

**ENGLISH LANGUAGE AND COMPREHENSION**

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

**EXPLANATION:-**

3. (3) Replace 'society' with 'society's'.  
 4. (2) Plural Subject (we) takes a Plural Verb (keep).  
 13. (2) we need an Adverb (Properly) with a verb (treated).  
 14. (1) Replace 'then' with 'than'. 'Than' is used with a comparative degree.  
 17. (2) 'Slim' is incorrectly spelt here, means- thin in an attractive way

**WORD**

**MEANING IN ENGLISH**

**MEANING IN HINDI**

|           |  |   |
|-----------|--|---|
| Abstract  | Existing only as an idea, not as a physical thing  | विचार या कल्पना मात्र में न कि कोई भौतिक वस्तु                      |
| Abstruse  | Little known about or understood by people   | गूढ़, गहन, कठिन, दुर्बोध  |
| Algae     | Very simple plants that grow mainly in water   | शैवाल, सेवार  |
| Algid     | Marked by prostration, cold and clammy skin, and low blood pressure.   | ठंडा  |
| Beam      | A line of light  | प्रकाश-रेखा, किरण किरणपुंज  |
| Bitter    | Having or being a disagreeable sharp taste that is one of the four basic taste sensations  | कड़वा   |
| Fanatic   | A person who is very enthusiastic about something and may have extreme or dangerous opinions (especially about religion or politics) | कट्टर व्यक्ति (विशेषतः धर्म या राजनीति के विषय में)                 |
| Gelid     | Icy; extremely cold.   | हिम-शीत   |
| Igneous   | Used about rocks) formed when magma comes out of a volcano and becomes solid   | ज्वालामुखी से निकले लावा के ठोस हो जाने पर बनी (चट्टानें), आग्नेय   |
| Militant  | Engaged in warfare or combat   | उग्रवादी  |
| Moderate  | Being, having, using, etc. Neither too much nor too little of something  | मध्यम स्तर का (न बहुत अधिक न बहुत कम)                               |
| Penetrate | To go through or into something, especially when this is difficult   | भेदना, घुसना  |
| Phlegm    | A specific type of mucus that originates in your lungs and throat  | बलगम  |
| Recondite | Abstruse, little known   | जिनके बारे में कम जानकारी हो  |
| Sectarian | Connected with the differences that exists between religious groups  | सांप्रदायिक, पंथिक (विभिन्न धार्मिक वर्गों की भिन्नताओं से संबंधित) |
| Soar      | To fly aloft or about  | ऊपर उड़ना   |
| Sour      | Having a sharp taste like that of a lemon  | खट्टा   |
| Steam     | The hot gas that is produced by boiling water  | वाष्प, भाप  |
| Surrogate | One acting in the place of another   | स्थानापन्न व्यक्ति  |
| Zealot    | A person who is very enthusiastic and has strong beliefs, especially about religion and politics                                     | विशेषकर धर्म एवं राजनीति के विषय में अतिउत्साही; कट्टरपंथी, समर्थक  |

**GENERAL INTELLIGENCE & REASONING**

1. (1)  
 2. (1) After arranging letters, more will come in the fourth position.  
 3. (1)

|             |                  |             |                  |             |                  |             |                  |
|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|
| I           | N                | T           | E                | R           | N                | A           | L                |
| Place Value | Opp. Place Value | Place Value | Opp. Place Value | Place Value | Opp. Place Value | Place Value | Opp. Place Value |
| 9           | 13               | 20          | 22               | 18          | 13               | 1           | 15               |

and

|             |                  |             |                  |             |                  |             |                  |
|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|
| M           | O                | U           | N                | T           | A                | I           | N                |
| Place Value | Opp. Place Value | Place Value | Opp. Place Value | Place Value | Opp. Place Value | Place Value | Opp. Place Value |
| 13          | 12               | 21          | 13               | 20          | 26               | 9           | 13               |

