Railway Non-Technical Popular Categories (NTPC) Exam - 2022 Level-V

(HELD ON 12.06.2022 Time 9-10:30AM)

1. Who became the first Indian female athlete to win two individual Olympic medals?

(a) Ankita Raina (b) PV Sindhu
(c) Dutee Chand (d) Mirabai Chanu

Ans. (b) : PV Sindhu is an Indian badminton player. She became first Indian woman who won two consecutive medals in Olympics games Silver medal in 2016 and Bronze Medal in 2020 Olympics.

2. If $6y^2 - 13y + 6 = 0$, then find the product of the two roots of the equation.

(a) 1 (b) –1
(c) $\frac{13}{6}$ (d) $\frac{-13}{6}$

Ans. (a) : Given, equation

$$6y^2 - 13y + 6 = 0$$

On comparing this with the standard form of quadratic equation

$$ax^2 + bx + c = 0$$

Where, a = 6, b = - 13, c = 6

$\therefore$ The product of the roots = $\frac{c}{a}$

$= \frac{6}{6}$

$= 1$

3. If 22.5 of 32% $-\frac{2}{3} \times \sqrt[3]{512} \times \sqrt{81} = y$, then the value of y is:

(a) –41.2 (b) –41.8
(c) –40.2 (d) –40.8

Ans. (d) : $22.5 \times 32\% - \frac{2}{3} \times \sqrt[3]{512} \times \sqrt{81} = y$

$22.5 \times 32\% - \frac{2}{3} \times 8 \times 9 = y$

$0.225 \times 32 - 48 = y$

$7.2 - 48 = y$

$y = - 40.8$

4. Arushi was to multiply a number by 2.4, but instead multiplied by 4.2, If the product she obtained was 65.1, then what is the correct product that she should have got?

(a) 46.88 (b) 36.50
(c) 37.50 (d) 113.93

Ans. (c) : Let the number = x

Right answer = $x \times 2.4$

Wrong answer = $x \times 4.2 = 65.1$

$\Rightarrow x = \frac{651}{42} = 15.5$

Then right product = $15.5 \times 2.4 = 37.20$

5. In which of the following years was the Bengal State Prisoners Regulation (Bengal Regulation III) passed?

(a) 1876 (b) 1812
(c) 1857 (d) 1818

Ans. (d) : The Bengal Regulation III of 1818, officially the Bengal State Prisoners Regulation, III of 1818 was a law for preventive detention enacted by the East India Company in the Presidency of Bengal in 1818.

6. The surface area of a sphere is 61600 sq. cm. Find the volume of the sphere (in cu m). [Use $\pi = \frac{22}{7}$]

(a) 4.312 (b) $\frac{43.12}{3}$
(c) $\frac{4.312}{3}$ (d) 43.12

Ans. (c) : Surface area of sphere = $4\pi r^2$

According to the question,

$4\pi r^2 = 61600,$

$r^2 = \frac{61600 \times 7}{4 \times 22} = 4900 \Rightarrow r = 70cm$

Then, volume of sphere = $\frac{4}{3}\pi r^3$

$= \frac{4}{3} \times \frac{22}{7} \times 70 \times 70 \times 70 = \frac{4312000}{3} cm^3$

$= \frac{4312000}{3 \times 10^6} m^3 = \frac{4.312}{3} m^3$

7. 'Huli Vesha' is a popular folk dance in the coastal region of _____.

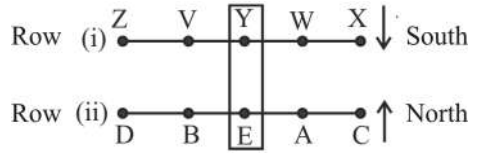
(a) Kerala (b) Odisha
(c) Karnataka (d) Gujarat

Ans. (c) : Huli Vesha also known for tiger faced dance is a dance form unique to coastal Karnataka. The dance is performed by local youth during the Navratri Festival.

8. Select the combination of letters that when sequentially placed in the blanks of the given series will complete the series.
A_ _BD_CEB_ _CEB_
(a) CDAEAD (b) CEADAD
(c) CADADE (d) CDADEA

Ans. (b) : The given series will complete–
ACEBD / ACEBD / ACEBD

9. Ten people are sitting in two parallel rows I and 2. A, B, C, D and E are sitting in row 1 facing the North and V, W, X, Y and Z are sitting in row 2 facing the South, in such a way that each member in row 1 faces a member of row 2. Neither A nor B sit at any of the extreme ends of the row. A sits second to the right of B. The one who faces B is an immediate neighbour of Z, Y sits second to the left of Z. The one who faces Y sits second to the left of C, W sits second to the right of V, D is not an immediate neighbour of A. Who faces E?
(a) W (b) V
(c) X (d) Y

Ans. (d) :


According to the question after making diagram it is clear that Y is sitting in front of E.

10. In the data set given below, what is the difference between the Median and the Mode?
{2.1, 5, 6, 7, 8, 9.3, 11, 15, 17, 19.21, 27, 31, 31, 33, 16.5, 14, 10}
(a) 19 (b) 10
(c) 17 (d) 15

Ans. (c) : Arranging the numbers in ascending order,
2.1, 5, 6, 7, 8, 9.3, 10, 11, 14, 15, 16.5, 17, 19.21, 27, 31, 31, 33
Mode = 31 (has come 2 times)
and, total number of terms = 17 (odd)

$\therefore$ Median $= \left(\frac{n+1}{2}\right)$ th term

$= \left(\frac{17+1}{2}\right)$ th term

= 9th term = 14

$\therefore$ Difference between Median and Mode
= 31 – 14 = 17

11. Who among the following is the Supreme Commander of the Indian armed forces?
(a) President
(b) Speaker of Lok Sabha
(c) Prime Minister
(d) Defence Minister

Ans. (a) : The President of India is the supreme commander of Indian armed forces. The headquarters of the Indian Armed Forces is located in New Delhi.

12. Sunita won 3/5 of the marbles that were there in the beginning of the game. Ravi won 2/3 of the remaining marbles while Sunny won the remaining 60 marbles. How many marbles did Sunita Win?
(a) 255 (b) 240
(c) 285 (d) 270

Ans. (d) : Let, number of marbles

Won by Sunita $= \frac{3x}{5}$

number of remaining marbles $= x - \frac{3x}{5} = \frac{2x}{5}$

Won by Ravi $= \frac{2x}{5} \times \frac{2}{5} = \frac{4x}{15}$

Remaining $= \frac{2x}{5} \times \frac{4x}{15} = \frac{2x}{15}$

$\because \frac{2x}{15} = 60 \Rightarrow x = 450$

Won by Sunita $= 450 \times \frac{3}{5} = 270$

13. Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?
67.69 + 5.12 - 0.89 ÷ 31.88 = ?
(a) 150 (b) 35
(c) 73 (d) 48

Ans. (c) : 67.69 + 5.12 – 0.89 ÷ 31.88 = ?
= 73.08 – 0.02 = ?
= 73.06 ≈ 73 = ?
Hence, ? = 73

14. If $\sqrt{3}\tan 2\theta - 3 = 0$, then $\tan\theta \sec\theta - \sin\theta$ where $0 < \theta < 90^\circ$?
(a) $\frac{1}{6}$ (b) $\frac{5}{6}$
(c) $\frac{2}{3}$ (d) $\frac{2}{3}$

Ans. (a) : Given $\sqrt{3}\tan 2\theta - 3 = 0$

$\therefore \tan 2\theta = \sqrt{3}$

$\tan 2\theta = \tan 60^\circ \Rightarrow 2\theta = 60^\circ \Rightarrow \theta = 30^\circ$

$\therefore \tan\theta.\sec\theta - \sin\theta$

$= \tan 30^\circ . \sec 30^\circ - \sin 30^\circ$

$= \frac{1}{\sqrt{3}} \times \frac{2}{\sqrt{3}} - \frac{1}{2}$

$= \frac{1}{\sqrt{3}} \times \frac{2}{\sqrt{3}} - \frac{1}{2}$

$= \frac{1}{6}$

15. The spring festival celebrated by Konyak tribe of Nagaland is known as ___.

(a) Garia Poja (b) Myoko

(c) Aoleang Monyu (d) Mopin

Ans. (c) : The spring festival celebrated by Konyak tribe of Nagaland is known as Aoleang Monyu. The festival is celebrated in the first week of April mainly in Mon district of Nagaland. The Aoleang celebrates the arrival of spring and prays for good upcoming harvest.

16. What is the default alignment of numbers in an Excel worksheet?

(a) Left (b) Justify

(c) Center (d) Right

Ans. (d) : Align or alignment is a term used to describe how text is placed on the screen. In an excel worksheet the numbers are align to the right while the texts are align to the left by default.

17. The ratio of the length, width and height of a cuboid is 4 : 3 : 5 and the sum of the lengths of all its edges is 144 cm. Find the total surface area of the cuboid.

(a) 756 cm^2 (b) 846 cm^2

(c) 1026 cm^2 (d) 1620 cm^2

Ans. (b) : Let Length of Cuboid = 4x

Breadth = 3x

Height = 5x

According to the question,

$4(4x+3x+5x) = 144$

$4 \times 12x = 144$, $x = 3$

Then surface area of cuboid = $2(lb + bh + hl)$

$= 2(12+15+20)x^2$

$= 2 \times 47x^2$

$= 94 \times 9$

$= 846\ cm^2$

18. In 2019, archaeologists unearthed a rare treasure in the form of a life-sized stucco sculpture from _____. a Buddhist site which represents one of the Bhodhisattvas in Jathaka Chakra.

(a) Udayagiri (b) Khandgiri

(c) Sarnath (d) Phanigiri

Ans. (d) : In 2019, archaeologist unearthed a rare treasure in the form of a life sized stucco sculpture from phanigiri. The phanigiri, a Buddhist site located in Surgapet district of Telangana. It represents one of Bhodisattva in Jathaka Chakra.

19. The sum of two numbers is 17 while the sum of their squares is 157, Find the sum of the cubes of those two numbers.

(a) 3791 (b) 1491

(c) 3094 (d) 1547

Ans. (d) : According to the question,

$x + y = 17$ ———(i)

$x^2 + y^2 = 157$ ———(ii)

$\because (x - y)^2 = (x + y)^2 - 4xy$——(iii)

From equation (i) and (ii)–

$(x + y)^2 = x^2 + y^2 + 2xy$

$289 = 157 + 2xy$

$2xy = 132$

$4xy = 264$

Again from equation (iii)–

$(x - y)^2 = 289 - 264 = 25$

$x - y = 5$ .....(iv)

On solving equation (i) and (iv)

$x = 11, y = 6$

Then sum of cube of numbers = $x^3 + y^3$

$= (11)^3 + (6)^3$

$= 1331 + 216$

$= 1547$

20. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts. decide which of the given conclusions logically follow (s) from the statements.

Statements:

Some dogs are donkeys.

No donkey is a horse.

Conclusions:

I. Some dogs are not horse.

II. Some horses are dogs

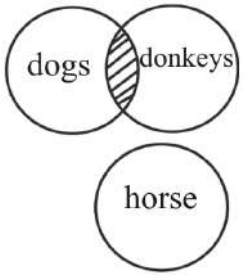
(a) Only conclusion II follows.

(b) Both conclusions I and II follow.

(c) Neither conclusion I nor II follows.

(d) Only conclusion I follow.

Ans. (d) : Venn diagram according to statements,



Hence, Only Conclusion I is follow.

21. Select the option that is related to the fifth letter-cluster in the same way as the fourth letter-cluster is related to the third letter-cluster and the second letter-cluster is related to the first letter-cluster.

EYBRD : VBYIW ::DAJKO : WZQPL :: JEWAD : ?

(a) KRESD (b) MHREA

(c) QVDZW (d) VRTYU

Ans. (c) : Just as,

E Y B R D ⇕ ⇕ ⇕ ⇕ ⇕ (Opposite letter)
V B Y I W

And,

D A J K O ⇕ ⇕ ⇕ ⇕ ⇕ (Opposite letter)
W Z Q P L

Same as,

J E W A D ⇕ ⇕ ⇕ ⇕ ⇕ (Opposite letter)
Q V D Z W

22. Which of the following keyboard shortcut is used to lock your Windows 10 PC?

(a) Ctrl + K
(b) Windows logo key + L
(c) Ctrl + L
(d) Windows logo key + K

Ans. (b) :

Press this key		To do this
Windows logo key +L		Lock your Windows PC
Ctrl+K		Insert a hyperlink in MS Word
Wndows logo key+K		Open the connect quick action
Ctrl+L		Alings the line or selected text to the left of the screen in MS word

23. Where was the first ' Open Rock Museum' inaugurated by the Union Minister of state for Science & Technology and Earth Sciences, on January 6, 2021 ?

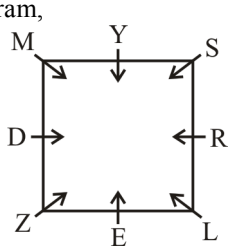
(a) Kochi (b) Hyderabad
(c) Bhubaneshwar (d) Guwahati

Ans. (b) : The first Open Rock Museum inaugurated in Hyderabad, Telangana on January 6, 2021 by the Union Minister of state for science and technology and earth sciences.

