❚ ENGLISH LANGUAGE AND COMPREHENSION ❚

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

2. (3) Replace 'high' with 'higher'. Comparative degree is required with 'than'.

3. (3) 'Prank' is incorrectly spelt here, means- a trick that is played on somebody as a joke
मजाक के रूप में किसी के साथ की गई चालाकी; शरारत, नटखटपन

9. (1) Then president → तब के राष्ट्रपति

12. (3) Replace 'five next' with 'next five'. 'In the next five years' is the correct expression.

13. (2) Didn't take V_1 (pay)

18. (1) Visual → Related to eyes   Audio → Related to ears   Oratory → Related to speech
Digital → Related to online

WORD	MEANING IN ENGLISH	MEANING IN HINDI
Amiss	Wrong; not as it should be	गलत
Altruist	An unselfish person whose actions show concern for the welfare of other	परोपकारी
Amateur	One who engages in a pursuit, study, science, or sport as a pastime rather than as a profession	जो कुछ शौकिया तौर पर करता है।
Bluff	To try to make people believe that something is true when it is not, usually by appearing very confident	किसी को झाँसा देना, धोखा देना
Despair	Hopelessness	निराशा
Despondent	Without hope; expecting no improvement	हताश
Feathers	One of the light, soft things that grow in a bird's skin and cover its body	पंख, पर
Gaily	Happily; cheerfully	प्रसन्नता से खुशी खुशी
Impeccable	Without any mistakes or faults; perfect	त्रुटिहीन
(V_2-Marred)	To harm or damage something good	खराब करना; क्षति पहुँचाना बिगाड़ देना
Ponderous	Slow and clumsy because of great weight, heavy	भारी–भरकम, धीमा
Precise	Exact	सटीक
Recluse	A religious person who lives a life away from other people and society	वैरागी
Reproach	To Scold	डाँटना, फटकारना
Skeptic	A person who doubts that something is true or paid	संदेहवादी
Sober	Abstaining from drinking alcohol or taking intoxicating drugs	नशीले पदार्थ के सेवन से परहेज करना
Stoic	A person who is indifferent to pain and pleasures of life	तटस्थ
Unruly	Difficult to control; without discipline	अनियंत्रित
Vagabond	A person who wanders from place to place without a fixed home	बंजारा
Vitiated	To make something less effective; to spoil something	दूषित करना, विकृत करना, निरस्त करना, रद्द करना
Volunteer	One who offers one's services without being forced	स्वयंसेवक
Wondrous	Beautiful and impressive in a surprising way	सुंदर एवं प्रभावशाली, अद्भुत, आश्चर्यजनक

❚ GENERAL INTELLIGENCE & REASONING ❚

1. (2)

2. (4) Interchanging + and ÷
   I. $27 \div 3 - 18 \times 3 + 9 = 24$
   $27 + 3 - 18 \times 3 \div 9 = 24$
   $30 - 6 = 24$
   $24 = 24$
   II. $12 \div 8 \times + 16 - 7 = 19$
   $6 + 16 - 7 = 19$
   $15 = 19$

3. (2)

	C	A	P	T	U	R	E	S
	Opp. Place ↓ Value	Place ↓ Value	Opp. Place ↓ Value	Place ↓ Value	Opp. Place ↓ Value	Place ↓ Value	Opp. Place ↓ Value	Place ↓ Value
	24	1	11	20	6	18	22	19

D	E	C	O	R	A	T	E
Opp. Place Value	Place Value	Opp. Place Value	Place Value	Opp. Place Value	Place Value	Opp. Place Value	Place Value
23	5	24	15	9	1	7	5

Similarly,

E	D	U	C	A	T	O	R
Opp. Place Value	Place Value	Opp. Place Value	Place Value	Opp. Place Value	Place Value	Opp. Place Value	Place Value
22	4	6	3	26	20	12	18

4. (2) R A M E N
+4 +4 +4 +4 +4
R I Q E V

Similarly,
M O D E L
+4 +4 +4 +4 +4
P I H S Q

5. (1) T D S
−1 +5
S I J
−1 +5
R N A
−1 +5
Q S R
−1 +5
P X I

6. (2) 56, 121, 242 ⇒ 56 + 65 ⇒
121 + 121 ⇒ 242
78, 165, 726 ⇒ 78 + 87 ⇒
165 + 561 ⇒ 726
Similarly,
36, 99, 198 ⇒ 36 + 63 ⇒ 99
+ 99 ⇒ 198

