

QUANTITATIVE APTITUDE

1. (4) Number of business analytics joined

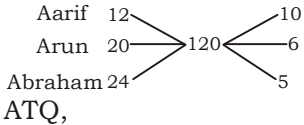
$$= 80 + 63 + 78 + 42 + 67 = 330$$

Number of Sales Representatives Joined

$$= 50 + 46 + 38 + 34 + 22 = 190$$

The difference between sales representative and business analytics.

$$= 330 - 190 = 140$$

2. (1) 

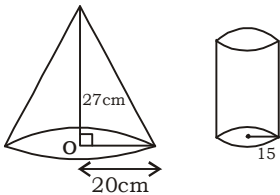
ATQ,
Required number of Days

$$= \frac{120 + 1 \times 10 + 6 \times 3 + 5 \times 4}{10 + 6 + 5}$$

$$= \frac{12 + 10 + 18 + 20}{21} = \frac{168}{21}$$

$$= 8$$

3. (1)



Volume of cone = Volume of cylinder

$$\frac{1}{3} \times \pi \times 20 \times 20 \times 27$$

$$= \pi \times 15 \times 15 \times h$$

$$h = \frac{20 \times 20 \times 9}{15 \times 15} = 16 \text{ cm}$$

∴ Height of cylinder = 16 cm

4. (3) Sum of six member = $6 \times 40 = 240$

New average = $40 \times 12.5\%$

$$40 \times \frac{9}{8} = 45$$

Sum of six members and guest = $7 \times 45 = 315$

Age of guest = $315 - 240 = 75$

5. (1) The number of female working in the production department =

$$5100 \times \frac{20}{100} - 2050 \times \frac{48}{100} = 36$$

6. (1) $x = 222, y = 223, z = 224, x^3 + y^3 - z^3 - 3xyz$

$$= x^3 + y^3 + z^3 - 3xyz$$

$$= \frac{x + y + z}{2}$$

$$[(x - y)^2 + (y - z)^2 + (z - x)^2]$$

$$= \frac{(222 + 223 + 224)}{2}$$

$$(1^2 + 1^2 + 2^2)$$

$$= \frac{669 \times 6}{2} = 2007$$

7. (4) Total number of cars produced in 2001

$$= 440000 (40 + 15 + 5)\%$$

$$= 440000 \times \frac{60}{100}$$

$$= 264000$$

8. (3) $\sec A = \frac{5}{4}$

$$\frac{\tan A}{1 + \tan^2 A} - \frac{\sin A}{\sec A}$$

$$= \frac{\tan A}{\sec^2 A} - \frac{\sin A}{\sec A}$$

$$= \frac{\tan A - \sin A \cdot \sec A}{\sec^2 A}$$

$$= \frac{\tan A - \tan A}{\sec^2 A} = 0$$

9. (1) Difference between village E and D = $(18 - 17)$ of 50000

$$= 50000 \times \frac{1}{100} = 500$$

10. (2) $6x^2 + 13x + 7 = 0$

$$\alpha + \beta = \frac{-13}{6}$$

and, $\alpha \cdot \beta = \frac{7}{6}$

$$x^2 - (\alpha^2 + \beta^2)x + \alpha^2 \beta^2 = 0$$

$$\Rightarrow x^2 - [(\alpha + \beta)^2 - 2\alpha \cdot \beta]x + (\alpha \cdot \beta)^2 = 0$$

$$\Rightarrow x^2 - \left(\frac{169}{36} - \frac{14}{6} \right)x + \frac{49}{36} = 0$$

$$\Rightarrow 36x^2 - 85x + 49 = 0$$

11. (3) ATQ,

$$\Rightarrow x \propto y^2$$

$$\Rightarrow x = ky^2$$

$$\Rightarrow 12 = k(2)^2$$

$$\Rightarrow k = 3$$

When, $y = 3$
then, $x = 3(3)^2$
 $x = 27$

12. (2) $\frac{40m}{\frac{12m}{\text{sec}} - \frac{10m}{\text{sec}}}$

Time taken by the policeman to catch the thief.