24. D, E, L, M, R, S, Y and Z are sitting around a square table facing the centre of the table. Four of them are sitting at each of the corners, while the other four are sitting at the exact centre of each of the sides.
D sits in the middle of one of the sides of the table. Only one person sits between D and E, L sits to the immediate right of E. Only three people sit between L and M when counted from the right of L, R is an immediate neighbour of L, S sits to the immediate left of Y. Who sits third to the right of Z?

(a) D (b) S
(c) Y (d) R

Ans. (d) : According to the question,
On drawing diagram,



It is clear from diagram that R is sitting 3rd to right of Z.

25. In each of the number-pairs, the second number is obtained by performing a certain mathematical operation on the first number, Three of the following pairs follow the same pattern and thus form a group. Select the member-pair that does NOT belong to that group.

(a) 21 : 420 (b) 15 : 208
(c) 17 : 272 (d) 25 : 600

Ans. (b) : (a) 21 : 420
$\Rightarrow 21^2 - 21 \Rightarrow 441-21 = 420$
(b) 15 : 208
$\Rightarrow 15^2 - 15 \Rightarrow 225-15 = 210$
(c) 17 : 272
$\Rightarrow 17^2 - 17 \Rightarrow 289-17 = 272$
(d) 25 : 600
$\Rightarrow 25^2 - 25 \Rightarrow 625-25 = 600$
Hence, option (b) is different from others.

26. Which of the following sites of Indus Valley Civilization is located in Punjab (India)?

(a) Kot Diji (b) Banawali
(c) Balu (d) Ropar

Ans. (d) :

Indus Valley cites		Locations
Kot Diji	–	Sindh (Pakistan)
Banawali	–	Haryana
Balu	–	Haryana
Ropar	–	Punjab

27. The LCM of two numbers is 20 times their HCF, and the sum of the LCM and the HCF is 504. If the difference of the numbers is 24, then find the sum of the numbers.

(a) 210 (b) 216
(c) 225 (d) 180

Ans. (b) : According to the question,
$L = 20\ H$ —— (i)
and, $L + H = 504$ ——(ii)
$H(a - b) = 24$ ——(iii)
From equation (i) and (ii)–
$20H + H = 504 \Rightarrow H = 24$
equation (iii) and $(a - b) = 1$
$\because L = Hab$
$\therefore Hab = 20H$ [from equation (i)]

$ab = 20$

$(a + b)^2 = (a - b)^2 + 4ab$

$= 1 + 80 = 81$

$\Rightarrow \quad (a + b) = 9$

Hence, Sum of numbers $= H(a + b)$

$= 24 \times 9 = 216$

28. The Sanskrit drama, 'Ratnavali', about the love story of Princess Ratnavali is said to have been written by ____.

(a) Vishakhadutta (b) Kalidasa

(c) Harsha (d) Bhavabhuti

Ans. (c) : The Sanskrit drama 'Ratnavali' about the love story of Princess Ratnavali and King Udayana is written by Harsha. Besides Ratnavali, Harsha also wrote Nagananda and Priyadarsika.

29. The reproductive parts in animals produce male and female gametes that fuse to form a:

(a) Foetus (b) Embr yo

(c) Ovum (d) Zygote

Ans. (d) : The reproductive parts in animals porduce male and female gametes that fuse to form a Zygote. A zygote is an eukaryotic cell and it is the earliest development stage in humans.

30. A question is given followed by two statements labelled I and II, Identify which of the statements is/are sufficient to answer the question.

Question:

How is Damini related to Bhola?

Statements:

I. Tika has only one son, Bhola and only one daughter. Kamala.

II. Damini is Roma's son's wife. Kamala is the only daughter of Roma. Meghan is the daughter of Bhola.

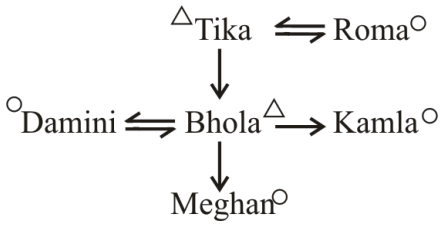
(a) Statement I alone is sufficient, while Statement II alone is not sufficient to answer the question.

(b) Both Statements I and II together are sufficient to answer the question.

(c) Statement II alone is sufficient, while Statement I alone is not sufficient to answer the question.

(d) Statements I and II together are not sufficient to answer the question.

Ans. (b) : On making a diagram according to the statement



After combining both statement it is clear that Damini and Bhola are wife and husband. Hence Both statement I and II together are sufficient to answer the question.

31. In a mixture of 90 litres, the ratio of milk to water 4 : 1 , In another mixture of 90 litres, the ratio of milk to water is 3 : 2, What is the positive difference between the quantites the quantities of milk in the two mixures?

(a) 22 litres (b) 18 litres

(c) 23 litres (d) 16 litres

Ans. (b) : Amount of milk in Ist mixture-

$$90 \times \frac{4}{5} = 72 \text{ liter}$$

Amount of milk in second mixture

$$90 \times \frac{3}{5} = 54 \text{ liter}$$

Intended diffeence = (72 – 54) = 18 liter

32. Study the following arrangement of letters, numbers, symbols and answer the question that follows.

(Left) € A 5 # 6 λ 5 D P A 8 R 2 Z * Q 9 B L 5 6 % $ H 2 F # 6 (Right)

How many such letters are there in the above series, each of letters is immediately preceded by a symbol and immediately followed by a number ?

(a) 4 (b) 3

(c) 2 (d) 1

Ans. (b) :

€ A 5 # 6 λ 5 D P A 8 R 2 Z * Q 9 B L 5 6 % $ H 2 F # 6

Hence, intended number of letters = 3

33. Into how many books is the Akbar Nama divided?

(a) 5 books (b) 4 books

(c) 2 books (d) 3 books

Ans. (d) : The book Akbarnama is written by Abu'l Fazl in Persian language. The book is divided into three books: The first book deal with Akbar's ancestors. The second recorded the events of Akbar's reign and the third is the Ain-i-Akbari which deals Akbar's administration.

34. Which type of missile was the Python-5 test fired by DRDO in April 2021?

(a) Anit-radiation Missile

(b) Air-to-Surface Missile

(c) Air-to-Air Missile

(d) Surface-to-Surface Misile

Ans. (c) : Python-5, an Air to Air Missile was test fired by DRDO in April 2021. The Python-5 is the second air to air Missile of Israel origin.

35. As per UN (World Population Prospects 2019. ___led the ranking for countries with the highest population density in 2019.

(a) Netherlands (b) Monaco

(c) Hong Kong (d) Sweden

Ans. (b) : As per UN (World Population Prospects 2019) the country Monaco led in the ranking for countries with the highest population density in 2019. The population density of Monaco is 26152 per square km.

36. The Sattriya dance form was introduced by ___in 15th Century AD in Assam.

(a) Guru Pankaj Charandas
(b) Jayaprabha Menon
(c) Raja Bhag Chandra
(d) Mahapurusha Srimanta Sankaradeva

Ans. (d) : Sattriya is an Indian classical dance. The themes are related to Lord Krishna, Sometimes others Vishnu avatars such as Rama and Sita. Mahapurusha Srimanta Sankaradeva 115th century is credited with developing Sattriya dance into its present form It is popular classical dance related to Assam.

37. A shopkeeper mixes 30 kg of rice which he purchased at ₹30/kg and 40 kg of rice which he purchased at ₹28/kg and he sells the entire mixture at ₹28/kg. What is the profit or loss percentage (approximated to nearest integer)?

(a) 7% profit (b) 6% loss
(c) 3% loss (d) 5% profit

Ans. (c) : Cost price of rice : Selling price of rice

$(30\times30+28\times40) : 28\times(30+40)$

$(900+1120) : 28\times70$

$(90+112) : 196$

$202 : 98$

$\Rightarrow$ CP : SP = 101 : 98

$\text{Loss \%} = \frac{3}{101}\times100 = 2.97 \approx 3\%$

38. _____is defined as the output per unit of variable input.

(a) Net product (b) Gross product
(c) Average product (d) Capital products

Ans. (c) : The average product is defined as the output per unit of variable cost-

$\text{Average product} = \frac{\text{Total Product}}{\text{Variable Cost}} \text{ or } \frac{\text{TP (Total Product)}}{\text{Labour (L)}}$

39. In a class four students ranked between Rahul and Sreeja. Sreeja ranked 14th from the top while Rahul ranked 7th from the bottom. How many students are there in the class?

(a) 26 (b) 25
(c) 20 (d) 21

Ans. (b) :

Total student in class = (14 + 4 + 7) = 25

40. The present average age of X, Y and Z is 44 years, 8 years ago the average age of X and Y was 38 years. What is the present age of Z ?

(a) 38 Years (b) 40 Years
(c) 41 Years (d) 39 Years

Ans. (b) :

Present age of (X+Y+ Z) = 44×3 = 132 = years

Age of (X+Y) before 8 years = 38×2 = 76 = years

Present age of (X + Y) = (76 + 16) = 92 = years

Then, present age of Z = (132 – 92) = 40 = years

41. Evaluate $\frac{\cos^2(45^\circ+\theta)+\cos^2(45^\circ-\theta)}{\text{cosec}^2 30^\circ \sin^2 45^\circ - \sec^2 60^\circ}$.

(a) $-\frac{1}{6}$ (b) $-\frac{1}{2}$
(c) $\frac{1}{6}$ (d) $\frac{1}{2}$

Ans. (b) : Given,

$$\frac{\cos^2(45^\circ+\theta)+\cos^2(45^\circ-\theta)}{\text{cosec}^2 30^\circ \sin^2 45^\circ - \sec^2 60^\circ}$$

$$= \frac{\cos^2(45^\circ+\theta)+\sin^2(45^\circ+\theta)}{4\times\frac{1}{2}-4}$$

$$= \frac{1}{2-4} = \frac{-1}{2}$$

42. A can complete 12% of the work in 15%, of the allotted time. A and B worked for the entire period of the allotted time and the work got completed on time. What portion of the work was done by B?

(a) 25% (b) 20%
(c) 10% (d) 15%

Ans. (a) : A will work to complete in allotted time

$= \frac{12}{15} = \frac{4}{5}$ part, remaining $\frac{1}{5}$ part done by B

$\frac{1}{5}\times100 = 20\%$ part will be completed by B

43. Which of the following is NOT an example of rocks?

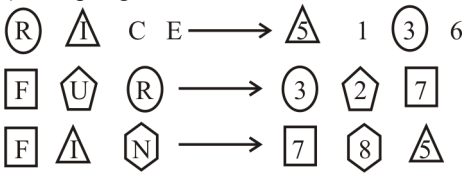
(a) Asphalt (b) Schist
(c) Granite (d) Basalt

Ans. (a) : The rock is an aggregate of one or more minerals. The Rock can be divided into three mains categories named as- Sedimentary, Igneous and Metamorphic rock. In the given option schist, Granite and Basalt are an example of rock while Asphalt is a black or Brown Petroleum like material.

44. In a certain code language. 'RICE' is coded as '5136' , 'FUR' is coded as '327' and 'FIN' is coded as '785'. How well 'FUN' probable be coded in that language?

(a) 258 (b) 718
(c) 872 (d) 182

Ans. (c) : As per given codes-



∴ FUN → 728

Hence , FUN probable be coded as 872.

45. Which of the following numbers is divisible by 30?

(a) 12340 (b) 34560
(c) 23450 (d) 45670

Ans. (b) : If a number is divisible by 30 then it is also divisible by 3. If the sum of the digits of a number is divisible by 3, then the whole number is divisibly by 3.

From option (b),

⇒ 3 + 4 + 5 + 6 = 18 (Which is divisible by 3)

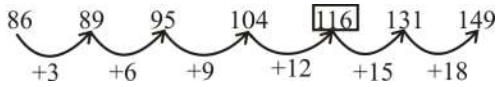
Hence, 3456 is divisible by 30.

46. Select the number from among the given options that can replace the question mark (?) in the following series.

86, 89, 95 , 104, ? , 131, 149

(a) 114 (b) 116
(c) 113 (d) 122

Ans. (b) :

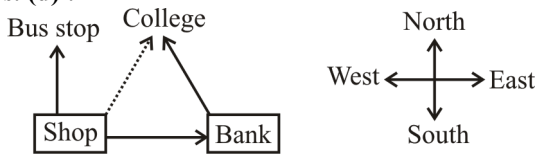


+3 is increased in the following next numbers.

47. A bank is to the east of a shop. A college is to the north-west of the Bank. A bus stop is to the north of the shop and to the west of the college. In which direction is the college with respect to the shop?

(a) North (b) North-west
(c) East (d) North-east

Ans. (d) :



Hence, college is to the North, East direction with respect to shop.

48. Which of the following ports is located on the western coast of India?

(a) Ennore (b) Cochin
(c) Haldia (d) Paradip

Ans. (b) : Port		**Location**
Ennore	–	Tamil Nadu (Eastern coast)
Cochin	–	Kerala (Western coast)
Haldia	–	Kolkata (Eastern coast)
Paradip	–	Odisha (Eastern coast)

49. The average weight of 14 students of a class is 20 kg. If a student leaves the class the average weight of the class drops by 2 kg. Find the weight of the student (in kg) who left the class.

