 'DELHI' ?

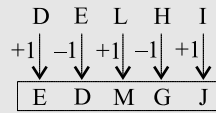
- (A) EDMJG
- (B) GMDEJ
- (C) DEGMJ
- (D) EDMGJ

[Sainik School Entrance Exam.  
(Class VI) 2021]

2. (D) As,



Similarly,

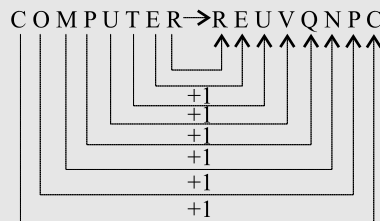


3. In a certain code language, COMPUTER is written as RFUVQNPC. How will MEDICINE be written in that code language ?

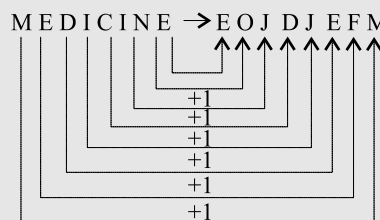
- (A) MFEDJJOE
- (B) EOJDEJFM
- (C) MFEJDJOE
- (D) EOJDJEFM

[Sainik School Entrance Exam.  
(Class VI) 2021]

3. (D) As,



Similarly,

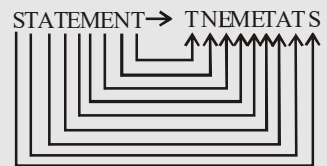


4. If STATEMENT is coded as TNMETATS then POLITICAL will be coded as :

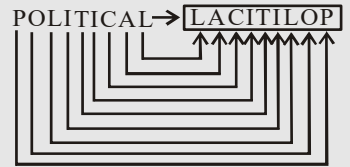
- (A) LACITLOP
- (B) LCATILIO
- (C) OPILITACL
- (D) LACITIPOL

[Sainik School Entrance Exam.  
(Class VI) 2020]

4. (A) As,



Similarly,

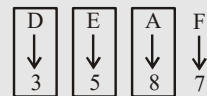


5. If in a certain code DEAF is written as 3587 and FILE is written as 7465 then IDEAL will be written as :

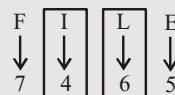
- (A) 43568
- (B) 43586
- (C) 63548
- (D) 48536

[Sainik School Entrance Exam.  
(Class VI) 2020]

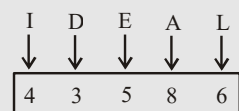
5. (B) As,



And,



Similarly,

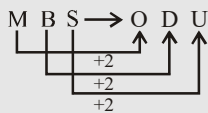


6. If in a certain code MBS is coded as ODU then BRL will be coded as ?

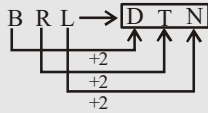
- (A) DTN
- (B) DUN
- (C) CSM
- (D) CTN

[Sainik School Entrance Exam.  
(Class VI) 2020]

6. (A) As,



Similarly,

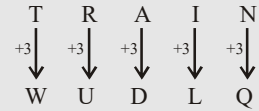


7. If TRAIN is written as WUDLQ, then BUS would be written as .....

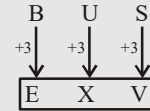
- (A) EXU  
(B) DWU  
(C) EXV  
(D) VXE

[Sainik School Entrance Exam.  
(Class VI) 2018]

7. (C) As,



Similarly,



## Important Questions

1. In a code language, the following alphabets are coded in a particular way :

A C D E G H K L M N O S

Λ ρ ∥ ∩ ∪ ∩ ← ∩ ∩ ∪ ∥ ∨

Which word can be decoded from the following ?

