ENGLISH LANGUAGE AND COMPREHENSION

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

EXPLANATION:-

5. (4) 'Burning' is incorrectly spelt here.

6. (1) Replace 'Its' with 'it's'. Its- Possessive Adjective It's- short form of 'It is'

9. (1) 'Fancy dress pink' with 'fancy pink dress'.
Adjective precedes the Noun it qualifies.

12. (1) We need an Adverb 'steadily' here to modify the verb 'increasing'.

WORD	MEANING IN ENGLISH	MEANING IN HINDI
Anguish	Great mental pain or suffering.	मनोव्यथा
Chronicle	A historical account of events arranged in order of time	समय के क्रमानुसार इतिहास
Decimate	To kill large numbers of animals, plants or people in a particular area	क्षेत्र विशेष के पशुओं, पौधों या मनुष्यों को बड़ी संख्या में मार डालना
Enigmatic	Mysterious	रहस्यमय
Eulogy	A speech or piece of writing that says good things about somebody /something.	प्रशंसाभरा भाषण या लेख
Extempore	A speech made without preparation	बिना पूर्व तैयारी के बोला, किया या लिखा गया
Fret	To be worried and unhappy about something	किसी विषय में चिंतित और दुखी होना
Grumpy	Bad-tempered	बदमिजाज, चिड़चिड़ा
Harbour	A place on the coast where ships can be tied up	बंदरगाह
Heathen	A person who does not belong to one of the main world religions	संसार के मुख्य धर्मों से विमुख व्यक्ति; विधर्मी
Hyperbole	Exaggerated claims, not meant to be taken seriously	अतिशयोक्ति
Hypergamy	The practice of marrying above one's social status or class	अतिविवाह
Hyperpyrexia	Is a term for a very high fever of over 106.7°f or 41.5°c	106-7°F या 41-5°C से अधिक बुखार की स्थिति
Hyperreal	Involving or characterized by particularly realistic graphic representation	अतिवास्तविक
Layperson	A person without professional or specialized knowledge in a particular subject.	आम आदमी
Mend	To repair something that is damaged or broken	मरम्मत करना
Mendicant	A member of a religious order originally owning neither personal nor community property and living mostly on charitable donations, beggar	भिक्षुक
Oblate	A layman living in a monastery under a modified rule and without vows	मठ में रहने वाला
Parable	A usually short fictitious story that illustrates a moral attitude or a religious principle	नीतिकथा; शिक्षाप्रद कथा
Pine	A tall evergreen tree that has thin sharp leaves.	देवदार या चीड़ का पेड़
Secular	Not concerned with religion	धर्मनिरपेक्ष

1. (1) G — J J — L — V — Y Y — B
$+3$ $+2$ $+3$ $+3$
↓
(Odd one)
A — D D — G — E — H H — K
$+3$ $+3$ $+3$ $+3$

2. (1) $14,17,970 \Rightarrow (14)^2 + (17)^2 = 485 \times 2 \Rightarrow 970$
$15,23,1508 \Rightarrow (15)^2 + (23)^2 = 754 \times 2 \Rightarrow 1508$
Similarly,
$17,24,1730 \Rightarrow (17)^2 + (24)^2 = 865 \times 2 \Rightarrow 1730$

3. (2)

4. (1) B △L Ⓣ = △ 9 ⑥ 5
D △L E = △ 7 △ 3
Ⓣ A D Y = 0 3 ⑥ 8
M A S B = 4 8 1 9
So, BTO = 962

5. (4).

6. (4) 56 R 8 Q 13 S 4 2 R 21 P S
Putting the value of P, Q, R, S
$56 \div 8 + 13 - 42 \div 21 \times 5$
$= 7 + 13 - 2 \times 5$
$= 7 + 13 - 10 = 10$

7. (4)

8. (4) The microscope is used to Magnify
Pen is used for writing.
Spade is used for Dig.
The shoot is not used for guns.