(a) 43 (b) 49
(c) 45 (d) 46

Ans. (d) : Let total weight of 14 students is of class

$= 14 \times 20 = 280$ kg

According to the question,

$$= \frac{280 - x}{13} = 18$$

$280 - x = 234$

$x = 280 - 234$

$x = 46$

Hence, weight of student who left class = 46 kg

50. The first railway line in India was laid in the year 1853 from Bombay to _____.

(a) Pune (b) Nasik
(c) Thane (d) Nagpur

Ans. (c) : The first railway line in India laid in the year 1853 from Bombay to Thane (which was 35 km long) under the Governor-generalship of Lord Dalhousie.

51. Which of the following lakes is a brackish water lake?

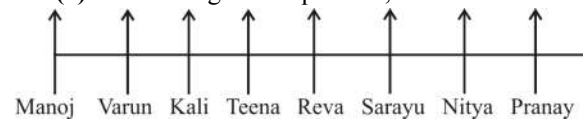
(a) Loktak Lake (b) Wular Lake
(c) Dal Lake (d) Pulicat lake

Ans. (d) : In the given options, Lake Pulicat is a brackish water lake. It is the second largest brackish water lake in India after lake Chilika while the Loktak, Dal (J & K) are the fresh water lake.

52. There are eight persons-Manoj, Nitya, Varun, Pranay, Kali, Reva, Sarayu and Teena. All of them are sitting in a straight row and are facing North but not necessarily in the same order. There are only two persons sitting between Reva and Pranay. The number of persons sitting between Kali and Manoj is the same as the number of persons sitting between Pranay and Sarayu. Varun is not a neighbour of Sarayu, Sarayu is sitting to the immediate left of Nitya, Kali is sitting second to the left of Reva, Reva is fourth from the extreme right end. Manoj sits at one of the extreme ends of the row. Teena sits to the immediate right of Kali. How many persons are seated to the left of Nitya?

(a) Six (b) Four
(c) One (d) Three

Ans. (a) : According to the question,

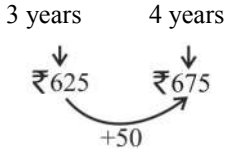


Hence , "Six" persons are seated to the left of Nitya.

53. A sum of money at certain rate of interest when compounded annually becomes ₹625, in 3 years and ₹675 in 4 years. What is the rate of Interest per annum?

(a) 7% (b) 8%
(c) 4% (d) 6%

Ans. (b) :

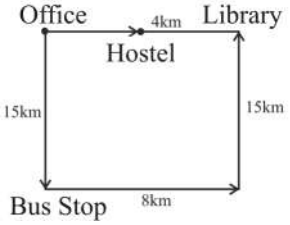


Annual interest rate = $\frac{50}{625} \times 100 = 8\%$

54. Ramdin started from his office and walked 15 km in the south direction and reached the bus stop, and then turned to his left and walked 8 km straight on the road. From there, he turned to his left, walked 15 km and reached the Central Library. After this, he turned to his left again and walked 4 km to reach his hostel. How far and in which direction is the hostel with respect to his office?

(a) 7 km towards South
(b) 4 km towards West
(c) 4 km towards East
(d) 12 km towards North

Ans. (c) : Diagram according to question,

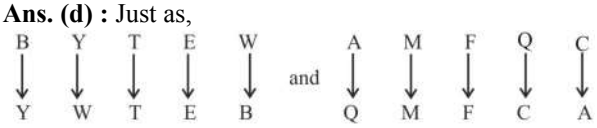


It is clear that his hostel is 4 km in East direction with respect to office.

55. BYTEW is related to YWTEB following a certain logic. Following the same logic, AMFQC is related to QMFCA. Which of the following is TILDW related to following the same logic?

(a) LTIWD (b) WILDT
(c) WLITD (d) WTLID

Ans. (d) : Just as,



(Alphabets are arranged in descending order)

Same as,

Hence, ; 'TILDW; is coded as ;WTLID'.

56. Which of the following is an example of a living fossil tree?

(a) Silver oak (b) Dryoptereris
(c) Funaria (d) Ginkgo biloba

Ans. (d) : Ginkgo biloba commonly known as ginkgo or gingko. It is a species of tree native to China. It is an example of a living fossil tree. It first appeared over 290 million years ago.

57. In which type of chemical reaction do crystals of ferrous sulphate lose water on heating and the colour of the crystals changes from light green to white?

(a) Displacemnet reaction
(b) Double displacement reaction
(c) Decomposition reaction
(d) Combination reaction

Ans. (c) : In Decomposition Reaction, crystals of ferrous sulphate lose water on heating and the colour of the crystals changes from light green to while.

$$2FeSo_4 \xrightarrow{Heat} Fe_2O_3 + SO_2 + SO_3$$

(Ferrous Sulphate) (Ferric oxide)

58. Who approved a policy on declassification of war histories in June 2021?

(a) Narendra Modi
(b) Rajnath Singh
(c) Amit shah
(d) Jyotiraditya M Scindia

Ans. (b) : On June 12, 2021 Defence Minister Rajnath Singh approved a policy on archiving, declassification, compilation and publication of war and operations histories by the Ministry of Defence (MoD).

59. Who laid the foundation stone of Shri Parvati Temple at Somnath in August 2021?

(a) Vijay Rupani (b) Bjupendra Patel
(c) Narendra Modi (d) Amit Shah

Ans. (c) : In August, 2021 Prime Minister Narendra Modi inaugurated several projects in Gujarat's Somnath and laid the foundation stone for Shri Parvati Temple, which is proposed to be constructed with a total outlay of ₹ 30 Crore.

60. How many technology innovation platforms have been launched by the Central Government for development of technologies for globally competitive manufacturing in India in July 2021?

(a) Eight (b) Five
(c) Six (d) Seven

Ans. (c) : In July 2021, the Government of India announced the launch of **six** technology innovation platforms to boost the domestic manufacturing sector and develop innovative, indigenous technologies to put India at par with the global counterparts.

61. The following question is based on the given words.
PLAN FORE RAMP RANG SAND
If in each word the fourth letter is changed to the next letter in the English alphabetical order, how many letter clusters thus formed will have two vowels?
(a) None (b) Three
(c) One (d) Two

Ans. (d) :
PLAN FORE RAMP RANG SAND
↓ ↓ ↓ ↓ ↓
PLAO FORF RAMQ RANH SANE
PLAO and SANE has two vowel letter cluster.
Hence, number of two vowel letter cluster = 2

62. In each of the given number-clusters. The number on the right side of '=' (the equal to sign) is calculated by performing certain mathematical operations on the three numbers on the left of '=' (the equal to sing). All three number-clusters follow the same pattern. Select the number from among the given options that can replace the question mark (?) in the third number-cluster.
21, 9, 40 = 149
18, 7, 25 = 101
15, 11, 30 = ?
(a) 110 (b) 135
(c) 125 (d) 120

Ans. (b) : Just as,
(i) 21, 9, 40 = 149
$\Rightarrow 21\times9 - 40$
$189 - 40 = \boxed{149}$
(i) 18, 7, 25 = 101
$\Rightarrow 18\times7 - 25$
$126 - 25 = \boxed{101}$
Same as,
15, 11, 30 = ?
$\Rightarrow 15\times11 - 30$
$165 - 30 = \boxed{135}$

63. How many gold medals did India win in the Asian Junior Boxing Championship 2021 in Dubai ?
(a) Six (b) Seven
(c) Five (d) Eight

Ans. (d) : India won total eight gold, five silver and six bronze medals in the Asian Junior Boxing Championship 2021 which was held in Dubai-2021.

64. Which of the following countries does NOT have direct access to a sea?
(a) Bangladesh (b) Pakistan
(c) Myanmar (d) Nepal

Ans. (d) : In the given options Nepal is a land-locked country hence it does not have direct access to a sea while Bangladesh, Maynmar have direct access to sea through Bay of Bengal and Pakistan has direct access to sea through Arabian Sea.

65. The famous Sardar Sarovar dam has been built on which of the following rivers?
(a) Sutlej (b) Narmada
(c) Godavari (d) Ganga

Ans. (b) : Sardar Sarovar dam has been built on the river Narmada. It is a concrete gravity dam located in Kevadiya near Navagam, Gujarat.

66. It was Thursday of February 1, 2007. What was the day of the week on February 2, 2006?
(a) Wednesday (b) Thursday
(c) Saturday (d) Friday

Ans. (b) : $\because$ 2006 and 2007 both are not leap year
Hence February will be 28.
$\therefore$ 1 February 2007 $\rightarrow$ Thursday
1 February 2006 $\rightarrow$ Wednesday
Then, 2 February 2006 $\rightarrow$ Thursday
Note:- One day difference in simple year if date is same.

67. As of February 2022, how many elements are there in the modern Periodic Table?
(a) 108 (b) 148
(c) 138 (d) 118

Ans. (d) : As of February 2022, total 118 elements are in the modern periodic table. Out of these 118, only 94 are naturally occurring.

68. The power of the Parliament to amend the Constitution of India is described in:
(a) Article 368 (b) Article 395
(c) Article 252 (d) Article 360

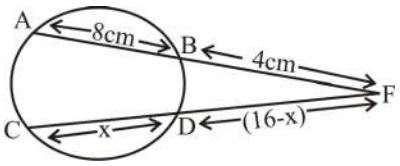
Ans. (a) : The power of the parliament to amend the Constitution of India is described in Article 368 of Indian Constitution. The Constitution provides for two types of amendments.
1. By a special majority of parliament
2. By a special majority of the parliament with the ratification by half of total states.

69. Who received the World Food Prize 2021, for unlocking the benefits of fish for diet, health and livelihood Across the Global South?
(a) Dr Rattan Lal
(b) Dr Shakuntala Harak Singh Thilsted
(c) Dr. Sanjaya Rajaram
(d) Dr Modadugu Vijay Gupta

Ans. (b) : Dr. Shakuntala Harak Singh Thilsted received the World Food Prize-2021, for unlocking the benefits of fish for diet, health and livelihood across the Global South.

70. Two chords AB and CD of a circle intersect at a point F outside the circle.
If AF = 12 cm, BF = 4 cm and CF = 16 cm, find the length of CD.
(a) 13 cm (b) 12 cm
(c) 11 cm (d) 10 cm

Ans. (a) :



By theorem,
If two chords AB and CD of a circle are cut at a point F outside the circle them,

$AF \times BF = CF \times DF$

$12 \times 4 = 16 \times (16 - x)$

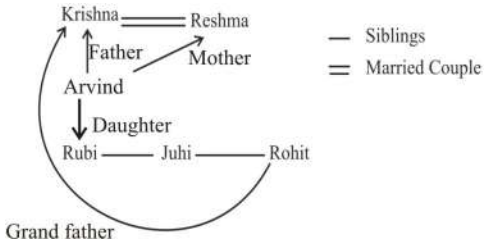
$3 = 16 - x$

$x = 13$ cm

Hence, length of CD = 13cm.

71. Rubi and Juhi are sisters. Krishna is Juhi's father's father. Reshma is the mother of Arvind. Arvind is the father of Rohit, who is the only brother of Rubi. How is Krishna related to Rohit?
(a) Father's father (b) Mother's brother
(c) Mother's father (d) Father

Ans. (a) : Drawing diagram according to the question,



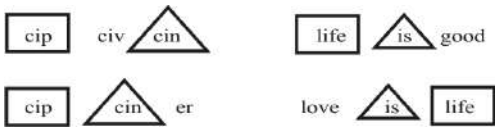
Hence, Krishna is Grandfather of Rohit.

72. Who among the following was a British reformer, a campaigner for women's rights and a supporter of Indian nationalism?
(a) Josephine Butler
(b) Florence Nightingale
(c) William Wilberforce
(d) Annie Besant

Ans. (d) : In the given options, Annie Besant was a British reformer, a campaigner for women's rights and a supporter of Indian nationalism.

73. In a certain code language, 'cip civ cin' is written as 'life is good', 'cip cin er' is written as 'love is life' How will 'love' be written as in that language?
(a) cip (b) oob
(c) er (d) cin

Ans. (c) :



∴ Love will be written as er.

74. Which of the following economic activities falls under the primary sector?
(a) Mining (b) Education
(c) Banking (d) Manufacturing

Ans. (a) : The primary sector or primary industry involves in the extraction and harvesting of natural products from the earth. Hence in the given options mining activities falls under the primary sector.

75. A train running at 90 km/h crosses an electric pole in 18 seconds and a platform in 65 seconds. What is the length of the platform?
(a) 1250 m (b) 1050 m
(c) 1020 m (d) 1175 m

Ans. (d) : $90\text{km/h} = 90\frac{5}{18}\text{m/sec} = 25\text{m/sec}$

Length of Train = 25×18 = 450 m.
Let Length of Platform = x m.
Then, Time = Distance/Speed

$$65 = \frac{x + 450}{25}$$

$1625 = x + 450$

$x = 1625 - 450$

$x = 1175$ m.

Hence, Length of Platform = 1175

76. Read the given statements and conclusions carefully. Decide which of the given conclusions follow based on the statements.
Statements:
P>Z, N<T, M>N, Z>M
Conclusions:
I. P<T
II. N<Z
(a) Only II is true
(b) Neither I nor II is true
(c) Only I is true
(d) Both I and II are true

Ans. (a) : Statement,

$P > Z,\ N < T,\ M > N,\ Z > M$

From above statement

$P > Z > M > T > N$

Conclusion (i) $P < T$ (✗)

(ii) $N < Z$ (✓)

So, only conclusion II is true.

