

**ENGLISH LANGUAGE AND COMPREHENSION**

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

**EXPLANATION:-**

6. (4) Replace 'been' with 'be'.  
 'Modal verbs Can/could/shall/should etc. + V<sub>bf</sub>' is the correct structure.  
 8. (1) 'Debauchery' is incorrectly spelt here, means- extreme and unreasonable involvement in physical pleasures.  
 16. (4) Replace 'so for the sakes of' with 'just for the sake of'.

<b>WORD</b>	<b>MEANING IN ENGLISH</b>	<b>MEANING IN HINDI</b>
Absolute	Free or nearly free from mixture, pure	पूर्ण
Abundance	A large quantity, plenty	प्रचुरता
Arraign	To bring a person to a court of law in order to formally accuse him/her of a crime	आरोप लगाना
Astrology	The study of the positions and movements of the stars and planets and the way that some people believe they affect people and events	ज्योतिष शास्त्र
Concealment	The act of hiding something	छिपाने की क्रिया
Concurrent	Operating or occurring at the same time	समवर्ती
Conscience	Knowledge of right and wrong and a feeling one should do what is right	अंतरात्मा की आवाज, जमीर
Drought	A prolonged dry period in the natural climate cycle that can occur anywhere	सूखा
Dubious	Doubtful	संदिग्ध
Emphatic	Said or expressed in a strong way	(कथन, अभिव्यक्ति आदि) सशक्त, जोरदार
Feast	A meal with plenty of food and drink	दावत
Flounder	To struggle to move or obtain footing	लड़खड़ाना
Genealogy	The study of family lines of ancestors	वंशावली
Gregarious	Tending to associate with others of one's kind, social	झुण्ड में रहनेवाला
Lair	A place where you hide, stay alone or where lions rest etc.	मांद
Libertarian	A person who believes in liberty of thought and action	मुक्तिवादी
Malignant	Evil in influence or effect, injurious	घातक
Physiology	Study of body functions	शरीर क्रिया विज्ञान
Psychology	The scientific study of the mind and the way that people behave	मनोविज्ञान
Sheer	Used to emphasize the size, degree or amount of something	एकदम
Steady	Developing, growing or happening gradually and at a regular rate	नियमित
Straighten	To make or become straight	सीधा करना
Wallow	To roll oneself about in a lazy, relaxed, or ungainly manner	लोट लगाना

**GENERAL INTELLIGENCE & REASONING**

1. (3)  $11 : 1331 \rightarrow (11)^3 \rightarrow 1331$   
 $12 : 1728 \rightarrow (12)^3 \rightarrow 1728$   
 $16 : 4086 \rightarrow (16)^3 \rightarrow 4096$   
 Not(4086)  
 $13 : 2197 \rightarrow (13)^3 \rightarrow 2197$
2. (1) The people who are good at exactly two sports =  $11+14 + 18 = 43$
3. (4) Total age of Sweta, Damini, Supriya = 56 years  
 3 years ago their age collectively decreases by =  $3 \times 3 = 9$  years  
 Before three years total age of sweta, damini and supriya =  $56 - 9 = 47$  years.
4. (3)  $12, 24, 72 \rightarrow \begin{matrix} 12 & \xrightarrow{\times 2} & 24 & \xrightarrow{\times 3} & 72 \end{matrix}$   
 $16, 32, 96 \rightarrow \begin{matrix} 16 & \xrightarrow{\times 2} & 32 & \xrightarrow{\times 3} & 96 \end{matrix}$   
 Similarly,  
 $14, 28, 84 \rightarrow \begin{matrix} 14 & \xrightarrow{\times 2} & 28 & \xrightarrow{\times 3} & 84 \end{matrix}$
5. (3) a b s/a b s/a b s/a b s  
 6. (2)  
 7. (1)  
 8. (3)
- 
9. (4)
- $$\begin{matrix} 1 & \xrightarrow{\times 1+1} & 2 & \xrightarrow{\times 2+2} & 6 & \xrightarrow{\times 3+3} & 21 & \xrightarrow{\times 4+4} & 88 & \xrightarrow{\times 5+6} & 445 & \xrightarrow{\times 6+6} & 2676 \end{matrix}$$
10. (2)  $196-2 \rightarrow \sqrt{196} \rightarrow \frac{14}{7} = 2$   
 $784-4 \rightarrow \sqrt{784} \rightarrow \frac{28}{7} = 4$   
 Similarly,  
 $3136-8 \rightarrow \sqrt{3136} \rightarrow \frac{56}{7} = 8$
11. (3)
12. (3)  $S \xrightarrow{+1} T$        $S \xrightarrow{+1} T$   
 $U \xrightarrow{-1} V$        $U \xrightarrow{-1} V$   
 $N \xrightarrow{+1} O$  Similarly,  $N \xrightarrow{+1} O$   
 $S \xrightarrow{-1} T$        $R \xrightarrow{-1} S$   
 $E \xrightarrow{+1} F$        $I \xrightarrow{+1} J$   
 $T \xrightarrow{+1} U$        $S \xrightarrow{+1} T$   
                          $E \xrightarrow{+1} F$
13. (3) Army is a collective noun of soldiers. In the same way, Shoal is a collective noun of Fish.

