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General Science & General Awareness

Ans.1(A)
Ans.2(D)
Ans.3(A)
Ans.4(A)
Ans.5(C)
Ans.6(C)
Ans.7(A)
Ans.8(B)

Every year on January 21, Manipur, Meghalaya, and Tripura celebrate their Statehood Day.

These states attained full statehood under the North Eastern Region (Reorganization) Act of 1971.

This occasion reflects the evolution of these states as integral parts of the Indian Union.

The north-eastern region of India is often called the "Seven Sisters," comprising Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

This region is known for its lush hills, fertile plains, dense greenery, and rare exotic flora and fauna. Manipur was granted statehood in 1972, preserving its unique identity.

Meghalaya's Garo and Khasi rulers acceded to India in 1947.

Tripura was a princely state before merging with India on November 15, 1949.

Ans.9(D)

Chairman, TRAI, Mr. Anil Kumar Lahoti, inaugurated the SATRC Workshop on Spectrum.

The workshop is being hosted by the Telecom Regulatory Authority of India (TRAI) at Hotel Double Tree by Hilton, Goa.

The event is organised by the Asia Pacific Telecommunity (APT).

The three-day workshop focuses on effective spectrum management in the evolving telecommunications landscape.

Delegates include SATRC member countries, Working Group Members, industry experts, and government representatives.

Ans.10(C)

Parakram Diwas 2025 is being celebrated from 23rd to 25th January 2025 at Barabati Fort, Cuttack, the birthplace of Netaji Subhas Chandra Bose.

The celebration honours Netaji on his 128th birth anniversary.

The event has been inaugurated by Shri Mohan Charan Majhi, Chief Minister of Odisha, on 23rd January 2025.

Parakram Diwas commemorates Netaji's birth anniversary, first observed at Victoria Memorial, Kolkata.

Significant past events include:

2022: Unveiling of Netaji's hologram statue at India Gate, New Delhi.

2023: Naming of 21 unnamed islands in Andaman and Nicobar after Param Vir Chakra awardees.

2024: Event inauguration at Red Fort, Delhi, site of the INA trials.

In 2025, the Ministry of Culture is organising the celebration in Cuttack, Odisha.

Ans.11(A)

UNESCO Regional Office for South Asia, in collaboration with MeitY and Ikigai Law, organized a two-day stakeholder consultation on AI Readiness Assessment Methodology (RAM) in India.

The event took place at IIIT Bangalore on 16th January and Nasscom AI office on 17th January.

The consultation was the second of five planned consultations under the AI RAM initiative by UNESCO and MeitY.

The aim is to develop an India-specific AI policy report identifying strengths and opportunities within India's AI ecosystem.

The AI RAM will provide actionable insights to promote responsible and ethical AI adoption across sectors.

Ans.12(A)

The Ministry of Women and Child Development has celebrated the 10th anniversary of the Beti Bachao Beti Padhao (BBBP) scheme, which focuses on protecting, educating, and empowering the girl child in India.

The inaugural event has been held on January 22, 2025, at Vigyan Bhawan, New Delhi.

The celebrations have highlighted key achievements, including an improvement in the national Sex Ratio at Birth (SRB) from 918 in 2014-15 to 930 in 2023-24.

The gross enrolment ratio of girls at the secondary education level has increased from 75.51% to 78%.

The 10th-anniversary celebrations have lasted from January 22 to March 8, culminating on International Women's Day.

BBBP, launched by Prime Minister Narendra Modi on January 22, 2015, has become a national movement addressing gender imbalance and ensuring opportunities for girls.

The program has re-enrolled over 100,000 out-of-school girls and launched impactful initiatives like the Yashaswini Bike Expedition and Kanya Shiksha Pravesh Utsav.

Ans.13(C)

The three-day Flamingo Festival 2025 in Andhra Pradesh concluded on January 20, 2025.

The festival focused on protecting the rich biodiversity of Pulicat Lake and Nelapattu Bird Sanctuary.

The festival raised awareness about the ecological significance of Pulicat Lake and Nelapattu Bird Sanctuary.

The greater flamingo is the state bird of Gujarat. India also has a resident population of around 650,000 lesser flamingoes (*Phoeniconaias minor*), which are mostly found in the salt deserts of Gujarat.

Flamingo City lies in the Rann of Kutch, 10 km northeast of Nir at the tip of Pachchham Island south of Solanki Bet.

Ans.14(C)

The 27th International Congress on Glass (ICG) has been significant for India, as it marks nearly four decades since the last ICG congress was held in India in 1986.

The event has been hosted by CSIR-Central Glass and Ceramic Research Institute (CSIR-CGCRI), Kolkata, coinciding with its 75th anniversary in 2025.

The theme for ICG 2025 has been "Glass: A Smart and Indispensable Material for Sustainable Society."

The congress has focused on emerging technologies and the role of glass in creating a Green World.

- Ans.15(B)** The ICG congress has been a triennial event organized by the International Commission on Glass (ICG) to promote research cooperation and knowledge dissemination.
- The Government of India has launched Entity Locker under its e-Governance project. Entity Locker is a digital platform designed to transform the management and verification of business/organisation documents. Entity Locker has been developed and is being managed by the National e-Governance Division under the Digital India Corporation. The Digital India Corporation (formerly Medial Lab Asia) is a non-profit organisation under the Union Ministry of Electronics and Information Technology (MeitY). The platform is a cloud-based system for storing, sharing, and verifying digital documents and certificates. "Entity" refers to any business organisation, government or private, registered in India, including government organisations, private companies, MSMEs, and non-profit organisations.
- Ans.16(A)** Karnataka Men's Senior Cricket Team won their 5th Vijay Hazare Trophy by defeating Vidarbha by 36 runs in the final. The final was held at Kotambi Stadium, Vadodara, Gujarat, in the 2024-25 Vijay Hazare Trophy. The Vijay Hazare Trophy is a premier 50-over limited overs cricket tournament for senior men's teams, organized by the Board of Control for Cricket in India (BCCI). The tournament took place from 21 December 2024 to 18 January 2025, with 38 Ranji teams participating across various venues in the country. Karnataka had previously won the Vijay Hazare Trophy in the following seasons: 2013-14, 2014-15, 2017-18, and 2019-20. Dhruv Shorey was the top scorer for Vidarbha with 110 runs. Captain of Karnataka: Devdutt Padikkal
Captain of Vidarbha: Karun Nair
Player of the Final: Ravichandran Smaran (Karnataka)
Player of the Tournament: Karun Nair (Vidarbha) for his tournament aggregate of 779 runs.
- Ans.17(C)**
Ans.18(B) Laws of Photo-Electric Effect
Ans.19(A) Energy
Ans.20(C) Kepler's first law
Ans.21(D)
Ans.22(B)
Ans.23(A)
Ans.24(D)
Ans.25(A) New India
Ans.26(D)
Ans.27(C)
Ans.28(C) Three
Ans.29(D)
Ans.30(A) Haematin
Ans.31(A)
Ans.32(C) North America- Aconcagua
Ans.33(A)
Ans.34(B)
Ans.35(B) Nitrogen is absorbed as ammonium (NH⁺₄ cation) or nitrate (NO⁻₃ anion)

- Ans.36(B)**
Ans.37(D) Thalassemia is a blood disorder and inherited disease. Thalassemia is an example of frame shift mutation.
- Ans.38(C)** Eutrophication of a water body enhances organic matter production and Biological oxygen demand both.
- Ans.39(B)** Away from mid-point opposite to hinges
Ans.40(B) The moment of inertia of a body does not depend upon its angular velocity.
- Ans.41(B)** Nucleons are regarded as Composites of Sub-particles known as Quarks. A quark is an elementary particle and a fundamental constituent of matter.
- Ans.42(B)** Antacid tablets consist of Aluminium Hydroxides [Al(OH)₃] and Magnesium Hydroxides [Mg(OH)₂]. Which neutralizes stomach acidity.
Ans.43(B) Zinc Phosphide (Zn₃P₂) poison is used for Killing rats.
- Ans.44(B)**
Ans.45(C) National Science day is celebrated in India on 28 February each year to mark the discovery of the Raman effect by Indian physicist Sir Chandra sekhara Venkata Raman on 28 February, 1928.

Mathematics

- Ans.46(A)** $\frac{4}{7} = \frac{16}{x}$
 $x = \frac{(16 \times 7)}{4}$
 $x = 28$
- Ans.47(C)** Cost (C) = Number of articles (N) × Price per piece (P).....1
 $C = (N+5) \times (P - 2)$ (2)
 $C = (N+2) \times (P - 1)$ (3)
Now comparing equation 1 and 2
 $NP = (N+5) \times (P - 2)$
 $NP = NP - 2N + 5P - 10$
 $5P - 2N = 10$ (4)
Similarly, comparing equations 1 and 3 we will get
 $2P - N = 2$ (3)
Now, solving the equations 3 and 4 we will get
 $N = 10$, and $P = 6$
Hence, cost is 60.
- Ans.48(C)** Successive discount = $-x - x + x^2/100$
 $= -4 - 4 + 16/100$
 $= 7.84\%$
- Ans.49(A)** Total work = $40 \times 30 = 1200$ units
First 10 days = $10 \times 40 = 400$
Second 10 days = $10 \times 35 = 350$
Third 10 days = $10 \times 30 = 300$
Total work in 30 days = 1050
Left out work = 150 units.
Now for the next 10 days, there are 25 workers, they will complete the work in
 $150/25 = 6$ days.
Total days required = $30 + 6 = 36$ days.
- Ans.50(B)** Total units of work = 55×3 (Efficiency × Time = Work)
If they work together = $(55 \times 3)/5 = 33$ days.
- Ans.51(A)** The time taken by the men to travel a distance x km is 1hr 45 min, but this distance of x will be travelled by sound in 15 minutes. This is because had he been at his initial position then he would have heard the gun shots only after 2 hours. But he heard it 15 min earlier because he has travelled a distance of x km. hence
(Time of men) / (Time of sound) = 105/15

Since speed and time are inversely proportional is distance is same, then
 (Speed of men) / (Speed of sound) = 15/105 = 1/7
 Speed of men = 350/7 = 50 mps

Ans.52(A) As the distance is same, then the speed and time are inversely proportional,
 (New speed)/(Earlier speed) = 5/4

(New time taken)/(Earlier time taken) = 4/5
 But the difference in time taken = 5 minutes
 Hence earlier time taken = 25 minutes, but earlier he was late by 15 minutes. So to reach office on time he has to take 25 - 15 = 10 minutes

Ans.53(B) $(c \times b \times n) / 100 = (d \times b^2 \times n^2) / 100$
 $c/d = bn/1$

Ans.54(A) S : W = 4 : 1 and W : D = 4 : 1
 Combining both the ratio S : W : D = 16 : 4 : 1
 Now total asset = 9000/15 × 21 = 12600

Ans.55(D) Let the radius be 3x and 4x and height be 16y and 9y
 $v_1/v_2 = (1/3 \times 9x^2 \times 16y) / (1/3 \times 16x^2 \times 9y) = 1/1$

Ans.56(A) Average = total/number of components
 = (96 + 136 + 231 + 204 + 146 + 255)/6
 1068/6 = 178

Ans.57(B) Engineering + industrial = 367
 Consumers + plantation = 350
 = 367 - 250 = 17 units

Ans.58(B) $(136 - 96) / 136 \times 100 = 29.41 \approx 30\%$

Ans.59(C) Let $x = 0.242424 \dots$ (1)
 $100x = 24.242424 \dots$ (2)
 Now subtracting 1 from 2 we will get
 $99x = 24$

Hence $x = 24/99 = 8/33$
Ans.60(A) You can manually check it or follow osculator method of finding the divisibility
 The osculator of 19 is 2
 Hence if we take 27193

Step 1: Take the 1st digit from the right and multiply it with 2 and if the osculator is positive add it otherwise subtract it from the rest of the number

$2719 + 2 \times 3 = 2725$
 $272 + 2 \times 5 = 283$
 $28 + 2 \times 3 = 34$
 $3 + 2 \times 4 = 11$ (the final should come in multiple of 19 or if we can find in between steps 19 or multiple of 19 then also we can tell it is divisible by 19. Hence it is not divisible by 19
 Now 21793

$2179 + 2 \times 3 = 2185$
 $218 + 2 \times 5 = 228$
 $22 + 2 \times 8 = 38$ divisible by 19 hence option (a)

Ans.61(C) The cyclicity concept of 2 and 3 is 4 and 4 is 2 and 5 its unit digit will always be 5.

2^{11} the unit digit will be $11/4 =$ remainder will be 3 then the unit digit will be the third term in the cycle of powers of 2

$2^1 =$ Unit digit of 2 is 2

$2^2 =$ Unit digit of 4 is 4

$2^3 =$ Unit digit of 8 is 8

$2^4 =$ Unit digit of 16 is 6

Then it will repeat again.

Similarly for 3^{12} it is also cycle of 4, the remainder $12/4 = 0$, hence it will be the last term i.e $3^4 = 81$ unit digit is 1.

For 4^{13} , since 13 is odd, hence unit digit will be 4

And for 5^{14} units digit will be 5 only

Ans.62(B)

$$\frac{27/4 - 23/5}{23/20} = \frac{135 - 92}{23} = 43/23$$

Ans.63(A)

HCF = 143 = 11×13
 LCM = 53482 = $11^2 \times 13 \times 17 \times 2$
 Number 1 = 26741 = $11^2 \times 13 \times 17$
 Then number 2 will be $11^2 \times 13 \times 2 = 286$
 Because HCF × LCM = Number 1 × Number 2

Ans.64(A)

Let that number be N, then we can mark that if 2 is added to N then N will become a multiple of 15, 45, and 80

$N = 15a + 13$

$N + 2 = 15(a + 1)$

Similarly,

Now finding LCM of 15, 45 and 80 which comes out to be 720

Now the format of the number is $N + 2 = 720x$

Hence $N = 720x - 2$

For n to be greatest 3 digit number we can put $x = 1$ only

$N = 720 \times 1 - 2 = 718$

Ans.65(A)

Average of the even numbers between 21 and 41

First even number = 22

And last even number = 40

Hence average of even numbers = (first number + last number)/2

$= (40 + 22) / 2 = 31$

Ans.66(C)

Average speed = (Total distance)/(total time)

$$\frac{40 + 60 + 70}{\frac{40}{16} + \frac{60}{12} + \frac{70}{28}} = \frac{170}{10} = 17$$

Ans.67(B)

He has to secure = $63.50 + 36.50 = 100$ marks to pass the exam which corresponds to 40%, then total marks will be

$100/40 \times 100 = 250$ marks

Ans.68(A)

$41 \times 100 / 102.5 = 40$

Ans.69(A)

After n operations the quantity of milk

$= [a(1 - b/a)^n]$

$= 50(1 - 5/50)(1 - 5/50) = 50 \times 9/10 \times 9/10 = 40.5$

Ans.70(A)

Effect on volume can be calculated

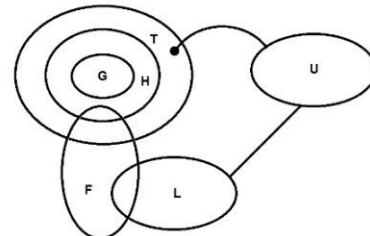
$= x + y + z + (xy + yz + zx) / 100 + xyz / 100^2$

Here $x = -5$, $y = -5$ and $z = 2$

$= 7.945\%$

General Intelligence and Reasoning

Ans.(71-73)



Ans.71(D)

Ans.72(C)

Ans.73(D)

Ans.74(C)

In first quadrant

(43-32)

11 (11+1)

$11 \times 12 = 132$

Similarly in fourth quadrant

(44-29)

$15 (15+1)$

$15 \times 16 = 240$

Ans.75(C)

Ans.76(C)

Ans.77(B)

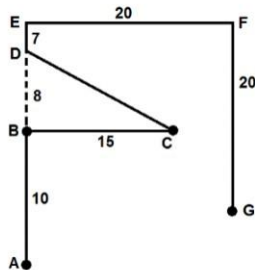
Ans.78(A)

Word	Code
Ali	Imp
read	ltx
Very	lzq
Fast	lfs
fly	lbq
Bird	lnx
high	ltz
grow	ldv
tree	lcz
In	lhw

Ans.79(D)

Ans.(80-81)

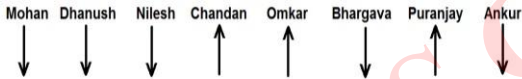
Given word does not have "M".



Ans.80(C)

Ans.81(B)

Ans.(82-85)



Ans.82(B)

Ans.83(B)

Ans.84(D) Except "D" all are looking South.

Ans.85(A)

Ans.86(B)

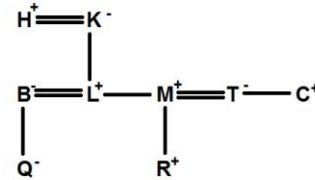
Ans.87(C)

Ans.88(D)

Ans.89(D)

Ans.90(C)

Ans.(91-93)



Ans.91(B)

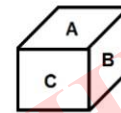
Ans.92(A)

Ans.93(C)

Ans.94(A)

Ans.95(C)

Ans.96(B)



Ans.97(C)

Ans.98(A)

Ans.99(C)

Ans.100(A)

Except "C" all are "3.5" times the first number.