77. Read the given statements and conclusions carefully. Decide which of the given conclusions is are true based on the statements.

Statements:

A > Z ≥ P > M

P < R

Conclusions:

I. A < R

II. M < R

(a) Only I is true

(b) Neither I nor II is true

(c) Both I and II are true

(d) Only II is true

Ans. (d) : Statement,

$A > Z \geq P > M$

$P < R$

From above relation

$A > R > Z \geq P > M$

Conclusion (i) $A < R$ (✗)

(ii) $M < R$ (✓)

Hence, Only conclusion II is true.

78. The amount payable on maturity of a certain sum which is invested for 5 years at a certain rate per cent p. a is ₹ 9,800 and the amount payable on the same sum invested for 10 years at the same rate is ₹ 12,600 . If simple interest is offered in both cases, the rate of interest p.a . is.

(a) 7.8% (b) 10%

(c) 8.5% (d) 8%

Ans. (d) : ∵ Principal amount are equal in both and also same rate for each.

Simple interest of 5 years = 12600 – 9800 = ₹ 2800

∴ Simple interest of 1 year = 2800/5 = ₹ 560

Principal amount (P) = (9800 – 2800) = ₹ 7000

Then, annual interest rate = $\frac{560}{7000} \times 100 = 8\%$

79. Ravi has to go from Hyderabad to Delhi. The distance between Hyderabad and Delhi is 1,200 kms. He decides to travel 25% of the distance on foot, 30% of the distance by bus, 15% of the distance by train and the remaining distance by an airplane. What is the distance travelled by Ravi by an Airplane?

(a) 580 km (b) 360 km

(c) 300 km (d) 425 km

Ans. (b) : According to the question,

Onfoot + Bus + Train + Airplane

↓ ↓ ↓ ↓

25% + 30% + 15% + 30% = 100

∵ 100% → 1200 kms.

Distance travelled by Ravi by an Airoplane is-

∴ 30% → $\frac{1200}{100} \times 30 = 360$km.

80. The Valmiki Ambedkar Awas Yojana is aimed at providing:

(a) Infrastructure for all the citizens

(b) Financial assistance to slum dwellers living below poverty line

(c) Foodgrains to slum dwellers living below poverty line

(d) Housing and toilet facilities to slum dwellers living below poverty line

Ans. (d) : Valmiki Ambedkar Awas Yojana (VAMBAY) was launched by the Prime Minister on December 2, 2021, with a view to ameliorating the conditions of the urban slum dwellers living below poverty line by providing them with dwelling units and the facility of community toilets.

81. An information is given, followed by two statements labeled I and II. Identify which of the statements is/are possible reason (s) behind the given information.

Information:

This year, schools will have to operate on a hybrid model i.e. online as well physical school.

Statements:

I. Many parents are still not willing to send their children to places with large gatherings owing to a pandemic

II. In schools, seating capacity will not be adequate to accommodate all the enrolled students owing to the social distancing norms.

(a) Only statement I is a possible reason.

(b) Neither statement I nor II is a possible reason.

(c) Only statement II is a possible reason.

(d) Both statements I and II are possible reasons.

Ans. (d) : According to the given information both statements I and II are possible reasons.

82. Which of the following states has zero Scheduled Tribe population as per Census 2011?

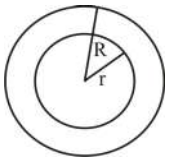
(a) Assam (b) Maharashtra
(c) Punjab (d) West Bengal

Ans. (c) : As per census report 2011, the state Punjab, Haryana and UT's Puduchery Delhi and Chandigarh has no scheduled tribe population.

83. A circular racing track has been developed in a field. If the difference between the outer circumference and the inner circumference of the racing track is 33 m, then find the width of the track (in m) (Use $\pi = \frac{22}{7}$)

(a) $5\frac{1}{5}$ (b) $4\frac{3}{4}$
(c) $5\frac{3}{4}$ (d) $5\frac{1}{4}$

Ans. (d) : According to the question,



Let the radius of the outer circle be R and the inner circle be r

Now,

$$2\pi\ (R - r) = 33$$

$$(R - r) = \frac{33 \times 7}{2 \times 22}$$

$$(R - r) = \frac{21}{4} = 5\frac{1}{4}$$

Hence, width of racing track (in m) = $5\frac{1}{4}$

84. When we divide NNP (Net National Product) by the total population of a nation we get__ .

(a) gross National Product
(b) external dividend
(c) resource growth
(d) per capita income

Ans. (d) : When we divide NNP (Net National Product) by the total population of a nation then we get per capita income.

85. A family spends ₹4600, ₹5600, ₹4800, ₹3800, and ₹6000, on groceries in the first 5 months of a year. How much should the family spend in the 6th month to make the 6 months average spending of family on groceries to ₹4500?

(a) ₹3500 (b) ₹3650
(c) ₹4500 (d) ₹2200

Ans. (d) : Total expenditure of 6 month of family
= 6×4500 = ₹ 27000

First 5 month expenditure of family.
4600+5600+4800+3800+6000 = ₹ 24800

∴ Total expenditure of 6 months = 27000 – 24800
= ₹ 2200

86. From the given options, which two numbers should be interchanged so that the value of Y becomes 29 ?

6 × 4 – 5 + 9 ÷ 3 = Y

(a) 5 and 3 (b) 4 and 5
(c) 6 and 9 (d) 9 and 3

Ans. (b) : From option (b) interchanging 4 and 5

6 × 4 – 5 + 9 ÷ 3 = y (Given)

6 × 5 – 4 + 9 ÷ 3 = y (Interchanging numbers)

30 – 4 + 3 = y

33 – 4 = y

$\boxed{29 = y}$

87. What is the smallest cubic number, which is divisible by 72, 108 and 300?

(a) 21600 (b) 27000
(c) 5400 (d) 3375

Ans. (b) :

2	72	108	300
2	36	54	150
2	18	27	75
3	9	27	75
3	3	9	25
3	1	3	25
25	1	1	25

For making cube, multiply by 5 in LCM of numbers.

$2\times2\times2\times3\times3\times3\times25\times\boxed{5}$

Hence, smallest cube number
= 8×27×125
= 27000

88. $\frac{9}{15} \times \frac{45}{81} \times \left\{\frac{49}{6} \times \left(\frac{16}{7} - 2\right)\right\} \times \frac{24}{5} \div \frac{16}{15} = ?$

(a) $\frac{5}{9}$ (b) $\frac{9}{5}$
(c) $\frac{2}{7}$ (d) $\frac{7}{2}$

Ans. (d) : Given,

$$\frac{9}{15}\times\frac{45}{81}\left\{\frac{49}{6}\times\left(\frac{16}{7}-2\right)\right\}\times\frac{24}{5}\div\frac{16}{15}=?$$

$$=\frac{9}{15}\times\frac{45}{81}\times\left\{\frac{49}{6}\times\frac{2}{7}\right\}\times\frac{24}{5}\div\frac{16}{15}=?$$

$$=\frac{9}{15}\times\frac{45}{81}\times\frac{7}{3}\times\frac{24}{5}\div\frac{16}{15}=?$$

$$=\frac{9}{15}\times\frac{45}{81}\times\frac{7}{3}\times\frac{24}{5}\times\frac{15}{16}=?$$

$$\boxed{\frac{7}{2}=?}$$

89. In which Schedule of the Constitution of India were 22 languages mentioned?

(a) 4rd Schedule (b) 3rd Schedule
(c) 8rd Schedule (d) 5rd Schedule

Ans. (c) : In the 8th schedule of the Constitution of India deals with total 22 official languages in India. Initially, there were 14 official languages in the 8th schedule. Sindhi language was added in 1967 thereafter three more language Konkani, Manipuri and Nepali were included in 1922. Subsequently Bodo, Dogri, Maithli and Santhali were added in 2004.

90. A train covers a distance of 57.6 k in 48 minutes. What is its speed in m/s?

(a) 24 (b) 18
(c) 21 (d) 20

Ans. (d) : Speed = Distance / Time

$$\text{Speed}=\frac{57.6\,\text{km}}{48\,\text{m}}$$

$$=\frac{57600}{48\times60}=20\text{m/sec}$$

91. Indian men's hockey team won bronze medal by defeating which country in Tokyo 2020 Summer Olympics in August 2021?

(a) Australia (b) Netherland
(c) Belgium (d) Germany

Ans. (d) : In Tokyo 2020 Summer Olympics, Indian men's hockey team defeated Germany to win their first-ever Olympic Medal in 41 years. It was India's third hockey bronze medal in the history of the Olympics.

92. Find the product of the greatest among the numbers 0.82, 0.802, 0.85, 0.085 with the smallest among the numbers 0.3, 0.03, 0.203, 2.03.

(a) 0.0225 (b) 0.246
(c) 0.0255 (d) 0.2406

Ans. (c) :
0.82, 0.802, 0.85, 0.085 greatest number in this = 0.85
and 0.3, 0.03, 0.203, 2.03 smallest number = 0.03
Intended Product = 0.85×0.03 = 0.0255

93. The intervention by the monetary authority of a country in the money market to keep the money supply stable against external shocks is called___.

(a) Speculative demand (b) Reserve deposit
(c) Sterilisation (d) Statutory liquidity

Ans. (c) : The intervention of monetary authority of a country in the money market to keep the money supply stable against external shocks is called sterilisation.

94. Valley of the kings-one of the most important archaeological sites in the world is located in____.

(a) Thailand (b) Norway
(c) Egypt (d) Turkey

Ans. (c) : Valley of the kings-one of the most important archaeological sites in the world is located in Egypt. It is also known as the Valley of the gates of kings.

95. Which Five-Year plan aimed at accelerating food grain production increasing employment opportunities and raising productivity with focus on food work and productivity?

(a) Fourth (b) First
(c) Sixth (d) seventh

Ans. (d) : The main objectives of the seventh five year plan were to established growth in the areas of increasing economic productivity, accelerating food grains production, increasing employment opportunities and raising productivity with focus on food work and productivity.

96. Sweta correctly remembers that Ajay's exam is before Friday but after Tuesday. Kavy correctly remembers that Ajay's exam is after Wednesday but before Saturday. On which of the following days does Ajay's exam correctly fall?

(a) Thursday (b) Tuesday
(c) Wednesday (d) Monday

Ans. (a) : Examination of Ajay according to Sweta
Tuesday → Wednesday or Thursday ← Friday
Examination of Ajay according to Kavy
Wednesday → Thursday or Friday ← Saturday
So it is clear that examination of Ajay is on Thursday.

97. Read the given statements and conclusions carefully. Decide which of the given conclusions is are true based on the

Statements:

K = P < C; P > Q; Q > L

Conclusions:

I. Q < C

II. K > L

(a) Only conclusion II is true

(b) Neither conclusion I nor II is true

(c) Bothe conclusions I and II are true

(d) Only conclusion I is true

Ans. (c) : Given,

$K = P < C ; P > Q ; Q > L$

$\because \begin{matrix} P < C \\ P > Q \end{matrix} \Rightarrow K > L$

and, $K = P \Rightarrow K > Q \Rightarrow \boxed{K > L}$

Hence, according to the statement both conclusion I and II are true.

98. Which of the following is NOT a major factor affecting the population change in a region?

(a) Migration

(b) Occupational composition

(c) Death rate

(d) Birth rate

Ans. (b) : In the given options, occupational compostion. is not major factor, which affects the population change in a region.

99. Alha singing is a prominent genre of folk songs of some parts of:

(a) Odisha (b) Uttar Pradesh

(c) Punjab (d) Assam

Ans. (b) : Alha singing is a prominent genre of folk songs which sings in some parts of Uttar Pradesh.

100. During the Mauryan reign which of the following provinces was considered as the gold mine hub in Karnataka?

(a) Suvarnagiri (b) Ujjayini

(c) Taxila (d) Tosali

Ans. (a) : During the Mauryan period, Suvarnagiri was known for gold mine hub in Karnataka.

101. Sudhir is 4.5 times as efficient as Aarav. If they work together, they can complete a piece of work in 8 days. How many days will Aarav take to do the same work alone?

(a) 40 (b) 36

(c) 44 (d) 48

Ans. (c) : Ratio of work capacity

Sudheer : Aarav = 4.5 : 1

= 15 : 10 = 9 : 2

Total work = $(9 + 2) \times 8 = 88$ unit

Then time taken by Aarav Alone to complete the same work

$= \frac{88}{2} = 44$ days

102. With reference to the Green Revolution in India, what is the full form of HYVP?

(a) High-Yielding Varieties Pattern

(b) High-Yielding Varieties Patent

(c) High-Yielding Varieties Programme

(d) High-Yielding Varieties Plants

Ans. (c) : With reference to the Green Revolution in India, the HYVP stands for High-Yielding Varieties Programme. The main objectives of this programme was to increase the productivity of food grains by adopting latest varieties of inputs of crops.

103. SPIC MACAY (Society for the Promotion of Indian Classical Music and Culture amongst Youth) is a non-political nationwide, voluntary movement founded in ____.