14. (2) Except option 2, all are in the form of Baby — adult
15. (2) Charlie's brother's wife is Penny  
 Charlie — ⊕ = Penny  
   ⊕
16. (1)  $(23)^2, (6)^2, (18)^2 \leftarrow (529,36,324)$   
 $(7)^2, (12)^2, (10)^2 \leftarrow (49,144,100)$   
 Similarly,  
 $(17)^2, (2)^2, (32)^2 \leftarrow (289,4,1024)$
17. (1) E D E K A  
 5 4 5 11 1  
                                 ↓  
   add  
   1+1  
   =2  
 5 4 5 2 1  
 Similarly,  
 A O R B G  
 1 15 18 2 7  
                                 ↓            ↓  
   add        add  
   6        9  
 5 6 9 2 7
18. (4)
19. (1) K                  I                  O (Odd)  
                                 -2                  +6  
 D                  E                  H                  W                  X                  A  
                                 +1                  +3                  +1                  +3  
 N                  O                  R  
                                 +1                  +3
20. (2) (Consonants + 2)  
 (Vowels no change)
- |     |     |     |   |   |     |     |   |
|-----|-----|-----|---|---|-----|-----|---|
| S   | T   | Y   | E | E | L   | S   | E |
| +2↓ | +2↓ | +2↓ |   |   | +2↓ | +2↓ |   |
| U   | V   | A   | E | E | N   | U   | E |
- Similarly,
- |     |   |     |   |
|-----|---|-----|---|
| M   | I | N   | E |
| +2↓ |   | +2↓ |   |
| O   | I | P   | E |
21. (4) 4. Gaiety  
 1. Gain  
 3. Gainsay  
 2. Gaiter  
 5. Gauge
22. (2)
23. (3) Nib is a part of Pen In the same way Room is a part of the house.
24. (1)
25. (4) Statement I -  
 $4 \times 7 + 8 \div 2 - 5 = 14$   
 Interchanging 5 and 7.  
 $4 \times 5 + 8 \div 2 - 7 = 14$   
 $= 20 + 4 - 7 = 14$   
 $= 17 \neq 14$

Statement II-  
 $7 + 6 \times 4 - 5 \div 3 = 22$   
 Interchanging 5 and 7.  
 $5 + 6 \times 4 - 7 \div 3 = 22$   
 $= 5 + 24 - \frac{7}{3} \Rightarrow 29 - \frac{7}{3}$   
 $= \frac{80}{3} \neq 22$   
 Neither statement I nor II correct

**ANSWER KEY**

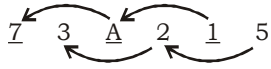
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**QUANTITATIVE APITUDE**

