# 6539 , SOLUTION , SSC CGL

Ques 1. ANS (B) Solution:

If a month starts on a Thursday, then the 26th of the same month will be the 25th day from that day. Each day of the week is repeated after 7 days. So after 25 days (3 weeks and 4 days) it will be a Monday.

Ques 2. ANS (A) Solution:

The pond has water inside it, a similar relationship can be seen between tea and cup. No other relationship can be obtained from the other mentioned options.
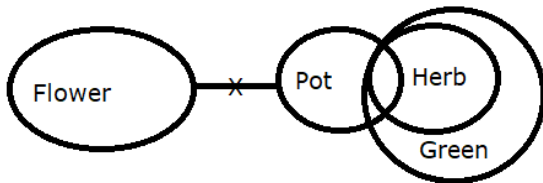
Ques 3. ANS (A) Solution:

$(3)^2 : (3)^3 :: (7)^2 : (7)^3 :: (9)^2 : (9)^3$

So, $(7)^3 = 343$

So, Option (a) is related to the third term

Ques 4. ANS (B) Solution:

Venn diagram:



I: Some Flower is herb ---- Does not follow

II: Some flower is green ---- Does not follow

III: Some pot is green ---- Follow

So, only conclusion III follows.

Ques 5. ANS (D) Solution:
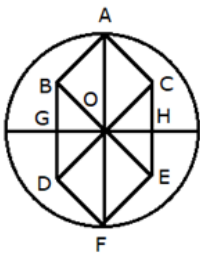
a) PQWX -- PQ (RSTUV) WX

b) EFLM -- EF (GHIJK) LM

c) IJPQ -- IJ (KLMNO) PQ

d) MNST -- MN (OPQR) ST

Ques 6. ANS (C) Solution:

There are ten triangles in the given figure. They are AOB, BOG, GOD, DOF, FOE, EOH, HOC, COA, BOD, COE.



Ques 7. ANS (D) Solution:

From the above given four different positions of the same cube, it can be concluded that,

Face having number '1' is not opposite to faces with numbers 2, 6, 4 and 5 because these numbers are adjacent to the face with number '1'.

So, the face having number '1' is opposite to the face having number '3'.

Face having number '4' is not opposite to faces with numbers 1, 5, 3 and 6 because these numbers are adjacent to the face with number '4'.
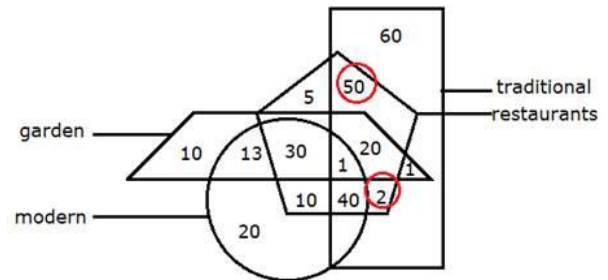
So, the face having number '4' is opposite to the face having number '2'.

Thus, the remaining numbers '5' and '6' are on opposite faces.

Ques 8. ANS (C) Solution:

Phrases are formed by using words. Paragraphs are formed by using phrases. By using the paragraphs, story forms. The story contains moral.
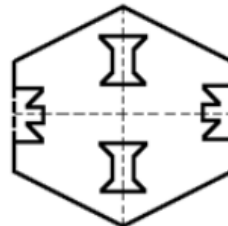
Ques 9. ANS (D) Solution:



The restaurants which are traditional but neither modern nor garden are represented by the combination of only rectangle and pentagon.

Ques 10. ANS (A) Solution:

Option (IV) appears as the correct form of paper after cutting and unfolding.



Ques 11. ANS (A) Solution:

First letter in each term - g, f, e, d and c.

Second letter in each term - W (V U) T (S R) Q (P O) N (M L) K.

Third letter in each term - x (y) z (a) b (c) d (e) f.

Fourth letter in each term - A (B C D) E (F G H) I (J K L) M (N O P) Q

Hence, 'cKfQ' can replace the question mark (?) in the given cluster series.

Ques 12. ANS (C) Solution:

70. Which one of the following response will fill the * mark in the given question?

11 * 9 * 32 * 14 * 2

(1) 11x19+32- 14-2

209+32-14-2

225 which is giving only one output. We cannot conclude anything from this.

(2) 11+9-32-14+2

20+2-32-14

22-46

-24 which is giving only one output. We cannot conclude anything from this.

(3) 11 + 9 = 32 - 14 + 2

20 = 20. Hence (3)

(4) 11 * 9 + 32 - 14 + 2

99 + 32 -12

99+20

119 which is giving only one output. We cannot conclude anything from this.

Ques 13. ANS (B) Solution:

39 + 9 = 48; 48 + 9 = 57; 57 - 11 = 46; 46 + 9 = 55; 55 + 9 = 64; 64 - 11 = 53

Ques 14. ANS (D) Solution:

BODYBUILDING

The independent meaningful words:

BODY

BUILD

IN

Maximum 3 words can be formed.