(a) 1970 (b) 1979

(c) 1977 (d) 1973

Ans. (c) : SPIC MACAY (Society for the Promotion of Indian classical Music and Culture amongst Youth) is a non political nationwide, voluntary movement. This society was founded in 1977 by Dr. Kiran Seth at IIT Delhi.

104. In a certain code language. 'MISTAKE' is written as 'LHRUBLF' and 'PROBLEM' is written as 'OQNCMFN'. How will 'STRANGE' be written in the language?

(a) TUSBMFD

(b) RSQBOHF

(c) RSQBMFD

(d) TUSAOHF

Ans. (b) : Just as,

$M \xrightarrow{-1} L$

$I \xrightarrow{-1} N$

$S \xrightarrow{-1} H$

$T \xrightarrow{+1} U$

$A \xrightarrow{+1} B$

$K \xrightarrow{+1} L$

$E \xrightarrow{+1} F$

And,

$P \xrightarrow{-1} O$

$R \xrightarrow{-1} Q$

$O \xrightarrow{-1} N$

$B \xrightarrow{+1} C$

$L \xrightarrow{+1} M$

$E \xrightarrow{+1} F$

$M \xrightarrow{+1} N$

Same as,

S $\xrightarrow{-1}$ R
T $\xrightarrow{-1}$ S
R $\xrightarrow{-1}$ Q
A $\xrightarrow{+1}$ B
N $\xrightarrow{+1}$ O
G $\xrightarrow{+1}$ H
E $\xrightarrow{+1}$ F

105. The length of each edge of a cube is 2.6 cm. What is the total surface area (in cm^2)of the cube?

(a) 40.76 (b) 40.56
(c) 39.96 (d) 40.36

Ans. (b) : Total surface area of a Cube $= 6a^2$
$= 6\times(2.6)^2$
$= 6\times6.76 = 40.56\ cm^2$

106. A certain sum amounts to ₹ 22494 in 7 years at x% per annum on simple interest. If the rate of simple interest per annum had been (x +4)% the amount payable after 7 years would have been ₹ 25917 . Find the sum invested.

(a) ₹ 12,275 (b) ₹ 12,225
(c) ₹ 12,175 (d) ₹ 11,975

Ans. (b) : According to the question,

$$(22494 - P) = \frac{P\times x\times 7}{100} \text{ ——— (i)}$$

$$(25917 - P) = \frac{P(x+4)\times 7}{100} \text{ ——— (ii)}$$

From equation (ii) – (i) –

$$3423 = \frac{P\times 7}{100}\times 4$$

$$489 = \frac{P}{25},\ P = 489\times25 = ₹\ 12,225$$

Hence, Invested sum = ₹ 12,225

107. As of December 2021, the number of High Courts in India are ____.

(a) 30 (b) 25
(c) 28 (d) 20

Ans. (b) : As of December 2021, the known number of High Courts in India are 25.

108. A sum of ₹9800 was invested for a year at 10% interest per annum, compounded half-yearly. What would been the interest payable at the end of the year?

(a) ₹ 1003.50 (b) ₹ 980
(c) ₹ 1005.60 (d) ₹ 1004.5

Ans. (d) : Annual rate of interest = 10%
Half yearly rate of compound interest-

5% 5%
First six month second six month

$$\text{Intended rate} = 5+5+\frac{5\times5}{100}$$

$$= 10+\frac{1}{4} = 10.25\% \text{ or } 10\%+0.25\%$$

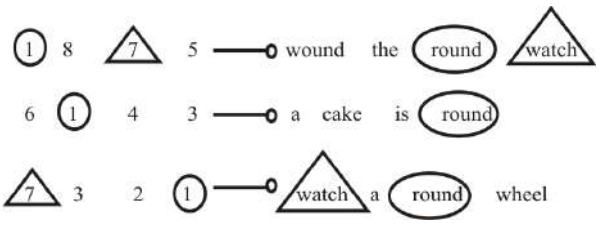
$$\text{Payable interest} = 9800\times\frac{10}{100}+9800\times\frac{1}{400}$$

$980 + 24.5 = ₹\ 1,004.5$

109. In certain code language each word is given a number code. Accordingly, 1875 means 'wound the round watch' , 6143 means 'a cake is round' and 7321 means 'watch a round wheel'. Find the code for watch.

(a) 7 (b) 8
(c) 5 (d) 1

Ans.(a):

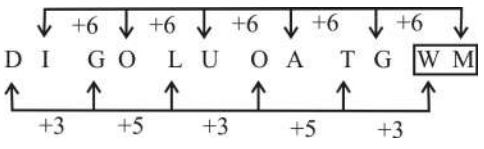


Hence, 7 is code of watch.

110. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.
DI, GO, LU, OA, TG, ?

(a) WM (b) UL
(c) WL (d) YM

Ans. (a) :



111. There are 3 badminton players in each stream- Commerce, Science and Arts. A, B and C are from Commerce P, Q and R are from Science, J, K and L are from Arts. A team of 4 badminton players are to be sent for a tournament with following conditions:

(i) There must be at least one student from each stream.
(ii) P will not go with Q or R.
(iii) A and C will always go together.
(iv) K and L will always go together.
Which of the following combinations of players is a possible combination for the tournament?
(a) A, Q, R and J (b) B, P, R and J
(c) A, C, P and J (d) B, Q, J and K

Ans. (c) :

Condition	Commerce	Science	Arts
(i)	A/B/C	P/Q/R/	J/K/L
(ii)	A/B/C	P or (Q/R)	J/K/L
(iii)	B/(A+C)	P or (Q/R)	J/K/L
(iv)	B or (A+C)	P or (Q/R)	J or (K+L)

Hence, A, C, P and J combinations of players is a possible combination for the tournament.

112. The First Human Development Report was published by the United Nations Development Programme (UNDP) in the year___.
(a) 1990 (b) 1980
(c) 1945 (d) 1905

Ans. (a) : In the year 1990, the first human development report was published by United Nations Development Programme (UNDP). The Human Development Report (HDR) is an annual Human Development Index was launched by the Pakistan economist Mahbub ul Haq and Indian Nobel laureate Amartya Sen.

113. A solid metallic sphere of radius 3 cm is melted and drawn into a wire of thickness 4 mm What is the length of the wire (in m)?
(a) 7.5 (b) 8
(c) 9 (d) 9.25

Ans. (c) : Volume of wire = Volume of sphere

$$4\text{mm} = \frac{4}{10}\text{cm}.$$

$$\text{Radious of wire} = \frac{1}{2}\times\frac{4}{10} = 0.2\,\text{cm}.$$

Volume of wire = $\pi r^2 l$
Where, l = length of wire

$$\therefore\ \pi(0.2)^2 = \frac{4}{3}\pi(3)^3$$

$$0.04 \times l = \frac{4}{3}\times 27$$

$$0.04 \times l = 36$$

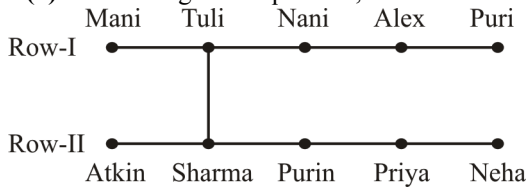
$$l = \frac{36}{0.04}$$

$$l = \frac{36\times 100}{4}$$

$l = 9 \times 100$ cm
$l = 9$ m.

114. Study the given information carefully and answer the question that follows.
In a boat, people are sitting in two parallel rows, with five people each in a row, in such a way that there is equal distance between adjacent persons.
In the first row, Mani, Nani, Alex, Puri and Tuli are seated (not necessarily in the same order) and all of them are facing south.
In the second row, Sharma, Atkin, Purin, Neha and Priya are seated (not necessarily in the same order) and all of them are facing north.
Therefore people in the opposite rows face each other in this arrangement Priya sits third to the right of Atkin. Atkin sits at one of the extreme ends. Sharma sits second to the left of Priya. The person facing Sharma sits to the immediate right of Nani, Puri sits second to left of Nani. Mani is not an immediate neighbour of Nani. Only two people sit between Mani and Alex Neither Nani nor Mani faces Neha.
Who among the following is facing Tuli?
(a) Sharma (b) Neha
(c) Priya (d) Atkin

Ans. (a) : According to the question,



Face of Tuli is towards Sharma.

115. 2 litres of a liquid having milk and water in the ratio 3 : 2 is mixed with 3 litres of a liquid having milk and water in the ratio 2 : 3. Find the ratio of milk to water in the new mixure.
(a) 1 : 1 (b) 12 : 13
(c) 5 : 6 (d) 9 : 4

Ans. (b) : Quantity of water

In 2 litre quantity
- quantity of milk $2\times\frac{3}{5} = \frac{6}{5}$ litre
- quantity of water $2\times\frac{2}{5} = \frac{4}{5}$ litre

In 3 litre quantity
- quantity of milk $3\times\frac{2}{5} = \frac{6}{5}$ litre
- quantity of water $3\times\frac{3}{5} = \frac{9}{5}$ litre

$$\text{Intended ratio} = \frac{\frac{6}{5}+\frac{6}{5}}{\frac{4}{5}+\frac{9}{5}} = \frac{12}{13} = 12:13$$

116. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true. even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow (s) from the statements.

Statements:

All men are robots.

All robots are machines.

Conclusions:

I. All machines are men

II. Some robots are men.

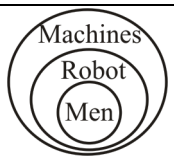
(a) Neither conclusion I nor II follows

(b) Both conclusions I and II follow

(c) Only conclusion II follows

(d) Only conclusion I follows

Ans. (c) : According to the question, on drawing venn diagram,



According to statement only conclusion II follows.

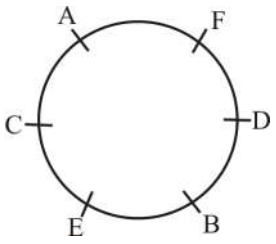
117. Six people A, B, C, D, E and F are sitting around a circular table facing the centre. C sits second to the left of B. E is an immediate neighbour of B. F sits third to the left of E. D sits second to the left of A.

Who sits to the immediate right of A ?

(a) F (b) B

(c) C (d) E

Ans. (c) : On drawing diagram according to the question.



Hence, C sits to the immediate right of A.

118. Which Article of the Indian Constitution is related with the oath or affirmation by judges of high courts?

(a) 256 (b) 219

(c) 187 (d) 231

Ans. (b) : The Judges of High Courts are appointed by President with the Consultation of Chief Justice of India and Governor of the concerned state. Article 219 of Indian Constitution specifically provides that every person who is appointed to be a Judge of High Court shall before he enters upon his office, make and subscribe before the Governor of the concerned State or some person appointed in that behalf by him, an oath or affirmation.

119. The area of a rectangle is 453.6 m^2. If its length is 27 m. Then what is the perimeter of the rectangle?

(a) 87.6 m (b) 86.6 m

(c) 89.8 m (d) 85.4 m

Ans. (a) : Area of Rectangle = Length ×Breadth

$\therefore$ 27× Breadth = 453.6

Breadth = 16.8 m.

Then Perimeter of Rectangle = $2(l + b)$

$= 2(27 + 16.8)$

$= 2\times43.8 = 87.6$ m.

120. The following table presents the expenditure of a company on variious heads over five years.

Expenditures of a company (in Lakhs)

	Expenditature Heads				
Year	Salary	Transport	Taxes	Advertising	Offers and Promotions
2017	361	93	83	142	52
2018	273	67	65	133	86
2019	645	110	152	108	95
2020	712	108	165	112	48
2021	652	111	132	101	75

(Reference- Expenditures of a company (in Lakhs), Expenditure Heads, Year, Salary, Transport, Taxes, Advertising, Offers and Promotions)

The company's total expenditure in 2017 was approximately what percentage of its total expenditure in 2021?

(a) 71% (b) 61%

(c) 68% (d) 55%

Ans. (c) : According to the question,

Total expenditure of 2017 = 361 + 93 + 83 + 142 + 52

= 731 Lakhs

Total expenditure of 2021 = 652+111+132+101+75

= 1071 Lakhs

$$\text{Percentage} = \frac{731}{1071}\times100$$

$$= 68.25$$

$$\approx 68\%$$

Railway Non-Technical Popular Categories (NTPC) Exam - 2022 Level-V

(HELD ON 12.06.2022 Time 12:45-2:15PM)

1. The Amazon Rainforest which is well known as the lungs of the earth is located in ____.

(a) South America (b) Asia

(c) Africa (d) North America

Ans. (a) : The Amazon rainforest is a moist tropical rainforest that covers most of the Amazon basin of South America . The Amazon rainforest absorbs 25% of atomospheric CO_2 and produces large amount of Oxygen. So these forest is called the lungs of the Earth.

2. Which of the following pilot projects was launched on the occasion of World Environment Day 2021, with an aim of establish a network for production and distribution of ethanol in India?

(a) E-50 (b) E-100

(c) E-103 (d) E-65

Ans. (b) : Prime Minister launched the E-100 pilot project in Pune to mark World Environment Day on 5th June 2021. The ambitious project aims to setup a network for the production and distribution of Ethanol across the nation.

3. Vimal secured 46% marks in the exam and failed to qualify in the exam by 10 marks. If he secured 52% marks, he would have secured 8 marks more than what was the minimum qualifying marks. What were the minimum marks one had to score to qualify in the exam?