1. (2) Let, two number are  $10x, 13x$   
 $30\%$  of first number = 16  
 $\frac{80}{100} \times 10x = 16$   
 $\Rightarrow (x = 2)$   
 $B = 13x \Rightarrow 13 \times 2 = 26$   
 $50\%$  of B  $\Rightarrow \frac{26}{2} = 13$
2. (2) Ratio of production of company C<sub>1</sub> and C<sub>6</sub>.  
 $C_1 : C_6$   
 $100 : 50$   
 $2 : 1$
3. (4) Total CP of D, E and F =  $550 + 750 + 650 = 1950$   
 Total SP of E, F and G  $\Rightarrow 700 + 450 + 650 = 1800$   
 Percentage of total CP to SP  
 $= \frac{1950}{1800} \times 100 \Rightarrow 108.33\%$
4. (4)  $\sec \theta \times \sqrt{1-\sin^2 \theta}$   
 $\sec \theta \times \cos \theta = 1$
5. (3)  $3 \tan \theta = 5 \sin \theta$   
 $3 \times \frac{\sin \theta}{\cos \theta} = 5 \sin \theta$   
 $\cos \theta = \frac{3}{5}$
6. (1) 6 year ago total age of (Abhay + wife + child) =  $42 \times 3 = 126$   
 Present age of (Abhay + wife + child) =  $126 + 3 \times 6$   
 $= 126 + 18 = 144$  years  
 Present age of his wife and child =  $30 \times 2 + 8 \times 2$   
 $= 60 + 16 = 76$

Age of Abhay = 144 years - 76 years. = 68 years.

7. (1) 7 3A 215 is divisible by 11. Then difference of sum of their alternate digit must be zero or divisible by 11.



$$(7 + A + 1) - (3 + 2 + 5) = 0$$

$$8 + A - 10 = 0$$

$$A = 2$$

If 56B 26 is divisible by 9 then their sum of digit also divisible by 9.

$$\frac{5+6+B+2+6}{9} \Rightarrow \frac{19+B}{9}$$

Then B must be 8.

$$\therefore A = 2 \text{ and } B = 8$$

$$A + B = 2 + 8 \Rightarrow 10$$

8. (3)  $p + q = 5$ ,  $pq = 18$   
 $p^3 + q^3 = (p + q) [(p+q)^2 - 3pq]$   
 $\Rightarrow 5[5^2 - 3 \times 18]$   
 $\Rightarrow 5 [25 - 54]$   
 $\Rightarrow 5 [-29] = -145$

9. (1)  $60\%$  of  $870 - \sqrt{1444} + 18 \times 19$

$$\frac{3}{5} \times 870 - 38 + 342$$

$$= 522 - 38 + 342 = 826$$

10. (3)  $\frac{70}{100}(x - y) = \frac{30}{100}(x + y)$

$$\frac{7}{10}(x - y) = \frac{3}{10}(x + y)$$

$$7(x - y) = 3(x + y)$$

$$7x - 7y = 3x + 3y$$

$$4x = 10y$$

$$\left(\frac{x}{y} = \frac{5}{2}\right)$$

$$\text{Percentage of } x \text{ to } y = \frac{2}{5} \times 100$$

$$= 40\%$$

11. (3)  $10\% = \frac{10}{100} \Rightarrow \frac{1}{10}$

$$R : R_1$$

$$10 : 11$$

$$\text{Ratio of area of circle} = \left(\frac{R}{R_1}\right)^2$$

$$= \frac{100}{121}$$

Area of circle increased by 21%.

12. (3)  $(a+b)^2 = 100$ ,  $ab = 25$   
 $a^2 + b^2 + 2ab = 100$

$$a^2 + b^2 + 2ab - 4ab = 100 - 4ab$$

$$a^2 + b^2 - 2ab = 100 - 4 \times 25$$

$$(a - b)^2 = 0$$

$$a - b = 0$$

13. (1) Average production of wheat in 5 different states.

$$\Rightarrow \frac{60+80+62+50+48}{5}$$

$$\Rightarrow \frac{300}{5} = 60 \text{ tonnes.}$$

14. (3)  $x = -2$ ,  $y = 1$

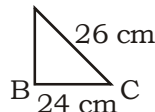
$$\left(\frac{4}{x} + y\right) \left[\frac{16}{x^2} + y^2 - \frac{4y}{x}\right]$$

$$\left[\frac{4}{-2} + 1\right] \left[\frac{16}{4} + 1 - \frac{4(1)}{(-2)}\right]$$

$$= [-1] [4 + 1 + 2]$$

$$= -1 \times 7 = -7$$

15. (4) A



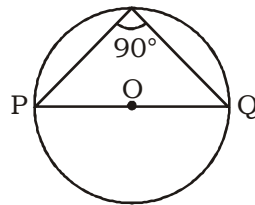
From Pythagorean theorem.

$$AB = \sqrt{(26)^2 - (24)^2}$$

$$AB = \sqrt{676 - 576} = \sqrt{100}$$

$$AB = 10 \text{ cm}$$

16. (4)  $90^\circ$  angle only make when PQ is diameter of the circle.



$$PO = 15 \text{ cm}$$

$$OQ = 15 \text{ cm}$$

$$PQ = 30 \text{ cm}$$

17. (4)  $8\%$  discount =  $\frac{-2}{25}$

$$SP = \frac{\times 23}{25}$$

$$MP = \frac{23}{25} = 18400$$

$$MP = 18400 \times \frac{25}{23} \Rightarrow 20000$$

18. (2) Total number of car sold in January and April more than the number of car sold in May =  $5400 \times (28\% + 24\% - 12\%)$   
 $5400 \times (52\% - 12\%)$

$$5400 \times \frac{40}{100} \Rightarrow 2160$$

19. (1) Principle = 4000

$$\text{Amount} = 4960$$

$$\text{SI of 4 years} = 960$$

$$\text{SI of 1 year} = \frac{960}{4} = ₹240$$

Rate of interest increased to

$$1.5 \text{ times} = 6\% \times \frac{3}{2} = 9\%$$

$$\text{SI for 4 years} = 4000 \times \frac{9}{100} \times 4$$

$$= ₹1440$$

$$\text{Amount after 4 years} = 4000 + 1440 \Rightarrow ₹5440$$

20. (3) Let, the efficiency of A =  $10x$

$$\text{Total work} = 10x \times 20 = 200x$$

Time was taken with 80%

$$\text{efficiency} = \frac{200x}{8x} = 25 \text{ days.}$$

21. (4) Radius of circular park

$$= \frac{420}{2} = 210 \text{ m}$$

$$\text{Speed in m/sec.} = 9 \times \frac{5}{18}$$

$$= \frac{5}{2} \text{ m/sec.}$$

Circumference of circular park

$$= 2\pi r \Rightarrow 2 \times \frac{22}{7} \times 210 = 1320 \text{ m}$$

Time taken to cover circular

$$\text{park} = \frac{1320}{\frac{5}{2}} = 528 \text{ second}$$

$$= 8.8 \text{ min}$$

22. (3) Area of square =  $(\text{side})^2 = 1156$

$$(\text{side} = 34)$$

Length of rectangle

$$= 2 \times \text{side} \Rightarrow 2 \times 34 = 68 \text{ cm}$$

$$\text{Breath of rectangle} = \text{side} - 14$$

$$= 34 - 14 = 20 \text{ cm}$$

$$\text{Ratio} = L : B$$

$$68 : 20$$

$$17 : 5$$

23. (3) Total distance covered

$$= \text{Time} \times \text{Speed}$$

$$\Rightarrow 2 \frac{1}{6} \times 12 \text{ km/h}$$

$$\Rightarrow \frac{13}{6} \times 12 \Rightarrow 26 \text{ km}$$

$$\text{Time taken by cycle} = \frac{26}{13} \Rightarrow 2$$

hrs. 120 minutes)

$$24. (4) \sec 60^\circ + \tan 15^\circ - \sin^2 90^\circ = 2 + 1 - (1)^2 = 2$$

$$25. (3) CP = 4500 + 500 \text{ (Repair)} = ₹5000$$

$$SP = 4500$$

$$\text{Loss} = ₹500$$

$$\text{Loss \%} = \frac{500}{5000} \times 100 = 10\%$$

### ANSWER KEY

1. (2) 2. (2) 3. (4) 4. (4) 5. (3)  
6. (1) 7. (1) 8. (3) 9. (1) 10. (3)  
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### GENERAL AWARENESS