Similarly,

|             |                  |             |                  |             |                  |             |                  |
|-------------|------------------|-------------|------------------|-------------|------------------|-------------|------------------|
| P           | A                | Y           | M                | F           | N                | T           | S                |
| Place Value | Opp. Place Value | Place Value | Opp. Place Value | Place Value | Opp. Place Value | Place Value | Opp. Place Value |
| 16          | 26               | 25          | 14               | 5           | 13               | 20          | 8                |

4. (1) I.  $11 + 6 \times 8 - 8 \div 2 = 15$   
 Interchanging  $\times$  and  $-$ ,  
 $11 + 6 - 8 \times 8 \div 2$   
 $= 11 + 6 - 8 \times 4$   
 $= 11 + 6 - 32$   
 $= -15$   
 $\therefore$  Statement is incorrect.  
 II.  $15 - 4 \times 3 + 6 \div 1 = 63$   
 Interchanging  $\times$  and  $-$   
 $15 \times 4 - 3 + 6 \div 1$   
 $= 60 - 3 + 6 = 63$   
 $\therefore$  Statement is correct

5. (1) **R T W P S V**  
 18 20 23 16 19 22  
 $\xrightarrow{+2}$   $\xrightarrow{+3}$   $\xrightarrow{+3}$   $\xrightarrow{+3}$   
**A D G I L O**  
 1 4 7 9 12 15  
 $\xrightarrow{+3}$   $\xrightarrow{+3}$   $\xrightarrow{+3}$   $\xrightarrow{+3}$

6. (3) As Den is Lion's living area, the Web is the Living area of the Spider.

7. (3) 286, 456, 340  $\Rightarrow 456 - 286 = 170 \times 2 = 340$   
 347, 592, 490  $\Rightarrow 529 - 347 = 245 \times 2 = 490$   
 Similarly,  
 198, 279, 162  $\Rightarrow 279 - 198 = 81 \times 2 = 162$

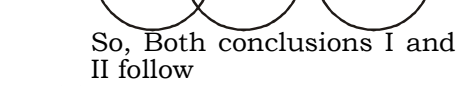
8. (1) The alphabet E is opposite to the alphabet C

9. (3) There are total 10 cubes.

10. (1) '#' will come opposite to the face 9

11. (3) The letter S is on the opposite face of the face showing H.

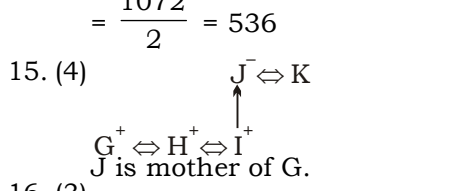
12. (2) Stationary



14. (1) 413, 662, 911  $\Rightarrow 413 + 911 = \frac{1324}{2} = 662$

387, 636, 885  $\Rightarrow 387 + 885 = \frac{1272}{2} = 636$

Similarly,  
 287, 536, 785  $\Rightarrow 287 + 785 = \frac{1072}{2} = 536$



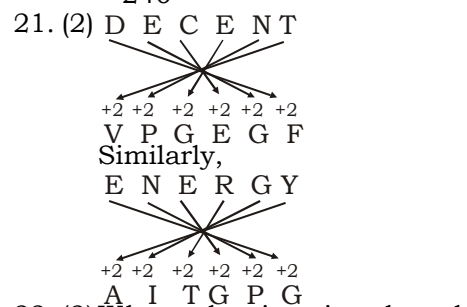
16. (3)  
 17. (3)  
 18. (3)

O L R  
 $\xrightarrow{+3}$   $\xrightarrow{-7}$   $\xrightarrow{+8}$   
**R E Z**  
 $\xrightarrow{+3}$   $\xrightarrow{-7}$   $\xrightarrow{+8}$   
**U X H**  
 $\xrightarrow{+3}$   $\xrightarrow{-7}$   $\xrightarrow{+8}$   
**X Q P**  
 $\xrightarrow{+3}$   $\xrightarrow{-7}$   $\xrightarrow{+8}$   
**A J X**