(a) 148 (b) 146

(c) 156 (d) 138

Ans. (a) : Let total marks be x.

According to the question,

$x \times 46\% + 10 = x \times 52\% - 8$

$(x \times 52\%) - (x \times 46\%) = 10 + 8$

$$\frac{x \times 52}{100} - \frac{x \times 46}{100} = 18$$

$$\frac{52x - 46x}{100} = 18$$

$$\frac{6x}{100} = 18$$

$6x = 1800$

$x = 300$

On putting the value of x

Minimum qualifying marks = $(300 \times 46\%) + 10$

$$= \left(\frac{300 \times 46}{100}\right) + 10$$

$= 138 + 10$

$= 148$ marks

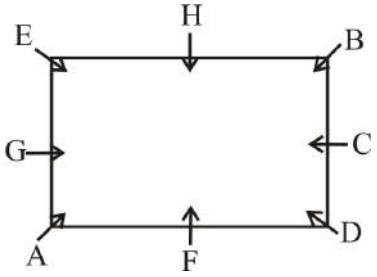
4. A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. four of them are sitting at each of the corners. while the other four are sitting at the exact centre of each of the sides.

G sits in the middle of one of the sides of the table, E is an immediate neighbour of G, E sits third to the left of F. Only three people sit between F and H, B sits to the immediate left of H, C sits third to the right of A, Who sits third to the right of D?

(a) F (b) H

(c) G (d) E

Ans. (b) : The order of their seating around a square table is as follows-



Hence, 'H' sits third to the right of 'D'.

5. Which country's satellite was carried into space by the Indian Polar Satellite Launch Vehicle PSLV-C51 in February 2021?

(a) Brazil (b) USA

(c) Russia (d) Japan

Ans. (a) : PSLV-C51 the first dedicated launch for NewSpace India Limited (NSIL) successfully launches Amazonia-1 and 18 Co-passenger satellites from Sriharikota. The Amazonia-1 satellite was first Brazilian satellite launched by India.

6. Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement:

One must wake up early in the morning and exercise.

Assumptions:

I. Exercising is not possible at any other time of the day.

II. Everyone who exercises early in the morning is fitter than those who do not.

(a) Neither assumption I nor assumption II is implicit

(b) Only assumption I is implicit

(c) Both assumptions I and II are implicit

(d) Only assumption II is implicit

Ans. (a) : According to the statement neither assumption I nor assumption II is implicit.

7. The amount payable on maturity of a certain sum invested at a certain rate of simple interest per annum for one year was ₹ 1,484. If the rate of interest had been 2% higher, the amount would have been ₹ 26.50 more. What was the interest that was paid on the sum invested at the original rate?

(a) ₹ 152.50 (b) ₹ 161

(c) ₹ 157 (d) ₹ 159

Ans. (d) : Let Principal = ₹ P

According to the question,

2% of P = 26.50

$$P = \frac{26.50 \times 100}{2}$$

= ₹ 1325

Simple Interest = Amount – Principal

= 1484 - 1325

= ₹159

8. Under which scheme was Somnath Promenade developed, as per the release of PMO on 20 August 2021 ?

(a) AMRUT scheme (b) HRIDAY scheme

(c) PRASHAD scheme (d) UDAY scheme

Ans. (c) : According to a release by the Prime Minister Office (PMO) , the Somnath Promenade has been developed under the Pilgrimage Rejuvenation and Spritual Augmentation Drive (PRASAD) scheme. PRASAD scheme was launched in the year 2014-2015 under the Ministry of Tourism.

9. A can do 75% of the work in 30 days while B can do 50% of the same work in 18 days. If they work together. What fraction of the work will be done in 1 day ?

(a) $\frac{7}{120}$ (b) $\frac{1}{19}$

(c) $\frac{19}{360}$ (d) $\frac{1}{20}$

Ans. (c) : A's work = 75% ———30 days

$$100\text{———} \frac{30}{75} \times 100 = 40 \text{ days}$$

B's work = 50% ———18 day

$$100\text{———} \frac{18}{50} \times 100 = 36 \text{ days}$$

One day work of (A + B) $= \frac{1}{40} + \frac{1}{36}$

$$= \frac{9+10}{360}$$

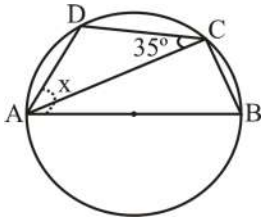
$$= \frac{19}{360} \text{ unit}$$

10. ABCD is a cyclic quadrilateral. AB is a diameter of the circle. If ΔACD = 35º find the value of ΔBAD.

(a) 70º (b) 55º

(c) 45º (d) 60º

Ans. (b) :



∠ACD 90º (Diameter makes a right angle to the circumference)

∠BCD = ∠ACB + ∠ACD

= 90º + 35º

= 125º

∠BAD + ∠BCD = 180º (From cyclic quadrilateral)

∠BAD = 180º – ∠BCD

∠BAD = 180º – 125º

∴ ∠BAD = 55º

11. Vishakha joined five different hobby classes viz. Painting, Dancing, Modelling, Singing and Cooking. She attends each class on different days of the same week from Monday to Friday but not necessarily in the same order. She attends Modelling class on Wednesday, She attends neither Painting nor Dancing class on Thursday and Friday. She attends Cooking class on Friday.

On which day does she attend Singing class?

(a) Monday (b) Thursday

(c) Data is inadequate. (d) Tuesday

Ans. (b) :

Hobby classes	**Days**
Modelling	Wednesday
Painting	Monday or Tuesday
Dancing	Monday or Tuesday
Singing	Thursday
Cooking	Friday

It is clear from above that vishakha attends singing class on thursday.

12. What is the difference between the LCM and the HCF of 24 and 18?

(a) 24 (b) 6

(c) 72 (d) 66

Ans. (d) :

LCM of 24 and 18 =

6	24	18
4	4	3
3	1	3
	1	1

$= 6 \times 3 \times 4 = 72$

HCF of 24 and 18 = 6

Difference between LCM and HCF = 72 – 6 = 66

13. The total surface area of a solid hemisphere is 1848 cm^2. What is the length of the diameter of the flat surface of the hemisphere. [Use $\pi = \frac{22}{7}$]

(a) 35 cm (b) 21 cm

(c) 14 cm (d) 28 cm

Ans. (d) : Total surface area of solid Hemisphere = $3\pi r^2$

$3\pi r^2 = 1848\ cm^2$

$\Rightarrow r^2 = \frac{1848}{3\pi}$

$\Rightarrow r^2 = \frac{1848 \times 7}{3 \times 22}$

$\Rightarrow r^2 = 196$

$\Rightarrow r^2 = (14)^2$

$\therefore$ Radius (r) = 14

Diameter = 2r

$= 2 \times 14$

= 28 cm

14. The situation in an economy when inflation and unemployment both are at higher levels is known as ____.

(a) reinflation (b) stagflation

(c) inflation gap (d) inflation premium

Ans. (b) : Stagflation is an economic situation where the economy experiences the combination of high rate of Inflation and Unemployment and economic growth going slow.

15. Eight friends, Janaki, Komali, Lokesh, Manu, Nirvan, Rajan, Paru and Silpa, are sitting around a square table in such a way that four of them sit at four corners while four sit in the middle of each of the four sides. The ones who sit in the middle of the sides face the centre, while those who sit at the four corners face outward (i.e. opposite the centre). Lokesh sits third to the right of Manu. Manu sits in the middle of one of the sides of the table. Exactly three people sit between Lokesh and Silpa. Paru sits second to the right of Silpa. Nirvan is one of the immediate neighbours of Paru. Exactly three people sit between Nirvan and Komali. Janaki sits second to the right of Komali. Which of the following statements is true regarding Rajan?

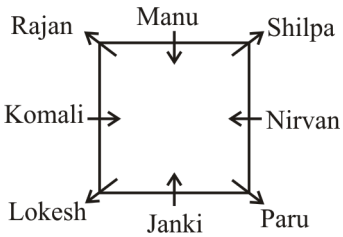
(a) Only three people sit between Rajan and Janaki.

(b) Nirvan sits second to the left of Rajan.

(c) Both Manu and Komali are immediate neighbours of Rajan.

(d) Rajan sits in the middle of one of the sides

Ans. (c) : The seating arrangement of the eight friends is as follows-



It is clear from above diagram that both Manu and Komali are sitting immediate next to Rajan.

16. A conical tent with base diameter 10 m and height 12 m has been made. An additional 10% cloth is required as wastage in stitching the tent. Find the area of the cloth required (in m^2) (Use $\pi = 3.14$)

(a) 65 π (b) 71.5 π

(c) 60 π (d) 78.5 π

Ans. (b) : Given,

Diameter = 10m, Height (h) = 12m

Radius = $\frac{\text{Diameter}}{2}$ Slant height $(\ell) = \sqrt{h^2 + r^2}$

Radius = $\frac{10}{2} = 5$ m. $= \sqrt{12^2 + 5^2}$

$\therefore \ell = 13$ meter

Area of tent clothes = πrl

$= \pi \times 5 \times 13$

$= 65\pi$

Area of clothes with 10% extra clothes $= \frac{65\pi \times 110}{100}$

$= 71.5\pi$

17. Select the correct conclusion that could be drawn from the given expression.

R > T ≥ N > U = S ≤ Z < V

(a) V < T (b) N < Z

(c) R > U (d) T = S

Ans. (c) : R > U can drawn from the given.
Hence option (c) is correct.

18. Rahul invested a certain sum for two yers at 60% p.a. compound interest compounded annually. If at the end of two years he received interest of ₹ 11,700, then how much did he initially invest?

(a) ₹ 8,000 (b) ₹ 7,250

(c) ₹ 7,750 (d) ₹ 7,500

Ans. (d) : Let Principal = ₹ P

$$\text{Compound Interest} = \left[P\left(1+\frac{R}{100}\right)^t\right] - P$$

$$11700 = \left[P\left(1+\frac{60}{100}\right)^2\right] - P$$

$$11700 = \left[P\left(\frac{8}{5}\right)^2\right] - P$$

$$11700 = \frac{64P}{25} - P$$

$$11700 = \frac{64P - 25P}{25}$$

$$P = \frac{11700 \times 25}{39}$$

$\therefore P =$ ₹ 7500

19. Which Indian state was the first to be carved out on the basis of language in the year 1956 ?

(a) Gujarat (b) Andhra Pradesh

(c) Punjab (d) West Bengals

Ans. (b) : Andhra Pradesh first to be carved out of basis of language in Nov. 1, 1956. In October 1953, the government of India was forced to create the first linguistic state known as Andhar Pradesh by sepreting the Telgu speaking areas from Madras State. In dec. 1953 Government of India appoint a three member states reorgnization commsion which submitted its report in 1955 and later 1956 Andhra Pradesh was seprated officially.

20. Find the perimeter (in cm) of a square having an area equal to the area of a rhombus of whose diagonals are 8 cm and 16 cm

(a) 32 (b) 34

(c) 36 (d) 35

Ans. (a) : Area of rhombus $= \frac{1}{2} \times d_1 \times d_2$

(where d = diagonal)

$= \frac{1}{2} \times 8 \times 16$

$= 64 \text{ cm}^2$

According to the question,

Area of square = Area of rhombus

Side of square $= \sqrt{\text{Area of square}}$

$= \sqrt{64}$

$= 8\text{cm}$

Perimeter of square = side of square ×4

$= 8 \times 4$

$= 32$ cm

21. The transformation of silk worms and frog larvae into adults through drastic changes is called :

(a) mutation (b) metamorphosis

(c) transfiguration (d) diversification

Ans. (b) : The transformation of silk worms and frog larvae into adults through drastic changes is called metamorphosis. (egg → Larva or Tadpole →Pupa or Late Tadpole →Adult)

22. What is the median of 15, 2, 7, 8, 11, 5 and 14 ?

(a) 8 (b) 7.5

(c) 7 (d) 9.5

Ans. (a) : On arranging the numbers in ascending orders–

2, 5, 7, 8, 11, 14, 15

Median $= \frac{n+1}{2}$ th term (Where n = number of terms)

$= \frac{7+1}{2} = \frac{8}{2} = 4^{\text{th}}$ term = 8

23. Articles 5 to 11 of the Constitution of India deals with the :

(a) Citizenship

(b) Fundamental Duties

(c) Indian Union

(d) Fundamental Rights

Ans. (a) :

Part	Article	Provision
Part-1	1 to 4	The Union and its territories
Part - 2	5 to 11	Citizenship
Part - 3	12 to 35	Fundamental Right
Part - 4	36 to 51	Directive Principle of state policy
Part - 4 (A)	51 (A)	Fundamental Duties

24. What is the formula for Net worth ?

(a) Net Worth = Assets + Liabilities
(b) Net Worth = Assets × Liabilities
(c) Net Worth = Assets / Liabilities
(d) Net Worth = Assets – Liabilities

Ans. (d) : Net Worth is the value of the assets a person or corporation owns, minus the liability they own.
Net Worth = Asset – Liability

25. The slant height of a right circular cone is 13 cm and the area of the base is 144π cm^2. Find the volume (in cm^3) of the cone.