7. (2) R⁺
M⁺ —— Daughter-in-law
L⁺ —— Q⁺ ↔ S⁻

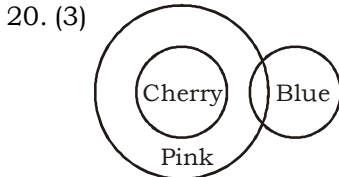8. (2) Like writing with a pen. In the same way it is dug with a spade

9. (2) 5432 → 2345
6192 → 1269
Similarly,
7835 → 3578

12. (4) Yuan is the currency of China. Similarly yen is the currency of japan

13. (1) 18 + 9 × 2 = 36
36 + 18 × 2 = 72
Similarly,
32 + 16 × 2 = 64

14. (4) 20, 22, 26, 32, 40, **50**
+2 +4 +6 +8 +10

15. (4) 3 → 5, 6
3 → 1, 2

16. (1) $P \xrightarrow{+2} R \xrightarrow{+3} V$ **(odd)**
$O \xrightarrow{+2} Q \xrightarrow{+3} T$
$A \xrightarrow{+2} C \xrightarrow{+3} F$
$X \xrightarrow{+2} Z \xrightarrow{+3} C$

4 ⇔ 3

17. (2) Convex

19. (4) 27 − 11 − 8 = 8
48 − 37 − 2 = 9
Similarly,
56 − 5 − 3 = 48

20. (3)

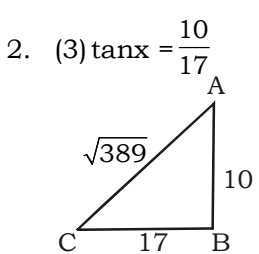21. (2) Dog's feminine is bitch. Thus the feminine of bull is cow.

22. (4) 59, 118, 236
×2 ×2
64, 128, 256
×2 ×2
Similarly,
82, 164, 328
×2 ×2

QUANTITATIVE APTITUDE

1. (2) Total Production of bikes by all 5 companies = 700 + 450 + 500 + 250 + 300 = 2200
Total production of trucks by all 5 companies = 500 + 300 + 200 + 600 + 650 = 2250
∴ Difference between total production of bikes and trucks A_1 = 2250 − 2200 ⇒ 50
Total production of bikes by company D, F, H = 700 + 500 + 300 = 1500
∴ Average production (A_2)
$= \dfrac{1500}{3}$ = 500
∴ The value of $\dfrac{A_2}{A_1} = \dfrac{500}{50} \Rightarrow 10$
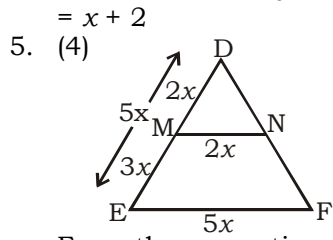
2. (3) $\tan x = \dfrac{10}{17}$

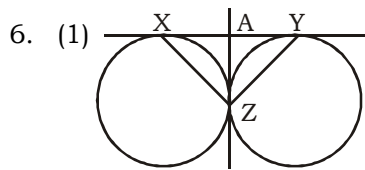From Pythagorean theorem
$AC^2 = AB^2 + BC^2$
$AC^2 = 10^2 + 17^2$

$AC^2 = 100 + 289$
$AC^2 = 389$
$AC = \sqrt{389}$
$\sin x = \dfrac{10}{\sqrt{389}}$

3. (4) We know in a radius of an equilateral triangle
$= \dfrac{side}{2\sqrt{3}}$ units
$= \dfrac{12}{2\sqrt{3}}$ cm ⇒ $2\sqrt{3}$

4. (2) Total age of 6 girls = 6x
New average age of the class
$= \dfrac{6x + x - 2 + x + 4 + x + 8 + x + 10}{10}$
$= x + 2$

5. (4)

From the properties of BPT,
5x = 60
Or, x = 12
∴ Length of ME = 12 × 3 cm
= 36 cm

6. (1)

Let, ∠XYZ = α
∴ ∠AZY = α [as AY = AZ]
Similarly,
If ∠AXZ = β
∴ ∠AZX = β
From properties of triangle
∠YXZ + ∠XYZ + ∠XZY = 180°
Or, β + α + α + β = 180°
Or, α + β = 90°
∴ ∠XZY = 90°

7. (2) Salary of F = 400
Salary of H = 500
∴ Ratio of salary of F and H = 400 : 500 = 4 : 5

8. (4) (a+b+2c) (a²+b²+4c²−ab−2bc−2ca) = a³+b³+8c³−6abc

9. (4) x = 18 ⟶ 18 ⟶ 1
y = 9 ⟶ 18 ⟶ 2
X + Y complete work in $\dfrac{18}{3}$ = 6 days.
∴ X + Y complete $\dfrac{1}{6}$ unit of work in 1 day.