Ques 15. ANS (D) Solution:

Here, the letters at the ends are replaced by the letters which are at the same position in the reverse alphabetical order as that of the former in alphabetical order. Also, the middle letter is replaced by its positional value in reverse alphabetical order

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| Z | Y | X | W | V | U | T | S | R | Q | P | O | N |
| 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |

JBE == J = Q, B = Y(25), E = V.

KOX == K = P, O = L(12), X = C.

Ques 16. ANS (A) Solution:

a) 632, 352, 974 -- 632 + 352 = 984

b) 675, 234, 909 -- 675 + 234 = 909

c) 547, 412, 959 -- 547 + 412 = 959

d) 354, 137, 491 -- 354 + 137 = 491

Ques 17. ANS (A) Solution:

In each step, one line of the inner figure is omitted while one line is added at one of the ends in the outer figure.

For alphabets, the logic is:

R(18) - 3 = O(15)

O(15) - 3 = L(12)

L(12) - 3 = I(9)

Ques 18. ANS (D) Solution:

The pattern is:

$10^2 - 1 = 99$

$11^2 - 1 = 120$

$12^2 - 1 = 143$

$13^2 - 1 = 168$

$14^2 - 1 = 195$

Ques 19. ANS (C) Solution:

"pen is blue" is coded as "FG LM WS", ....................(1)

"blue water of " is coded as "GH OM FG", ...................(2)

"water is good" is coded as "GH LM ED", ...................(3)

From (1) and (2),

blue == FG

From (2) and (3),

water == GH

From (1) and (3),

is == LM

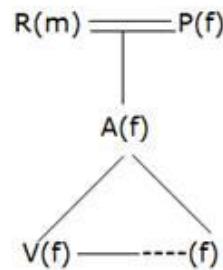From (1),

pen == WS

From (2),

of == OM

From (3),

good = ED

Ques 20. ANS (D) Solution:

A is the only child of R and she has two daughters.
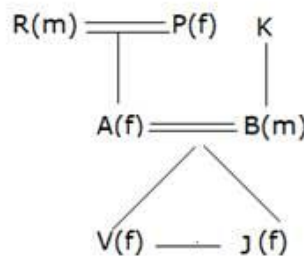
R is married to P.

P is the grandmother of V.



B is the son of K.

J is granddaughter of K and sister of V.



So, K is either the father-in-law or mother-in-law of A.

Ques 21. ANS (A) Solution:

Here, the position of letters in the reverse alphabetical order is considered.

ART -- 26 + 9 + 7 = 42

CAR -- 24 + 26 + 9 = 59

Similarly, FOG -- 21 + 12 + 20 = 53

| 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

Ques 22. ANS (C) Solution:

The correct order of words according to English dictionary is Bushelman, Bushwhack, Butanones, Buttinsky, Buttoning.

Ques 23. ANS (A) Solution:

When the figure (I) is rotated 270° clockwise, the figure will be:



And then, rotated 45° anticlockwise, the figure will be:



Common Mistake: It is asked to move the option figure in the question not the question figure.

Ques 24. ANS (B) Solution:

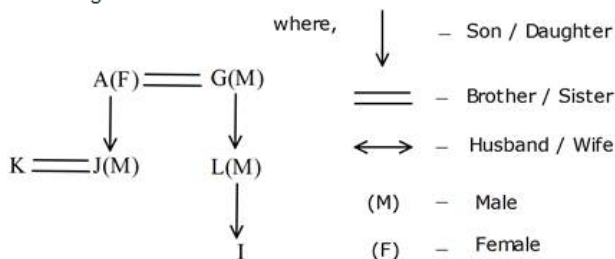Some moisturizers are oil free. This statement is not definite. So, conclusion I is false.

Some cream are moisturizers. This statement is not definite. So, conclusion II is false.

Some oil free are moisturizers. This statement is not definite. So, conclusion III is false.
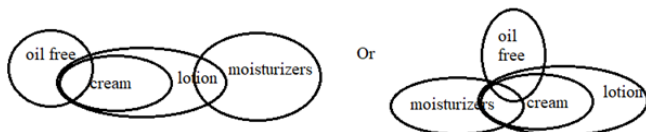


Ques 25. ANS (C) Solution:



Ques 26. ANS (C) Solution:

Telangana's efforts at restoring and conserving heritage has won more global laurels with two initiatives from the State winning UNESCO Asia-Pacific Awards for Cultural Heritage Conservation.

The list of the 2022 UNESCO Asia-Pacific Awards for Cultural Heritage Conservation announced at Bangkok included the Stepwells in the Qutb Shahi Tomb complex at Golconda, which were selected for the Award of Distinction, while the Domakonda Fort in Kamareddy was selected for the Award of Merit.

Ques 27. ANS (A) Solution:

On April 6, 1896, the Summer Olympic Games, a long-lost tradition of ancient Greece, are reborn in Athens 1,500 years after being banned by Roman Emperor Theodosius I.The first recorded Olympic Games were held at Olympia in the Greek city-state of Elis in 776 B.C., but it is generally accepted that the Olympics were at least 500 years old at that time.

Ques 28. ANS (B) Solution:

The Indian cricket team created history on January 15 by registering a stunning 317-run victory over Sri Lanka at the Greenfield Stadium in Thiruvananthapuram. This is the highest victory margin in the rich history of the 50-over format.

