

QUANTITATIVE APTITUDE

1. (1) ATQ,
 $125\% = 278000$
 $118\% = \frac{278000}{125}$
 $= 262432$
2. (3) A + B can do a piece of work in 50 days

$$40\% = \frac{2}{5}$$

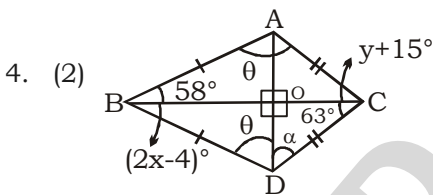
Efficiency of A : efficiency of B = 3 : 5
 Total work = $50 \times 8 = 400$
 A can do 60% of the work

$$\frac{400 \times 60}{3 \times 100} = 30 \text{ days}$$

3. (3) ATQ,
 Sum of spent of D_1 and D_4
 $= 12\% + 14\% = 26\%$
 Sum of Spent of D_2 and D_3
 $= 11\% + 11\% = 22\%$
 Difference between the spend of (D_1, D_4) and (D_2, D_3) = 4%
 Now,
 4% of 4962000

$$= 4962000 \times \frac{4}{100}$$

$$= \text{Rs. } 198480$$



4. (2) From $\triangle ABD$
 Let, $\angle BAD = \angle BDA = \theta$
 then, $2\theta + 58^\circ = 180^\circ$
 $\theta = 90^\circ - 29^\circ$
 $\theta = 61^\circ$

From $\triangle CDO$
 Let, $\angle CDO = \alpha + 63 + 90 = 180^\circ$
 then, $\alpha = 27^\circ$

From $\triangle OBD$
 $\angle DBC + 90^\circ + 61^\circ = 180^\circ$
 $\angle DBC = 29^\circ = 2x - 4^\circ$
 $2x = 33^\circ$
 $\angle ACB = 63^\circ = y + 15^\circ$
 $y = 48^\circ$
 $2x + 5y = 33^\circ + 240^\circ = 273^\circ$

5. (4) Let, HCF of three numbers is H.
 Let, three numbers are 2H, 3H, 5H,
 LCM = 90
 The LCM of 2H, 3H, 5H is 30H
 ATQ,
 $30H = 90$
 $H = 3$

6. (2) ATQ,
 Average number of customers in service C =
 $\frac{260 + 200 + 270}{3} = \frac{730}{3}$

$$= 243\frac{1}{3}$$

Average number of customers in service A =

$$\frac{250 + 175 + 350}{3} = \frac{775}{3}$$

$$= 258\frac{1}{3}$$

Average number of customers in service B =

$$\frac{220 + 190 + 240}{3} = 226\frac{2}{3}$$

Average number of customers in service D =

$$= 253\frac{1}{3}$$

A is highest

7. (2) Principal = 860
 Time = 4 years
 Rate = 15%
 Interest = 60%
 Amount = 160%
 ATQ,
 $100\% = 860$
 $160\% = 86 \times 16 = ₹1376$

8. (4) $x + \frac{1}{x} = 8$
 $\Rightarrow x^2 + 1 = 8x$
 $\Rightarrow x^2 - 8x + 1 = -1$
 Now,

$$\frac{5}{x^2 - 8x + 2} = \frac{5}{-1 + 2} = 5$$

9. (1) ATQ,
 New average weight
 $= \frac{49 \times 39 - 7 \times 40 + 7 \times 54}{49}$
 $= 39 + 2 = 41\text{kg}$

10. (1) ATQ,
 Number of positive cases in

$$\text{China} = 10000 \times \frac{11}{100} = 1100$$

Number of positive cases in

$$\text{Spain} = 1200 \times \frac{8}{100} = 960$$

Number of positive cases in

$$\text{Italy} = 10000 \times \frac{12}{100} = 1200$$

Number of positive cases in the

$$\text{USA} = 14000 \times \frac{12}{100} = 1680$$

The USA has maximum Positive Cases.