19. (4) 17, 51, 153  $\Rightarrow 17 \times 3 = 51 \times 3 = 153$   
 32, 96, 288  $\Rightarrow 32 \times 3 = 96 \times 3 = 288$

Similarly,  
 42, 126, 378  $\Rightarrow 42 \times 3 = 126 \times 3 = 378$   
 20. (4) 8 A 7 = 56,  
 $\Rightarrow 8 \times 7 = 56$

Similarly,  
 9 A 11 = 99  
 $\Rightarrow 9 \times 11 = 99$   
 16 A 15  
 $16 \times 15 = 240$



22. (2) Where boxing is played called Ring. Similarly, the Rink is a place where skating is played.

23. (2) Pedology ~ Fishes  
 Other than the above pair, all are studies in respective parts

24. (1) 2, 4, 7, 11, 16, **22**  
 $\xrightarrow{+2}$   $\xrightarrow{+3}$   $\xrightarrow{+4}$   $\xrightarrow{+5}$   $\xrightarrow{+6}$

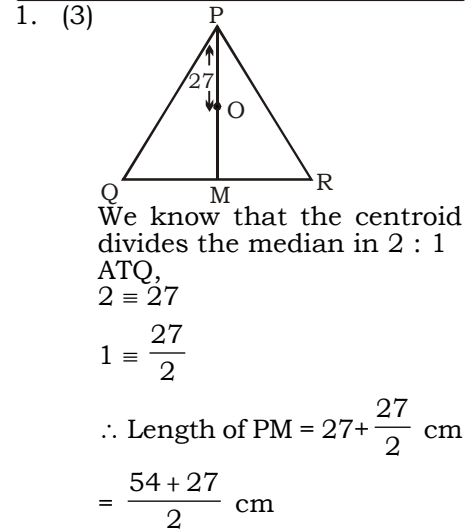
25. (4) 8 : 128  $\Rightarrow 8 \times 16 = 128$   
 16 : 256  $\Rightarrow 16 \times 16 = 256$   
 Similarly,

? : 176  $\Rightarrow \frac{176}{16} = 11$

**ANSWER KEY**

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

**QUANTITATIVE APTITUDE**



$= \frac{81}{2}$  cm  
 40.5 cm

2. (3) The 3 digit number series which are divisible by 20 is 100, 120, 140, ..... 980.  
 First term = 100  
 Last term = 980  
 $\therefore$  Difference = 20  
 $\therefore n^{\text{th}}$  term =  $a + (n - 1)d$   
 Or,  $980 = 100 + (n - 1)20$

Or,  $\frac{980 - 100}{20} = n - 1$   
 Or,  $n = 44 + 1$   
 Or,  $n = 45$

[n = no. of terms]  
 $\therefore$  Sum of all 3-digit number  
 $= \frac{45}{2} (100 + 980)$

$= \frac{45}{2} \times 1080$   
 $= 45 \times 540$   
 $= 24300$

3. (3) Total weight of 10 persons =  $(40 \times 10)$  kg  
 $= 400$  kg  
 After joining new person total weight =  $(11 \times 42)$  kg  
 $= 462$  kg

$\therefore$  Weight of new person =  $(462 - 400)$  kg  
 $= 62$  kg

4. (2)  $\text{cosec}A (1 - \cos A) (\text{cosec}A + \cot A)$   
 $= \frac{1}{\sin A} (1 - \cos A)$

$\left( \frac{1}{\sin A} + \frac{\cos A}{\sin A} \right)$   
 $= \frac{1}{\sin^2 A} (1 - \cos A) (1 + \cos A)$

$= \frac{1}{\sin^2 A} (1 - \cos^2 A) = \frac{1}{\sin^2 A} \times \sin^2 A = 1$

5. (2) Amount = 20000  
 Principal = 12500  
 $\therefore$  Interest = 20000 - 12500 = 7500

$\therefore$  Time =  $\frac{7500 \times 100}{12500 \times 8}$  yr  
 $= 7.5$  yr