10. (4) (1 + tanθ − secθ) (1 + cotθ + cosecθ)

Let, $\theta = 45°$

$\therefore (1 + \tan 45° - \sec 45°)(1 + \cot 45° + \csc 45°)$

$= \left(1 + 1 - \sqrt{2}\right)\left(1 + 1 + \sqrt{2}\right)$

$= (2)^2 - \left(\sqrt{2}\right)^2 \Rightarrow 2$

11. (3) Let, radii of two circles are r_1, r_2 cm
ATQ,
$2\pi r_1 = 77$

Or, $r_1 = 77 \times \dfrac{7}{22} \times \dfrac{1}{2}$

Or, $r_1 = \dfrac{49}{4}$ and

$2\pi r_2 = 154$

Or, $r_2 = 154 \times \dfrac{7}{22} \times \dfrac{1}{2}$

Or, $r_2 = \dfrac{49}{2}$

$\therefore$ Difference between their radii

$= \left(\dfrac{49}{2} - \dfrac{49}{4}\right)$ cm

$= \dfrac{98 - 49}{4}$ cm $\Rightarrow \dfrac{49}{4}$

$= 12.25$ cm

12. (3) Let, Marked price = 5x
Selling price = 4x

$\therefore$ Cost price $= \dfrac{4x}{90} \times 100 = \dfrac{40x}{9}$

$\therefore$ Ratio of marked price and

cost price $= 5x : \dfrac{40x}{9} = 9 : 8$

13. (2) Let, usual speed of car be x km/h
$\therefore$ Reduced speed of car = (x – 14) km/h
ATQ,

$\dfrac{280}{x-14} - \dfrac{280}{x} = 1$

Or, $280x - 280(x-14) = x(x-14)$
$3920 = x^2 - 14x$
$x^2 - 14x - 3920 = 0$
$x^2 - 70x + 56x - 3920 = 0$
Either x – 70 = 0 Or x + 56 = 0
x = 70,   x = –56
[As speed can't be negative]
$\therefore$ Usual speed of car = 70 km/h

14. (4) $\sin^2 21 + \sin^2 69$
$= \sin^2 21° + \cos^2 21°$
[As $\sin 21°$ and $\cos 69°$ are complementary pair)
= 1

15. (1) Number of girls in S_1 = 400
Number of girls in S_2 = 1000
$\therefore$ Diff. betweet Number of girls in S_1 and S_2 = (1000 – 400) = 600

$\therefore$ Required % $= \dfrac{600}{1000} \times 100 = 60\%$

16. (3) Let principal = 10 units

$\dfrac{\left(10 \times \frac{1}{2}\right)\text{units} \times 20 \times 2}{100} + \dfrac{\left(5 \times \frac{2}{5}\right)\text{units} \times 25 \times 2}{100}$

$+ \dfrac{3 \text{ units} \times 10 \times 2}{100} = 360$

2 units + 1 unit + $\dfrac{3}{5}$ units = 360

$\dfrac{18}{5}$ units = 360

10 units = 1000

17. (3) Number of person × Average weight = Total weight
15 × 30 = 450
Average weight of 16 persons

$= \dfrac{450 + 78}{16} = 33$ kg

18. (3) First   Second
    Watch   watch
    +25   –10

    $\searrow \quad \swarrow$
      0
    $\swarrow \quad \searrow$
    10 : 25
    2 : 5   = 7
ATQ,
7 ≡ 3500
2 ≡ 1000
5 ≡ 2500
$\therefore$ Cost price of first watch = 1000
Cost price of second watch = 2500

19. (3) For the number 5A72B to divide by 11, difference of sum of alternate number is equal to O or multiple of 11.
$\therefore$ Sum of alternate number = (B + 7 + 5) – (A + 2)
= B – A + 10
ATQ,
B – A + 10 = 11
Or, B – A = 1

20. (4) Total sales of branch A in 2018 = 14
Total sales of branch C in 2020 = 70
$\therefore$ Ratio of total sales of branch A to branch C = 14 : 70
= 1 : 5

21. (2) P : Q = 2 : 3
    Q : R = 4 : 5
    R : S = 2 : 1

P	:	Q	:	R	:	S
2	:	3	:	3	:	3
4	:	4	:	5	:	5
2	:	2	:	2	:	1
16	:	24	:	30	:	15

The value of P : R : S = 16 : 30 : 15

22. (2) $k + \dfrac{1}{k} + 2 = 0$

Or, $k + \dfrac{1}{k} = -2$

$\therefore k = -1$
Now,

$k^{17} + \dfrac{1}{k^{11}}$

$= (-1)^{17} + (-1)^{11}$

23. (1) As angle subtended by chord AB is 90°, so the chord is diameter of circle.