- Most U.S.A
 11. (2) $\tan A + \cot A = 2$
 Putting $A = 45^\circ$

Now,
 $2(\tan^2 A + \cot^2 A)$
 $2(1+1) = 4$

12. (1) MP SP
 2750 2103.75

$$= 2750 : \frac{210375}{100}$$

$$= 2750 : \frac{8415}{4}$$

$$= 550 : \frac{1683}{4} = 2200 : 1683$$

$$10\% = \frac{1}{10} \quad \text{MP : SP}$$

$$\text{1st Discount} \quad 10 : 9$$

$$\text{2nd Discount} \quad x : y$$

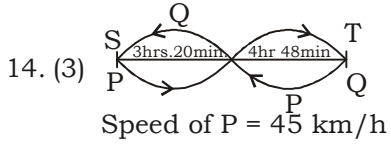
$$\text{Final} \rightarrow \frac{10x}{9y} = \frac{2200}{1683}$$

$$\frac{x}{y} = \frac{220}{187} \text{) difference } 33$$

$$\text{2nd discount \%} = \frac{33}{220} \times 100$$

$$= \frac{330}{220} = 15\%$$

13. (3) When a number is divisible by 2, 3, 5, then, the number will be divisible by the LCM (2, 3, 5) By hit and trial method in option (3) 2345760 is divisible by 2, 3, 5.



14. (3) Speed of P = 45 km/h

$$= \frac{\sqrt{3 \text{ Hr } 20 \text{ min}}}{\sqrt{4 \text{ Hr } 48 \text{ min}}}$$

$$\Rightarrow \frac{\text{Speed of P}}{\text{Speed of Q}} = \sqrt{\frac{3 \frac{1}{3}}{4 \frac{4}{5}}}$$

$$\Rightarrow \frac{45}{\text{Speed of Q}} = \sqrt{\frac{510 \times 5}{3 \times 24}}$$

$$\Rightarrow \frac{45}{\text{Speed of Q}} = \frac{5}{6}$$

$$\Rightarrow \text{Speed of Q} = 54 \text{ km/h}$$

15. (1) $\frac{1 - \cos \theta}{\sin \theta} = \frac{1}{5}$,
then, $\frac{1 - \cos \theta}{\sin \theta} \times \frac{1 + \cos \theta}{1 + \cos \theta} = \frac{1}{5}$

$$\Rightarrow \frac{\sin^2 \theta}{\sin \theta (1 + \cos \theta)} = \frac{1}{5}$$

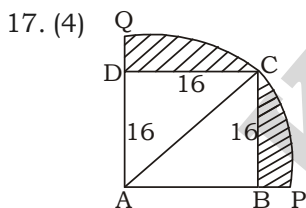
$$\Rightarrow \frac{1 + \cos \theta}{\sin \theta} = 5$$

16. (3) $k + \frac{1}{k} = 3$

then, $k^3 + \frac{1}{k^3} = 3^3 - 3$

$$= 27 - 3$$

$$= 18$$



A.T.Q,
 $r = 16\sqrt{2}$
Area of shaded region

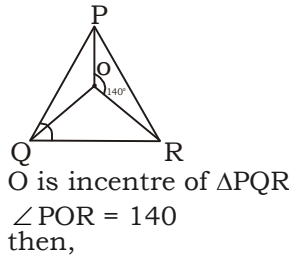
$$= \frac{1}{4} \pi (16\sqrt{2})^2 - (16)^2$$

$$= \frac{1}{4} \times 3.14 \times 256 \times 2 - 256$$

$$= 256 \left(\frac{3.14 - 2}{2} \right)$$

$$= 128 \times 1.14 = 145.92 \text{ cm}^2$$

18. (2)



O is incentre of ΔPQR
 $\angle POR = 140$
then,

$$\angle POR = 90 + \frac{\angle PQR}{2}$$

$$\Rightarrow 140 - 90 = \frac{\angle PQR}{2}$$

$$\Rightarrow \angle PQR = 100^\circ$$

(Wrong answer is given by SSC)