9. (2) E I
$-1\downarrow$ $-3\downarrow$
D F
Similarly, H M
$-1\downarrow$ $-3\downarrow$
G J

10. (1)

11. (1) $18 - 325 \rightarrow (18)^2 = 324 + 1 = 325$
$14 - 197 \rightarrow (14)^2 = 196 + 1 = 197$
$12 - 145 \rightarrow (12)^2 = 144 + 1 = 145$
But,
$24 - 575 \rightarrow (24)^2 = 576 + 1 = 577 \neq 575$

12. (2) 5. Manager
4. Manage
1. Manger
2. Mango
3. Mangrove

13. (4)

(Fruit / Vegetables / Almonds)

14. (3)
10 — 10 — 20 — 60 — 240 — **1200**
$\times 1$ $+37$ $+37$ $+37$ $+37$

15. (2) Masons use a plumb line to do their work.
Similarly, blacksmiths use a saw to do their work.

16. (2)

17. (4)

18. (3) B O U C L E
-4 -2 -4 -2 -5 -2
A J Y S K Z
Similarly,
B O U D I N
-4 -2 -4 -2 -5 -2
J G Z S K Z
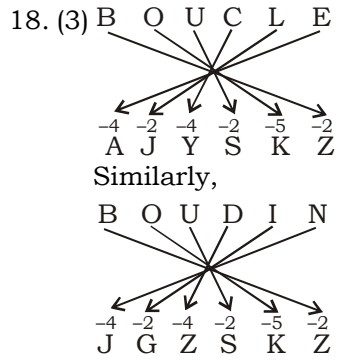
19. (4) Mango and Bananas are both types of fruit.

20. (2) $(18)^2 - 4 = 324 - 4 = 320$
$(13)^2 - 4 = 169 - 4 = 165 \neq 163$
$(24)^2 - 4 = 576 - 4 = 572$
$(9)^2 - 4 = 81 - 4 = 77$

21. (2) P   H   D   T
↓ $\downarrow -4$ $\downarrow -8$ $\downarrow -12$
P   D   V   H
↓ $\downarrow -4$ $\downarrow -8$ $\downarrow -12$
P   Z   N   V
↓ $\downarrow -4$ $\downarrow -8$ $\downarrow -12$
P   V   F   J
↓ $\downarrow -4$ $\downarrow -8$ $\downarrow -12$
P   R   X   X

22. (1) $(15)^2 - 15 = 225 - 15 = 210$
$(10)^2 - 10 = 100 - 10 = 90$
$(20)^2 - 20 = 400 - 20 = 380$

23. (3) Mare is the female of the horse.
Similarly, Sister is the female of the Brother

24. (4) $7 - 5 \times 2 + 8 \div 4 = 17$
Interchanging + and −, 7 and 5
$5 + 7 \times 2 - 8 \div 4$
$= 5 + 14 - 2 = 17 = $ RHS (Proved)

25. (3)
Mother
↑
Pawan ↔ Sister ↔ Sister(Girl)
∴ The pointed girl is the sister of Pawan

1. (2) $A = \cot 30° \tan 60° \cot 60° \tan 30°$
$\Rightarrow A = \sqrt{3} \times \sqrt{3} + \frac{1}{\sqrt{3}} \times \frac{1}{\sqrt{3}}$
$\Rightarrow A = 3 + \frac{1}{3}$
$\Rightarrow A = \frac{10}{3}$

2. (2) For 2nd case- Principal = 20000
Rate of interest = $8.5\% = \frac{17}{200}$
Time = 3y
∴ SI $= 20000 \times \frac{17}{200} \times 3$
SI = 5100
∴ Amount = 2000+5100 =25100
For 1st case -Principal = 20000
Rate of interest = $6\% = \frac{3}{50}$
Time = 3y
∴ SI $= 20000 \times \frac{3}{50} \times 3 = 3600$
∴ Amount = 20000+3600
= 23600
∴ Difference = 25100 − 23600
= 1500
∴ Value of gain per year $= \frac{1500}{3}$
= 500

3. (4) Total sale of bikes = 400+ 350 + 550+600+700 = 2600
∴ Avg. Sales of bikes $= \frac{2600}{5}$
= 520
Total sales of cars = 900+ 450 + 650+800+700 = 3500
∴ Avg sales of cars $= \frac{3500}{5}$
= 700
∴ Difference between avg. sales of bikes and cars
$P_1 = (700 - 520) = 180$
Total value of bikes and cars (P_2)
$= 2600 + 3500, P_2 = 6100$
∴ The value of $P_2 - P_1$
$= 6100 - 180$
$= 5920$

4. (2) From question we can write
44 CP = x SP
$\Rightarrow$ CP : SP = x : 44
ATQ,
$\frac{44 - x}{x} \times 100 = 10$
$\Rightarrow 10(44 - x) = x$
$\Rightarrow 11x = 440$
$\Rightarrow x = 40$
The value of x is 40

5. (4)
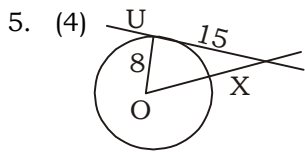
$OX = \sqrt{(15)^2 + (8)^2}$

$= \sqrt{225 + 64} = \sqrt{289}$

= 17 cm

The value of OX is 17 cm

6. (4) $x - \dfrac{1}{x} = 4$

Squaring both sides,

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

$\Rightarrow x^2 + \dfrac{1}{x^2} = 18$

Cubing both sides,

$x^6 + \dfrac{1}{x^6} = 5832 - 54$

$\left[\text{As } x^2 + \dfrac{1}{x^2} = 18\right]$

$\Rightarrow x^6 + \dfrac{1}{x^6} = 5778$

7. (1) If diameter of sphere = 7cm

$\therefore$ Radius of sphere = $\dfrac{7}{2}$ cm

$\therefore$ Total surface area

$= 4\pi \times \left(\dfrac{7}{2} \times \dfrac{7}{2}\right) cm^2$

$= 4 \times \dfrac{22}{7} \times \dfrac{7}{2} \times \dfrac{7}{2} cm^2$

$= 154 \ cm^2$

After cutting it into two halves-
Total surface area = 2×total surface area of each half

$= 2 \times [2\pi r^2 + \pi r^2]$

$= 2 \times 3 \times \dfrac{22}{7} \times \dfrac{49}{4} = 231 \ cm^2$

$\therefore$ Increased total surface area
= (231 − 154) cm² = 77 cm²

8. (2) Total number of workers getting wages of more than 200
= 20 + 50 + 15 = 85

9. (3) Angel subtended by a chord on the centre of a circle is 180°
So, the chord is the diameter of the circle.
The diameter subtended on the circumference is 90°

10. (3) $\left(k + \dfrac{1}{k}\right)\left(k - \dfrac{1}{k}\right)\left(k^2 + \dfrac{1}{k^2}\right)$

$\left(k^4 + \dfrac{1}{k^4}\right)$

$= \left(k^2 - \dfrac{1}{k^2}\right)\left(k^2 + \dfrac{1}{k^2}\right)\left(k^4 + \dfrac{1}{k^4}\right)$

$= \left(k^4 - \dfrac{1}{k^4}\right)\left(k^4 + \dfrac{1}{k^4}\right)$

$= k^8 - \dfrac{1}{k^8}$

11. (2) Time is taken by train to reach = 4hr 30 min

$= 4\dfrac{1}{2}$ hr $= \dfrac{9}{2}$ hr

Speed of train = 40m/s

$= 40 \times \dfrac{18}{5}$ km/h = 144km/h

Total distance cover by train =

speed × time = $144 \times \dfrac{9}{2}$ km

= 648 km

12. (1)

Previous : Present

Ratio of price = 4 : 5
Ratio of expenditure = 5 : 3

$\therefore$ Ratio of consumption = $\dfrac{5}{4} : \dfrac{3}{5}$

= 25 : 12

$\therefore$ Decreased value = (25 − 12) = 13

$\therefore$ Decrease % $= \dfrac{13}{25} \times 100 = 52\%$

13. (2) 1st vessel Ratio of Juice and water
= 3 : 5 = 8 × 1 = 3 : 5
2nd vessel ratio of Juice and water
= 3 : 1 = 4 × 2 = 6 : 2
$\therefore$ Ratio of Juice and Water in bigger vessel = (6+3): (5+2)
= 9 : 7