$\therefore$ Radius of circle $= \dfrac{16}{2} = 8$ cm

24. (1)

$\dfrac{\frac{1}{2} + \frac{3}{4} \div \frac{1}{4} + \frac{3}{4} \div \frac{1}{2} + \frac{1}{4}}{\frac{3}{4} \times \frac{1}{4} \div \frac{1}{2} - \frac{1}{2} \times \frac{3}{4} \times \frac{1}{4}}$

$= \dfrac{\frac{1}{2} + 3 + \frac{3}{2} + \frac{1}{4}}{\frac{3}{4} \times \frac{1}{2} - \frac{2}{3} \times \frac{1}{4}} \Rightarrow \dfrac{\frac{2 + 12 + 6 + 1}{4}}{\frac{3}{8} - \frac{2}{12}}$

$= \dfrac{\frac{21}{4} \times 24}{(9 - 4)} \Rightarrow \dfrac{126}{5}$

25. (2) According to the question
1 < II
1 × 20%   = II × 14%
I : II = 7 : 10
17 units = 8942
1 unit = 526
10 units = 5260 1 unit = 140
Compound interest (12 units)
= 140 × 21 $\Rightarrow$ 2940

ANSWER KEY

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

GENERAL AWARENESS

1.(2) P.C Mahalanobis is known as the Father of Indian Statistics.
First five year plan was based on Harrod-Domar model.

2.(2) Eight Degree Channel separates the islands of Minicoy and Maldives.
Nine Degree Channel separates the island of Minicoy from the Lakshadweep.

3.(3) 68th National Award
Best Actor - Suriya (Soorarai Pottru) and Ajay Devgn (Tanhaji)

Best Actress - Aparna Balamurali(Soorarai Pottru)
Best Supporting Actor - Biju Menon(Ayyappanum Koshiyum)
Best Male Playback Singer - Rahul Deshpande
Best Director - Sachidanandan K. R.
Best Book - The Longest Kiss
Dada Saheb Phalke - Asha Parekh.

4.(1) Kashinath Naik is javelin thrower. He won the bronze medal at the 2010 Commonwealth Games with a throw of 74.29 meters.

Neeraj Chopra's gold medal at Tokyo 2020 was also India's second individual Olympic gold medal after shooter Abhinav Bindra's 10m air rifle glory at Beijing 2008.

Devendra Jhajharia is an Indian Paralympic javelin thrower competing in F46 events. He is the first Indian Paralympics player to win two gold medals at the Paralympics. He won his first gold in the javelin throw at the 2004 Summer Paralympics in Athens. At the 2016 Summer Paralympics in Rio de Janeiro, he won a second gold medal in the same event. He becomes India's most decorated Paralympic player by winning his third medal, a silver at the 2020 Summer Paralympics at Tokyo.

5.(1) Lingaraja Temple is a Hindu temple dedicated to Shiva.
Karnataka-Lakshmi Narasimha, Hoysaleswara, Kedareshwara Temple, Iskcon, etc.
Maharashtra - Shani Shingnapur, Trimbakeshwar, Bhimashankar Temple, etc.
Tamil Nadu - Meenakshi Amman, Gangaikonda Cholapuram, Bala Murugan Temple, Brihadeeswarar, Thanjavur Arulmigu, Ramanathaswamy, etc.

6.(4) Pressure is determined as force per unit area of the surface. The SI unit of pressure is Pascal.

7.(4) **Karnataka** - Jog fall(Saravati raiver), Almatti Dam(Krishna river), Renuka Sagara Dam (Malaprabha river).
Chhattisgarh - Niagara falls(Indravati river), Amrit Dhara Waterfall(Hasdo River)
Jharkhand - Masaria Dam(Masaria river),Nakti Dam(Nakti river), Murahir Dam(Lowjheria Nala), Maithon Dam(Barakar river),Hundru Falls(Subarnarekha River).
Odisha - Hirakud Dam(Mahanadi), Indrawati dam(Indravati river).