6. (4) Ratio of number of boys and girls = 5 : 4 = 9  
 ATQ,  
 $9 \equiv 414$   
 $1 \equiv 46$   
 $5 \equiv 230$   
 $4 \equiv 184$

After getting admitted 46 more boys, then the number of boys =  $230 + 46 = 276$

∴ Ratio of boys and Girls  
= 276 : 184  
= 3 : 2

7. (2) Curved surface area =  $2\pi rh$   
unit<sup>2</sup>

$$= 2 \times \frac{22}{7} \times 7 \times 5 \text{ cm}^2$$

$$= 220 \text{ cm}^2$$

∴ Total surface area = 220 +

$$2 \times \frac{22}{7} \times 49 \text{ cm}^2$$

$$= 220 + 308 \text{ cm}^2$$

$$= 528 \text{ cm}^2$$

8. (2)  $\frac{3}{4} \div \frac{9}{64} + \frac{7}{11} \times \frac{121}{14} - \frac{9}{13} \times \frac{65}{36}$

$$\frac{1}{2} \div \frac{4}{5} + \frac{3}{4} \times \frac{16}{5}$$

$$= \frac{16}{3} + \frac{11}{2} - \frac{5}{4}$$

$$= \frac{5}{8} + \frac{4}{5}$$

$$= \frac{1150}{171}$$

9. (4) From triplet for the triangle  $\Delta OQP$ ,  
We will get,  
OP = 13

10. (4) The average of an odd number series is the middle of that number series.

Also, adding any number to every number is equivalent to adding that number to the average.

Average of total 10 even number = A + 5

11. (2)  $\sin A = \frac{6}{7}$

$$\therefore \cos A = \sqrt{1 - \sin^2 A}$$

$$= \sqrt{1 - \frac{36}{49}}$$

$$= \frac{\sqrt{13}}{7}$$

$$\therefore \sec A = \frac{1}{\cos A} = \frac{7}{\sqrt{13}}$$

12. (1) I. Production of sugar by A in year J and K

$$= 70 + 50$$

$$= 120$$

Production of sugar by B in year L and M

$$= 70 + 60$$

$$= 130$$

% of production of A more to production of B

$$= \frac{10}{130} \times 100$$

$$= 7.69\%$$

Statement is incorrect.

