

**ENGLISH LANGUAGE AND COMPREHENSION**

1. (4) 2. (4) 3. (1) 4. (3) 5. (2) 6. (4) 7. (1) 8. (2) 9. (1)  
 10. (4) 11. (2) 12. (2) 13. (4) 14. (4) 15. (1) 16. (3) 17. (4) 18. (2)  
 19. (3) 20. (4) 21. (4) 22. (4) 23. (2) 24. (2) 25. (4)
2. (4) 'In broad daylight' is the correct phrase , means-during the day, when everyone can see.  
 9. (1) The correct word could be 'ropes' or 'wraps'. Wraps -to put paper or cloth around somebody/  
 hing as a cover ropes -very thick, strong string that is used for tying or lifting heavy things,  
 climbing up, etc.  
 11. (2) Replace 'on' with 'in' 'in the groups' is the correct expression.  
 12. (2) Conjunction 'that' is not used in direct speech  
 20. (4) Replace 'careful' with 'carefully'. We need an adverb (carefully) to modify the verb (writes)

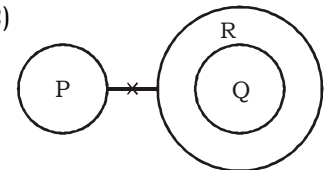
**DIFFICULT WORD**

WORD	MEANING IN ENGLISH	MEANING IN HINDI
Clump	A small group of plants or trees growing together	पेड़ों का झुमट
Congregate	To come together in a crowd or group	एकत्रित होना
Constant	Happening or existing all the time or again and again, persistent	लगातार
Convince	To succeed in making somebody believe something	किसी को विश्वास दिलाना; आश्वस्त करना
Delible	Capable of being deleted.	मिटाए जाने योग्य
Delinquency	A situation in which tax or borrowed money is not paid or paid back when it should be, default	दिवालिया
Dissolve	Used about a solid) to become or to make something become liquid	घुलना या घोलना
Eccentric	Strange or unusual, idiosyncratic	विलक्षण व्यक्ति
Intensify	To become or to make something greater or stronger	तीव्रतर, प्रबल या उग्र कर देना
Intermittent	Stopping for a short time and then starting again several times	रुक-रुक कर होने वाला , आंतरापिक
Marinate	To coat or cover (food) with herbs, spices, etc. And let rest before cooking or serving	तेल-मसाले आदि के मिश्रण मे लपेटना
Relentless	Not stopping or changing	निरंतर
Tardiness	The quality or fact of being late; lateness.	देरी
Unravel	To remove the knots from a piece of string, thread, etc. to come unfastened in this way, To make something clear.	डोरी, धागे आदि के गाँठें सुलझाना, उजागर करना
Wane	To become gradually weaker or less important, evanesce	पतन
Wonted	Habitual; usual.	अभयस्त

**GENERAL INTELLIGENCE & REASONING**

1. (1)  $7, 559, 6 \Rightarrow 7^3 + 6^3 = 559$   
 $8, 637, 5 \Rightarrow 8^3 + 5^3 = 637$   
 Similarly,  
 $9, 1241, 8 \Rightarrow 9^3 + 8^3 = 1241$
2. (4) 2, 1, 3, 4, 5  
 3. (1)  $1 \rightarrow 6, 5$   
 $1 \rightarrow 3, 2$   
 Opposite  $5 \leftrightarrow 2$
4. (4)
5. (2)  $\triangle H \triangle A \square W \square K \square - 8 \triangle 2 \square 5 \triangle 6$   
 $\square I \square N \square K \square S \square - \square 5 \square 4 \square 9 \square 7$   
 $\square G \square U \square N \square K \square - 1 \square 9 \square 3 \square 5$   
 $\triangle H \square S \square G \square A \square - 4 \square 3 \square 2 \square 6$   
 $G K A \square - 3 \square 5 \square 6$

6. (1)  $6, 121, 17 \Rightarrow (6 \sim 17)^2 = 121$   
 $38, 576, 14 \Rightarrow (38 \sim 14)^2 = 576$   
 Similarly,  
 $9, 81, 18 \Rightarrow (9 \sim 18)^2 = 81$
7. (4)  
 $153, 202, 251, 300, 349, 398$   
 $+49 \quad +49 \quad +49 \quad +49 \quad +49$
8. (1)  
 $7 F 6 F 1 = 176$   
 $8 F 2 F 4 = 482$   
 $3 F 1 F 8 = 831$
9. (4)
10. (4) Lion — Den  
 11. (3)  
 12. (1)



13. (2)
14. (2)  $8 \ 1 \ 9 \ 6 \ 2 \ 4 \ 5 \ 7$  Reverse  $7 \ 5$   
 $4 \ 2 \ 6 \ 9 \ 1 \ 8$   
 $3 \ 2 \ 1 \ 6 \ 4 \ 5 \ 2 \ 8 \ 1$  X  $8 \ 1$   
 $2 \ 5 \ 4 \ 6 \ 1 \ 2 \ 4$   
 $7 \ 1 \ 5 \ 6 \ 2 \ 3$  Reverse  $3 \ 2 \ 6 \ 5 \ 1$   
 $7$   
 $6 \ 5 \ 4 \ 2 \ 8$  Reverse  $8 \ 2 \ 4 \ 5 \ 6$
15. (3)
- Mother — Sister (Lady)  
 |  
 Navneet — Sister  
 ↘  
 Maternal Aunt

16. (4) The law of motion is derived by Issac Newton in the same way the theory of relativity in derived by Albert Einstein

17. (1) R Q M R

+7 | +5 | +9 | +11 |  
↓ ↓ ↓ ↓  
Y V V C

+7 | +5 | +9 | +11 |  
↓ ↓ ↓ ↓  
F A E N

+7 | +5 | +9 | +11 |  
↓ ↓ ↓ ↓  
M F N Y

+7 | +5 | +9 | +11 |  
↓ ↓ ↓ ↓  
T K W J

18. (4)  $38 : 76 \Rightarrow 38 \times 2 = 76$

Similarly,

$42 : 84 \Rightarrow 42 \times 2 = 84$

19. (4)  $X \xrightarrow{+3} A \xrightarrow{+4} E \xrightarrow{+5} J$

$N \xrightarrow{+3} Q \xrightarrow{+4} U \xrightarrow{+5} Z$

$D \xrightarrow{+3} G \xrightarrow{+4} K \xrightarrow{+5} P$

$G \xrightarrow{+3} J \xrightarrow{+4} N \xrightarrow{+6} T$  (Odd)

20. (3) Ohm is unit of electric resistance similarly, seconds is unit of time.

21. (4) A N — E R

+4                      +4

Similarly,

B O — F S

+4                      +4

22. (3) By hit and trial method

Interchanging 2 and 6

$8 \times 6 + 12 \div 2 - 4 = 14$

$8 \times 2 + 12 \div 6 - 4 = 14$

$16 + 2 - 4 = 14$

$14 = 14$

23. (3)

24. (2) C H E W E R

+5 | -7 | +5 | -7 | +5 | -7 |  
↓ ↓ ↓ ↓ ↓ ↓  
H A J P J K

25. (2)  $P \leftrightarrow R$ ;  $\# \leftrightarrow Q$ ;  $A \leftrightarrow @$

So, # will be the face opposite to the face showing Q.

### ANSWER KEY

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### QUANTITATIVE APTITUDE

1. (2) We know

$$\sin(A+B) = \sin A \cos B + \cos A \sin B.$$

Now,

$$\sin x = \sin 50^\circ \cos 40^\circ + \cos 50^\circ \sin 40^\circ.$$

$$\sin x = \sin 90^\circ$$

$$x = 90^\circ$$

2. (4) We know,  
 $\tan A = \cot B$  when  $(A+B) = 90^\circ$

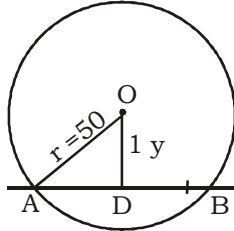
Now,  
 $\tan 2A = \cot(46-A)$

$$2A + 46 - A = 90^\circ$$

$$A = 44^\circ$$

3. (2) Insufficient data, so no conclusions follow.

4. (4)



From pythagorean theorem.

$$AD^2 = (50)^2 - (14)^2$$

$$AD^2 = 2500 - 196$$

$$AD^2 = 2304$$

$$AD = 48$$

$$\text{Then } AB = 48 \times 2 = 96$$

Sum of chord AB and diameter of this circle =  $96 + 50 \times 2 = 196$  cm

5. (3) Average sale of branch A, B, C in

$$2020 = \frac{117 + 113 + 83}{3} = \frac{313}{3}$$

Average sale of brach A, B,

$$\text{C in 2021} = \frac{99 + 74 + 101}{3}$$

$$= \frac{274}{3}$$

Percentage of average sales of A, B, C in 2021 to average sales of A, B, C in 2020 is

$$\frac{274/3}{313/3} \times 100 = 97.53\%$$

6. (2)  $\frac{x^2-1}{x} \Rightarrow \frac{x(x-\frac{1}{x})}{x}$

$$= x - \frac{1}{x}$$

Now,

$$x^2 + \frac{1}{x^2} = 51$$

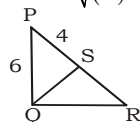
$$x^2 + \frac{1}{x^2} - 2 = 49$$

$$\left(x - \frac{1}{x}\right)^2 = (7)^2$$

$$x - \frac{1}{x} = 7$$

7. (1) From right angle  $\Delta PQS$ ,

$$QS = \sqrt{(6)^2 - (4)^2}$$



$$= \sqrt{36-16}$$

$$= \sqrt{20} \Rightarrow 2\sqrt{5}$$

8. (3) Total cost price =  $750 + 650 + 450 + 550 + 350 + 850 = 3600$

Total profit =  $250 + 200 + 350 + 450 + 300 + 400 = 1950$

$\therefore$  Difference between total cost price and profit  $P_1 = 3600 - 1950 = 1650$

Total cost price of A and B =  $750 + 650 = 1400$

Total selling price of E and F =  $(350 + 300) + (850 + 400) = 650 + 1250 \Rightarrow 1900$

$\therefore$  Difference between selling price and cost price  $P_2 = 1900 - 1400 = 500$

$$\therefore P_1 - P_2 = 1650 - 500 = 1150$$

9. (1) Ratio of angle =  $4 : 3 : 2$

ATQ,

$$4 \equiv 80$$

$$3 \equiv 60$$

$$2 \equiv 40$$

$\therefore$  Smallest angle is  $40^\circ$ .

10. (2) Total discount =  $85000 - 68000 = 17000$

$$\therefore \text{Requird discount \%} = \frac{17000}{85000} \times 100$$

$$= 20\%$$

11. (1) For the number  $2x64y$  is divisibility by 88.

We first check the divisibility of that number by 8 and 11 separately.

Divisibility of 8:- To divisible by 8, last e digit must be divisible by 8.

So, value of  $y = 8$ .

Divisibility of 11:- To divisible by 11, sum of alternate number is zero or multiple of 11.

Now,

$$(2 + 6 + 8) - (x + 4) = 11$$

$$\text{Or, } x = 1$$

Now,  $6x - 5y$

$$(6 \times 1) - (5 \times 8) = -34$$

12. (3) Let, Principal = P

$$\therefore SI = \frac{P}{5}$$

$$SI = \frac{P \times R \times T}{100}$$

$$\text{Or, } R = \frac{100P}{5 \times P \times 5}$$

$$R = 4$$

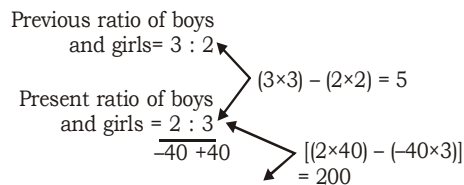
Time required to become interest equal to principal.

$$T = \frac{P \times 100}{P \times 4}$$

$$T = 25 \text{ y}$$

∴ Time required = 25 years

13. (1)



ATQ,

$$5 \equiv 200$$

$$1 \equiv 40$$

$$3 \equiv 120$$

∴ Initial number of boys is 120.

14. (4) Population of P in year M and A = 300 + 200 = 500

Population of Q in year K and L = 500 + 350 ⇒ 850

∴ % of population of P in year M and N to population of Q

$$\text{in year K and L} = \frac{500}{850} \times 100$$

$$= 41.17\%$$

15. (3)  $\frac{(103)^2 - (101)^2}{102}$

$$\frac{(103 + 101)(103 - 101)}{102}$$

$$\frac{204 \times 12}{102} = 2 \times 2 = 4$$

16. (4) The average of an odd number of consecutive natural numbers is the middle of the consecutive numbers.

∴ Consecutive numbers are = 33, 34, 35, 36..... 49.

∴ Smallest number is 33.

17. (1) A complete  $\frac{2}{3}$  rd work in 60 days.

∴ A complete whole work in 90 days.