$$= \frac{40}{12 - 10} = 20 \text{ sec.}$$

Distance covered by police = $12 \times 20 = 240 \text{ m}$

13. (1) $\cos \theta + \cos^2 \theta = 1,$
 $\Rightarrow \cos \theta = 1 - \cos^2 \theta = \sin^2 \theta$

$$\sqrt{\sin^4 \theta + \cos^2 \theta}$$

$$= \sqrt{\cos^2 \theta + \cos^2 \theta}$$

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

14. (1) $60 = 2 \times 2 \times 3 \times 5$

$$148 = 2 \times 2 \times 37$$

$$382 = 2 \times 191$$

HCF of 60, 148, 382 = 2

15. (2) ATQ,

Minimum purchase of Raghav = 70% of 1250 + 70% of 1540 + 70% of 1375.

$$= 4165 \times \frac{70}{100} = 2915.5$$

16. (4) $\sin A = \frac{4}{5},$

$$\sin^2 A = \frac{16}{25}$$

17. (2) Volume of sphere = Volume of cone

$$\frac{4}{3} \pi r^3 = \frac{1}{3} \pi r^2 h$$

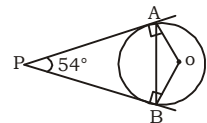
$$\Rightarrow \frac{4}{3} \pi \times 12 \times 12 \times 12$$

$$= \frac{1}{3} \pi \times 6 \times 6 \times h$$

$$\Rightarrow h = \frac{4 \times 12 \times 12 \times 12}{6 \times 6}$$

$$\Rightarrow h = 192 \text{ cm}$$

18. (1) ATQ,



An angle of 90° is formed between the tangent and the radius.

$$\angle AOB = -180^\circ - 54^\circ = 126^\circ$$

In $\triangle AOB$

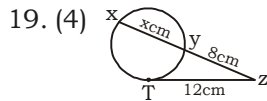
$$\angle \theta + \angle \theta + 126 = 180$$

(\because OA and OB are the radii.)

$$\Rightarrow 2\theta = 54$$

$$\Rightarrow \theta = 27^\circ$$

$$\angle OBA = 27^\circ$$



$$TZ^2 = ZY \cdot ZX$$

$$\Rightarrow 12 \times 12 = 8(8 + x)$$

$$\Rightarrow 18 = 8 + x$$

$$\Rightarrow x = 10 \text{ cm}$$

20. (4) $7\% = \frac{7}{100}, 18\% = \frac{9}{50}$

CP : SP

$$100 : 93$$

$$41 : 50$$

$$\frac{100 \times 41}{82} : \frac{93 \times 50}{93}$$

$$82 : 93$$

$$\text{Profit}\% = \frac{11}{82} \times 100$$

$$= 13.41\%$$

21. (1) $x + 4 + z = 0$

Squaring both side

$$x^2 + y^2 + z^2 + 2(xy + yz + zx) = 0$$

$$\Rightarrow 2(xy + yz + zx) = -40$$

$$\Rightarrow xy + yz + zx = -20$$

22. (1)

Income	Expenditure	Saving
1000	600	400

$$1000 \times \frac{130}{100} - \frac{160}{100} \times 100 = 1300 - 160 = 1140$$

$$400 \times \frac{350}{100} = 1400$$

$$\text{Expenditure} = 680$$

ATQ,

$$\frac{680}{2080} \times 100 = 32.69$$

$$= 32.7\% \text{ (Approx)}$$

23. (1) ATQ,

$$\triangle ABC \sim \triangle PQR$$

$$\frac{\text{Ar}\triangle ABC}{\text{Ar}\triangle PQR} = \left(\frac{h_1}{h_2}\right)^2$$

$$\Rightarrow \frac{x^2}{y^2} = \left(\frac{h_1}{h_2}\right)^2$$

$$\Rightarrow h_1 : h_2 = \sqrt{\frac{x^2}{y^2}} = x : y$$

24. (2) Let, Sum = x

$$\underbrace{x \quad 2x \quad 3x \quad 4x \quad 5x}_{7 \quad 7 \quad 7 \quad 7}$$

The sum will become 5 times in 28 years.