II. Total production of sugar by B in M and N = 60 + 45 = 105

Total production of sugar by A in K and L = 50 + 30 = 80

∴ Ratio of production by B to production by A

$$= 105 : 80$$

$$= 21 : 16$$

∴ Statement is correct

13. (3) Let actual time taken scooter to reach x hr

ATQ,

$$80 \times (x - 1) = 50 \times \left(x + \frac{4}{5}\right)$$

$$\text{Or, } 8(x - 1) = 5 \times \frac{5x + 14}{5}$$

$$\text{Or, } 8x - 5x = 12$$

$$\text{Or, } x = 4$$

$$\therefore \text{Total distance} = 80 \times (4 - 1) = 240 \text{ km}$$

$$\therefore \text{Speed of scooter} = \frac{240}{4}$$

km/hr

$$= 60 \text{ km/hr}$$

14. (2) Ratio of P and Q = 120 : 100 = 6 : 5

Ratio of Q and R = 70 : 100 = 7 : 10

∴ Ratio of P, Q and R

$$\Rightarrow P : Q : R$$

$$\frac{6}{7} : \frac{5}{7} : \frac{5}{10}$$

$$\frac{42}{42} : \frac{35}{35} : \frac{50}{50}$$

ATQ,

$$42 \equiv 420$$

$$1 \equiv 10$$

$$50 \equiv 500$$

15. (1) Let marked price = 100%  
After discount of 40%, selling price = 60%

ATQ,

$$60\% \equiv 1260$$

$$1\% \equiv 21$$

$$100\% \equiv 2100$$

∴ Marked price is 2100

16. (3)  $\frac{2 \cos^3 A - \cos A}{\sin A - 2 \sin^3 A} = 1$

$$\text{Or, } \frac{2(2 \cos^3 A - \cos A)}{2(\sin A - 2 \sin^3 A)} = 1$$

$$\text{Or, } \frac{4 \cos^3 A - 2 \cos A}{2 \sin A - 4 \sin^3 A} = 1$$

$$\text{O} \quad \quad \quad \text{r} \quad \quad \quad \text{,}$$

$$\frac{4 \cos^3 A - 3 \cos A + \cos A}{-\sin A + 3 \sin A - 4 \sin^3 A} = 1$$

$$\text{Or, } \frac{\cos 3A + \cos A}{-\sin A + \sin 3A} = 1$$

$$\text{Or, } \cos 3A + \cos A = -\sin A + \sin 3A$$

If we consider A = 45°, both sides of above equation satisfy,

$$\therefore A = 45^\circ$$

17. (3) Loss of article P = (300 - 250) = 50

$$\text{Loss of article Q} = (400 - 375) = 25$$

$$\text{Loss of article R} = (350 - 250) = 100$$

$$\text{Loss of article S} = (500 - 350) = 150$$

$$\therefore \text{Total loss} = 50 + 25 + 100 + 150$$

$$= 325$$

$$\therefore \text{Average loss} = \frac{325}{4}$$

$$= 81.25$$

18. (3) Ratio of efficiency of A, B = 120 : 100

$$6 : 5$$

$$\therefore \text{Total efficiency} = (6 + 5)$$

$$= 11$$

$$\therefore \text{Total work} = (20 \times 11) \text{ unit}$$

$$\therefore \text{B alone completes the}$$

$$\text{whole work in} = \frac{20 \times 11}{5} = 44$$

days

19. (4)  $\frac{K}{K^2 - 2K + 1} = \frac{1}{6}$

$$\text{Or, } K^2 - 2K + 1 = 6K$$

$$\text{Or, } K^2 - 8K + 1 = 0$$

Divide both side by K

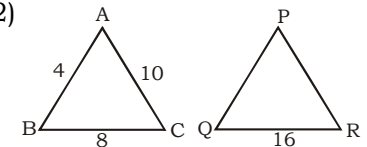
$$K + \frac{1}{K} = 8$$

Cubing both sides,

$$K^3 + \frac{1}{K^3} = 512 - (3 \times 8)$$

$$K^3 + \frac{1}{K^3} = 488$$

20. (2)



As  $\Delta ABC \sim \Delta PQR$

$$\therefore 8 = 16$$

$$1 = 2$$

$$4 = 8$$

$$10 = 20$$

∴ Semi perimeter of  $\Delta PQR$

$$= \frac{20 + 8 + 16}{2} \text{ cm}$$

$$= 22 \text{ cm}$$

∴ Area

$$= \sqrt{22(22-20)(22-8)(22-16)} \text{ cm}^2$$

$$= \sqrt{22 \times 2 \times 14 \times 6} \text{ cm}^2$$

$$= 4\sqrt{231} \text{ cm}^2$$

21. (4) As angle subtended by the chord at the major arc is half of the angle subtended at the center.  
∴ Angle subtended by the chord AB on the major arc

$$= \frac{140^\circ}{2}$$

$$= 70^\circ$$

22. (3) Total passport issued per year = 7000 + 9000 + 7500 + 9500 + 6500 + 8500 = 48000  
∴ Average passport issued a

$$= \frac{48000}{6}$$

$$= 8000$$

23. (4)  $a^3 + b^3 = 1456$

$$\text{Or, } (a + b)^3 - 3ab(a + b)$$

$$= 1456$$

$$\text{Or, } (16)^3 - 3ab \times 16 = 1456$$

$$\text{Or, } ab = \frac{4096 - 1456}{48}$$

$$\text{Or, } ab = 55$$

24. (3) The total number of players have a height of less than 141 cm  
= 1 + 3 + 2  
= 6

25. (1) Let cost price is 100%

$$\therefore \text{Selling price} = \frac{4000}{100} \times 87$$

$$= 3480$$

### ANSWER KEY

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

### GENERAL AWARENESS

1. (2) Recently, the Ministry of Statistics and Programme Implementation has released Women and Men in India 2022 report. The sex ratio at birth went up by three points to 907 in 2018-20 from 904 in 2017-19. India's sex ratio (females per 1,000 males) is expected to improve to 952 by 2036, up significantly from 943 in 2011.
2. (2) 3. (1) 4. (3)
5. (1) Vivekananda Rock Memorial is a monument in Kanyakumari.

Ravidas Ji Statue is in Ludhiana.

6. (1) Chanhudaro is only Indus Site with no Citadel. Bronze figurines of bullock cart and ekkas and a small pot suggesting a kink well have been excavated from there. Evidence of ploughed field, wooden furrow, seven fire-altars, bones of camel and two types of burials (Circular grave and rectangular grave) have been found from Kalibanga.

Evidence of unique water management system, Harapan inscription and stadium has been found Dholavira.

7. (2) Socialism is a political philosophy and movement encompassing a wide range of economic and social systems, which are characterised by social ownership of the means of production, as opposed to private ownership. Feudalism is a term used to describe the legal, economic, military, cultural and political customs that flourished in medieval Europe between the 9th and 15th century.

Structural functionalism, is "a framework for building theory that sees society as a complex system whose parts work together to promote solidarity and stability".

8. (3) The electron configuration of an element describes how electrons are distributed in its atomic orbitals.

The maximum number of electrons that can be accommodated in a shell is based on the principal quantum number (n). It is represented by the formula  $2n^2$ , where 'n' is the shell number.

9. (1) Dravidian Architecture - Chennakesava Temple in Belur, Hoysaleswara temple in Halebidu, and the Kesava Temple in Somanathapura.

10. (2) Swami Vivekananda (Narendranath Datta) was born on 12 January 1863 in Kolkata. He died in Belur Math, West Bengal, in 4 July, 1902.

He founded Ramakrishna Mission, Advaita Ashrama, Ramakrishna Mission Vivekananda College.

11. (3) Pituitary gland - Secretes hormones that regulate body functions

Midbrain - Regulates visual and auditory reflexes

Hindbrain - Controls basic life-sustaining functions

12. (4) Ravi Kumar Dahiya won Gold in Commonwealth Games 2022.

13. (4) The Pulitzer Prize is given for achievements in newspaper, magazine and online journalism, literature and musical composition. It was established in 1917. Pulitzer Prize 2022-

The award winners include Indian journalists Adnan Abidi, Sana Irshad Mattoo, Amit Dave along with The Washington Post. The late Danish Siddiqui of Reuters photographer has been given this award posthumously. He was assassinated during a conflict between the Taliban and the Afghan army.

14. (4)

15. (1) The diameter of an atom is on the order of 10<sup>-10</sup> m, whereas the diameter of the nucleus is roughly 10<sup>-15</sup> m—about 100,000 times smaller.

16. (4) Vulnerable Species in India Asian elephant, Bengal tiger, One-horned rhino, Black-necked crane, Ganges river dolphin, Snow leopard, Nilgiri Thar, Red panda.

17. (3) Strait of Malacca, waterway connecting the Andaman Sea (Indian Ocean) and the South China Sea (Pacific Ocean).

The Cook Strait is a strait that separates the North and South Islands of New Zealand, connecting the Tasman Sea on the west with the Pacific Ocean on the east.

18. (2) 2024 ICC Women's T20 World Cup will be played in Bangladesh.

19. (2)

20. (3)

21. (3) Calcutta High Court was established in 1862.

Allahabad High Court was established in 1866.

Andhra Pradesh High Court was established in 2019.

Telangana High Court was established in 1954.

22. (4)

23. (4)

24. (1) Champions - England  
Runners-up - Pakistan

Player of the series - Sam Curran

Most runs - Virat Kohli

Most wickets - Wanindu Hasaranga

25. (3)

### ANSWER KEY

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