1. (2) Laterite, soil layer that is rich in iron oxide and derived from a wide variety of rocks weathering under strongly oxidizing and leaching conditions. It forms in tropical and subtropical regions where the climate is humid.
2. (1)
3. (1) 2022-23 Vijay Hazare Trophy  
Champions - Saurashtra  
Runners-up - Maharashtra  
Player of the series - Rituraj Gaikwad  
Most runs - Narayan Jagadeesan  
Most wickets - Jaydev Unadkat
4. (1)
5. (4) Article 17 - abolishes untouchability and forbids its practice in any form.  
Article 18 - abolishes titles and prohibits the State from conferring any title, except military and academic titles, on any citizen.  
Article 15 - prohibits discrimination against any citizen on grounds of religion, race, caste, sex or place of birth.
6. (1) Pralhad Joshi - Minister of Coal
7. (2) Nakki Lake - Mount Abu  
Bhojtal(Upper Lake) - Madhya Pradesh
8. (2) Ghana Vadya - cymbals, bells, and gongs.  
Sushira - flute and shehnai.  
Avanaddha Vadya - sitar and veena.

Tata Vadya - tabla and mridangam

9. (1)

10. (2) Magnetic Tape is a storage medium for digital data, typically used in magnetic tape drives, and consists of a thin strip of plastic coated with a magnetic material.

Optical Disk is a type of storage media that uses laser light to read and write data, including formats like CD, DVD, and Blu-ray.

Flash Memory is a type of non-volatile memory that can be electrically erased and reprogrammed, commonly used in portable devices like USB drives, memory cards, and solid-state drives.

11. (3) Champaran Agrarian Law was passed by the British Government in 1918 after the Mahatma Gandhi had launched his historic Champaran Satyagraha Movement in 1917 to abolish the forcible cultivation of indigo on the land of farmers. This Bill was introduced in the Legislative Council on 29th November 1917 by W. Maude.

12. (3)

13. (4) Original Code refers to the actual programming code written in a specific programming language, that a computer can understand and execute.

Small Code, also known as microcode, is a low-level code that runs on the microprocessors in a computer, and it is used to implement complex instructions. Naive Code refers to code that is simple and straightforward, but may not be optimized for performance or efficiency.

14. (1) Bajrang Punia is wrestler who won Gold in Commonwealth Games 2018, 2022 and 2018 Commonwealth Games Jakarta and the Bronze medal in the 2020 Olympics in Tokyo.

15. (1) Sound waves cannot travel in vacuum. Sound is a longitudinal wave. The speed of the sound is directly proportional to the density of the medium. Frequency audible sound is from 20Hz to 20000hz.

16. (1)

17. (4)

18. (3)

19. (3) First winner - Bhalchandra Bhaskar Bhagwatm, Om Prakash Bhardwaj and O. M. Nambiar

Dronacharya Award 2022-

Jiwanjot Singh Teja (Archery)

Mohammad Ali Qamar (Boxing)

Suma Siddharth Shirur (Para Shooting)

Sujeet Maan (Wrestling)

20. (1) Jaipur - Pink City

Bhopal - City of Lakes

Blue - Jodhpur

21. (1) The northern plain has been formed by the interplay of the three major river systems, namely the Indus, the Ganga and the Brahmaputra along with their tributaries. This plain spreads over an area of 7 lakh sq. km. The plain being about 2400 Km long and 240 to 320 Km broad, is a densely populated physiographic division.

Alluvial soil is formed by the deposition of silt by rivers. This soil is generally fertile, rich in minerals like lime, potash, and phosphoric acid. It is porous and loamy. Paddy, sugarcane, banana, and turmeric are cultivated in this soil.

22. (1) Startup India launched by Ministry of Commerce and Industry.

23. (1) Constitutional struggle of Jinnah and political struggle of founding fathers, the Muslim League played a decisive role in World War II in the 1940s and as the driving force behind the division of India along religious lines and the creation of Pakistan as a Muslim state in 1947.

24. (2)

25. (3) Chief of Defence Staff (CDS) was formed on 1<sup>st</sup> January 2020.

First holder - General Bipin Rawat

### ANSWER KEY

1. (2) 2. (1) 3. (1) 4. (1) 5. (4)  
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