25. (1) The seven numbers of digit divisible by 11.

$$\overbrace{54P3987}^{11}$$

$$(5+p+q+7) - (4+3+8) = 0 \text{ or multiple of } 11.$$

$$21+p-15 = 0 \text{ or multiple of } 11.$$

$$P+6 = 0 \text{ or multiple of } 11.$$

$$\therefore \text{The value of } P = 5$$

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

6. (1) 7. (4) 8. (3) 9. (1) 10. (2)

11. (3) 12. (2) 13. (1) 14. (1) 15. (2)

16. (4) 17. (2) 18. (1) 19. (4) 20. (4)

21. (1) 22. (1) 23. (1) 24. (2) 25. (1)

GENERAL AWARENESS

1. (3) In India, coal is the most abundantly available fossil fuel. It fulfils a substantial part of the nation's energy needs.

Lignite is a low grade brown coal, which is soft with high moisture content. The principal lignite reserves are in Neyveli in Tamil Nadu and are used for generation of electricity.

2. (1) Babur (1526 - 1530) established Delhi as the Mughal Empire's capital. Babur defeated Ibrahim Lodi in the First Battle of Panipat in AD 1526.

In Battle of Khanwa at Fatehpur Sikri in AD 1527, Babur defeated Sanga.

In Battle of Chanderi Babur defeated Medini Rai in (1528. AD)

In Battle of Ghagra in AD 1529, Babur defeated the Afghans.

3. (3)

4. (2)

5. (2)

West Bengal Maa ki Rasoi Yojna

Uttar Pradesh UP Mantribhumi Yojana

Jharkhand - Sujalam sufalam Yojana

6. (3)

7. (1)

8. (3) Stomata:- Any of the Microscopic pores in the shoot epidermis of leaves and young stems.

Carotenoids:- Protect you from disease and enhance your immune system.

Chlorophyll:- It is responsible for green color of many plants and algae.

9. (3) The Ilbert Bill was a bill formally introduced on 9th February 1883 during the Viceroyship of the Marquess of Ripon, which was drafted by Sir Courtenay Peregrine Ilbert, the legal member of the Council of the Governor-General of India. It concerned the jurisdiction of Magistrates or Sessions Judges to try charges against "European British subjects" if they were themselves not European.

10. (2) Capital - Kolkata

CM - Mamta Banarjee

Governor - C.V Ananda Bose

Lok Sabha seats - 42

Rajya Sabha - 16

Established \rightarrow 26 January 1950

11. (2) Macronutrients :- Carbohydrates, fat & protein. Steroid hormone inducer:- Estradiol, Estrone & estriol types of estrogen.

Non-essential:- A nutrient in which an organism is capable of producing it in sufficient amount.

12. (2)

13. (4) Expenditure method:- A system for calculating gross domestic product (GDP) that combines consumption, investment, government spendings and net exports. Income Method:- The income approach to measuring the gross domestic product (GDP) is based on the accounting reality that all expenditures in an economy should equal the total income generated by the production of all economic goods and services. It also assumes that there are four

major factors of production in an economy and that all revenues must go to one of these sources.

14. (2)
 15. (3)
 16. (2) Damodar River is also known as " Sorrows of Bengal" its major tributaries are Barakar, Konar , Bokaro, Hahro, Ghari, Guia, Khadia, Bhera. The Narmada river is called the 'Reva'. Koshi is called sorrow of Bihar.
 17. (2)
 18. (2) $\text{HCOOH} \rightarrow$ Formic Acid
 $(\text{COOH})_2 \rightarrow$ Oxalic acid
 $\text{C}_6\text{H}_5\text{COOH} \rightarrow$ Benzoic acid
 19. (2) Visco meters: Measure the fluid flow and viscosity of liquids.
 Verniercalipers:- Measuring the distance between two opposite side of a surface.
 Screw gauge:- Measuring accurately the diameter of thin wire or thickness of sheet of metal.
 20. (4) Dead ball:- Crossing and uncrossing his arms in front of his body.
 (In cricket) A delivery in called "wide' if it is not sufficiently within reach for the batter to be able to hit it with the bat by any means of a normal cricketing shot.
 No ball:- an arm raised at shoulder height.
 21. (3) The mesolithic or middle stone age was transitional phase between paleolithic and neolithic period.
 In Europe \rightarrow 15,000 to 5,000 BC
 In Southwest Asia \rightarrow 20,000 to 10,000 BC
 22. (3) GST:- 101th Amendment Act and 122nd Amendment .Bill Urban local government bodies:- 74th Amendment Act
 Anti-defection:- 91st Amendment Act.
 23. (1) Industrial Policy Resolution, 1948
 It declared the Indian economy as Mixed Economy.

Small scale and cottage industries were given the importance. The government restricted foreign investments. Industries were divided into 4 categories -

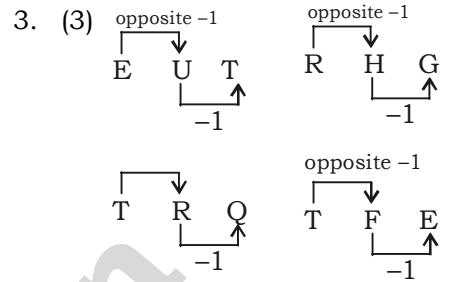
1. Exclusive monopoly of central government (arms and ammunicions, production of atomic energy and management of railways)
 2. New undertaking was undertaken only by state(coal, iron and steel, aircraft manufacturing, ship building, telegraph, telephone etc.)
 3. Industries to be regulated by the government (Industries of basic importance)
 4. Open to private enterprise, individuals and cooperatives (remaining)
24. (1) Assisted Reproductive Technology (Regulation) Act, 2021 aims at the regulation and supervision of ART clinics and assisted reproductive technology banks, prevention of misuse, and safe and ethical practice of ART services. The Surrogacy (regulation) Act 2021 allow only married infertile couples and certain categories of women to avail of ARTs and surrogacy. Sale of gametes and any payment to the surrogate mother, other than insurance coverage and medical expenses, has been prohibited.
25. (2) Kamalini Asthana and Nalin Asthana belong to Benaras Gharana style of Kathak.

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

GENERAL INTELLIGENCE & REASONING

1. (2) $16 * 3 * 2 * 11 * 9 = 22$
 Putting $\times, \div, -, +$
 $\Rightarrow 16 \times 3 \div 2 - 11 + 9 = 22$
 $\Rightarrow 16 \times \frac{3}{2} - 2 = 22$
 $\Rightarrow 24 - 2 = 22$
 $\Rightarrow 22 = 22$

2. (2) $7 + 6 - 9 \times 4 \div 2 = 2$
 interchanging 7 and 9
 $\Rightarrow 9 + 6 - 7 \times 4 \div 2 = 2$
 $\Rightarrow 15 - 7 \times 2 = 2$
 $\Rightarrow 15 - 14 = 2$
 $\Rightarrow 1 = 2$ is not correct.

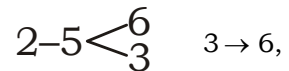


4. (3)
- | | | | | | | | | | |
|---|-----|---|-----|---|-----|---|-----|---|----|
| M | +0 | M | +0 | M | +0 | M | +0 | M | +0 |
| H | -9 | Y | -9 | P | -9 | G | -9 | X | |
| D | +8 | L | +8 | T | +8 | B | +8 | J | |
| M | -10 | C | -10 | S | -10 | I | -10 | Y | |

5. (3)
 6. (2) Trembling is a sign of fear. Similarly, sigh is a sign of relief.
 7. (2) $8 \div 4 \times 2 - 6 + 9 = 18$
 interchanging 4 and 2.
 $\Rightarrow 8 \div 2 \times 4 - 6 + 9 = 18$
 $\Rightarrow 4 \times 4 - 6 + 9 = 18$
 $\Rightarrow 16 - 6 + 9 = 18$
 $\Rightarrow 19 = 18$ is not correct.

8. (2) benches tables chairs Pencils

9. (2) From fig 2 and 3, we get

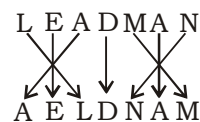


3 is opposite of 6.

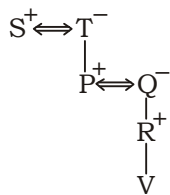
10. (2) Telescope is used to see distant objects
 Similarly, Microscope is used to see Tiny objects.

11. (1)

12. (1) H A I R C A P and

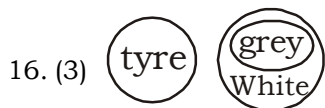


13. (1) 3. Ambience
2. Ambiguous
6. Ambivalent
7. Ameliorate
5. Amorphous
1. Amphibian
4. Amplify
14. (3) S @ T # P @ Q # R & V.