14. (3) Total no. of erasers sold by P in J and K = 250 + 240 = 490
Total no. of erasers sold by Q in M and N = 230 + 225
= 455
$\therefore$ The ratio of no. of erasers sold by P and Q = 490 : 455
= 98 : 91
$\therefore$ Statement is incorrect

St-II Total no. of erasers sold by P = 250+240+220+215+205
= 1130
Total no. of erasers sold by Q = 205+210+260+230+225 = 1130
The difference between them is 0
$\therefore$ Statement is correct
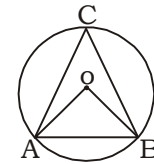
15. (3) $a^3 + b^3$
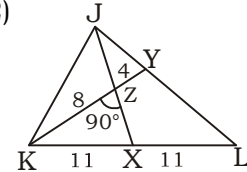$= (a+b)^3 - 3ab(a+b)$
$= (6)^3 - 3 \times 4 \times 6 = 144$

16. (4) The sum of angles made by a chord at the centre and on the major arc of a circle is 180°
We know,
$\angle AOB = 2\angle ACB$

As the sum of angles, 180° only possible angles are 120° and 60° respectively. So, the angle made at the centre of the circle is 120°.

17. (2)

Value of Z × $= \sqrt{(11)^2 - (8)^2} cm$

$= \sqrt{57}$ cm

and

Value of JZ = $2\sqrt{57}$

$\therefore$ Value of JX = $\left(2\sqrt{57} + \sqrt{57}\right) cm$

$= 3\sqrt{57}$ cm

18. (4) Marked price = 480
After giving discount of 5%
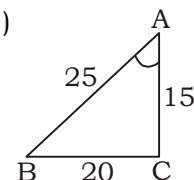
Selling price = $\dfrac{480}{100} \times 95$

= 456

19. (3) $\tan\theta + \sin\theta = A$
Squaring both sides
$\tan^2\theta + 2\tan\theta \sin\theta + \sin^2\theta = A^2$
$\tan\theta - \sin\theta = B$
Squaring both sides
$\tan^2\theta - 2\tan\theta \sin\theta + \sin^2\theta = B^2$
Now, $A^2 - B^2$
$= \tan^2\theta + 2\tan\theta \sin\theta + \sin^2\theta -$
$\tan^2\theta + 2\tan\theta \sin\theta - \sin^2\theta$
$= 4\tan\theta \sin\theta$

20. (1)

$\text{Sec } A = \dfrac{AC}{AB}$

$= \dfrac{15}{25} = \dfrac{3}{5}$

21. (1) Total marks of students
= (80×50) = 4000
$\therefore$ Total marks of passed students
= (55 × 50) = 2750
$\therefore$ Total marks of failed students
= 1250

$\therefore$ Avg. students = $\dfrac{1250}{30} = 41.66$

22. (3) Ratio of time of X and Y
= 150 : 100 = 3 : 2

Ratio of efficiency of X and Y
= 2 : 3

∴ Total work = [(2+3) × 15] unit
= 75 unit

∴ Time taken by X to complete

= $\frac{75}{2}$ days = 37.5 days

23. (4) Total no. of toys sold by shop A,B,C in 1st week
= 20 + 40 + 30 = 90
Total no. of toys sold by C,D,E in 2nd week = 20 +60+50 = 130
∴ Ratio of no. of toys = 90 : 130
= 9 : 13

24. (1) I : 66 × $\frac{5}{11}$ > $\frac{5}{6}$ ×66
30 > 55
It is wrong

II : 9 × $\frac{5}{9}$ > $\frac{8}{9}$ ×9
5 > 8
It is wrong.

III : 30 × $\frac{6}{6}$ > $\frac{4}{5}$ ×30
30 × 24
It is correct.

25. (3) 2 digit numbers which are divisible by 9.
= 18,27,36,45,54,63,72,81,90,99
∴ Sum of all numbers = 585.

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

GENERAL AWARENESS
1.(2) Deomali Peak, with an elevation of about 1,672 m, is the highest peak in the state of Odisha.
Phawngpui also known as Blue Mountain, is the highest mountain peak in the Mizo Hills (Lushai Hills) and in the state of Mizoram
Kalsubai is Highest Peak of Maharashtra's Ahmednagar District in Akola Taluka. It is known as The Everest of Maharashtra

2.(1) Legislative procedure, Bicameralism and Rule of law are taken from Britain

3. (1)

4.(3)

5.(2) Byte — 1024 Bytes
Kilobyte (Kb) — 1024 Bytes
Megabyte (MB) — 1024 KB
Gigabyte (BB) —1024 MB
Terabyte (TB) —1024 GB
Petabyte (PB) — 1024 TB

Exabyte (EB) —1024 PB
Zettabyte (ZB)—1024 EB
Yottabyte (YB)—1024 ZB

6.(3) Strait- a narrow piece of sea that joins two larger seas
Isthmus- a narrow piece of land, with water on each side, that joins two larger pieces of land

7.(3) "The Candlestand" is written by Debeshi Gooptu.

8.(2)

9.(3)

10.(1)

11.(1) Pradhan Mantri Mudra Yojana (PMMY) is a flagship scheme launched by the Government of India to provide financial assistance to micro and small enterprises (MSEs) across the country. Under the scheme, loans up to Rs. 10 lakh are provided to non-corporate, non farm small/micro enterprises for various purposes, including working capital, purchase of machinery and equipment, and infrastructure development.
Pradhan Mantri Garib Kalyan Anna Yojana - for the poor's food security, Each ration card holder will receive 5 kilograms of rice or wheat and 1 kg of dal
Pradhan Mantri Awas Yojana (PMAY) - urban residents with affordable housing through the Pradhanmantri Awas Yojana

12.(1) Rahul Ghandhi- Truth For Youth: Now or Never.
Nitin Gadkari-   India Aspires: Redefining Politics of Development
Smriti Irani-   Lal Salaam

13.(2)

14. (1) The valency of boron is 3. Valency of fluorine is 1.

15. (4)

16. (3) Anshu Malik(wrestling) won the Silver medal 2022 Common Wealth Games.
Saurav Ghosal(squash) won Bronze medal in 2022 Common Wealth Games.

17. (2) Neeraj Chopra won Gold in Javline Throw at Tokyo 2020 Olympics.
The Indian men's hockey team won bronze in Tokyo 2020 Olympics.

18.(3) Sushil kumar- Incorporating Small Businesses
Devdutt Pattanaik-7 Secrets of Shiva, 99 Thoughts on Ganesha

19.(2) The Akbarnama was the official chronicle of the reign of Akbar, the third Mughal emperor. The Ain-i-Akbari is the third volume of Akbar Nama which contains information about the administration of the empire. It was written by Abu'l-Fazl ibn Mubarak.

20.(1) Malleability is the property shown by metals by the virtue of which they can be beaten into thin sheets. Gold (Au) is the most malleable metal.
The ability of metals to be drawn into thin wires is called ductility. Platinum is the most ductile metal.

21.(2) Guru Gobind Singh Ji Airport -Maharashtra

22. (1) .

23. (2) 1928 Amsterdam Olympics
1932 Los Angeles Olympics
1936 Berlin Olympics
1948 London Olympics
1952 Helsinki Olympics
1956 Melbourne Olympics
1964 Tokyo Olympics
1980 Moscow Olympics

24.(4) Dadra and Nagar Haveli and Daman and Diu mergered in July 2019.

25.(3) A demand curve is a graphical representation that shows the relationship between the price of a good and the quantity of the good that consumers are willing and able to purchase at that price, holding all other factors constant. It typically slopes downwards, reflecting the law of demand - as the price of a good increases, the quantity demanded of that good decreases, and vice versa.
The total revenue curve is a graphical representation that shows the relationship between the quantity of a good sold and the total revenue earned by the seller, holding the price of the good constant. It slopes upwards for normal goods, reflecting the fact that as the quantity sold increases, so does the total revenue earned. For inferior goods, the total revenue curve may slope downwards.

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