

ENGLISH LANGUAGE AND COMPREHENSION

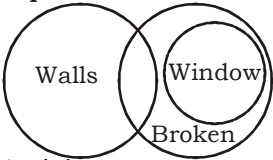
1. (2) 2. (2) 3. (4) 4. (4) 5. (2) 6. (3) 7. (1) 8. (2) 9. (3)
 10. (2) 11. (2) 12. (1) 13. (2) 14. (3) 15. (3) 16. (3) 17. (2) 18. (2)
 19. (3) 20. (1) 21. (1) 22. (1) 23. (4) 24. (4) 25. (2)

3. (4) 'Subject + has/have+ been +V3' is the correct structure of Present Perfect Tense (Passive Voice).
 5. (2) Replace 'raise'(उठाना) with 'rise' (उठना)
 7. (1) Late thirties means around 38 or 39.
 8. (2) We don't use article 'the' before a single Mountain, However, for groups of mountains, we do.
 For example:- the Himalayas, the Rockies,
 11. (2) Replace 'or' with 'nor'. 'Neither nor' is the correct pair of conjunction.
 18. (2) 'hardlywhen' and 'NO sooner Than' are the correct pair of conjunctions.
 19. (3) 'Perceive' is incorrectly spelt here, means- to notice or realize something. (इंद्रियों द्वारा ग्रहण करना, देखना, जानना, बोध होना)

WORD	MEANING IN ENGLISH	MEANING IN HINDI
Anxious	Worried and afraid, apprehensive	चिंतित
Bohemian	socially unconventional person	रुढ़िमुक्त
Boisterous	(used about a person or behaviour) noisy and full of energy	ऊधमी, शोरगुल मचाने वाला किंतु प्रसन्नचित्त
Collected	Calm and in control of yourself, your feelings, thoughts, etc.	शांत और संयम में; भावनाओं, विचारों आदि पर नियंत्रण बनाए हुए
Connoisseur	A person who knows a lot about art, good food, music, etc	विशेषज्ञ, कला का पारखी
Convalescent	Recovering from an illness or medical treatment.	अच्छ हो जाना (बिमारी के बाद)
Cosmopolitan	Containing people from all over the world	सर्वदेशीय
Fiend	A very cruel person	राक्षस
Flawless	Perfect; with no faults or mistakes	परिपूर्ण; त्रुटिरहित
Gall	Rude behaviour showing a lack of respect that is surprising because the fuy person doing it is not embarrassed	निर्लज्ज, अप्रत्याशित, अशिष्टता व दुस्साहसपूर्ण
Gallivant	To travel, roam, or move about for pleasure, meander	आवारागर्दी करना
Glib	Using words in a way that is clever and quick, but not sincere	चतुराई से अपनी बात कहने वाला; वाक्पटु
Grave	Bad or serious	प्रतिकूल या गंभीर
Implausible	Not easy to believe	अकल्पनीय
Inarticulate	Incapable of giving coherent, clear, or effective expression to one's ideas or feelings	अस्पष्ट, जो अच्छा वक्ता नहीं हो
Junkie	A drug addict.	नशेबाज
Obsequious	Making a great effort to please or agree with somebody, especially somebody who is important and powerful	चापलूस
Stiletto	Woman's shoes with high, narrow and pointed heels	नुकीली ऊँची जूती की एड़ी
Vacillate	To keep changing your ideas or opinions about something, especially in a way that annoys other people	संदेह करना
Vile	Very bad or unpleasant, atrocious	बहुत खराब या अप्रिय
Viscous	(used about liquids) thick and sticky; not flowing easily	चिपचिपा

GENERAL INTELLIGENCE & REASONING

- (2) $64 \# 58 \# 32 = -26 \Rightarrow 64 - 58 - 32 = -26$
 $104 \# 17 \# 89 = -2 \Rightarrow 104 - 17 - 89 = -2$
 Similarly
 $56 \# 7 \# 24 = 25 \Rightarrow 56 - 7 - 24 = 25$
- (2) DO — 60 $\Rightarrow 4 \times 15 = 60$
 PIE — 720 $\Rightarrow 16 \times 9 \times 5 = 720$
 Similarly
 CAT — 60 $\Rightarrow 3 \times 1 \times 20 = 60$
- (4) Engineer works on site in same way Servant works in house.
- (3) Thimpu is capital of Bhutan, in same way Islamabad is capital of Pakistan.