(a) 245 π (b) 260 π
(c) 240 π (d) 225 π

Ans. (c) : Given,
Slant height of cone $(\ell) = 13$cm
Area of base = 144 πcm^2
$\pi r^2 = 144\ \pi cm^2$
$r^2 = 144$
Radius (r) = 12 cm
Height (h) = $\sqrt{\ell^2 - r^2}$
$= \sqrt{13^2 - 12^2}$
$= \sqrt{25}$
$\therefore$ h = 5 cm
Volume of cone = $\frac{\pi r^2 h}{3}$
$= \frac{\pi \times (12)^2 \times 5}{3}$
$= \pi \times 12 \times 4 \times 5$
$= 240\pi$

26. A certain sum was invested at 40% p.a compound interest for two years and the interest was compounded annually. If the interest was compounded half-yearly, the amount payable of maturity after two years would have been ₹ 4,544 more. What was the sum invested?

(a) ₹ 42,500 (b) ₹ 40,000
(c) ₹ 42,000 (d) ₹ 37,500

Ans. (b) : Let Amount = A
According to the question,

$$A_2 - A_1 = 4544$$

$$\Rightarrow P\left(1+\frac{R_2}{100}\right)^{t_2} - P\left(1+\frac{R_2}{100}\right)^{t_1} = 4544$$

$$\Rightarrow P\left(1+\frac{20}{100}\right)^{4} - P\left(1+\frac{40}{100}\right)^{2} = 4544$$

$$\Rightarrow P\left(\frac{6}{5}\right)^{4} - P\left(\frac{7}{5}\right)^{2} = 4544$$

$$\Rightarrow \frac{1296P}{625} - \frac{49P}{25} = 4544$$

$$\Rightarrow \frac{1296P - 1225P}{625} = 4544$$

$$\Rightarrow 71P = 4544 \times 625$$

$$\therefore P = \frac{4544 \times 625}{71}$$

Hence, P = ₹ 4000

27. Read the given statements and conclusions carefully. decide which of the given conclusions is are true based on the given statement.

Statement: W = H ≤ G < C ≥ T = L > M

Conclusions:

I. W > T
II. C > M

(a) Only conclusion I is true
(b) Neither conclusion I nor II is true
(c) Only conclusion II is true
(d) Both conclusions I and II are true

Ans. (c) : According to the statement,
Hence, only conclusion II is true.

28. Which Five-Year Plan was suspended one year before the time schedule by the Janata Party?

(a) First (b) Seventh
(c) Fourth (d) Fifth

Ans. (d) :

Five year plan		Time period
Ist	–	1951-1956
IVth	–	1969–1974
Vth	–	1974-1978
VIIth	–	1985-1990

The fifth five year plan was suspended one year before the time schedule (1974-78).

29. Asthenosphere is a part of:

(a) Earth's Mantle (b) Earth's Crust – Mantle
(c) Earth's Crust (d) Earth's Core

Ans. (a) : The asthenosphere is a denser, weaker layer beneath the lithospheric mantle. It lies between 100 km to 410 km beneath Earths surface and the beneath lithospheric mantle (A part of Earth's upper mantle).

30. Madhavacharya (13th century) wrote Madhava Nidana which contains _____ chapters exclusively on diagnosis of the diseases (nidana).

(a) 90 (b) 69
(c) 96 (d) 60

Ans. (b) : Madhava Nidana, Written by Madhavacharya in 12th century has 69 chapters that are dedicated solely to sickness diagnosis (Nidana). It is the first work of its kind in Ayurveda to concentrate solely on one subject, diagnosis.

31. Karisma has been spending ₹ 5,400 on the purchase of an item every year for the past three years. However, the price per unit of this item has fluctuated from year to year with the per unit price being ₹ 9 in the first year. ₹ 24 in the second year and ₹ 14.40 in the third year. What was the average per unit price that Karisma paid for this item in the three years?

(a) ₹ 13.80 (b) ₹ 13.50
(c) ₹ 12.90 (d) ₹ 14.10

Ans. (b) : According to the question,

Number of items purchased in the first year

$$= \frac{5400}{9} = 600$$

Number of items purchased in the second year

$$= \frac{5400}{24} = 225$$

Number of items purchased in the third year

$$= \frac{5400}{14.40} = 375$$

Average price per unit paid over three years =

$$\text{Average price} = \frac{\text{Total expenditure}}{\text{Total number of items}}$$

$$= \frac{5400 + 5400 + 5400}{600 + 225 + 375}$$

$$= \frac{16200}{1200}$$

$$= ₹13.50$$

32. There are six friends, Aman, Bikram, Chetan, Dhanush, Elisa and Frank, each having a different height. Only three friends are shorter than Chetan. Aman is shorter than only Dhanush, Frank is shorter than Elisa, Frank is not the shortest. How many friends are shorter than Frank?

(a) 4 (b) 3
(c) 1 (d) 2

Ans. (c) : The descending order of these six friends from eldest to youngest will be as follows.
Dhanush > Aman > Chetan > Elisa > Frank > Bikram
It is clear from above only Bikram is shorter than Frank.

33. Which of the following is termed as a hunger hormone as it stimulates appetite, increases food intake and promotes fat storage?

(a) Insulin (b) Resistin
(c) Leptin (d) Ghrelin

Ans. (d) : Ghrelin is hormone produced by enteroendocrine cell of the gastrointenstial sract, espicially the stomach, and is often called a "hunger hormone" becouse it increases the drive to eat.

34. Which Indian personality has been appointed Regional Director for South Asia in the Internatinal Court of Arbitration of International Chamber of Commerce (ICC) in September 2021?

(a) Krish Iyer (b) Anita Bhatia
(c) Chitra Ramkrishna (d) Tejus Chauhan

Ans. (d) : Lawyer Tejus chauhan was appointed as Regional Director for South Asia in the International Court of Arbitration of the Paris based International Chamber of Commerce (ICC) in September 2021.

35. Cape Comorin, the southernmost tip of mainland India is located in which of the following states?

(a) Andhra Pradesh (b) Kerala
(c) Tamil Nadu (d) Karnataka

Ans. (c) : Cape Comorin, Rocky headland on the Indian Ocean in Tamil Nadu state, forming the southernmost point of the subcontinent. It is the southern tip of the Cardamom Hills, an extension of the Western Ghats range along the west coast of India.

36. Which of the following is a popular harvest dance in the Bundelkhand region of Madhya Pradesh?

(a) Charba (b) Dhalo
(c) Jawara (d) Maruni

Ans. (c) : Jawara is the harvest dance popular in the Bundelkhand region of Madhya Pradesh. The dance which inlcuded balancing a basket full of jawar (Millet) on the head is accompanied by heavy instrumental music.

37. Study the given arrangement of letters, symbols and numbers and answer the question that follows.

(Left A 8 & $ 4 Y & 6 # @ 9 U Y 3 % L 6 & K 9 & P V 4 B & % # U Y 8 $ # (Right)

Which of the following will be fourth to the right of the right of the sixth from the left end of the arrangement ?

(a) @ (b) 9

(c) # (d) P

Ans. (a) :

(Left) A 8 & $ 4 Y & 6 # @ 9 U Y 3 % L 6 & K 9 & P V 4 B & % # U Y 8 $ # (right)

sixth from, fourth to the

the left right from sixth

Hence @ will be at the fourth position to the right of the sixth position from the left end.

38. After the annexation of awadh in 1856, Nawab wajid Ali Shah was dethroned and exiled to___.

(a) Meerut (b) Calcutta

(c) Rangoon (d) Bombay

Ans. (b) : In 1856, Nawab Wajid Ali Shah was dethroned and exiled to Calcutta on the plea that the region was being misgoverened. The Nawab was accused of being unable to control the rebellious Chiefs and Talugdars.

39. All 80 students in a class are standing in a straight row facing north. Ravali is 30th from the extreme right end, while Kiriti is 26th from the extreme left end. How many students are standing between Ravali and Kiriti?

(a) 42 (b) 24

(c) 33 (d) 28

Ans. (b) : Number of students standing between Ravali and Kirti

$= 80-(30+26)$

$= 80 - 56 = 24$

40. The churches and convents of Goa were added to the list of UNESCO World Heritage Sites in the year ____.

(a) 1984 (b) 1989

(c) 1986 (d) 1983

Ans. (c) : Churches and convents of Goa is the name given by UNESCO to a set of religious monuments located in Goa, Which were declared a World Heritage Site in 1986.

41. In which city was the 4th International Race Walking Championships held in February 2021?

(a) Jaipur (b) Ranchi

(c) Amritsar (d) Lucknow

Ans. (b) : 4th International Race Walking Championships held in February 2021 in Ranchi.

42. If 'Autumn' is called 'Winter', 'Winter' is called 'summer', Summer' is called 'Rainy', 'Rainy' is called 'Cloudy', then in which season do we definitely wear woollen garments ?

(a) Summer (b) Rainy

(c) Cloudy (d) Winter

Ans. (a) : Woolen cloths are worn in winter and according to the question winter is called summer, hence the correct answer is option (a) summer.

43. _____is the weakest of the acids listed below.

(a) Acetic acid (b) Hydrochloric acid

(c) Hydrofluoric acid (d) Nitric acid

Ans. (a) : Acetic Acid (CH_3COOH) is a weak acid as upon mixing in water it undergoes partial ionization and thus does not dissociate completely.

44. India's first commercial nuclear power plant Tarapur is located in which of the following states?

(a) Maharashtra (b) Jharkhand

(c) Madhya Pradesh (d) Karnataka

Ans. (a) : Tarapur Atomic power station is located in Tarapur, Maharashtra. It was the first commerical atomic power station of India commissioned on 28th October 1969.

45. If in a certain code language, DANCER is called TEACHER, TEACHER is called PILOT, PILOT is called LAWYER. LAWYER is called SINGER, and SINGER is called CHEF, then who practices law?

(a) PILOT (b) LAWYER

(c) CHEF (d) SINGER

Ans. (d) : Since the lawyer is related to 'law' and in the question, the lawyer is called a singer. Hence the profession of singer is related to law.

46. From 3/4 of a number P, Ramakrishna subtracts 2/3 of another number Q and obtain 5/8 as the difference. What is the answer Ramakrishna should obtain if he subtracts eight times of Q from nine times of P?

(a) $\frac{15}{2}$ (b) $\frac{25}{4}$

(c) $\frac{20}{3}$ (d) $\frac{25}{3}$

Ans. (a) : According to the question,

$$P \times \frac{3}{4} - Q \times \frac{2}{3} = \frac{5}{8}$$

$$\Rightarrow \frac{3P}{4} - \frac{2Q}{3} = \frac{5}{8}$$

$$\Rightarrow \frac{9P - 8Q}{12} = \frac{5}{8}$$

$\Rightarrow 9P - 8Q = \left(\frac{5}{8}\right) \times 12$

$\Rightarrow 9P - 8Q = \frac{60}{8}$

$\therefore 9P - 8Q = \frac{15}{2}$

47. A women oriented community-based poverty reduction programme "Kudumbashree" was implemented in which state?

(a) Karnataka (b) Kerala

(c) Tamilnadu (d) Andhra Pradesh

Ans. (b) : A women oriented community-based poverty reduction programme "Kudumbashree" was launched on 17th May, 1998 in Kerala.

48. When 5 is added to one-third of a number, the sum is 59. What is the number?

(a) 192 (b) 162

(c) 167 (d) 172

Ans. (b) : Let the number be x.

According to the question,

$x \times \frac{1}{3} + 5 = 59$

$\Rightarrow \frac{x}{3} = 54$

$\Rightarrow x = 54 \times 3$

$\therefore x = 162$

49. A solid metallic cone of diameter 36 cm and height 12 cm is melted and made into identical solid spheres each of radius 3 cm. How many such spheres can be made?

(a) 32 (b) 38

(c) 34 (d) 36

Ans. (d) : Number of balls made by cone

$= \frac{\text{Volume of cone}}{\text{Volume of sphere}}$

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

$= \frac{\frac{36}{2} \times \frac{36}{2} \times 12 \times \frac{1}{3}}{\frac{4}{3} \times 3 \times 3 \times 3}$

$= \frac{18 \times 18 \times 4}{4 \times 9}$

$= 36$

50. Of the given options, which is the saltiest sea in the world ?

(a) Celebes Sea (b) Black Sea

(c) Baltic Sea (d) Red Sea

Ans. (d) : All the oceans and seas have salty water. however, the dead sea is considered to be the saltiest of all of them. In the given option Red sea is the saltiest water body.

Black Sea→ 1.3 – 2.3%

Baltic Sea→ 1.0%

Red Sea→ 3.6 – 4%

51. The Begumpuri mosque, built during the reign of _____was the main mosque of Jahanpanah his new capital in Delhi.

(a) Qutbuddin Avbak

(b) Muhammad Tughluq

(c) Ghiyasuddin Tughluq

(d) Guiyasuddin Balban

Ans. (b) : The Begumpuri mosque, built during the reign of Muhammad Tughluq was the main mosque of Jahanapanah his new capital in Delhi.

52. By selling an item for ₹ 1,729 Rohini made a loss of 30%. At what price should she sell the item to make a gain of 16%?

