

ENGLISH LANGUAGE AND COMPREHENSION

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

EXPLANATION:-

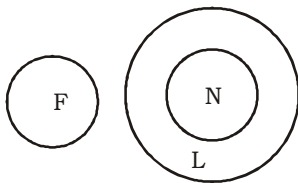
2. (1) Replace 'has' with 'is'.
 8. (4) Replace 'mile' with 'miles'.
 'thousands of miles' is the correct expression.
 16. (4) 'Clown' is incorrectly spelt here, means- a fool, jester, or comedian in an entertainment (such as a play).
 18. (2) 'singular Subject+ was+ v₃' is the correct structure of Past Indefinite (Passive Voice.)

WORD	MEANING IN ENGLISH	MEANING IN HINDI
Abstinence	Stopping yourself from having or doing something that you enjoy	परहेज
Adulation	Extreme admiration	अत्यधिक प्रशंसा और आदर
Amicable	Made or done in a friendly way	मैत्रीपूर्ण
Amoral	Not following any moral rules	नीतिहीन, अनैतिक
Amorous	Showing sexual desire and love for somebody	कामुकतापूर्ण, प्रेमातुर
Amorphous	Having no apparent shape or organization	बेढब
Amortization	The process of paying off a debt through scheduled, pre-determined installments that include principal and interest.	ऋणमुक्ति
Antsy	Perturbed , agitated, impatient, or restless,	चिंतित या परेशान
Celibacy	The state of voluntarily being unmarried	अविवाहित जीवन
Continence	The ability to control your feelings and emotions	संयम
Cynic	A person who believes that people only do things for themselves, rather than to help others	निंदक, दोषदर्शी
Fawn	To seek notice or favour by flattery or servile behaviour	चापलूसी करना
Feline	Connected with an animal of the cat family; like a cat	बिल्ली के समान
Flawed	Not perfect, containing mistakes	त्रुटिपूर्ण
Gluttony	The habit of eating and drinking too much	पेटूषण
Gregarious	Liking to be with others	झुण्ड में रहने वाले
Leonine	Lion like characteristics	शेर जैसा
Lionize	Give a lot of public attention and approval to (someone); treat as a celebrity.	चापलूसी करना
Porcine	Of, affecting, or resembling a pig or pigs.	सुअर जैसा
Reclusive	Someone who avoids other people's company.	एकांतप्रिय

GENERAL INTELLIGENCE & REASONING

1. (3) $15^2 - 15 = 210$
 Similarly, $(22)^2 - 22 = 484 - 22 \Rightarrow 462$
2. (1) SAGE \Rightarrow (GE) - (SP)
 $(7 + 5) - (19 + 1)$
 $\Rightarrow 12 - 20 = -8$
- and
 TABS $\Rightarrow 0$
 (BS) - (TA) = $(2 + 19) - (20 + 1)$
 $\Rightarrow 21 - 21 = 0$
 Similarly,
 VERB \Rightarrow (RB) - (VE)
 $(18 + 2) - (22 + 5) = 20 - 27$
 $\Rightarrow -7$
3. (3) 1. special
 2. species
 3. speck
 4. speckle
 5. spectacle
4. (4) $16, 32, 64, 128, 256, 512$
 $\times 2 \quad \times 2 \quad \times 2 \quad \times 2 \quad \times 2$

5. (2)



6. (1) $36 @ 2 \Rightarrow 36^2 \Rightarrow 1296$
 $4 @ 4 \Rightarrow 4^2 \Rightarrow 256$
 $9 @ 3 \Rightarrow 9^2 \Rightarrow 729$

7. (2)

8. (4)

9. (2) $L \xrightarrow{+3} O$

$Y \xrightarrow{+3} B$

Similarly,

$M \xrightarrow{+3} P$

$Z \xrightarrow{+3} C$

10. (4)

11. (3) (40, 20, 82)

$(40 + 20 \times 2 + 2) \Rightarrow 182$

and

(36, 18, 74)

$(36 + 18 \times 2 + 2) \Rightarrow 74$

Similarly,

(212, 106, 426)

$(212 + 106 \times 2 + 2) \Rightarrow 426$

12. (3) $5 - 6 \div 3 \times 9 + 1$

Interchanging 5 and 9

$9 - 6 \div 3 \times 5 + 1 = 0$

$9 - 2 \times 5 + 1 = 0$

$9 - 10 + 1 = 0$

$10 - 10 = 0$

13. (3) Except option 3.

Logic : +1, -3, +5

14. (2)

15. (4) $N \xrightarrow{\text{same}} N \xrightarrow{\text{same}} N \xrightarrow{\text{same}} N \xrightarrow{\text{same}} N$

$R \xrightarrow{-9} I \xrightarrow{-9} Z \xrightarrow{-9} Q \xrightarrow{-9} H$

$Q \xrightarrow{+8} Y \xrightarrow{+8} G \xrightarrow{+8} O \xrightarrow{+8} W$

$S \xrightarrow{-10} I \xrightarrow{-10} Y \xrightarrow{-10} O \xrightarrow{-10} E$

16. (4) Students who plays only 1 game

$\Rightarrow 19$ (Chess) + 21 (Ludo) + 13 (Squash)

$\Rightarrow 53$ student play only 1 game

17. (3) $34, 17, 51 \Rightarrow (17 \times 2), (17 \times 1), (17 \times 3)$

and $46, 23, 69 \Rightarrow (23 \times 2), (23 \times 1), (23 \times 3)$

Similarly,

$72, 36, 108 \Rightarrow (36 \times 2), (36 \times 1),$

(36×3)

18. (4)

19. (4) $(36, 48, 45) \Rightarrow 48 - \frac{36}{12} \Rightarrow 45$

and

$(72, 96, 90) \Rightarrow 96 - \frac{72}{12} \Rightarrow 90$

Similarly,

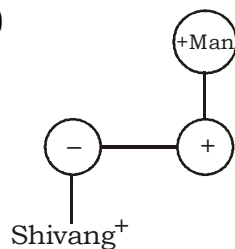
$(60, 80, 75) \Rightarrow 80 - \frac{60}{12} \Rightarrow 75$ 2.

20. (4) In (figure 1) and (figure 2), B and C is common so

$A \xrightarrow{\text{Opposite}} Z$

21. (4)

22. (2)



The man is maternal grand father of shivangi.

23. (4) Except option 4 all are correct.

Wall is made by Bricks.

Paper is made up of Pulp.

Furniture is made of Wood.

24. (1) Pen is used by the Author to write a Book. Similarly, a Gun is used by soldiers to fight with the enemy.

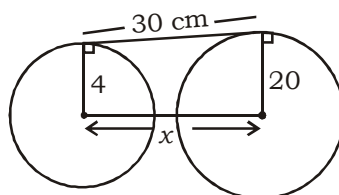
25. (1) Patter is the sound of Rain
Bleat is the sound of Goat

ANSWER KEY

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

QUANTITATIVE APTITUDE

1. (1) Length of direct common tangent =



$30 = \sqrt{x^2 - (20 - 4)^2}$

$30 = \sqrt{x^2 - 16^2}$

Squaring both sides

$900 = x^2 - 16^2$

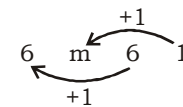
$x^2 = 900 + 16^2$

$x^2 = 900 + 256$

$x^2 = 1156$

$x = 34$

2. (1) Divisibility Rule of 11 \Rightarrow Difference between the sum of their alternate pair must be zero or multiple of 11.



$= (6 + 6) - (m + 1)$

$= 12 - (m + 1)$

By putting $m = 0$

$\Rightarrow 12 - (0 + 1)$

$\Rightarrow 11$ (It is divisible by 11)

$m = 0$

3. (1) Average export =

$\frac{47,000 + 59,000 + 99,000 + 20,000 + 85,000}{7}$

$= 62,000$

Minimum export = 20,000

Percentage of minimum export is less than average export by

$= \frac{62,000 - 20,000}{62,000} \times 100$

$= \frac{42,000}{62,000} \times 100 = 67.74\%$

4. (2) Average CP of J and K \Rightarrow

$\frac{700 + 900}{2} = 800$

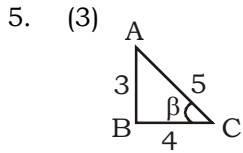
Average SP of L and M

$= \frac{600 + 800}{2} \Rightarrow \frac{1400}{2} \Rightarrow 700$

Loss Percentage

$= \left(\frac{800 - 700}{700} \right) \times 100$

$= \frac{1}{7} \times 100 = 14 \frac{2}{7} \%$



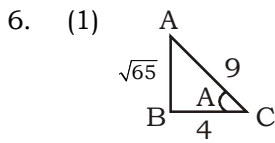
$$\sec \beta + \tan \beta = 2$$

$$\sec \beta - \tan \beta = \frac{1}{2}$$

$$2 \sec \beta = 5$$

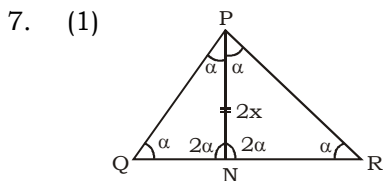
$$\sec \beta = \frac{5}{4} \Rightarrow \frac{H}{B}$$

$$\cot \beta \Rightarrow \frac{BC}{AB} \Rightarrow \frac{4}{3}$$



$$\sec A = \frac{H}{B}$$

$$\cot A = \frac{BC}{AB} = \frac{4}{\sqrt{65}}$$



If PN is median, then it cut QR at the mid point N.

In $\triangle PNR$, $QN = NR$ then angle are also equation.

IN $\triangle PNR$

$$QN = NR$$

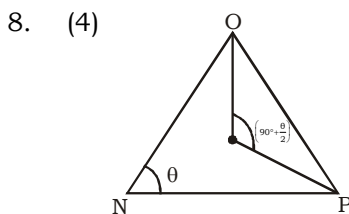
Because median (PN) cuts at the mid point.

$$\therefore \angle NPR = \angle NRP = \alpha$$

$$2\alpha + 2\alpha = 180^\circ$$

$$\alpha = 45^\circ$$

$$\therefore \angle QPR = 2\alpha = 90^\circ$$



$$\angle ONP + \angle GLP$$

$$\Rightarrow \theta + 90 + \frac{\theta}{2} = 195$$

$$\frac{3\theta}{2} = 105$$

$$3\theta = 210$$

$$\theta = 70^\circ$$

$$\angle OLP \Rightarrow 90^\circ + \frac{\theta}{2} \Rightarrow 90 + \frac{70}{2} = 125^\circ$$

9. (2) $a + b + c = 0$

$$a^2 + b^2 + c^2 + 2(ab+bc+ca) = 0$$

$$40 + 2(ab + bc + ca) = 0$$

$$ab + bc + ca = -20$$

10. (3) We know form the concept of algebra.

$$\left(x + \frac{1}{x} = a_1 \text{ then } x^2 + \frac{1}{x^2} = a_1^2 - 2\right)$$

$$x + \frac{1}{x} = 4$$

Squaring both sides

$$x^2 + \frac{1}{x^2} = (4)^2 - 2$$

$$= 16 - 2 \Rightarrow 14$$

11. (1) 30% decrease in price

$$= \frac{-30}{100} + \frac{-3}{10} - \frac{\times 7}{10}$$

$$40\% \text{ increase in sales} = \frac{+40}{100} =$$

$$\frac{+2}{5} - \frac{\times 7}{5}$$

Price	10	7
-------	----	---

Sales	$\frac{5}{50}$	$\frac{7}{49}$
-------	----------------	----------------

$$\underbrace{\hspace{10em}}_{-1}$$

$$\text{Percentage decrease} = \frac{1}{50} \times 100$$

$$= 2\%$$

12. (1) Rustam + Preetam = $30 \times 2 = 60$ days(i)

$$\text{Preetam + Geetan} = 20 \times 2$$

$$= 40 \text{ years} \dots\dots(ii)$$

$$\text{Rustam + Geetm} \Rightarrow 26 \times 2 =$$

$$52 \text{ years} \dots\dots(iii)$$

$$C \text{ Rustam + Preetam + Geetam}$$

$$= \frac{152}{2} = 76 \text{ years} \dots\dots(iv)$$

$$\Rightarrow \text{By comparing eq. (i) and (iv)}$$

$$\text{Geetam's age} = 76 - 60$$

$$16 \text{ years}$$

$$\text{Age of youngest after 5 years}$$

$$\Rightarrow = 16 + 5 = 21 \text{ years}$$

13. (2) We know

$$\frac{CP-SP}{CP} \times 100 = \% \text{ loss}$$

ATQ,

$$100 \times \frac{CP - 210}{CP} = l_1 \dots(i)$$

$$100 \times \frac{CP - 420}{CP} = l_2 \dots(ii)$$

$$l_1 - l_2 = 7$$

$$100 \times \left(\frac{CP - 210}{CP}\right) - 100 \left(\frac{CP - 420}{CP}\right)$$

$$= 7$$

$$\frac{100}{CP} [CP - 210 - CP + 420]$$

$$\frac{100}{CP} [210] = 7$$

$$CP = \frac{210 \times 10}{7}$$

$$CP = ₹3000$$

$$CP \text{ of table} = ₹3000$$

14. (1) $\sec x + \cos x = \frac{5}{2}$,

(Put $x = 60^\circ$)

$$\sec 60^\circ + \cos 60^\circ \Rightarrow 2 + \frac{1}{2} = \frac{5}{2}$$

$$\sin^2 x \Rightarrow \sin^2 60^\circ = \left(\frac{\sqrt{3}}{2}\right)^2 = \left(\frac{3}{4}\right)$$

15. (2) Jobs in 2010 is minimum $\Rightarrow 2010$

16. (4)

$$P \xrightarrow{720 \text{ km}} Q$$

(6 am)

$$\text{Speed of train} = 20\text{m/s} \times \frac{18}{5}$$

$$= 72 \text{ km/hrs}$$

$$\text{Total time} = \frac{720\text{km}}{72\text{km/h}} + 1 \frac{1}{2}$$

$$\Rightarrow 10 \text{ hr} + 1 \frac{1}{2} \text{ (stoppage)}$$

$$\Rightarrow 11 \frac{1}{2} \text{ hrs}$$

$$\Rightarrow 5 : 30 \text{ pm}$$

17. (2) Statement - I

$$\text{Total production of J} = (90 + 70 + 50 + 45 + 40) = 295$$

$$\text{Total production of K} = (55 + 60 + 90 + 80 + 65) = 350$$

$$\text{Difference} = 350 - 295 = 55$$

Statement - II

Product of J in P and Q

= Product by K in R and S

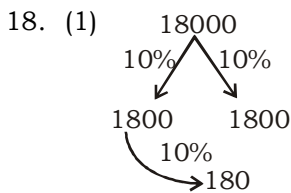
$$\times \frac{92.11}{100}$$

$$= 90 + 70 = 90 + 80 \times \frac{90.11}{100}$$

$$160 = 170 \times \frac{92.11}{100}$$

$$160 \neq 156.587$$

Both statements are false.



$$\text{Interest} = 1800 + 1980 = 3780$$

$$\text{Rate of Interest} = \frac{20\%}{2} \Rightarrow 10\%$$

half yearly

$$\text{Total compound interest} = ₹3780$$

19. (3) $\frac{CP}{MP} \Rightarrow \frac{100 - (\text{discount \%})}{100 + (\text{profit \%})}$

$$\Rightarrow \frac{130x}{100} \Rightarrow 13,000$$

$$\Rightarrow (x = 1000)$$

$$CP = 9x = 9 \times 1000 = \text{Rs. } 9000$$

20. (4) Let, Angle of triangle = $2x$, $2x$, $5x$

$$\text{Sum of all angle of triangle} = 180^\circ$$

$$9x = 180^\circ$$

$$x = 20^\circ$$

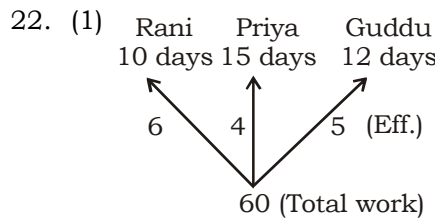
$$\text{Largest angle} = 5x = 5 \times 20 = 100^\circ \text{ degree.}$$

21. (1) $\left(\frac{5}{6} \times \frac{1}{3} \times \frac{12}{25} - \frac{1}{3} \times \frac{5}{6} \times \frac{18}{25} \right)$
 $\left(\frac{25}{12} \times \frac{1}{6} \times \frac{1}{5} + \frac{3}{8} \times \frac{12}{25} \times \frac{5}{6} \right)$

$$\frac{1}{6 \times 3 \times 25} \times \frac{(60 - 90)}{1}$$

$$= \frac{\left(\frac{5}{36} + \frac{3}{20} \right)}{1}$$

$$\Rightarrow \frac{-1}{25 + 27} \Rightarrow \frac{-1}{15} \times \frac{180}{42} \Rightarrow \left(\frac{-3}{13} \right)$$



Ratio of their efficiency

$$= 6 : 4 : 5$$

$$\text{Priya's share} = \frac{4}{15} \times 9000 = 2400$$

23. (1) Length = 8 cm

Breadth = 16 cm

Height = 4 cm

Total surface area of cuboid

$$= 2(lb + bh + hl)$$

$$2(8 \times 16 + 16 \times 4 + 4 \times 8)$$

$$2(128 + 64 + 32)$$

$$2(224) \Rightarrow 448 \text{ cm}^2$$

24. (1) $a = 12$, $B = -7$, $C = -5$

$$a^3 + b^3 + c^3 = (a+b+c)(a^2 + b^2 + c^2) + 3abc$$

$$(a+b+c) \Rightarrow 12 - 7 - 5 = 0$$

$$\text{Then rule of } a^3 + b^3 + c^3 = 3abc$$

$$3 \times 12 \times -7 \times -5 = 1260$$

25. (4) $2(x) = 3(y) = 4(z) = 12$ (say)

$$x = 6, y = 4, z = 3$$

$$\text{Share of } x, y, z = (6 : 4 : 3)$$

$$Y \text{ share} = \frac{4}{13} \times (13,000)$$

$$= ₹4000$$

ANSWER KEY

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

GENERAL AWARENESS

1.(3) The Irani Trophy or Irani Cup, also known as the Mastercard Irani Trophy due to sponsorship reasons. It is played annually between the winners of the Ranji Trophy and a Rest of India cricket team. The Rest of India team includes players from Ranji teams of various states. Madhya Pradesh was the runner up in 2022.

Most runs Wasim Jaffer (1,294)

Most wickets P a d m a k a r Shivalkar (51)

2.(2) The major iron ore belts in India are Odisha- Jharkhand belt, Durg-Bastar-Chandrapur belt, Ballari-Chitradurga-Chikkamagaluru-Tumakuru belt, Maharashtra-Goa belt.

3.(1)

4.(4)

5.(1) Theme of World Refugee Day 2022 - "Together we heal, learn and shine."

Theme of Refugee Week 2023: Compassion

6.(3)

7.(1)

8.(1) In the 2022 Birmingham Commonwealth Games, Annu Rani scripted history as she became the first Indian female javelin thrower to win a medal, a bronze.

9.(3) 1983 - Bhanu Athaiya (Gandhi) for Best Costume Design

2009 - Resul Pookutty (Slumdog Millionaire) for Best Sound Mixing.

2009 - Gulzar Best Original Song (For "Jai Ho")

2009 - A. R. Rahman for Best Original Score

2023 - Kartiki Gonsalves and Guneet Monga for The Elephant Whisperers

2023 - RRR for Naatu Naatu

10.(4)

11.(3)

12.(2) Rhine Valley is the valley, or any section of it, of the river Rhine in Europe.

13.(2)

14.(4) Blood is composed of blood cells suspended in blood plasma. Plasma, which constitutes 55% of blood fluid, is mostly water (92% by volume), and contains proteins, glucose, mineral ions, hormones, carbon dioxide (plasma being the main medium for excretory product transportation), and blood cells themselves. Albumin is the main protein in plasma, and it functions to regulate the colloidal osmotic pressure of blood.

The blood cells are mainly red blood cells (also called RBCs or erythrocytes), white blood cells (also called WBCs or leukocytes), and in mammals platelets (also called thrombocytes). The most abundant cells in vertebrate blood are red blood cells. These contain hemoglobin, an iron-containing protein, which facilitates oxygen transport by reversibly binding to this respiratory gas thereby increasing its solubility in blood. In contrast, carbon dioxide is mostly transported extracellularly as bicarbonate ion transported in plasma.

15.(2) The International Space Station (ISS), which has been in orbit since 1998, has been jointly developed by Russia and the United States.

One of the few areas where cooperation between Russia, the

United States, and its allies had not been ruined by tensions over Ukraine and other issues up until now was space exploration.

One of the Soviet space program's major achievements and a significant source of national pride in Russia is the launch of the first satellite in 1957 and the sending of the first man into space in 1961.

Roscosmos Chief: Yury Borisov

16.(2) Dal is a lake in Srinagar, is variously known as the "Lake of Flowers", "Jewel in the crown of Kashmir".

Loktak Lake is in Manipur.

The Sambhar Salt Lake, India's largest inland salt lake, is located in Sambhar Lake Town, Jaipur district of Rajasthan, India, southwest of the city of Jaipur and northeast of Ajmer, Rajasthan.

17.(3)

18.(4)

19.(1) The 60th Amendment, 1988 - amended article 276 of the Constitution relating to taxes on professions, trades, callings and employments.

50th Constitutional Amendment Act 1984 amended article 33.

The 7th Amendment of Indian Constitution was needed to implement the recommendations of the States Reorganisation Commission regarding the reorganization of the states on a linguistic basis.

20.(2) Buddha preaching his first sermon at Sarnath. This event is known as Dhammacakkappavattana.

Buddha delivered his maximum number of sermons at Shravasti, the capital of the kingdom of Kosala.

21.(3) Shovana Narayan - Kathak Rukmini Devi - Bharatanatyam Birju Maharaj - Bharatanatyam

22.(3) Tissue that supports, protects, and gives structure to other tissues and organs in the body.

23.(4) Japan - Concept of "procedure established by Law" Germany - Fundamental Rights are suspended during Emergency

24.(3) Priya Jhingan is an Indian Army officer and Lady Cadet No 1 and Silver Medalist from the first batch of 25 lady officers who were commissioned in the Indian Army in 1993.

Harita Kaur Deol was a pilot with the Indian Air Force. She was the first woman pilot to fly solo in the Indian Air Force.

Shanti Tigga was the first female jawan in the Indian Army.

25.(2) Animal waste, oil and urea are some of the organic impurities present in sewage.

ANSWER KEY

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