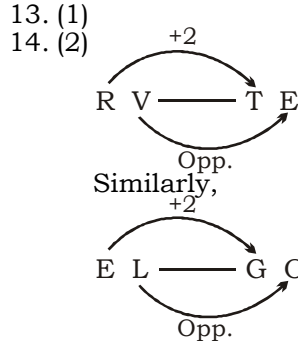
- (3) Activity
- (4)
- (4) Interchanging, + and -
 I. $18 \div 3 + 8 \times 5 - 4 = 20$
 $18 \div 3 - 8 \times 5 + 4 = 20$
 $6 - 40 + 4 = 20$
 $-30 \neq 20$
 II. $6 + 8 \times 9 \div 3 - 4 = 14$
 $6 - 8 \times 9 \div 3 + 4 = 14$
 $6 - 24 + 4 = 14$
 $-14 \neq 14$
- (4) C E M E N T
 $\begin{matrix} +2 & -2 & +2 & -2 & +2 & -2 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ E & C & O & C & P & R \end{matrix}$
 and
 H E I G H T
 $\begin{matrix} +2 & -2 & +2 & -2 & +2 & -2 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ J & C & K & E & J & R \end{matrix}$
 Similarly,
 F A T H E R
 $\begin{matrix} +2 & -2 & +2 & -2 & +2 & -2 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ H & Y & V & F & G & P \end{matrix}$

- (4) $58 : 319 \Rightarrow (58 \times 5) + \frac{58}{2} = 314$
 $32 : 176 \Rightarrow (35 \times 5) + \frac{32}{2} = 176$
 $76 : 418 \Rightarrow (76 \times 5) + \frac{76}{2} = 418$
- (3)

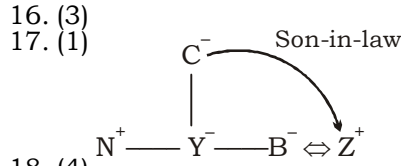
$$12. (4) \frac{331235}{66247} = 5 \frac{51265}{10253} = 5$$

$$\frac{15265}{3053} = 5$$

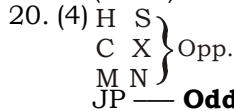
$$\frac{126215}{25247} = 4.99 \text{ (Odd)}$$



- (2) A A B A B C A B C D A B C D E



- (4)
- (1) $8, 63, 81 \Rightarrow 8^2 - 1 = 63/$
 $(8 + 1)^2 = 81$
 $11, 120, 144 \Rightarrow 11^2 - 1 = 120$
 $\therefore (11 + 1)^2 = 144$
 Similarly,
 $9, 80, 100 \Rightarrow 9^2 - 1 = 80/$
 $(9 + 1)^2 = 100$



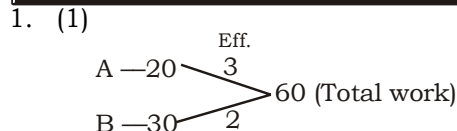
- (1) $48, 87, 165, 204, 282, 321, 399$
 $\begin{matrix} +39 & +78 & +39 & +78 & +39 & +78 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \end{matrix}$
- (4) $108 - 11664 \Rightarrow 108 \times 108 = 11664$
 $116 - 13456 \Rightarrow 116 \times 116 = 13456$
 $112 - 12544 \Rightarrow 112 \times 112 = 12544$
 $104 - 10886 \Rightarrow 104 \times 104 = 10816 \text{ (Odd)}$

- (1)
- (3)
- (4) Carpenter — Furniture

ANSWER KEY

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

QUANTITATIVE APTITUDE



Ratio of efficiency of A and B = 3 : 2
 Working together A and B can complete the same work
 $= \frac{60}{5} = 12$

- (4) Total no. of cars manufactured in 2017 and 2018 = $(1600 + 2600) = 4200$
 Total no. of trains manufactured in 2017 and 2018 = $1800 + 2000 = 3800$
 \therefore Sum of total no. of cars and trains = $3800 + 4200 = 8000$
 Again Total no. of buses manufactured in 2016, 2017, 2018 = $2000 + 1600 + 3000 = 6600$
 \therefore Ratio of sum of cars and trains manufactured in 2017 & 2018 to total no. of buses manufactured in 2016, 2017, 2018 = $8000 : 6600 = 40 : 33$