(a) ₹ 2,856.20 (b) ₹ 2,865.20

(c) ₹ 2,856.50 (d) ₹ 2,866.40

Ans. (b) : According to the question,

CP of article = $1729 \times \frac{100}{70} = ₹\ 2470$

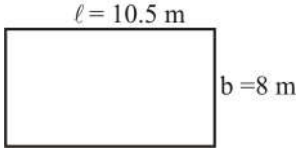
Sp of the article at 16% profit= $\frac{2470 \times 116}{100} = ₹\ 2865.20$

53. The length and the width of a rectangular plot of land are 10.5 m and 8 m, respectively. Find the cost of laying grass in the entire plot at ₹ 15.25 per square metre.

(a) ₹ 1,293 (b) ₹ 1,275

(c) ₹ 1,281 (d) ₹ 1,302

Ans. (c) :



Area of rectangular plot = $\ell \times b$

$= 10.5 \times 8$

$= 84\ m^2$

The cost of laying grass in the entire plot = 84×15.25

$= ₹\ 1281$

54. A two-digit positive number is such that the product of its digits is 24. When 18 is added to the number, the digits interchange their places. Which smallest positive number should be subtracted from the given number to make it a perfect square?

(a) 0 (b) 10
(c) 12 (d) 8

Ans. (b) : Let the tenth digit = x
digit of unit = y
Numbers = 10x + y
According to the question,
$x \times y = 24$
or $xy = 24$
again $10x + y + 18 = 10y + x$
$9x - 9y = -18$
$x - y = -2$ _____(i)
Now,
$(x + y)^2 = (x - y)^2 + 4xy$
$\Rightarrow (x + y)^2 = (-2)^2 + 4 \times 24$
$\Rightarrow (x + y)^2 = 4 + 96$
$\Rightarrow (x + y)^2 = (10)^2$
$\therefore x + y = 10$_____(ii)
On solving eq^n (i) and eq^n (ii)
$x = 4, y = 6$
So number = $10x + y$
$= 10 \times 4 + 6$
$= 46$
Nearest to 46 is $6^2 = 36$ which is perfect square
$\therefore 46 - 36 = 10$
Hence substracting 10 from the number will make it a perfect square.

55. If $\cot^2\theta = 1 + \cos^2\theta - \sin^2\theta$, $0^o < \theta < 90^o$, then find the value of $\tan^2\theta + \text{cosec}^2\theta$
(a) $\frac{3}{2}$ (b) $\frac{1}{2}$
(c) 3 (d) -1

Ans. (c) : $\cot^2\theta = 1 + \cos^2\theta - \sin^2\theta$
$\frac{\cos^2\theta}{\sin^2\theta} = \cos^2\theta + \cos^2\theta$
$\frac{\cos^2\theta}{\sin^2\theta} = 2\cos^2\theta$
$\frac{1}{\sin^2\theta} = 2$
$\text{cosec}\,\theta = \sqrt{2}$
$\theta = 45^o$
So, $\tan^2\theta + \text{cosec}^2\theta = ?$
$\tan^2 45^o + \text{cosec}^2 45^o$
$= 1 + \left(\sqrt{2}\right)^2$
$= 1 + 2$
$= 3$

56. Who among the following was awarded the 'Grand Prize of the Fukuoka Prize' in 2021?
(a) Palagummi Sainath (b) Ramchandra Guha
(c) Romila Thapar (d) Amjad Ali Khan

Ans. (a) : Mr. P. Sainath was awarded the 'Grand Prize' of the Fukuoka prize in 2021. The prize honours individuals, groups, organisation who produce as well as maintain many distinct and diverse cultures of the Asian region and is one of Japans most distinguished international honours.

57. Which Indian American-led start-up was awarded the 'National Science Foundation Innovation-Corps (NSFI-Corps) Teams Award' on 11 August 2021?
(a) Zenefits (b) Instacart
(c) Bloom Energy (d) SoftWorthy

Ans. (d) : Softwaorthy, Indian-American led startup was awarded the National science foundation Innovation- Corps (NSFI-Corps) Team award on 11 August 2021.

58. Who won the gold medal in the women's individual recurve event at the Archery World Cup Stage 3 held in Paris in June 2021?
(a) Deepika Kumari
(b) Ankita Bhagat
(c) Bombayla Devi Laishram
(d) Dola Banerjee

Ans. (a) : Deepika Kumari won the gold medal in the women's Individual recurve event at the Archery World Cup stage 3 held in Paris in June 2021.

59. Who was the first Indian to join the Indian Civil Services?
(a) Behari Lal gupta
(b) Surendranath Banerjee
(c) Satyendranath Tagore
(d) Ramesh Dutt

Ans. (c) : Satyendra Nath Tagore was the first Indian to join the Indian Civil servic. He was posted to the Bombay ICS, where he served his entire career from 1864-1897.

60. Which of the following numbers is NOT divisible by 9 ?
(a) 49104 (b) 77832
(c) 35253 (d) 45390

Ans. (d) : 45390 is not divisble by 9 and other numbers are divisible by 9.
Note:- A number whose sum of its digit is exactly divisible by 9 is always divisible by 9, because the sum of its digit is not divisible by 9.

61. A stick was broken in two parts which gave lengths in the ratio 7 : 11. If the length of the smaller part was 77 cm find the length of the unbroken stick.

(a) 1.21 m (b) 1.26 m
(c) 1.80 m (d) 1.98 m

Ans. (d) : 7 : 11 = 77 : x

$$\frac{7}{11} = \frac{77}{x}$$

x = 121

Total length of stick = 77 + 121

= 198 cm or 1.98 m.

62. Which of the following statements with regard to the Green Revolution is NOT true?

(a) It requires decreasing inputs over time.
(b) It needs fertilizers and pesticides.
(c) It increases crop yields
(d) It uses high-yielding varieties of seeds.

Ans. (a) : The green revolution led to high productivity of crops through adapted measures such as increased area under farming, double cropping, adoption of high yield variety seed, increase use of inorganic fertilizers and pesticides. It is not true that green revolution needs decreasing inputs over time.

63. Ustad Bahauddin Mohiuddin Dagar is a legendary musician associated with which of the following musical instruments?

(a) Flute (b) Rudra Veena
(c) Sitar (d) Tabla

Ans. (b) :

Musical Instrument		**Musician**
Flute	-	Hari prasad Chaurasia
Veena	-	Ustad Bahauddin Mohiuddin Dagar
Sitar	-	Pandit Ravi Shankar
Tabla	-	Zakir Hussain

64. Read the given statements and conclusion carefully. Assuming that the information given in the statements is true even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow (s) from the statements .

Statements:

Some mobiles are laptops.

No laptop is a computer.

All phones are computers.

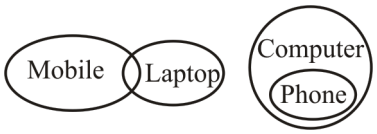
Conclusions:

I. At least some mobiles are computers.

II. At least some phones are laptops.

(a) Neither conclusion I nor II follows.
(b) Either conclusion I or II follows.
(c) Both conclusion I and II follow.
(d) Only conclusion I follows.

Ans. (a) : Diagram is given below-



It is clear from above diagram that neither conclusion I nor II follows.

65. The National Consumer Disputes Redressal Commission (NCDRC) was established in the year _____under the Consumer Protecion Act of 1986.

(a) 1987 (b) 1995
(c) 1991 (d) 1988

Ans. (d) : The National Consumer Dispute Redressal Commission or the NCDRC is a quasi judicial commission established as per the provision of the consumer protection Act, 1986. It was established in 1988.

66. The Palace of Assembly is a legislative assembly designed by noted architect Le Corbusier and is located in ___.

(a) Puducherry
(b) Chandigarh
(c) Dadra and Nagar Haveli and DAman and Diu
(d) Ladakh

Ans. (b) : Le Corbusier, a renowed architect designed the Palace of Assembly, a legislative assembly building in Chandigarh. It is the part of capital complex.

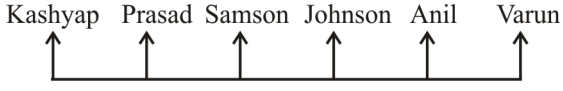
67. Study the given information carefully and answer the question that follows.

Varun, Kashyap, Anil, Johnson, Samson and Prasad are sitting in a row facing north but not necessarily in the same order. Varun and Kashyap sit at the extreme ends. Anil is sitting to the immediate left of Varun. Only one person sits between Anil and Samsan. Johnson is not an immediate neighbour of Kashyap.

Who is sitting to the immediate right of Kashyap?

(a) Varun (b) Johnson
(c) Samson (d) Prasad

Ans. (d) : Seating arrangement is as follows-



Hence, It is clear from the above diagram that Prasad is sitting right next to Kashyap.

68. Which of the following states has the largest area (in absolute terms) under forest, according to India State of Forest Report 2019?

(a) Karnataka
(b) Madhya Pradesh
(c) Odisha
(d) Maharashtra

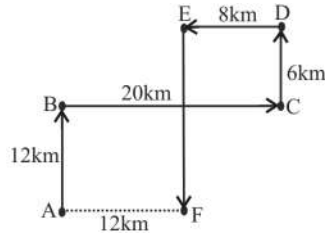
Ans. (b) : Madhya Pradesh state has the maximum forest cover in India (ISFR 2019). According to ISFR (2021), total forest and tree cover is 24.62% of the geographical area of the country (Including 21.71 forest cover and 2.91 tree cover).

69. A train ran for 12 km in the north direction from point A to reach point B. From there, it took a right turn and ran for 20 km to reach point C. Then, it ran for 6 km after taking a left turn and reached point D. From there, it took a left turn again and ran for a distance of 8 km to reach point E. Then, it covered 18 km in the south direction to reach point F.

How far and in which direction is point A with respect to point F?

(a) 12 km, west (b) 13 km, west
(c) 10 km, east (d) 15 km, south

Ans. (a) :



20 – 8 = 12km

Hence, point A is at 12 km in west direction with respect to point F.

70. There are six girls Mayuri, Kavyanjali, Divya, Poonam, Neha and Vidya, Each girl likes a different colour - red, blue, purple, yellow, green and pink, Divya likes red colour, Vidya does not like pink and green colour. Neha likes voilet colour. Mayuri likes blue colour, which of the following girl and colour combinations is correct?

(a) Poonam-green (b) Vidya - yellow
(c) Kavyanjali - Pink (d) Poonam- green

Ans. (b) : The favourite colour of six girls is given below.

Girls	Colour
Mayuri	Blue
Kavayanjali	Green
Divya	Red
Poonam	Pink
Neha	Purple
Vidya	Yellow

It is clear from above that option (b) combination of Vidya-Yellow is correct.

71. Under which flagship programme did the Ministry of Skill Development and Entrepreneurship launch a pilot project to revive Kashmir's Namda craft in November 2021 ?

(a) Capacity building Scheme
(b) Pradhan Mantri Kaushal Vikas Yojana 3.0
(c) Pradhan. Mantri Vaya Vandana Yojana
(d) Rozgar Mela Scheme

Ans. (b) : The Ministry of skill development and Entrepreneurship launched a pilot project to revive the Namda craft of Kashmir. The project was launched under the pradhan Mantri Kaushal Vikash Yojana.

72. Santos port also known as 'coffee port' of the world is located in ____.

(a) Brazil (b) Canada
(c) The United Kingdom (d) France

Ans. (a) : Santos port also known as the coffee port of the world is located in Brazil. Brazil is the Top coffee producing country accounting for 40% of the global coffee supply. The top five coffee producing nations are Brazil, Vietnam, Colombia, Indonesia and Ethiopia account for 75% of the world's total coffee production.

73. Ramen leaves his home every day at 7:40 am and reaches his office at 9:46 am. One day he left his home at 7:40 am but travelled one-fourth of the distance at 6/7 of the usual speed and the rest of the distance at 6/5 of the usual speed. At what time did Ramen reach offce on that day?

(a) 9:45:40am (b) 9:35:30am
(c) 9:30:55am (d) 9:25:50am

Ans. (b) : 7:40 am 9 : 46

Total taken time to reach office = 126 min = $\frac{126}{60}$ hours.

Let distance = x km

Now, normal speed = $\frac{x}{\frac{126}{60}} = \frac{10}{21}x$ km/h

According to the question,

{where t_1 & t_2 are different time to tarvel at different speed}

$$\frac{x}{4} = \frac{10x}{21} \times \frac{6}{7} \times t_1 \quad \text{.....(i)}$$

$$\frac{3}{4}x = \frac{10x}{21} \times \frac{6}{5} \times t_2 \quad \text{.....(ii)}$$

From equation (i) and (ii)

$$t_1 = \frac{49}{80} \text{ and } \quad t_2 = \frac{21}{16}$$

Now, total taken time reach office (t) = $t_1 + t_2$

$$t = \frac{49}{80} + \frac{21}{16}$$

$$= \frac{49+105}{80} = \frac{154}{80} \text{ hours}$$

$$= \frac{154}{80} \times 60 = 115.5 \text{ minute}$$

115.5 min = 1 hour + 55 min + 30 sec.

Hence, Raman reach office on that day

= 7 : 40 : 00 + 1 : 55 : 30

= 9 : 35 : 30

74. A person walks 825 m in 3 minutes. What is his speed in km/h?

(a) 16.5 (b) 16.8

(c) 16.25 (d) 16.75

Ans. (a) : