

ENGLISH LANGUAGE AND COMPREHENSION

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

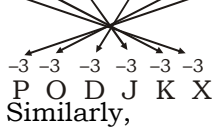
EXPLANATION:-

5. (3) 'To+ V_{bf}' is the correct structure.
 10. (2) Replace 'to' with 'upon'. 'Stumble upon something is correct phrase, means- to discover something by chance, or to meet someone by chance.
 11. (4) Replace 'Every' with 'Either'. 'Either' is used when the choice is between two.
 17. (2) 'Suggest' is incorrectly spelt word.

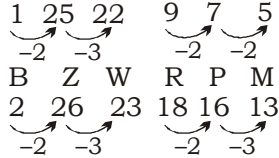
OWORD	MEANING IN ENGLISH	MEANING IN HINDI
Abeysance	A state of temporary inactivity, latency, moratorium, layoff	ठहराव
Bigot	A person with very strong, unreasonable beliefs or opinions and who will not listen to or accept a different opinion	कट्टर, दूसरों के विचारों के प्रति असहिष्णु
Brew	To prepare (beer, ale, etc.) By steeping, boiling, and fermentation or by infusion and fermentation	(शराब) बनाना
Eulogize	To praise somebody/something very highly	तारीफ करना
Futility	Uselessness.	निरर्थकता
Incompatibility	The state of not being able to exist or work with another person or thing because of basic differences	असंगति, बेमेलपन
Insecticide	Any toxic substance that is used to kill insects	कीटनाशक
Invulnerable	One that cannot be harmed/wounded	अभेद्य
Keelhaul	Punish (someone) by dragging them through the water under the keel of a ship, either across the width or from bow to stern.	पानी में जहाज के नीचे खींच के मारना
Marinate	Soak food in a seasoned liquid before cooking.	तेल मसाले आदि के मिश्रण में लपेटना
Mystic	A person who spends his/her life developing his/her spirit and communicating with god or a god	रहस्यवादी, रहस्य-साधक संत
Patricide	Killing one's father	पिता की हत्या
Plunge	To jump, drop or fall suddenly and with force	छलाँग लगाना, गिरना
Propitious	Favourable; likely to produce a successful result	अनुकूल
Pummel	To hit someone or something repeatedly	कूटना
Quilt	A bed cover made of two layers of cloth with a filling of wool, cotton, or down held together by patterned stitching	रजाई
Rap	A quick, sharp hit or knock on a door, window, etc.	खटखटाना
Reprove	To criticize somebody or not approve of something that somebody has done	निंदा करना
Scorch	To burn something so that its colour changes but it is not destroyed	सिर्फ उपरी परत का जलना
Sinister	Seeming evil or dangerous, baleful, ominous, foreboding	अपशुन भरा
Stew	Cooked slowly in a small amount of liquid	पकाना (पानी-इत्यादि में)
Stir	To cause an especially slight movement or change of position of	हिलाना
Tyrannicide	The killing of a tyrant.	एक अत्याचारी की हत्या
Vacillate	Waver	कंपन करना, डोलना

GENERAL INTELLIGENCE & REASONING

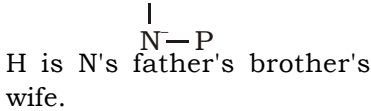
1. (2) A N M G R S



2. (3) A Y V I G E



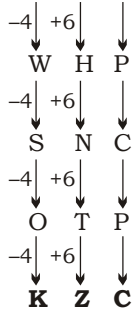
3. (3) H ⇔ J⁺ - L



4. (2) The digit 4 is opposite to the digit 7.

5. (3) 3. Nursery
4. Matric Exam
5. Higher Secondary
2. Graduate
1. Post graduate

6. (3) A B C



7. (1) 434 : 567 ⇒ 434 + 133 = 567
617 : 750 ⇒ 617 + 133 = 750

Similarly, 839 : ? ⇒ 839 + 133 ⇒ 972

8. (1) 21 ÷ 13 × 3 + 48 - 37
After interchanging 14 and 21
⇒ 14 ÷ 21 × 3 + 48 - 37

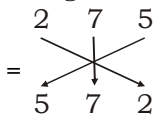
$$\Rightarrow \frac{14}{21} \times 3 + 48 - 37$$

$$\Rightarrow 2 + 48 - 37$$

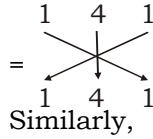
$$\Rightarrow 13$$

9. (3)
10. (1) Student : Class

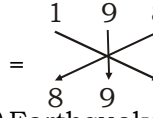
11. (2) 617 @ 342 = 572 ⇒ 617 - 342



483 @ 342 = 141 ⇒ 483 - 342



Similarly, 280 @ 82 = 891 ⇒ 280 - 82



12. (4) Earthquake

13. (2) Dhaka

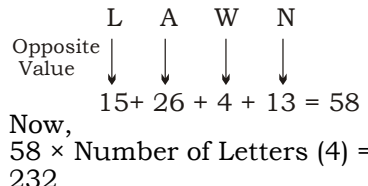
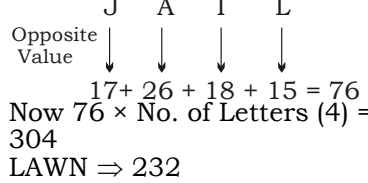
14. (2) 51, 55, 64, 80, 105, 141

$$\begin{matrix} +4 & +9 & +16 & +25 & +36 \\ (1)^2 & (3)^2 & (4)^2 & (5)^2 & (6)^2 \end{matrix}$$

15. (2)

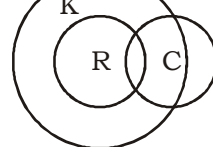
16. (2) 7

17. (2) JAIL = 304



Similarly, NAVY Opposite Value 13 + 26
+ 5 + 2 = 46

18. (3)



So, none follows

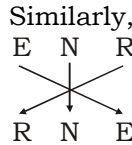
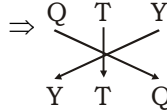
19. (1) 13, 7, 546 ⇒ 13 × 7 ⇒ 91 × 6 ⇒ 546

14, 15, 1260 ⇒ 14 × 15 ⇒ 210 × 6 ⇒ 1260

Similarly, 28, 21, 3528 ⇒ 28 × 21 ⇒ 588 × 6 ⇒ 3528

20. (1)

21. (3) QTY : YTQ



22. (4)

23. (3) 10, 22, 42 ⇒ 10 + 22 ⇒ 32 + 10 ⇒ 42

15, 14, 44 ⇒ 15 + 14 ⇒ 29 + 15 = 44

Similarly, 13, 12, 38 ⇒ 13 + 12 ⇒ 25 + 13 ⇒ 38

24. (1) 14 - 2844 ⇒ (14)³ = 2744 ≠ 2844

12 - 1728 ⇒ (12)³ = 1728

10 - 1000 ⇒ (10)³ = 1000

20 - 8000 ⇒ (20)³ = 8000

25. (1)

ANSWER KEY

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QUANTITATIVE APTITUDE

1. (1) Total number of savings having income more or equal 10,000 and less or equal 25,000 is 3 + 4 + 8 = 15

And

Total number of families having income more or equal 35,000 and less or equal 50,000 is = 10 + 4 + 5 = 19

∴ Difference = 19 - 15 = 4

2. (1) Let, Total distance = x km

Time taken by train = $\frac{x}{50}$ hr.

Time taken by walk = $\frac{x}{10}$ hr.

ATQ,

$$\frac{x}{50} + \frac{x}{10} = 12$$

$$\text{Or, } \frac{x + 5x}{50} = 12$$

$$x = \frac{12 \times 50}{6} \Rightarrow x = 100$$

3. (3) We know, Cost price : Marked price ⇒ 100 - Discount% : (100 + Profit%)
⇒ (100 - 20) : (100 + 30)
⇒ 80 : 130

$$\downarrow -13$$

$$117$$

$$\therefore \text{Profit} = (117 - 80) = 37$$

$$\therefore \% \text{ Profit} = \frac{37}{80} \times 100 = 46.25\%$$

4. (2) $\left(k + \frac{1}{k}\right)^2 = 9$

$$\text{Or, } k + \frac{1}{k} = 3$$

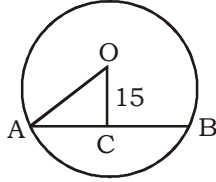
Cubing both sides.

$$k^3 + \frac{1}{k^3} = 27 - 3\left(k + \frac{1}{k}\right)$$

$$K^3 + \frac{1}{k^3} = 27 - 9$$

$$K^3 + \frac{1}{k^3} = 18$$

5. (4) As perpendicular drawn from centre to the chord, bisects the chord into two equal parts.



$$\therefore AC = CB = 20 \text{ cm}$$

$$\therefore OA = \sqrt{(20)^2 + (15)^2} \text{ cm} = 25 \text{ cm}$$

Similarly for another chord,
Distance from centre = 20 cm
Radius = 25 cm

\therefore Half of length

$$= \sqrt{(25)^2 - (20)^2} = 15 \text{ cm}$$

$$\therefore \text{Length of chord} = (15 \times 2) = 30 \text{ cm}$$

6. (4) $3126 \div 4$ of $521 + 5 \times 3$

$$3126 \div 4 \times 521 + 5 \times 3$$

$$= 3126 \div 2084 + 5 \times 3$$

$$= 1.5 + 5 \times 3$$

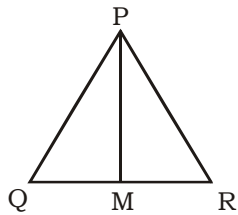
$$= 1.5 + 15 = 16.5$$

7. (4) Overall loss percentage

$$= \frac{10 - 20}{2} = \frac{-10}{2} = -5$$

As negative sign indicates loss, there is loss of 5%.

8. (4) From angle bisector theorem,



We know,

$$\frac{PQ}{PR} = \frac{QM}{MR}$$

$$OM = MR \text{ (As } PQ = PR)$$

So, PM is perpendicular to QR

$$\therefore \angle PMQ = 90^\circ$$

9. (1) Total number of sharpener sold by A (P_1) = $200 + 190 + 170 + 165 + 155 = 880$

$$200 + 190 + 170 + 165 + 155 = 880$$

Total number of sharpener sold by B (P_2) = $155 + 160 + 210 + 180 + 155 = 880$

$$155 + 160 + 210 + 180 + 155 = 880$$

$$\therefore \frac{P_1}{P_2} = \frac{880}{880} = 1$$

10. (1) We know,

Total surface area of sphere = $4\pi r^2$ unit²

$$= 4 \times \frac{22}{7} \times 3.5 \times 3.5 \text{ cm}^2$$

$$= 154 \text{ cm}^2$$

11. (2) Let, Marks obtained by A = A and marks obtained by B = B
A = 60% of (A + B)

$$\text{Or, } A = \frac{60}{100} \times (B + 25 + B)$$

$$\text{Or, } B + 25 = \frac{3}{5} (2B + 25)$$

$$5B + 125 = 6B + 75$$

$$B = 50$$

\therefore Marks obtained by A = $50 + 25 = 75$

Marks obtained by B = 50

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

Squaring both sides.

$$x^4 + \frac{1}{x^4} = 16 - 2$$

$$x^4 + \frac{1}{x^4} = 14$$

13. (3) For equilateral triangle,

$$\text{In radius} = \frac{\text{side}}{2\sqrt{3}}$$

$$\text{Side} = 5\sqrt{3} \times 2\sqrt{3}$$

$$\text{Side} = 30$$

\therefore Length of side is 30 cm

14. (3) Statement - I : Combined sales of P in year A and B = $100 + 200 = 300$

Combined sales of Q in year D and E = $250 + 150 = 400$

\therefore Ratio of sales of P and Q = $300 : 400 = 3 : 4$

\therefore Statement - I is incorrect.

Statement-II

Sales of P in year C = 300

Sales of Q in year D = 100

\therefore % of sales of P to that of Q

$$= \frac{300}{100} \times 100 = 300\%$$

Statement - II is correct.

15. (4) $\sqrt{2} \sec^2 \theta - 4 \sec \theta + 2\sqrt{2} = 0$

\therefore From sridhar acharya rule

$$\sec \theta = \frac{-(-4) \pm \sqrt{(-4)^2 - 4 \times 2\sqrt{2} \times \sqrt{2}}}{2\sqrt{2}}$$

$$\sec \theta = \frac{4 \pm \sqrt{16 - 16}}{2\sqrt{2}}$$

$$\sec \theta = \sqrt{2}$$

$$\sec \theta = \sec 45^\circ$$

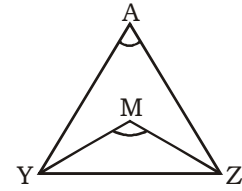
$$\theta = 45^\circ$$

Now, $\sin^2 \theta + \tan^2 \theta$

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

16. (1) From properties of incentre.

We know,



$$\angle YMZ = 90^\circ + \frac{\angle YXZ}{2}$$

$$\text{Or, } 150^\circ - \angle YXZ = 90^\circ + \frac{\angle YXZ}{2}$$

$$\text{Or, } \frac{3}{2} \angle YXZ = 60^\circ$$

$$\text{Or, } \angle YXZ = 40^\circ$$

17. (4) As numbers are consecutive, so difference between any number is same.
 \therefore Sum of middle two number = $13.5 \times 2 = 27$

As number are consecutive, so middle two numbers are = 13, 14

\therefore Frist six numbers are = 9, 10, 11, 12, 13, 14

\therefore Sum of six numbers = $9 + 10 + 11 + 12 + 13 + 14 = 69$

18. (2) $a^3 + b^3 + c^3 - 3abc = \frac{a+b+c}{2}$

$$\left[3(a^2 + b^2 + c^2) - (a+b+c)^2\right]$$

$$\text{Or, } a^3 + b^3 + c^3 - 3abc$$

$$= \frac{6}{2} [(3 \times 40) - 36]$$

$$\text{Or, } a^3 + b^3 + c^3 - 3abc = 3[120 - 36]$$

$$a^3 + b^3 + c^3 - 3abc = 252$$

19. (3) For compound interest, We know,

$$\text{Amount} = \text{Principal} \left(1 + \frac{\text{Rate}}{100}\right)^{\text{time}}$$

$$\text{Or, } 1060.90 = 100 \left(1 + \frac{R}{100}\right)^2$$

$$\text{Or, } \frac{1060.90}{1000} = \left(1 + \frac{R}{100}\right)^2$$

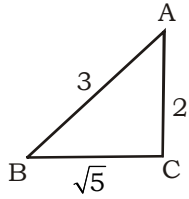
$$\text{Or, } \frac{10609}{10000} = \left(1 + \frac{R}{100}\right)^2$$

$$\left(\frac{103}{100}\right)^2 = \left(1 + \frac{R}{100}\right)^2$$

$$\text{Or, } R = 3$$

Rate of interest is 3%.

20. (1) $\text{Cosec} B = \frac{3}{2}$



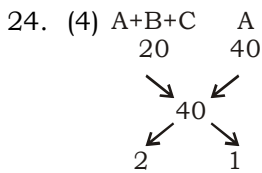
$\cot B \sin B$

$$= \frac{\sqrt{5}}{2} \times \frac{2}{3} \Rightarrow \frac{\sqrt{5}}{3}$$

21. (2) Total foreign trade by A (J_1)
 $= (170 + 150 + 75 + 65 + 35) = 495$
 Total foreign trade by B (J_2) =
 $45 + 105 + 195 + 175 + 90 = 610$
 \therefore Difference = $J_2 - J_1$
 $610 - 495 = 115$

22. (2) $\frac{3 \cos 62^\circ}{\sin 28^\circ} - \frac{2 \tan 34^\circ}{\cot 56^\circ}$
 $= \frac{3 \sin 28^\circ}{\sin 28^\circ} - \frac{2 \cot 56^\circ}{\cot 56^\circ}$
 $= [\text{As we know } \cos 62^\circ = \sin 28^\circ$
 $\tan 34^\circ = \cot 56^\circ \text{ from reciprocal}$
 $\text{angle}]$
 $= 3 - 2 \Rightarrow 1$

23. (3) Let $x =$ Composite number
 (which has more or equal to 2 factors)
 Composite number sequence
 are $x, x + 2, x + 4$
 ATQ,
 $3x + 6 = 36$
 Or, $x = 10$
 \therefore Numbers are 10, 12, 14
 \therefore Product is $10 \times 12 \times 14 = 1680$



So, A do same amount of work
 with B and C as A does alone
 \therefore Efficiency of B and C = 1
 \therefore B and C do work in 1 day =
 $\frac{1}{40}$

25. (4)
 Ratio of Income = 4 : 5
 $\{(5 \times 5) - (4 \times 4)\} = 9$
 Ratio of Exp. = 5 : 4
 $\{(5 \times 12000) - (4 \times 6000)\}$
 $= 36000$

ATQ,
 $9 \equiv 36000$
 $1 \equiv 4000$
 \therefore Income of A = 4×4000
 $= 16000$

ANSWER KEY

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GENERAL AWARENESS

1. (1) 2. (4)
 3. (2) India has gained its 79th Grand-
 master with the title being
 awarded to 16-year-old Pranesh
 M from Tamil Nadu.
 4. (3) The image formed by a convex
 mirror is always erect, virtual and
 diminished.
 Concave mirrors form both real
 and virtual images.
 5. (2) The ten largest countries in the
 world, in order of their total area,
 are Russia, Canada, China, the
 United States, Brazil, Australia,
 India, Argentina, Kazakhstan,
 and Algeria.
 6. (2) Karnataka Maharshi Valmiki
 Scheduled Tribes Development
 Corporation Limited is a State
 Govt company, incorporated on
 26 Jul, 2006.
 Company's authorized capital
 stands at Rs 2000.0 lakhs and
 has 100.0% paid-up capital
 which is Rs 2000.0 lakhs.
 7. (3) 8. (4)
 9. (1) Calic Act was repealed by Stat-
 ute Law Revision Act 1867.
 10. (1)
 11. (3) Host country - South Africa
 Champions - Netherlands
 Runner-up - Germany
 Best player - Stine Kurz
 Best goalkeeper - Mali Wichmann
 12. (3) Moti Lal Kammu is an Indian
 contemporary playwright from
 Jammu & Kashmir.
 Ravi Shankar - Maihar gharana
 Bismillah khan - Gwalior
 Gharana
 13. (3)
 14. (2) Poonam Surie - China, a Search
 for Its Soul, Dancing On A Moon-
 beam, China: Confucius in the
 Shadows, Scattered Ray
 Daman Singh - Strictly Personal:
 Manmohan and Gursharan, Nine
 By Nine, The Sacred Grove, The
 last frontier
 Raghav Bahl - Super Century:

What India Must Do to Rise by
 2050, Superpower? , Exploring
 FrontPage 2002,

15. (2) January 2023 - Shubman Gill
 February 2023 - Herry Brook
 March 2023 - Sakib Al Hasan
 16. (2)
 17. (4) Manjra River - Nizam Sagar Dam
 Tapi River - Ukai Dam
 Sabarmati river - Dharoi Dam
 18. (2) 19. (1)
 20. (1) The Supporting Andhra's Learn-
 ing Transformation (SALT)
 project aims to improve the qual-
 ity of learning for over 50 lakh
 students in the State. It aims for
 training teachers, facilitating
 State-level assessment and es-
 tablishing an effective education
 management and information
 system.
 21. (1) Non metals react with oxygen to
 form non-metallic oxides. For
 example, SO_2 , NO_2 , etc. These
 are usually acidic in nature. This
 is the reason for acid rain.
 Metals react with oxygen to form
 basic oxides. Metallic oxides are
 basic in nature because they re-
 act with dilute acids to form salt
 and water.
 A less reactive metal cannot re-
 place a more reactive metal from
 its salt solution in water.
 22. (1)
 23. (4) Basalt, tuff, pumice are examples
 of extrusive igneous rock.
 Sedimentary rocks include sand-
 stone, limestone, and shale.
 Metamorphic rocks include
 phyllite, schist, gneiss, quartzite
 and marble.
 24. (2) The Reserve Bank raised the
 minimum capital requirement for
 setting up an asset reconstruc-
 tion company (ARC) to Rs 300
 crore from the existing Rs 100
 crore with an aim to strengthen
 the securitisation.
 25. (2)

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