∩ ∥ ∩ ∩ ∩ ∩

- (A) HONEST  
(B) HOMAGE  
(C) HOCKEY  
(D) HOSTEL

2. If GOLD is written as IQNF, how WIND can be written in the code ?

- (A) YKPF (B) VHMC  
(C) XJOE (D) DNIW

3. If D = 4, BAD = 7, then what is the value of ANT = ?

- (A) 8 (B) 17  
(C) 35 (D) 37

4. If HKUJ means FISH, what does UVCD mean?

- (A) STAR (B) STAB  
(C) STAL (D) STAK

5. If F = 6, MAT = 34, then how much is CAR ?

- (A) 21 (B) 22  
(C) 25 (D) 28

6. In a certain code, 'MANAGER' is written as 'REGANAM', then how 'MOTION' is written as ?

- (A) NOIOMT (B) NOITOM  
(C) NOITMO (D) NOIMOT

7. In a certain code 'KINDLE' is written as ELDNIK, how 'EXOTIC' can be written in that code ?

- (A) EXIOTC (B) COXITE  
(C) CXOTIE (D) CITOXE

8. Given below are capital letters in the first line and numbers in the second line. Numbers and letters are code for each other. Choose the correct code for given in letters :

B D F H J L N P R T

2 7 0 4 1 6 9 3 8 5

Given letters : F B R L P H

- (A) 0 2 8 9 3 4 (B) 0 2 8 6 3 1  
(C) 0 2 8 3 6 4 (D) 0 2 8 6 3 4

9. If in a certain language, MADRAS is coded as NBESBT, how is BOMBAY coded in that language ?

- (A) CPNCBX (B) CPNCBZ  
(C) CPOCBZ (D) CQOCBZ

10. In a certain code language, OPERATION is written as NODQZSHNM. How is INVISIBLE written in that code ?

- (A) JOWJTJCMF  
(B) JOWJTHAKD  
(C) HMUHTJCMF  
(D) HMUHRHAKD

11. In a certain code, FAVOUR is written as EBUPST. How is DANGER written in that code ?

- (A) CBFFDS (B) CBMHDS  
(C) EBFHDS (D) EBHHFS

12. If SUMMER is coded as RUNNER, the code for WINTER will be :

- (A) SUITER (B) VIOUER  
(C) WALKER (D) SUFFER

13. If in a certain language, MIRACLE is coded as NKUEHRL, then how is GAMBLE coded in that language ?

- (A) JDOCMF (B) CLEMNK  
(C) HCPFQK (D) AELGMN

14. In a certain code, BELIEF is written as AFKKDI. How is SELDOM written in the code ?

- (A) RDKCNL (B) RFKENM  
(C) RFKFNP (D) TFKENP

15. If EHFNRQ is the code for BECKON, which word has the code QDFWXULQ ?

- (A) NCAUTIRN  
(B) NACUTIRN  
(C) NATCRIUN  
(D) NACTURIN

16. In a certain code, DECEMBER is written as ERMBCED. Which word will be written as ERMVBENO in that code ?

- (A) AUGUST  
(B) SEPTEMBER  
(C) OCTOBER  
(D) NOVEMBER

17. If in a certain code, 'GIGANTIC' is written as 'GIGTANCI'. How 'MIRACLES' be written in that language ?

- (A) MIRLCAES (B) MIRLACSE  
(C) RIMCALSE (D) RIMLCAES

18. If in a certain code language 'SYSTEM' is written 'SYSMET', 'NEARER' is written as 'AENRER', then how will 'FRACTION' be written in that language ?

- (A) CARFNOIT (B) CARFTION  
(C) ARFCNOIT (D) FRACNOIT

19. If 'MEAT' is written as 'TEAM', then 'BALE' is written, as :

- (A) ELAB (B) EABL  
(C) EBLA (D) EALB

20. In a certain code language, 'O' is written as 'E', 'A' as 'C', 'M' as 'I', 'S' as 'O', 'N' as 'P', 'E' as 'M', 'I' as 'A', 'P' as 'N' and 'C' as 'S', then how will 'COMPANIES' be written in that code language ?