19. (4) Area of equilateral triangle

$$= \frac{\sqrt{3}}{4} \times 20 \times 20 = 100\sqrt{3} \text{ cm}^2$$

20. (1) I. $100^2 - 99^2 + 98^2 - 97^2 + \dots - 2^2 - 1^2$

$$= (100 - 99)(100 + 99) + (98 + 97)(98 - 97) + (96 + 95) \dots - (2 - 1)(2 + 1)$$

$$= 199 + 195 + 191 + \dots - 3$$

Number of terms = $\frac{199 - 3}{4} + 1$
 $= 50$

Sum = $\frac{50}{2} (199 + 3) = 101 \times 50$
 $= 5050$

II. $8x + 8 = -16$

$x + \frac{1}{x} = -2$ then,

We can assume that $x = -1$

So, $x^{197} + x^{-197}$

$$= (-1)^{197} + (-1)^{-197}$$

$$= -1 - 1 = -2 \text{ (Not Correct)}$$

21. (2) $\sin A = \frac{4}{5}$,
Triplets - 3, 4, 5

$\sin A = \frac{4}{5}$

$\cos A = \frac{3}{4}$

and,

$\sin B = \frac{15}{17}$

Triplets 8, 15, 17

$\sin B = \frac{15}{17}$ $\cos B = \frac{8}{17}$

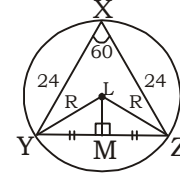
Then,

$\sin(A - B) = \sin A \cos B - \cos A \sin B$

$$= \frac{4}{5} \times \frac{8}{17} - \frac{3}{5} \times \frac{15}{17}$$

$$= \frac{32}{85} - \frac{45}{85} = \frac{-13}{85}$$

22. (1)



We know that
 $\angle YLZ = 2\angle YXZ$
 $\angle YXZ = 60^\circ$
then $\angle YLM = 120^\circ$

$\angle YLM = \frac{120}{2} = 60^\circ$

23. (3) The number of books on Mathematics, Physics and Chemistry in a University library is in the ratio 8:5:9. There is a proposal to increase these books by 10%, 5% and 5% respectively. Then the ratio of the number of books after increment will be

$$\Rightarrow \frac{8 \times 110}{100} : \frac{5 \times 105}{100} : \frac{9 \times 105}{100}$$

$$\Rightarrow 176 : 105 : 189$$

24. (2) Let, the present age of A and B = 2x, 3x
A.T.Q,

$$\frac{2x + 5}{3x + 5} = \frac{3}{4}$$

$$\Rightarrow 8x + 20 = 9x + 15$$

$$\Rightarrow x = 5$$

The present age of B = 3x
 $= 15$ years

25. (4) The marks scored by A = 54 + 65 + 67 = 186

The marks scored by C = 48 + 48 + 67 = 163 - Least

Mark scored by DD = 41 + 87 + 60 = 188

Mark scored by E = 74 + 70 + 55 = 199

\therefore C scored the least marks in aggregate of all the subject.

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

GENERAL AWARENESS

1. (2) Archana Kamat - Table Tennis
Himas Das - sprinter
She hold national record in 400 m
Monica Bata - Table Tennis
Lovlina Borgohain won a Bronze Medal at the 2020 Olympic Games in women's welter weight event.
2. (4) A.R. Rahman - Zee Cine Awards
Tamil, 2020. Currently he is on the Board of advisors of India's International Movement of united Nations. He is the Brand Ambassador of Sikkim.
Harris Jayaraj has been honoured with Kalaimamani Award
3. (4) Monetary Policy Committee is responsible for fixing the benchmark interest rate in India. It was founded on 27th June, 2016. It was first proposed by the Urjit Patel Committee.
Competition Commission of India is a statutory body within the Ministry of Corporate Affairs and is responsible for enforcing the competition Act, 2002. It was formed on 14th October, 2003. Its chairperson is Sangeeta Verma and P.K. Singh is the secretary.
NaBFID National Bank for Financing Infrastructure and Development came into force April, 2021. It became the fifth AIFI after EXIM, NABARD, NHB and SIDBI.
4. (1) Toluene: C_7H_8 is used in making paints, fingernail polish, lacquers, adhesives and rubber.
Acetophenone C_8H_8O - used as fragrance in shops, flavouring agent in foods and as solvent for plastics and resins.
Aniline - $C_6H_5NH_2$
5. (3) Speed and Distance are scalar quantity.
Displacement, Velocity and Acceleration are vector quantity.
6. (3) Birju Maharaj was a Kathak dancer from 'Kalka-Bindadin' Gharana.
He was awarded Sangeet Natak Akadami (1964), Sangam Kala (2002), National Film Award for best Choreography for Unnai Kaanadhu and Filmfare Award (2016) for best Choreography for 'Mohe Rang Do Laal (Baji Rao Mastani).
7. (4) $CaSO_4$ (Calcium Sulphate) - Plaster of Paris
 $CaCl_2$ - Calcium Chloride
 $Ca(OH)_2$ (Calcium hydroxide) - Slaked lime
8. (2) Bombay Road Plan (1961-81)- Second
Lucknow Road Plan (1981-2001)- Third
9. (4) SMILE - Support for Marginalised A total budget of ₹ 1000 crore has been allocated for SMILE till 2025-26.
Union Minister for Social Justice & Empowerment-Dr. Virendra Kumar.
10. (2) 73rd Amendment - Statutory provisions for Panchayat Raj as third level of administration in villages.
74th Amendment - Statutory provisions for Local Administrative bodies as third level of administration in urban areas.
11. (1) Roshan Kumari belongs to the Jaipur Gharana and the founder of Nritya Kala Kendra, Mumbai an academy promoting Kathak.
12. (3) Sair-E-Gul Faroshan festival known as "Phool Walon ki Sair" is an annual festival celebrated by flower sellers of Delhi in region of Mehrauli. It was founded in 1812.
13. (4)
14. (2) Most Populous State - Uttar Pradesh, Maharashtra, Bihar, West Bengal, Andhra Pradesh, Madhya Pradesh, Tamil Nadu.
Least Populous State - Sikkim, Mizoram, Arunachal Pradesh, Goa, Nagaland, Manipur, Meghalaya.
15. (1) Dadabhai Naroji also known as "Grand Old Man of India" and unofficially Ambassador of India. He served as 2nd (Calcutta), 9th (Lahore) and 22nd (Calcutta). President of INC 1886, 1893 and 1906 respectively. His book 'Poverty and Un-British Rule in India' brought attention to his theory of the Indian 'Wealth drain' into Britain.
16. (4) Chola dynasty of Tamil Chola rulers was in South India between 9th century and the 13th century.
17. (1) Water exists in three states. Water is considered renewable Water is abiotic, not biological. It is a natural resource.
18. (4) The Chinese Buddhist pilgrim, Xuan Zang came in the court of Harshavardhan. He travelled Indian sub continent during 629-645.
19. (3)
20. (3) Writ is a form of written command in the name of a Court or other legal authority to act.
Bill - A bill becomes an Act after it is passed in both the houses and gets ascent from the President.
21. (2) Electronic commerce is the activity of buying or selling products online or over the internet. The term was coined by Dr. Robert Jacobson.
22. (4) Tarun - Adviser to PM
Kapoor - Narendra Modi
Rajiv - Director general
Bahl - of ICMR
Pralay - CEO of CSB
Mondol - Bank
23. (4) Rajaraja I - 985 CE to 1013 CE
Rajendra II - 1052 CE to 1064 CE
Rajadhiraja - 1044 CE to 1052 CE
Rajendra I - 1014 CE to 1044 CE.
24. (3) Smile (2021) - Scheme for Comprehensive Rehabilitation of Beggars.
Beti Bachao Beti Padhao (2015) - Dr. Rajendra Phadke is the National convenor of BBBP Abhiyan. It also supported by Indian Medical Association.
UDAN (2016) - Ude Desh ka Aam Nagrik.