Ques 29. ANS (C) Solution:

Pashupati seal is the most famous of the seals that belonged to Indus Valley Civilization. It is the one with a horned male deity represented on it. He has three heads and is sitting in a yogic posture surrounded by four animals viz elephant, tiger, rhinoceros and a buffalo.

It is noteworthy that while the seals depict a number of animals there is no representation of horse.

source: Wikipedia

Ques 30. ANS (C) Solution:

Munawar Ali Khan was a Hindustani classical and light classical vocalist of Kasur Patiala Gharana. He created a new raga named Malini Basant and also created many geet, khyal, thumri and ghazal bandishes.

He was the younger son of Ustad Bade Ghulam Ali Khan. He extensively toured across the globe for his performances and had several discs to his credit both in India and abroad.

Ques 31. ANS (B) Solution:

The Indian League was started in 1875 by Sisir Kumar Ghosh with the object of stimulating the sense of nationalism amongst the people and of encouraging political education. The Indian Association of Calcutta (also known as the Indian National Association) superseded the Indian League and was founded in 1876 by younger nationalists of Bengal led by Surendranath Banerjea and Ananda Mohan Bose, who were getting discontented with the conservative and pro-landlord policies of the British Indian Association. The Indian Association was the most important of pre-Congress associations and aimed to promote by every legitimate means the political, intellectual and material advancement of the people.

Ques 32. ANS (C) Solution:

Migration is the movement of people across regions and territories.

Internal Migration: Movement of people within the country. Internal migration does not change the size of the population, but influences the distribution of population within the nation.

International Migration: Movement of people out of the country and into the country from other countries.

Ques 33. ANS (A) Solution:

Dry ice is solid carbon dioxide, with the formula $CO_2$. Dry ice is colorless, odorless, and non-flammable, and can lower the pH of a solution when dissolved in water, forming carbonic acid $(H_2CO_3)$ .

Ques 34. ANS (A) Solution:

यूएस चैंबर ऑफ कॉमर्स की नवीनतम अंतर्राष्ट्रीय आईपी इंडेक्स रिपोर्ट में भारत को 55 देशों में से 42वें स्थान पर रखा गया है। वर्ष 2023 के सूचकांक में संयुक्त राज्य अमेरिका पहले स्थान पर है, उसके बाद यूके और फ्रांस हैं।

India has been ranked 42 out of 55 countries in the latest International IP Index report by the US Chamber of Commerce. The index for the year 2023 is topped by the United States, followed by the UK and France.

Ques 35. ANS (C) Solution:

मिनिस्ट्री ऑफ सिविल एविएशन के ताजा आंकड़ों के मुताबिक भारत में दुनिया में सबसे अधिक महिला पायलट्स नियुक्त हैं। नागरिक उड्डयन मंत्रालय में राज्य मंत्री जनरल (सेवानिवृत्त) वीके सिंह ने राज्यसभा में एक सवाल के जवाब में बताया कि देश में कुल 17,726 रजिस्टर्ड पायलट्स हैं। इनमें से 2,764 महिला पायलट हैं।

According to the latest data from the Ministry of Civil Aviation, India has the maximum number of women pilots employed in the world. In response to a question in the Rajya Sabha, Minister of State in the Ministry of Civil Aviation, General (Retd) VK Singh said that there are a total of 17,726 registered pilots in the country. Of these, 2,764 are women pilots.

Ques 36. ANS (C) Solution:

Mica deposits are found in the northern edge of the Chota Nagpur plateau. Koderma Gaya - Hazaribagh belt of Jharkhand is the leading producer.

Ques 37. ANS (B) Solution:

The cork floats while the nail sinks. This happens because of the difference in their densities. The density of a substance is defined as the mass per unit volume. The density of cork is less than the density of water. This means that the upthrust of water on the cork is greater than the weight of the cork. So, it floats.

The density of an iron nail is more than the density of water. This means that the upthrust of water on the iron nail is less than the weight of the nail. So, it sinks.

Ques 38. ANS (D) Solution:

Article 124(4) of the Constitution of India states: "A Judge of the Supreme Court shall not be removed from his office except by an order of the President passed after an address by each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two-thirds of the members of that House present and voting has been presented to the President in the same session for such removal on the ground of proved misbehavior or incapacity."

100 Lok Sabha MPs or 50 Rajya Sabha MPs is the minimum number of signatories required to issue the notice.

Ques 39. ANS (A) Solution:

Battle of Wandiwash: The decisive battle of the Third Carnatic War was won by the English on January 22, 1760 at Wandiwash (or Vandavasi) in Tamil Nadu. General Eyre Coote of the English totally routed the French army under Count Thomas Arthur de Lally and took Bussy as prisoner.

Result: Thereafter, the French, like their Portuguese and Dutch counterparts in India, confined themselves to their small enclaves and to commerce. The English became the supreme European power in the Indian subcontinent, since the Dutch had already been defeated in the Battle of Bidara in 1759.

Significance: The victory at Wandiwash left the English East India Company with no European rival in India.

Ques 40. ANS (C) Solution:

On 21st June, the Northern Hemisphere is tilted towards the sun. The rays of the sun fall directly on the Tropic of Cancer. As a result, these areas receive more heat. The areas near the poles receive less heat as the rays of the sun are slanting. The North Pole is inclined towards the sun and the places beyond the Arctic Circle experience continuous daylight for about six months. Since a large portion of the Northern Hemisphere is getting light from the sun, it is summer in the regions north of the equator. The longest day and the shortest night at these places occur on 21st June.

Ques 41. ANS (D) Solution:

The Quit India Movement, also known as the 'India August Movement', was a nation-wide movement launched at the Bombay session of the All-India Congress Committee by Mahatma Gandhi on 8 August 1942. On this day Gandhi made a call to Do or Die in his Quit India speech delivered in Bombay at the Gowalia Tank Maidan.

Ques 42. ANS (A) Solution:

Rajeev Singh Raghuvanshi, former Indian Pharmacopoeia Commission secretary-cum-scientific director has been appointed as the new Drug Controller General of India (DCGI), Central Drugs Standard Control Organization (CDSCO). Raghuvanshi superseded Dr PBN Prasad who held the position till February 28.

Ques 43. ANS (C) Solution:

Himachal Pradesh chief minister Sukhvinder Singh Sukhu announced a Rs.101-crore fund, the Mukhya Mantri Sukhashraya Sahayata Kosh, to facilitate the higher education of needy children and destitute women. The state government will bear the expense of beneficiaries' skill development, education, higher education and vocational training at engineering colleges, IIITs, NITs.

Ques 44. ANS (C) Solution:

शंघाई सहयोग संगठन (SCO) के आठ सदस्य देशों के विदेश मंत्रियों की बैठक चार और पांच मई को गोवा में आयोजित की गयी. SCO की शीर्ष बैठक जुलाई में नई दिल्ली में आयोजित की जाएगी. पाकिस्तान के विदेश मंत्री बिलावल भुट्टो जरदारी ने भी इस बैठक में भाग लिया.

A meeting of foreign ministers of eight member countries of the Shanghai Cooperation Organization (SCO) was held in Goa on May 4 and 5. The apex meeting of SCO will be held in New Delhi in July. Pakistan's Foreign Minister Bilawal Bhutto Zardari also participated in this meeting.

Ques 45. ANS (C) Solution:
On 16th April 1853, the first passenger train ran between Bori Bunder (Bombay) and Thane, a distance of 34 km. It was operated by three locomotives, named Sahib, Sultan and Sindh, and had thirteen carriages. The line was built through an alliance between the Great Indian Peninsular Railway (GIPR) - incorporated in 1849 - and the East India Company, which at that point ruled large swathes in India.

Ques 46. ANS (B) Solution:
Battle of Talikota: 1565
Second Carnatic War: 1749-1754
Battle of Plassey: 1757
Battle of Buxar: 1764

Ques 47. ANS (C) Solution:
Karam is a major native harvest festival of Jharkhand. The Karam festival is a worship of Karam devta, the god of power, youth and youthfulness. Karam is held on the 11th day of the moon in Bhadra month. Groups of young villagers go to the jungle and collect wood, fruits and flowers. These are required during the Puja of Karam God. During this period people sing and dance in groups. The entire valley seems to be dancing with the drumbeat day of the phases. This is one of the rare examples of such a vital and vibrant youth festival in Jharkhand's tribal area.

Ques 48. ANS (A) Solution:
Jim Corbett National Park is the oldest national park in India and was established in 1936 as Hailey National Park to protect the endangered Bengal tiger. It is located in Nainital district of Uttarakhand and was named after Jim Corbett who played a key role in its establishment. The park was the first to come under the Project Tiger initiative.

Ques 49. ANS (D) Solution:
Peat Soil: The accumulation of a high number of organic matter in the soil in humid regions results in the formation of peaty soils. These types of soils constitute about 10 to 40% of the organic matter and also a reasonable number of soluble salts. Peaty soils are heavy, black, and have high acidic content. They are low in phosphate and potash content. Peaty and marshy soils are found in a few districts of Kerala. On the other hand, marshy soils are found in coastal areas of some states such as Tamil Nadu, Bihar, Almora district of Uttaranchal, and Sundarbans of West Bengal.

Ques 50. ANS (B) Solution:

Gujarat Chief Minister Bhupendra Patel inaugurated the International Kite Festival 2023 in Ahemdabad. The theme of the festival is 'One Earth, One Family, One Future'. The festival is being organized by the Gujarat Tourism department and after a two-year halt due to the pandemic. Governor of Gujarat-Acharya Devvrat

Ques 51. ANS (C) Solution:
Lina pays Rs. 1500 as monthly rent
Minu's monthly rent 60% more than Lina
Minu's monthly rent = 160/100 * 1500
Aparna's monthly rent = 80/100 * 160/100 * 1500
Ritu's monthly rent = 175/100 * 80/100 * 160/100 * 1500 = Rs. 3360

Ques 52. ANS (B) Solution:
$(44^{901} + 7)/45$
$= [(45 - 1)^{901} + 7]/45$
$= [(-1)^{901} + 7]/45$
$= [-1 + 7]/45$
So, remainder = -1 + 7 = 6

Ques 53. ANS (B) Solution:
Let x be the angle such that it is two-third of its supplement.
The supplement of x = $(180° - x)$.
$\Rightarrow x = (2/3) * (180° - x)$
$\Rightarrow 3x = 360° - 2x$
$\Rightarrow 5x = 360°$
$\Rightarrow x = 72°$

Ques 54. ANS (A) Solution:
$Sin^2\theta + Cos^2\theta = 1$
$Sin^2\theta = 1 - Cos^2\theta$
$1/Cosec^2\theta = (1 - Cos^2\theta)$
$Cosec^2\theta = 1/(1 - Cos^2\theta)$
$Cosec\theta = 1/\sqrt{(1 - Cos^2\theta)}$

Ques 55. ANS (A) Solution:
Let capacity of cistern = LCM of 32 and 50 = 800 units
50% of 800 = 400 units
Efficiency of pipe A = 800/32 = 25 units per min
Negative efficiency of pipe B = 800/50 = 16 units per min
In first 2 min, total cistern filled = 25 - 16 = 9 units per min
In 84min, total cistern filled = 9 * 42 = 378 units
Since, pipe A can fill 25 units in 1 minute.
But we need 22 units to fill the tank.
So, remaining 22 units will be filled by pipe A in 22/25 minutes.
Required answer = 84 + (22/25) = 84(22/25) minutes.

Ques 56. ANS (A) Solution:

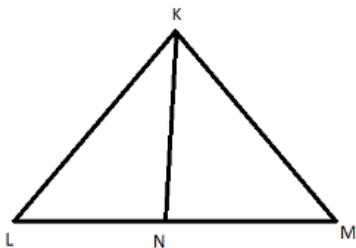$$\frac{\operatorname{cosec}^2 A - \cos^2 A \operatorname{cosec}^2 A}{1 + \tan^2 A}$$

$$= \frac{\operatorname{cosec}^2 A \left(1 - \cos^2 A\right)}{\sec^2 A}$$

$$= \frac{\operatorname{cosec}^2 A \sin^2 A}{\sec^2 A}$$

$$= \frac{1}{\sec^2 A}$$

$$= \cos^2 A$$

Ques 57. ANS (C) Solution:



Given,

∠ LKN = ∠ MKN

So, KN must be the bisector of ∠ LKM.

By angle bisector theorem,

KL/KM = LN/MN

6.5/7 = LN/MN

13/14 = LN/MN

LN/ (LN + MN) = 13/ (13 + 14)

LN/ LM = 13/27

LN: LM = 13: 27

Ques 58. ANS (B) Solution:

Perimeter of the base = 4 * 18 = 72 cm

Slant height of the pyramid = √(9² + 40²) = 41 cm

So, lateral surface area of the pyramid = 1/2 * Perimeter * slant height = 1/2 * 72 * 41 = 1476 cm²

Ques 59. ANS (C) Solution:

According to the Question,

Length of the racetrack = 600 m

Time at which race starts = 2:30 pm

Speed of the athlete = 2.5 m/s

We know, Time taken by athlete to finish the race without any stoppage = 600/2.5 = 240seconds

But he stopped for 20 seconds, so total time to finish the race = 240 + 20 = 260 seconds or 4 minutes 20 seconds

He reaches the final position at 02:34:20 pm Ans.

Ques 60. ANS (D) Solution:

Marked price of each silk saree = Rs.900

There was an offering of "buy 2 get 1 free" on silk sarees.

Then, selling price of 3 silk sarees = 900 * 2 = Rs.1800

Selling price of silk sarees bought by the person = Rs.14400

Then, total number of silk sarees bought by the person = 14400/1800 * 3 = 24

Marked price of each cotton saree = Rs.700

There was an offering of "buy 5 get 2 free" on cotton sarees.

Then, selling price of 7 cotton sarees = 700 * 5 = Rs.3500

Selling price of cotton sarees bought the person = 14400 + 3100 = Rs.17500

Then, total number of cotton sarees bought by the person = 17500/3500 * 7 = 35

Therefore, total number of sarees bought by the person = 24 + 35 = 59

Ques 61. ANS (D) Solution:

Let total profit = a

Ratio of share of T, U and V = 3200:3600:1600 = 8:9:4

According to the question-

Share of U - share of V = 200

9a/21 - 4a/21 = 200

5a/21 = 200

a = 200*21/5

a = 840

Share of T = 840 * (8/21) = Rs.320

Ques 62. ANS (C) Solution:

अभीष्ट उत्तर = 680 + 470 + 300 = 1450

Ques 63. ANS (D) Solution:

(3a + (1/a) - 4)² = 25

Since a > 0, so 3a + (1/a) - 4 > -4

If 0 ≥ 3a + (1/a) - 4 > -4

Then 0 ≤ (3a + (1/a) - 4)² < 16

But (3a + (1/a) - 4)² = 25

So, 3a + (1/a) - 4 > 0

3a + (1/a) = 5 + 4

3a + (1/a) = 9

Square both sides,

9a² + (1/a)² + 2 * (3a) * (1/a) = 81

9a² + (1/a)² = 81 - 6

9a² + (1/a)² = 75.

Ques 64. ANS (B) Solution:

$$5x + \frac{y}{x} = 1$$

$$5x^2 + y = x$$

$$5x^2 - x = -y$$

Now,

$$\frac{5x^2 + y + x}{5x^3 - x^2}$$

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

$$= \frac{1 + 1}{-y}$$

$$= \frac{-2}{y}$$

Ques 65. ANS (B) Solution:

$(4X^2 + 3 + 4\sqrt{3}X)(X^2 + 12 - 4\sqrt{3}X)$

$= [(2X)^2 + (\sqrt{3})^2 + 2 * 2X * \sqrt{3}] [X^2 + (2\sqrt{3})^2 - 2 * X * 2\sqrt{3})$

$= [(2X + \sqrt{3})^2] [(X - 2\sqrt{3})^2]$

Square root of $[(2X + \sqrt{3})^2] [(X - 2\sqrt{3})^2]$

$= (2X + \sqrt{3})(X - 2\sqrt{3})$

Ques 66. ANS (D) Solution:

Distance travelled by bicycle = 20 * 9/60 = 3km

Time taken by bicycle at 15km/h = 3/15 = 1/5 hours = 12 minutes

Ques 67. ANS (C) Solution:

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

$$= \sec^2 A - \tan A + \frac{\sin^2 A + \sin A}{\cos A (1 + \sin A)}$$

$$= \sec^2 A - \tan A + \frac{\sin A (1 + \sin A)}{\cos A (1 + \sin A)}$$

$$= \sec^2 A - \tan A + \tan A$$

$$= \sec^2 A$$

Ques 68. ANS (A) Solution:

Let rate % = R%

Simple interest of 3 years = 2232 - 1800 = Rs.432

We know that,

Simple interest = Principal * Rate * time/100
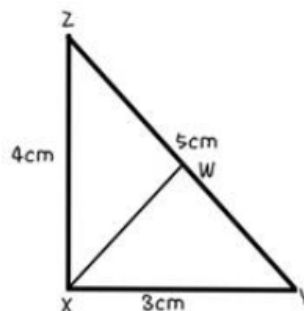
432 = 1800 * R * 3/100

R = 8%

New rate of interest = 8 + 4 = 12%

Amount = Principal + Simple interest

= 1800 + (1800 * 12 * 5/100)

= 1800 + 1080

= Rs.2880

Ques 69. ANS (B) Solution:



Since XW is the median.

$$\text{Length of median XW} = \frac{1}{2}\sqrt{2(XY^2 + XZ^2) - YZ^2}$$
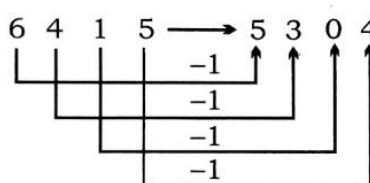
$$XW = \frac{1}{2}\sqrt{2(9 + 16) - 25}$$

XW = 2.5 cm

Alternate method:

Since $XY^2 + XZ^2 = YZ^2$, $\triangle XYZ$ is right angled at X.

So, YZ is the diameter of circumcircle of $\triangle XYZ$ and W is the centre of circumcircle.

XW = YZ/2 = 2.5 cm

Ques 70. ANS (D) Solution:
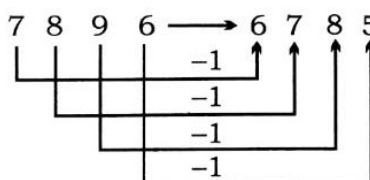


Ques 71. ANS (B) Solution:

Sum of 7 numbers = 30 * 7 = 210

Sum of first four numbers = 20 * 4 = 80

Sum of last three numbers = 210 - 80 = 130

Last number = 10 + 30 = 40

Sum of fifth and sixth number = 130 - 40 = 90

Required average = 90/2 = 45.

Ques 72. ANS (C) Solution:

Clearly, (x+1)/x is the only fraction in which numerator is greater than denominator. So, it is the greatest fraction.

Ques 73. ANS (C) Solution:

$$\text{Diagonal of square} = \left(a + \sqrt{6}\right)$$

$$\text{Side of square} \times \sqrt{2} = a + \sqrt{6}$$

$$\text{Side of square} = \frac{a + \sqrt{6}}{\sqrt{2}}$$

$$\text{Area of square} = \text{side}^2$$

$$A = \frac{\left(a + \sqrt{6}\right)^2}{2}$$

$$A = \frac{a^2 + 6 + 2a\sqrt{6}}{2}$$

$$2A = a^2 + 6 + 2a\sqrt{6}$$

Ques 74. ANS (C) Solution:

टैक्सियों की संख्या

कंपनी A ⇒25

कंपनी D ⇒75

कंपनी C ⇒35

Ques 75. ANS (C) Solution:

We know, sum of all angles of a quadrilateral is 360°. Then,

(2x - 4) + 3x + (x + 6) + (4x - 2) = 360

Then, x = 36

Now, angles are: (2x - 4 = 68°), (3x = 108°), (x + 6 = 42°) and (4x - 2 = 142°)

Therefore, smallest angle = 42°

Ques 76. ANS (B) Solution:

Bury the hatchet: make peace.

It is in context to the fact that when the manager and the employees realised that the strike was impacting both parties, they agreed to make peace amongst themselves.

The rest of the meanings are contextually incorrect.

Ques 77. ANS (D) Solution:

'CONFORMIST' means 'A person who conforms to accepted behaviour or established practices.'. 'NOTORIOUS' means 'Well known for bad qualities.'. 'STRANDED' means 'Left without the means to move from somewhere.'. 'INDELIBLE' means 'Something that cannot be removed or erased.'. According to the meanings mentioned above,

Ques 78. ANS (B) Solution:

The meaning of the word 'expedite' is 'make (an action or process) happen sooner or be accomplished more quickly'.

Let's look at the meanings of the given options.

Hasten: be quick to do something.

Hinder: make it difficult for (someone) to do something or for (something) to happen.

Pretend: behave so as to make it appear that something is the case when in fact it is not.

Accelerate: to go faster; to make something go faster or happen more quickly.

Among the given options, 'hinder' is the most appropriate antonym of the given word.

Ques 79. ANS (D) Solution:

Therefore, the correct answer is: Cersie says that her children will sit on the Iron throne.

Additional Information:

The tense form and the verb form of the sentence change as per the list given below (important ones from exam point of view) when changed from Direct Speech to Indirect Speech:

| Direct Speech | Indirect Speech |
| --- | --- |
| Present simple (Subject +V1st + Object) | Past simple (Subject +V2 + Object) |
| Present continuous (Subject +is/am/are+V1 +ing+ Object) | Past Continuous (Subject +was/were+V1 +ing+ Object) |
| Present perfect (Subject + has/have+V3+Object) | Past perfect (Subject+had+V3+Object) |
| Past simple (Subject+V2+Object) | Past perfect (Subject+had+V3+Object) |
| Past Continuous (Subject +was/were+V1 +ing+ Object) | Past perfect continuous (Subject +had been+V1 +ing+ Object) |
| Future simple (Subject+ will/shall+V1+object) | Present Conditional (Subject+ would+V1+object) |
| Future Continuous (Subject +will/shall+be+V1 +ing+ Object) | Conditional Continuous (Subject +would+be+V1 +ing+ Object) |

Ques 80. ANS (D) Solution:

The subject of the Active Voice is changed into the object of the Passive voice. Also, the object of the Active Voice is changed into the subject of the Passive Voice.

The usage of a "to be" form of the verb is necessary while changing the voice of the sentence from Active to Passive.

In Passive Voice, the preposition "by" is used before the object. However, it is optional in some cases.

These types of questions contain Modal verbs. Some of the modal verbs are: Can, could, may, might, shall, should, will, would, must, ought to.

The format of such a sentence in Active Voice is: Subject + Modal + V1 + Object.

Thus, in Passive voice, the format will be: Object of the active voice (Subjective case) + Modal + be + V3 + by + Subject of the active voice (Objective case).

For example:

You can do this. (Active Voice)

This can be done by you. (Passive Voice)

The options except (d) don't follow the correct grammatical format of the Passive Voice.

Therefore, the correct answer is: (d)

Ques 81. ANS (C) Solution:

If a sentence begins with 'There', the verb agrees with the predicate of the sentence. As, plural nouns explain specific amount, quantity, distance (in the predicate of the sentence). the verb should be singular.

For example: There is a dozen history books lying on my shelf.

Similarly, the plural nouns (eggs) are explaining the specific quantity (dozens), the verb should be singular after 'There' because the verb after 'There' agrees with the predicate of the sentence. So, 'is' must replace 'are'.

Thus, the error is in option (c) and therefore, is the correct answer.

Therefore, the corrected form of the sentence is: There is a dozen eggs kept inside the refrigerator.

Ques 82. ANS (C) Solution:

Let' does not take infinitive with 'to'. So, the infinitive 'to go' should be replaced with the bare infinitive (infinitive without

'to') 'go' to rectify the given sentence. The error is in the segment in option (c). Hence, option (c) is the correct answer. The correct sentence is: My parents let me go to my friend's house by myself.

Ques 83. ANS (C) Solution:
Both 'be able to' and 'could/can' show capacity. So, they are never used together in a sentence, as together they make the sentence superfluous.
So, only the use of 'are able to' is appropriate here, as all other options use the two terms together, which is incorrect.

Ques 84. ANS (C) Solution:
The correct order is RPSQ.
The initial part of the sentence introduces the subject (i.e. use of amphetamine) discussed in the remaining parts of the sentence. The initial part of the sentence is followed by 'R' which says that 'the use' was reduced by some act (whose name is mentioned in 'P'). So, 'R' is followed by 'P'. 'S' follows 'P' as it talks about the act that the act recognised something and that something is mentioned in 'Q' i.e. addictive properties of amphetamine. Moreover, 'which' mentioned in 'S' refers to the Act mentioned in 'P'. So, 'P' follows 'S'.
The arranged sentence is: In 1970, amphetamine use was dramatically curtailed by the Controlled Substances Act which acknowledged its addictive properties.

Ques 85. ANS (D) Solution:
In the given sentence, the verb should be in passive voice as the sentence lay emphasis on the receiver (nothing great). Among the given options, option (d) is the correct choice to replace the blank as the verb is in passive voice.

Ques 86. ANS (C) Solution:
Etymology: The derivation of a word, word origin or word source
Genetics: The study of heredity and the variation of inherited characteristics.
Phylogeny: The evolutionary history of a kind of organism
Taxonomy: Branch of science that deals with the classification of organisms.

Ques 87. ANS (A) Solution:
The correct spelling of the word is quarrelled. A is the right answer.

Ques 88. ANS (B) Solution:
The meaning of the word 'judicious' is 'having, showing, or done with good judgement or sense'. Let's look at the meanings of the given options.
Prudent: acting with or showing care and thought for the future.
Foolish: lacking good sense or judgement.
Canny: having or showing shrewdness and good judgement, especially in money or business matters.
Hospitable: friendly and welcoming to visitors or guests.
Among the given options, 'foolish' is the most appropriate antonym of the given word.

Ques 89. ANS (C) Solution:
The correct spelling should be 'occasionally'. 'Underrate' means 'to think that somebody/something is less clever, important, good, etc. than he/she/it really is'. 'Playwright' means 'a person who writes plays for the theatre, television or radio'.

Ques 90. ANS (B) Solution:
'In for a penny, in for a pound' means that someone is intentionally investing time or money for a particular project or task. Hence, the correct option will be option b).
The figurative expression for 'making the most of the worst situations or things because you can't do anything about it' is - Scrape the barrel.
The figurative expression for 'being grumpy or angry about something' is - Up in arms.
The figurative expression for 'doing something that makes it impossible to go back to the original state.' is - Burn your boats/bridges.

Ques 91. ANS (C) Solution:
The blank follows the modal verb 'may' which requires a base verb after it. Among the given options, 'seem' is the only base verb.
Option a) is V2, option b) is V3 and option d) is V2/V3; all are eliminated.

Ques 92. ANS (B) Solution:
The given sentence contains two clauses. The second clause contradicts the first one. Among the given options, 'but' is the most appropriate one as it is used to introduce a phrase or clause contrasting with what has already been mentioned. 'Moreover' and 'besides' is used to introduce additional information or to connect a sentence to a related one that has already been stated. They cannot be used in contradictory statements. 'Instead' means 'as an alternative or substitute'. It cannot be used in the given sentence.

Ques 93. ANS (D) Solution:
The previous sentence states that not all fat is bad. So, in the right form and right amount, fat is good for health. So, the words 'spoiling' and 'worsening' don't fit contextually in the sentence. Of the remaining two options, 'maintaining' is the most appropriate choice as the word 'using' doesn't provide a coherent sentence.

Ques 94. ANS (B) Solution:
Decades' is a period of time. The preposition 'for' can be used to show a period of time, be it in the past, present or future. So, 'for' is the most appropriate choice among the given options. 'Since' is used to refer to a point in time in past, both 'from' and 'to' are used to show the time of beginning and ending an activity respectively; none of these suits the given context.

Ques 95. ANS (D) Solution:
The sentence conveys that the studies have discovered something. The subject 'studies' is the doer in the sentence. So, the sentence should not be in a passive voice. According to this, option (a) is eliminated. The verb that follows 'have' should

be in past participle form. 'Finds' is not a past participle verb; it is third person singular. So, option (c) is also eliminated. The verb 'founded' (base (something) on a particular principle, idea, or feeling) doesn't provide a coherent sentence. So, option (b) is eliminated. The past participle verb 'found' (discover or perceive by chance or unexpectedly) is the most appropriate choice among the given options.

Ques 96. ANS (D) Solution:
The meaning of the word 'filthy' is 'disgustingly dirty'. Let's look at the meanings of the given options.
Sterile: free from bacteria or other living microorganisms; totally clean.
Aromatic: having a pleasant and distinctive smell.
Crowded: (of a space) full of people, leaving little or no room for movement; packed.
Sordid: very dirty and unpleasant.
Among the given options, 'sordid' is the most appropriate synonym for the given word.

Ques 97. ANS (C) Solution:
'Ostentation' means 'The pretentious or showy display of wealth and luxury, designed to impress'. Options b) and d) can be rejected as they are unrelated to the word. 'Modesty' means 'The quality or state of being unassuming in the estimation of one's abilities'. Hence, option a) can also be rejected as it is the exact opposite. 'Famished' means 'Extremely hungry'.
'Clandestine' means 'Kept secret or done secretively, especially because illicit'.

Ques 98. ANS (A) Solution:
The past tense of the verb 'welcomed' should be used here, as the auxiliary verb 'were' is also in past tense.

Ques 99. ANS (B) Solution:
The idiom 'like two peas in a pod' means very similar to each other. B is the right answer.

Ques 100. ANS (C) Solution:
The subject here is "thousands of acres" which is plural, and not "land" as in the sentence, "of land" is a prepositional phrase. So, we need to use a plural verb. Hence, option b) is wrong. Now, "in danger to" is idiomatically incorrect. The correct usage is "in danger of".