- (A) SEIACPAMO  
(B) SMINCPAMO  
(C) SEINCPAMO  
(D) SEINCPMIO

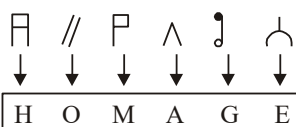
21. If '6' is coded as 'T', '8' is coded as 'I', '3' is coded as 'N', '9' is coded as 'Q', '2' is coded as 'Y', '5' is coded as 'D' and '7' is coded as 'R', then what is the uncoded form of 'DRINTQ' ?

- (A) 573869 (B) 578396  
(C) 576839 (D) None of these

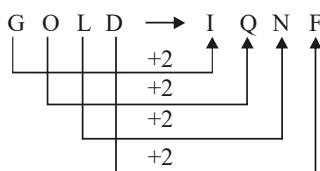
22. If in a certain code language 'STAR' is written as '\$ 3 \* 2', 'TORE' is written as '\$ 3 2 @', then how will 'OATS' be written in that language ?

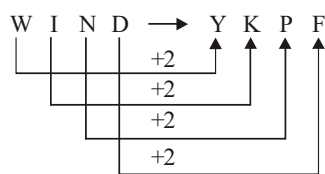
- (A) 3 \* 5 \$ (B) 3 \* \$ 5  
(C) 3 \$ \* 5 (D) 3 5 \* \$
23. If in a certain coded language, 'UNCLE' is written 94672, 'SISTER' is written as 535821 and SON is written as 584, then what will be the code of NOISE in that coded language ?  
(A) 64825 (B) 84652  
(C) 46356 (D) 48352
24. If 'PARK' is coded as '5394', 'SHIRT' is coded as '17698' and 'PANDIT' is coded as '532068', how would you code 'NISHAR' in that code language ?  
(A) 266734 (B) 231954  
(C) 201739 (D) 261739
25. If "man" is called 'girl', 'girl' is called 'woman', 'woman' is called 'boy', 'boy' is called 'butler' and 'butler' is called 'rogue', who will serve in a restaurant ?  
(A) Butler (B) Girl  
(C) Man (D) Rogue
26. If 'black' means 'Pink' 'Pink' means 'blue' 'blue' means 'white', 'white' means 'yellow', 'yellow' means 'red' and 'red' means 'brown', then what is the colour of clear sky ?  
(A) Brown (B) Pink  
(C) Blue (D) White
27. If 'wall' is called 'window', 'window' is called 'door', 'door' is called 'floor', 'floor' is called 'roof' and 'roof' is called 'ventilator', what will a person stand on ?  
(A) Window (B) Wall  
(C) Floor (D) Roof
28. If ZEBRA can be written as 2652181, how can COBRA be written ?  
(A) 302181 (B) 3152181  
(C) 31822151 (D) 1182153
29. If E = 5 and HOTEL = 12, how will you code LAMB ?  
(A) 7 (B) 10  
(C) 26 (D) 28
30. If the code word of 'LOSE' is 'MQVT' then what would be the code of 'GAIN' ?  
(A) HLCR (B) GCLR  
(C) HCLS (D) HCLR

## Solutions

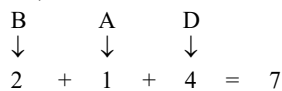
1. (B) 

2. (A) As,

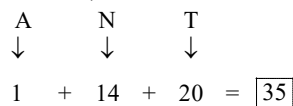


Same as,  


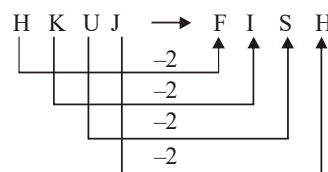
3. (C) As, D = 4 and



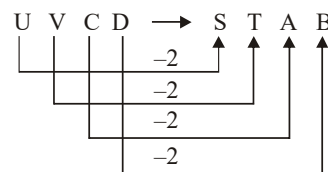
Same as,



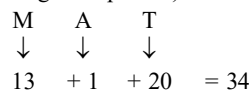
4. (B) As,



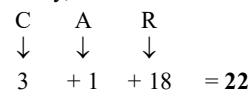
Same as,



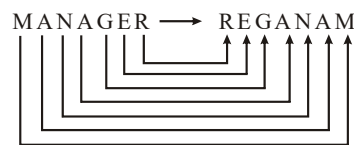
5. (B) F = 6 (Position number in the English alphabet)



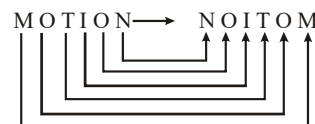
Similarly,



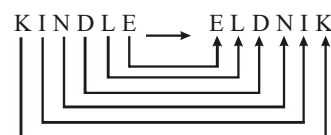
6. (B) As,



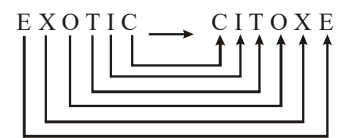
In the same way as :



7. (D) As,

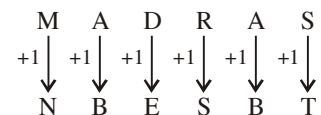


Same as,

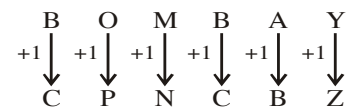


8. (D) 

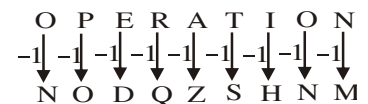
9. (B) As,



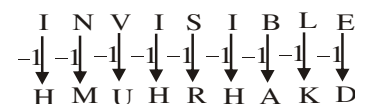
Similarly,



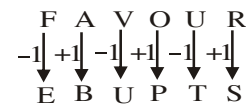
10. (D) As,



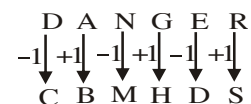
Similarly,



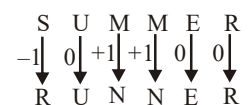
11. (B) As,



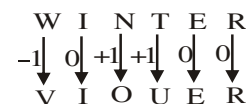
Similarly,



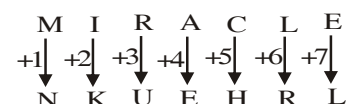
12. (B) As,



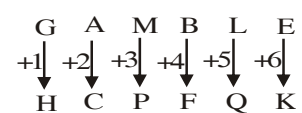
Similarly,



13. (C) As,



Similarly,



14. (C) As,

B E L I E F  
-1 +1 -1 +2 -1 +3  
A F K K D I

Similarly,

S E L D O M  
-1 +1 -1 +2 -1 +3  
R F K F N P

15. (D) As,

E H F N R Q  
-3 -3 -3 -3 -3 -3  
B E C K O N

Similarly,

Q D F W X U L Q  
-3 -3 -3 -3 -3 -3 -3 -3  
N A C T U R I N

16. (D) As,  $\frac{DE}{1} \frac{CE}{2} \frac{MB}{3} \frac{ER}{4}$

$\frac{4}{ER} \frac{3}{MB} \frac{2}{CE} \frac{1}{DE}$   
Similarly,

$\frac{NO}{1} \frac{VE}{2} \frac{MB}{3} \frac{ER}{4}$   
 $\frac{4}{ER} \frac{3}{MB} \frac{2}{VE} \frac{1}{NO}$

17. (B) As,

1 2 3 4 5 6 7 8  
G I G A N T I C  
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
G I G T A N C I  
1 2 3 6 4 5 8 7

Similarly,

1 2 3 4 5 6 7 8  
M I R A C L E S  
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
M I R L A C S E  
1 2 3 6 4 5 8 7

18. (A) As,

S Y S T E M → S Y S M E T  
1 2 3 4 5 6 3 2 1 6 5 4  
and

N E A R E R → A E N R E R  
1 2 3 4 5 6 3 2 1 6 5 4  
Similarly,

FRACTION → 

C	A	R	F	N	O	I	T
4	3	2	1	8	7	6	5

19. (D) As,

MEAT → TEAM

Similarly,

BALE → EALB

20. (C)

C O M P A N I E S  
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
S E I N C P A M O  
∴ COMPANIES ⇒ SEINCPAMO

21. (D)

D R I N T Q  
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
5 7 8 3 6 9  
∴ DRINTQ ⇒ 578369

22. (B) As,

$\begin{matrix} S \\ \downarrow \\ 5 \end{matrix} \begin{matrix} T \\ \downarrow \\ \$ \end{matrix} \begin{matrix} A \\ \downarrow \\ * \end{matrix} \begin{matrix} R \\ \downarrow \\ 2 \end{matrix}$  and  $\begin{matrix} T \\ \downarrow \\ \$ \end{matrix} \begin{matrix} O \\ \downarrow \\ 3 \end{matrix} \begin{matrix} R \\ \downarrow \\ 2 \end{matrix} \begin{matrix} E \\ \downarrow \\ @ \end{matrix}$

Similarly,  $\begin{matrix} O \\ \downarrow \\ 3 \end{matrix} \begin{matrix} A \\ \downarrow \\ * \end{matrix} \begin{matrix} T \\ \downarrow \\ \$ \end{matrix} \begin{matrix} S \\ \downarrow \\ 5 \end{matrix}$

∴ OATS ⇒ 3\*\$5

23. (D) From the given coded language, it is clear that

U - 9, N - 4, C - 6  
L - 7, E - 2, S - 5  
I - 3, T - 8, R - 1  
O - 8

∴ NOISE ⇒ 48352

24. (D) As,

P  $\begin{matrix} A \\ \downarrow \\ 3 \end{matrix} \begin{matrix} R \\ \downarrow \\ 9 \end{matrix} \begin{matrix} K \\ \downarrow \\ 4 \end{matrix}$ ,  $\begin{matrix} S \\ \downarrow \\ 1 \end{matrix} \begin{matrix} H \\ \downarrow \\ 7 \end{matrix} \begin{matrix} I \\ \downarrow \\ 6 \end{matrix} \begin{matrix} R \\ \downarrow \\ 9 \end{matrix} \begin{matrix} T \\ \downarrow \\ 8 \end{matrix}$

and

P  $\begin{matrix} A \\ \downarrow \\ 3 \end{matrix} \begin{matrix} N \\ \downarrow \\ 2 \end{matrix} \begin{matrix} D \\ \downarrow \\ 0 \end{matrix} \begin{matrix} I \\ \downarrow \\ 6 \end{matrix} \begin{matrix} T \\ \downarrow \\ 8 \end{matrix}$

Similarly,

N I S H A R  
↓ ↓ ↓ ↓ ↓ ↓  
2 6 1 7 3 9

25. (D) A 'butler' serves in a restaurant but 'butler' is called 'rogue'. So, a 'rogue' will serve in the restaurant.

26. (B) The colour of clear sky is blue. But as given, 'Pink' means 'Blue'. So, the aeroplanes fly in the clear sky whose colour is pink.

27. (D) A person will stand on the 'floor' and 'floor' is called 'roof'. So, a person will stand on the roof.

28. (B) As,

Z E B R A  
↓ ↓ ↓ ↓ ↓  
26 5 2 18 1 = 2652181

Same as,

C O B R A  
↓ ↓ ↓ ↓ ↓  
3 15 2 18 1 = 3152181

29. (A) E → 5 (Position in the English alphabet)

HOTEL =  $\frac{H+O+T+E+L}{5}$ ,  
 $= \frac{8+15+20+5+12}{5} = \frac{60}{5} = 12$

Same as,

LAMB =  $\frac{L+A+M+B}{4} = \frac{12+1+13+2}{4}$   
 $= \frac{28}{4} = 7$

30. (D)

L O S E → M Q V I  
12 15 19 5 13 17 22 9  
+1  
+2  
+3  
+4

Therefore,

G A I N → H C L R  
7 1 9 14 8 3 12 18  
+1  
+2  
+3  
+4

□□