25. (3) Sundarban mangrove is the area in the delta formed by the confluence of the Padma, Brahmaputra and Meghna rivers.]
1. (2) 2. (4) 3. (4) 4. (1) 5. (3)
 6. (3) 7. (4) 8. (2) 9. (4) 10. (2)
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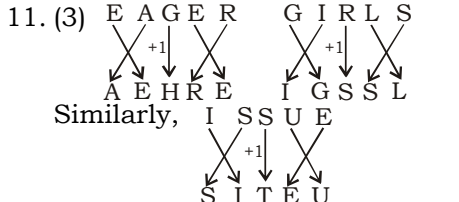
GENERAL INTELLIGENCE & REASONING

1. (4) The logic is
 SQO → S -2 Q -2 O
 YWU → Y -2 W -2 U
 MKI → M -2 K -2 I
 GED → G -2 E -1 D - odd
2. (3)
 3. (4) The pattern is
 Number of alphabets
- Feel at home, Check the laundry, Open the door
 4 2 4 5 3 7 4 3 4
 Similarly, the kite is flying
 3 4 2 6

4. (3)
 5. (2) The logic is
- | | | | |
|-----|-----|-----|-----|
| M | B | T | N |
| -2↓ | +1↓ | -1↓ | +2↓ |
| K | C | S | P |
| -2↓ | +1↓ | -1↓ | +2↓ |
| I | D | R | R |
| -2↓ | +1↓ | -1↓ | +2↓ |
| G | E | Q | T |
| -2↓ | +1↓ | -1↓ | +2↓ |
| E | F | P | V |
6. (2) 405-400-395 → 400+5=405, 400-5=395
 700-690-685 → 690+5=695, 690-5=685 - odd
 550-545-540 → 545+5=550, 545-5=540
 620-615-610 → 615+5=620, 615-5=610

7. (4) The logic is
- | | | |
|-----|-----|-----|
| L | M | R |
| +4↓ | +8↓ | +9↓ |
| P | U | A |
| +4↓ | +8↓ | +9↓ |
| T | C | J |
| +4↓ | +8↓ | +9↓ |
| X | K | S |
| +4↓ | +8↓ | +9↓ |
| B | S | B |
8. (1)
 9. (4) The order of words in a dictionary is
 3. kingdom
 1. kinglet
 5. kingly
 2. kingship
 4. kinsfolk
 order - 3,1,5,2,4

10. (4) Given
 687 : 612 :: 713 : ? :: 621 : 546
 The pattern is
 687 - 75 = 612
 713 - 75 = 638
 621 - 75 = 546



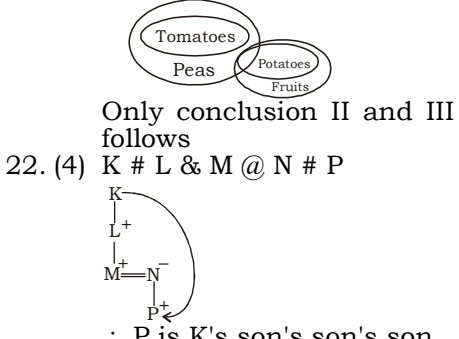
12. (4) By hit and trial method
 $7 \times 2 + 27 \div 9 - 4 = 18$
 Interchanging - and \times
 $7 - 2 + 27 \div 9 \times 4 = 18$
 $5 + 3 \times 4 = 18$
 $17 \neq 18$

13. (4)
 14. (2) Hens live in coop.
 Similarly, Bees live in a hive.
 15. (4)
 16. (2) By hit and trial method
- P⁺
 |
 Q⁺-R
- P is the father of R

17. (1) Given
 (3, 2, 35)
 (1, 4, 65)
 The pattern is
 $3^3 + 2^3 = 35$
 $1^3 + 4^3 = 65$
 Similarly, $7^3 + 2^3 = 351$

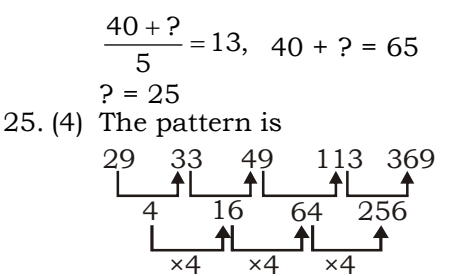


19. (2)
 20. (4) By hit and trial method
 $25 \times 5 \times 10 \times 2 \times 13$
 putting \div , $+$, $-$, $=$
 $25 \div 5 + 10 - 2 = 13$
 $5 + 8 = 13 \Rightarrow 13 = 13$
21. (3) The possible venn diagram is
-
- Only conclusion II and III follows



23. (1) By hit and trial method
 $20 \times 8 - 4 \div 2 + 7 = 50$
 interchanging - and \div
 $20 \times 8 \div 4 - 2 + 7 = 50$
 $40 + 5 = 50$
 $45 \neq 50$ (incorrect equation)

24. (3) The pattern is
 $\frac{18+27}{5} = \frac{45}{5} = 9$
 $\frac{40+140}{5} = \frac{180}{5} = 36$



1. (4) 2. (3) 3. (4) 4. (3) 5. (2)
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 21. (3) 22. (4) 23. (1) 24. (3) 25. (4)

ENGLISH LANGUAGE AND COMPREHENSION

3. (4) "Angry" takes preposition "with" (if it's concerned with a person). And it takes preposition "at" it associated with a situation.
 Ex:- I was angry at the mismanagement.
12. (4) "consummate" is incorrectly spelt.
 Meaning- extremely skilled, perfect example of something.
 (अतिदक्ष, किसी कार्य में पूर्ण रूप से कुशल होना)
19. (1) "confided in" should replace "confided to".
 (i) To Confide in - to have faith in.
 Ex:- she is their mother, so they confided in her.
 (ii) To confide to- to share secret or delicate information with someone.
 Ex:- Alibaba confided this priceless treasure to her before he died.
24. (4) **Meanings of Idioms**
 (i) A wild goose chase - pursuit of something unattainable.
 (ii) A snake in the grass - a secretly unfaithful friend.
 (iii) A bone of contention - something that two people or groups can't agree about and fight.
 (iv) A bolt from the blue - a sudden and unexpected event or piece of news.
1. (1) 2. (1) 3. (4) 4. (1) 5. (3)
 6. (2) 7. (1) 8. (2) 9. (3) 10. (2)
 11. (3) 12. (4) 13. (3) 14. (4) 15. (2)
 16. (2) 17. (1) 18. (4) 19. (1) 20. (1)
 21. (4) 22. (3) 23. (1) 24. (4) 25. (2)

Words

Affinity

Meaning in English

A natural attractions or feeling of kinship to a person or thing.

Complicated

consisting of parts intricately combined.

Deliberation

discussion or thinking about something in detail

Dubious

not sure or certain, suspicious

Inevitable

that can't be avoided or prevented from happening.

Syn. inescapable, certain

Liberate

to set free

Precise

exactly or sharply defined or stated, clear and accurate. स्पष्ट, विधिपूर्वक, सटीक

*Syn. meticulous, proper**Ant. rough, inaccurate, corrupt.*

Remorse

a feeling of regret it sadness for doing or sinning.

Syn. repentance- sorrow, pity .

Rhetoric

a way of speaking or writing that is intended to impress or influence people but is not always sincere.

Spontaneous

done or happening suddenly, not planned.

Nefarious

criminal, wicked.

Meaning in Hindi

सहज लगाव व पसंद कि भावना

जटिल

विस्तृत विचार-विमर्श

अनिश्चित, संदेहास्पद

जिसे घटित होने से रोका न जा सके

मुक्त या आजाद करना

स्पष्ट, विधिपूर्वक, सटीक

पश्चाताप, आत्मग्लानि

वाक्पटुता, शब्दाडंबर,

आकस्मिक, अचानक से

पापी, दुष्ट