So, T is mother-in-law of Q.

15. (3)
- $$\begin{array}{cccccc}
 & \times 2+2 & \times 2+2 & \times 2+2 & \times 2+2 & \times 2+2 \\
 5 & 12 & 26 & 54 & 110 & 222
 \end{array}$$



17. (3) A $\xrightarrow{+4}$ E $\xrightarrow{+4}$ I $\xrightarrow{+6}$ O $\xrightarrow{+6}$ U
B $\xrightarrow{+0}$ B $\xrightarrow{+0}$ B $\xrightarrow{+0}$ B $\xrightarrow{+0}$ B
C $\xrightarrow{+0}$ C $\xrightarrow{+0}$ C $\xrightarrow{+0}$ C $\xrightarrow{+0}$ C
D $\xrightarrow{+0}$ D $\xrightarrow{+0}$ D $\xrightarrow{+0}$ D $\xrightarrow{+0}$ D

18. (1) Rotated in anticlockwise direction.

19. (1) I C E = (9 + 3 + 5) + 3 = 20
H O T = (8 + 15 + 20) + 3 = 46

$$P O T = (16 + 15 + 20) + 3 = 54$$

20. (4) $(4)^2 = 16, 4 \times (4 + 1) = 20$
 $(16)^2 = 256, 16 \times (16 + 1) = 272$

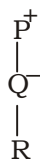
21. (2) $(7)^2 = 49, 4 \times (7 + 1) = 56$
 $(2)^2 + (4)^2 = 4 + 16 = 20$
 $(4)^2 + (5)^2 = 16 + 25 = 41$

Similarly,
 $(4)^2 + (3)^2 = 16 + 9 = 25$

22. (2) $76 = 4 \times 19$
 $98 = 2 \times 49$

Similarly,
 $72 = 4 \times 18$

23. (3) P - Q × R



(Question is wrong)

24. (2) Rotated clockwise 90°

25. (3) $15 \times 4 - 4 = 60 - 4 = 56$
 $13 \times 4 - 4 = 52 - 4 = 48$
 $11 \times 4 - 4 = 44 - 4 = 40 - \text{odd}$
 $17 \times 4 - 4 = 68 - 4 = 64$

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

ENGLISH LANGUAGE AND COMPREHENSION

7. (4) "Subsistence" is incorrectly spelt.

Meaning- the condition of remaining in existence; Continuation, Persistence. (निर्वाह, गुजर बसर)

13. (3) "External" is incorrectly spelt.

Meaning-connected with the outside of something. (बाहरी हिस्से का, बाहर स्थित, बाह्य).

14. (1) "Warned against" is correct substitute.

It means -to advise someone not to do something because it may have dangerous or unpleasant results.

18. (2) Purportedly- As appears or is stated to be true, though not necessarily so; allegedly. (कथित रूप से)

19. (1) Replace "asks" with "ask". (Plural subject(students) takes a plural verb).

20. (4) Replace "were" with "was". (As the subject is "one of major challenges")

Words

Meaning in English

Meaning in Hindi

Avert	To avoid	टालना
Apostle	One of the twelve men chosen by Christ to spread his teaching	धर्मदूत, प्रचारक (ईसा मसीह द्वारा चुना गया)
Entrenched	(of an attitude, habit, or belief) firmly established and difficult or unlikely to change; ingrained. <i>Ant. transient, temporary.</i> Also-(in military sense) To surround or provide with a trench, especially for defence; to dig in.	दृढ़ स्थिति
Heretic	A person whose religious beliefs are believed to be wrong or evil.	विधर्मी, अधर्मी
Refulgence	A radiant or resplendent quality or state : brilliance.	जगमगाहट
Restitution	The act of giving back something that was lost or stolen to its owner.	खोई या चुराई हुई वस्तु को उसके मालिक को वापसी, क्षतिपूर्ति
Repugnance	i) The quality or fact of being contradictory or inconsistent ii) strong dislike, distaste, or antagonism	असंगति
Stoic	Indifferent to both pleasure and pain	अरुचि
Startling	Very surprising, astonishing, or remarkable.	तटस्थ: चौंका देने वाला