∴ A complete  $\frac{1}{5}$  th of work in

$$\left(\frac{90}{5}\right) = 18 \text{ days.}$$

18. (4) Area of rectangular garden =  $(240 \times 80) \text{ m}^2$   
= 19200  $\text{m}^2$

∴ Length of path = 240 + 8 = 248 m

Breadth of path = 80 + 8 = 88m

∴ Area of path =  $(248 \times 88) \text{m}^2$

Area of path =  $(21824 - 19200) \text{m}^2$   
= 2624  $\text{m}^2$

19. (2) Measure of 3rd angle =  $180^\circ - (40^\circ + 62^\circ)$   
=  $180^\circ - 102^\circ$   
=  $78^\circ$

20. (4)  $\tan 8x = \cot 2x$   
Or,  $\tan 8x = \tan (90^\circ - 2x)$   
 $8x = 90^\circ - 2x$

$$x = 9^\circ$$

$$\therefore \tan 5x = \tan 45^\circ = 1$$

21. (3) Total number of patients on Monday and Wednesday =  $146 + 138 = 284$

Total number of patients on Thursday = 152

∴ Ratio of total number of patients on Monday and Wednesday to number of patients on Thursday

$$= 284 : 152$$

$$= 72 : 38$$

22. (4)  $P + r = 21$

Squaring both sides.

$$(P + r)^2 = 441$$

$$\text{Or, } (P - r)^2 + 2pr = 441$$

$$\text{Or, } (P - r) = \sqrt{289}$$

$$\text{Or, } P - r = 17$$

Now,

$$P^3 - r^3$$

$$= (p - r)^3 + 3pr(p - r)$$

$$= (17)^3 + 3 \times 380 \times 17$$

$$= 6851$$

23. (4) Let, amount of money is 100%  
After spending 10% money

Remaining money = 90%

Again after depositing 70% of remaining money, money remains =  $(90\% - 63\%) = 27\%$

ATQ,

$$27\% = 2646$$

$$100\% = \frac{2646}{27} \times 100$$

$$= 9800$$

∴ Raj had initially 9800

24. (4) Let cost price = 100%

∴ Selling price = 50%

ATQ,

$$50\% = 4270$$

$$100\% = 8540$$

Now,

To gain profit of 40%

$$\text{Selling price} = \frac{8540}{100} \times 140$$

$$= 11956$$

25. (4) On factorization of 720

$$\text{We get} = 2^4 \times 3^2 \times 5$$

Number of factors =  $(\text{Power} + 1) \times (\text{Power} + 1) \times (\text{Power} + 1)$   
=  $(4 + 1) \times (2 + 1) \times (1 + 1)$   
= 30

Now,

Total number of factors except 1 and itself are =  $30 - 2 = 28$

### ANSWER KEY

1. (2) 2. (4) 3. 2) 4. (4) 5. (3)  
6. (2) 7. (1) 8. (3) 9. (1) 10. (2)  
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21. (3) 22. (4) 23. (4) 24. (4) 25. (4)

### GENERAL AWARENESS

1. (3)
2. (2) Photosynthesis does not take place in plants during night time as the sunlight is absent and the accumulation of carbon dioxide is more.
3. (4) **The Pitt's India Act, 1784** also called the East India Company Act, 1784. Pitt's India Act, 1784 was passed to rectify the defects of the Regulating Act of 1773. It distinguished between the commercial and political functions of the company. It allowed the Court of Directors to manage the commercial affairs but created a new body called the Board of Control to manage the political affairs. It empowered the Board of Control to supervise and direct all operations of the civil and military government or revenues of the British possessions in India. The company's territories in India were for the first time called the 'British possessions in India'. The British Government was given supreme control over Company's affairs and its administration in India.
5. (2) **Deposition** is the laying down of sediment carried by wind, flowing water, the sea or ice. Sediment can be transported as pebbles, sand and mud, or as salts dissolved in water.
- Vaporization** of an element or compound is a phase transition from the liquid phase to vapor.
- Fusion** occurs when two atoms slam together to form a heavier

atom, like when two hydrogen atoms fuse to form one helium atom

6.(3)

7.(2) Malwa Plateau include the Mahi river in the west, the Chambal river in the centre and the Betwa river in the east and the headwaters of the Dhasan and Ken rivers. Other smaller rivers in the area are Shipra, Parbati and Gambhir.

9.(3) **Maharashtra** - Ajanta Caves, Ellora Caves, The Victorian and Art Deco Ensemble of Mumbai, Chhatrapati Shivaji Maharaj Terminus, Elephanta Caves

**Bihar** - Mahabodhi Temple Complex, Nalanda University

Madhya Pradesh - Khajuraho, Bhimbetka rock shelters, Sanchi

**Gujrat** - Champaner-Pavagadh Archaeological Park, Historic City of Ahmadabad

10.(4) The Great Indian Diet - Luke Coutinho and Shilpa Shetty Rani Mukerji - "candid, intimate" (autobiography)

12.(4) Jayaram Jayalalithaa served as Chief Minister of Tamil Nadu for more than fourteen years over six terms between 1991 and 2016.

14.(2) **Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act** allows banks and other financial institutions for auctioning commercial or residential properties to recover a loan when a borrower fails to repay the loan amount.

**The Government Securities Act, 2006** is a legislation of the Parliament of India, which aims to introduce various improvements in the government securities market and the management of government securities by the Reserve Bank of India.

**The Companies Act 2013** is an Act of the Parliament of India on Indian company law which regulates incorporation of a company, responsibilities of a company, di-

rectors, dissolution of a company.

15.(3)

16.(1)

17.(1) 2022 Asia Cup was played at U.A.E. Sri Lanka won the Cup.

**Player of the series** - Wanindu Hasaranga

**Most runs** - Mohammad Rizwan (281)

**Most wickets** -

India Bhuvneshwar Kumar (11)

2023 Asia Cup will be played in Pakistan.

18.(3) Reita Faria (Miss World 1966), Aishwarya Rai (Miss World 1994), Sushmita Sen (Miss Universe 1994), Diana Hayden (Miss World 1997), Yukta Mookhey (Miss World 1999), Priyanka Chopra (Miss World 2000), Lara Dutta (Miss Universe 2000), Nicole Faria (Miss Earth 2010), Manushi Chhillar (Miss World 2017), Harnaaz Sandhu (Miss Universe 2021).

19.(2) The Western Ghats, also known as the Sahyadri mountain range. It is a UNESCO World Heritage Site and is one of the 36 biodiversity hotspots in the world. It is sometimes called the Great Escarpment of India. According to UNESCO, the Western Ghats are older than the Himalayas.

The range starts near south of the Tapti river and runs approximately 1,600 km (990 mi) through the states of Gujarat, Maharashtra, Karnataka, Goa, Kerala and Tamil Nadu ending at Marunthuvazh Malai near the southern tip of India.

The peak of Anamudi in Kerala is the highest peak in the Western Ghats, as well as the highest peak in India outside the Himalayas.

The Eastern Ghats are a discontinuous range of mountains along India's eastern coast. The Eastern Ghats pass through Odisha, Andhra Pradesh to Tamil Nadu in the south passing some parts of Karnataka as well as Telangana. They are cut through by four major rivers of

peninsular India, Mahanadi, Godavari, Krishna, and Kaveri. Deomali with 1672 m height is the tallest point in Odisha. Arma Konda/Jindhagada Peak with 1680 m is the highest point in Andhra Pradesh. Kattahi Betta in BR hills with the height of 1822 m is the tallest peak in Eastern Ghats.

**Thal ghat and Bhor ghat** are important passes in Western Ghats which provide passage by road and rail between the Konkan Plains in the west and the Deccan Plateau in the east.

20.(4) India is the world's largest producer of milk, pulses and jute, and ranks as the second largest producer of rice, wheat, sugarcane, groundnut, vegetables, fruit and cotton.

22.(4) 15th June - World Wind Day  
15th June - World Elder Abuse Awareness Day

23.(4) Ministry of Commerce and Industry - **Piyush Goyal**

Ministry of Micro, Small and Medium Enterprises - **Narayan Rane**

Ministry of Corporate Affairs - **Rao Inderjit Singh**

Ministry of Consumer Affairs, Food and Public Distribution - Piyush Goel

25.(4) **Sarhul** is a spring festival in Jharkhand. It is a symbol of commencement of the new year. The festival is celebrated for three days, from the 3rd day of Chaitra month in Sukla Paksh to Chaitra Purnima.

Marking the start of spring and the first day of the lunar calendar, **Losar** is a popular festival of Arunachal Pradesh.

**Tusu** Festival is a folk festival held on the last day of the Bengali month of Poush.

#### ANSWER KEY

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