- (2) Let, breadth = x
 length = $x + 24$
 Perimeter of the rectangular sheet = $2(x + x + 24)$
 ATQ,
 $2(2x + 24) = 128$
 $x + 12 = 32$
 $x = 20$
 length = $x + 24$
 $= 20 + 24 = 44 \text{ cm}$

- (2) According to the question
 I. SI = $\frac{6000 \times 10 \times 2}{100} = 1200$

II. $10\% = \frac{1}{10}$

Ratio method

Principal Amount

$$\frac{10 : 11}{100 : 121}$$

CI = 21

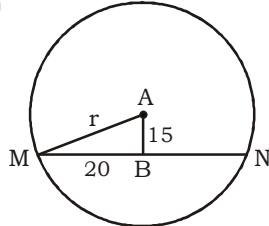
100 units = 6000
 1 unit = 60
 21 units = $21 \times 60 = 1260$

- (1) $\tan \theta + \cot \theta = 2$
 $[\tan \theta = 45^\circ]$
 $\tan 45^\circ + \cot 45^\circ = 2$
 $1 + 1 = 2$
 $2 = 2$
 Then,
 $\tan 45^\circ - \cot 45^\circ = 0$
- (3) $(a - b) = 5, ab = 150$
 let, $a = 15, b = 10$
 Value of $(a^3 - b^3) = 15^3 - 10^3 = 3375 - 1000 = 2375$

7. (1) The average profit percent earned by the company during the years 2016 to 2020 = $\frac{45+70+60+40+50}{5}$
= 54%

8. (1) Distance = $2\pi r \times N$
N = Number of revolutions
 $44 \times 1000 = 2 \times \frac{22}{7} \times r \times 500$
 $r = 14$ m

9. (4)



From Pythagorean theorem
 $r^2 = AB^2 + BC^2$
 $r^2 = 225 + 400$
 $r = 25$

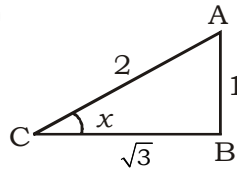
10. (2) $\frac{\operatorname{cosec} 90^\circ}{1 - \cos^2 60^\circ} = \frac{1}{1 - \frac{1}{4}} = \frac{4}{3}$

11. (4) $1200 \div 15 \times [45 \div (17 - 2)]$
 $2 + [-2(1 + 2)]$
 $= 80 [3] \div 2 + [-6]$
 $= 480 - 6$
 $= 474$

12. (1) The number of male teacher in school L = 160
The number of female teacher in school P = 110
ATQ,
 $\frac{160}{110} \times 100 = 195.45$
II. Female teachers in M and N = $170 + 120 = 290$
Male teacher in N and P = $170 + 150 = 320$
Ratio = $290 : 320$
 $= 29 : 32$

13. (4) Let total votes = 40 units
Party A got 30% votes
 $= 40 \times \frac{30}{100} = 12$ units
Party B got 25% votes
 $= 40 \times \frac{25}{100} = 10$ units
Remaining votes = $40 - (12 + 10) = 18$ units
Party C got remaining votes = 18 units
According to the question
 $18 \text{ units} - 12 \text{ units} = 9000$
 $6 \text{ units} = 9000$
 $1 \text{ unit} = 1500$
 $10 \text{ unit} = 10 \times 1500 \Rightarrow 15000$ votes

14. (1)



$\sin x = \frac{1}{2}$

$CB^2 = AC^2 - AB^2$

$CB^2 = 4 - 1$

$CB = \sqrt{3}$

Then, $(\sec^4 x + \operatorname{cosec}^4 x) - (\tan^4 x + \cot^4 x)$

$\Rightarrow \left\{ \left(\frac{2}{\sqrt{3}} \right)^4 + \left(\frac{2}{1} \right)^4 \right\} -$

$\left\{ \left(\frac{1}{\sqrt{3}} \right)^4 + \left(\frac{\sqrt{3}}{1} \right)^4 \right\}$

$\Rightarrow \left\{ \frac{16}{9} + 16 \right\} - \left\{ \frac{1}{9} + 9 \right\}$

$\Rightarrow \frac{160}{9} - \frac{82}{9} = \frac{78}{9} = \frac{26}{3}$

15. (4) Prime numbers

23, 29, 31, 37, 41, 43, 47

So, 7 Prime numbers are there between 20 and 50.