8.(2) **Gujrat** - Gir National Park,Vansda National Park, Marine National Park,Blackbuck National Park, Jambughoda Wildlife Sanctuary, Kutch Desert Wildlife Sanctuary, Nal Sarovar Bird Sanctuary.

9.(3) Kodandera M. Cariappa was the second Field Marshal.

10.(1) The 42nd Amendment changed the description of India from a "sovereign democratic republic" to a "sovereign, socialist secular democratic republic", and also changed the words "unity of the nation" to "unity and integrity of the nation".

11.(2) 2020 Summer Olympics
Gold - Neeraj Chopra
Silver - Mirabai Chanu(Weightlifting), Ravi Kumar Dahiya(Wrestling)
Bronze - P. V. Sindhu(Badminton), Lovlina Borgohain(Boxing), Bajrang Punia(Wrestling) and Team hockey.
The Ministry of External Affairs decided that Indian envoy will not attend the opening or closing ceremony of the Beijing Winter Olympics because of China making an Galwan soldier a torchbearer.

12.(1) The first logistics report was released in 2018.
Assam Himanta Biswa Sarma Jagdish Mukhi
Andhra Pradesh Chief Minister is Y.S. Jagan and Governor is Mohan Reddy Biswabhusan Harichandan.
Tamil Nadu Chief Minister is M.K Stalin and Governor is R.N. Ravi.

14.(4) Britain - Parliamentary government, Rule of Law, Legislative procedure, Single citizenship, Cabinet system, Prerogative writs, Parliamentary privilege, Bicameralism
Canada - Centrifugal form of federalism where the centre is stronger than the states, Residuary powers vest with the centre, Centre appoints the Governors at the states, Advisory jurisdiction of the supreme court.
USSR - Fundamental duties, The ideals of justice (social, economic, and political), expressed in the Preamble.

15.(2) Odisha has the highest reserve of Manganese ore in our country while the maximum Manganese producing state is Madhya pradesh.
Odisha - Simlipal National Park, Bhitarkanika National Park & Wildlife Sanctuary, Tikarpada Wildlife Sanctuary, Sunabeda wildlife sanctuary.
Madhya Pradesh - Kanha Tiger Reserve, Bandhavgarh National Park, Pench National Park, Panna National Park, Satpura National Park, Madhav National Park, Van Vihar National Park,Kuno National Park, Pachmarhi Biosphere Reserve.
Maharashtra - Sanjay Gandhi National Park, Navegaon Nagzira Tiger Reserve, Indravati National Park,Chandoli National Park.
Karnataka - Bandipur National Park, Nagarahole Tiger Reserve, Bannerghatta National Park, Anashi National Park, Mudumalai Tiger Reserve, Bhadra Wildlife Sanctuary.

17.(4) Hepatitis means inflammation of the liver.

18.(3) The Battle of Plassey was a decisive victory of the British East India Company over the Nawab of Bengal and his French allies on 23 June 1757, under the leadership of Robert Clive. The victory was made possible by the defection of Mir Jafar, who was Nawab Siraj-ud-Daulah's commander in chief. The battle helped the British East India Company take control of Bengal.

19.(4)

20.(4) Conduction is the process by which heat energy is transmitted through collisions between neighboring atoms or molecules. C4onvection, process by which heat is transferred by movement of a heated fluid such as air or water.

21.(2) Arms Act was enacted in 1878, Under this act, manufacture and sale of guns in the country were regulated. No Indian was allowed to manufacture, sell, or even carry a weapon without a license from the government.

22.(4) Veld, also spelled veldt, is a type of wide open rural landscape in Southern Africa.
The Llanos is a vast tropical grassland plain situated to the east of the Andes in Colombia and Venezuela, in northwestern South America.
Tundra ecosystems are treeless regions found in the Arctic and on the tops of mountains, where the climate is cold and windy, and rainfall is scant.

23.(3) Alt + F - opens the file menu or file tab while using the program or application.

24.(2) Arihant was launched on 26 July 2009, the anniversary of Vijay Diwas (Kargil War Victory Day).
INS Shivaji was commissioned on 15 February 1945 as HMIS Shivaji.
INS Vikramaditya was commissioned on 16 November 2013 at a ceremony held at Severodvinsk, Russia. On 14 June 2014, the Prime Minister of India, Narendra Modi, formally inducted INS Vikramaditya into the Indian Navy and dedicated her to the nation.

25.(2)

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