16. (3) $2p + 5q = 12$

Squaring both sides

$(2p + 5q)^2 = (12)^2$

$4p^2 + 25q^2 + 20 \times 3 = 144$

$4p^2 + 25q^2 = 84$

17. (4) As we know value of two sides is greater than other side

$(11 - 6) < AC < 17$

\therefore Possible value of AC = 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

\therefore No. of possible values of AC is 11

18. (1) I. Cost price of G, H and I = $500 + 300 + 800 = 1600$

The profit of D, E and F = $200 + 150 + 300 = 650$

ATQ,

$\frac{650}{1600} \times 100 = 40.625$

II. Total cost price = $700 + 600 + 400 + 500 + 300 + 800 = 3300$

Total profit = $200 + 150 + 300 + 400 + 250 + 350 = 1650$

Required ratio = $3300 : 1650 = 66 : 33$

$= 2 : 1$

19. (3) Ratio of present age

= Father : Mother : Son
 $8 : 5 : 2$

ATQ,

8 units = 48

1 unit = 6

Father = 48 years

Mother = 30 years

Son = 12 years

After 3 years (age) = Father (51)

Mother (33)

Son (15)

Average age of family after 3

years = $\frac{51+33+15}{3}$

= 33 years

20. (4) Successive discount = $x + y$

$-\frac{xy}{100}$

$= 12 + 10 - \frac{12 \times 10}{100}$

$= 22 - 1.2$

$= 20.8\%$

21. (1) Janki purchased 10 dozens of corn at the rate of ₹180/ dozen

12 corns = ₹180

1 corn = ₹15

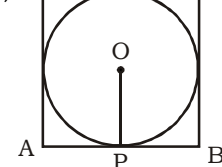
Profit Percent = $\frac{22-15}{15} \times 100$

$= 46.66\%$

22. (3) Go through option

$(2y - x + z)^2 = x^2 + 4y^2 + z^2 - 4xy + 4yz - 2xz$

23. (2) D



AB = 18 cm

$OP = \frac{18}{2} = 9$ cm

Area of circle = $\pi r^2 = 81\pi$

24. (2) Let, total employees in sales department be x

Sum of ages of all employees = $350x$

Sum of ages of all senior employees = 4500

Sum of ages of remaining employees = $250(x-10)$

ATQ,

$350x - 250(x-10) = 4500$

Or, $350x - 250x = 4500 - 2500$

Or, $x = 20$

\therefore Total number of employees are 20.

25. (1) To reach the exam centre,

Speed of Ram = $\frac{250}{6}$ km/hr

Ram covers $\frac{3}{5}$ th of total distance (=150 km) in 3.5 hr
 \therefore Remaining time = $[6 - (3.5+0.5)]\text{hr} = 2\text{hr}$
 \therefore Speed of Ram
 $= \frac{\text{Remaining distance}}{\text{time}}$
 $= \frac{250 - 150}{2} \text{ km/hr}$
 $= 50 \text{ km/hr}$

ANSWER KEY

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

GENERAL AWARENESS

1. (2)
 2. (2) Zeb-un-Nissa was the eldest child of Emperor Aurangzeb. Sultana Chand Bibi was the Regent of Bijapur Sultanate during the minority of Ibrahim Adil Shah II in 1580-1590, and regent of Ahmednagar Sultanate during the minority of her great nephew Bahadur Shah in 1595-1600. She is best known for defending Ahmednagar against the Mughal forces of Emperor Akbar in 1595. Jahanara Begum was the eldest surviving child of Emperor Shah Jahan and Mumtaz Mahal.
 3. (1) Nelson R. Mandela and Frederik Willem de Klerk Nobel Peace Prize for 1993. Rabindranath Tagore won the Nobel Prize for Literature in 1913 for his collection Gitanjali published in London in 1912. Luthuli was awarded the 1960 Nobel Peace Prize for his role in leading the nonviolent anti-apartheid movement.
 4. (3) Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. According to IMF projections, India has overtaken the U.K. to become the world's fifth-largest economy and is now behind only the US, China, Japan and Germany.
 5. (1) Concave Mirror - Vehicle headlights, Shaving mirrors, Solar furnaces, Searchlights, Torches, Flashlights, Dental Mirror, Micro-

- scopes, Telescopes, Makeup mirrors. Convex mirrors are used in magnification glasses, sunglasses, and rear view mirror in vehicles, ATMs, and street lights.
 6. (1) Direct Tax Code Bill replaces the Income Tax Act, 1961 and the Wealth Tax Act, 1957. The Bill widens income tax slabs for individuals. Income between Rs 2 lakh to Rs 5 lakh will be taxed at 10%, between Rs 5 lakh and Rs 10 lakh at 20%, and that over Rs 10 lakh at 30%.
 7. (2) A light pen is a computer input device in the form of a light-sensitive wand used in conjunction with a computer's cathode-ray tube (CRT) display.
 8. (4) 2022 FIFA U-17 Women's World Cup (7th) was the second time that India have been hosting a FIFA tournament, after the men's 2017 FIFA U-17 World Cup. Morocco and Tanzania and India, made their debuts in the tournament. Spain won the tournament.
 9. (1) An operating system (OS) is system software that manages computer hardware and software resources, and provides common services for computer programs.
 10. (3) A supernova is the colossal explosion of a star
 11. (4) Controller General of Defence Accounts (CGDA) Rajnish Kumar inaugurated PADMA. It is an automated Pay & Allowances module, launched for the Indian Coast Guard.
 Minister of Civil Aviation - Jyotiraditya Scindia
 Minister of Finance - Nirmala Sitharaman
 Minister of Defence - Rajnath Singh
 Minister of Culture - G. Kishan Reddy
 12. (4) **Best Picture** - Everything Everywhere All at Once
Best Actor - Brendan Fraser
Best Actress - Michelle Yeoh
Best Original Song - Naatu Naatu
Best Animated Feature - Guillermo del Toro's Pinocchio
Best Director - Daniel Kwan
Best Director - Daniel Scheinert
Best Supporting Actress - Jamie Lee Curtis
 13. (3) Drugs and Magic Remedies Act 1954
 Delhi School Education Act 1973
 Chit Funds Act-1982

14. (4) Some medals won by PVSindhu- 2016 Rio de Janeiro Olympic (Silver), 2020 Tokyo Olympic (Bronze), 2022 Manila Asian Championships (Bronze), 2023 Dubai Asia Mixed Team Championships (Bronze), 2022 Birmingham Commonwealth Games (Gold).
 15. (1) 2022 National Games has been played in Ahmedabad, Gandhinagar, Surat, Vadodara, Rajkot and Bhavnagar in Gujarat. Its motto is Celebrating unity through sports. Maharashtra 39 38 63 140 Services 61 35 32 128 Haryana 38 38 40 116
 16. (1)
 17. (4) Mukul Rohatgi - 12th KK Venugopal - 13th
 18. (3) Tsongmo Lake or Changgu Lake, is a glacial lake in Sikkim. Vembanad is the longest lake in India, located in Kerala. Loktak Lake is a freshwater lake of India, located in Manipur.
 19. (3) The best-known sections of the wall were built by the Ming dynasty (1368-1644).
 20. (3) Fusion Artists - Salim-Sulaiman, Shankar Tucker, Mame Khan, Jyoti Nooran, etc. Carnatic music - M. Balamuralikrishna, S. Sowmya, Sudha Ragunathan, Aruna Sairam, Maharajapuram Santhanam, T. M. Krishna, Bombay Jayashri, S. J. Jananiy, Chembai, etc. Hindustani classical music - Ustad Bismillah Khan, Pandit Bhimsen Joshi, and Ravi Shankar
 21. (4) Kangto the highest point in Arunachal Pradesh.
 22. (2) Banihal Pass is a mountain pass across the Pir Panjal Range which connects Jammu to Srinagar. Thamarassery is a mountain pass in Kerala, across the Western Ghats. Lipulekh Pass links the Byans valley of Uttarakhand, India with the Tibet Autonomous Region of China.
 23. (3)
 24. (3)
 25. (1) The Aga Khan Palace was built by Sultan Muhammed Shah Aga Khan III in the city of Pune

ANSWER KEY

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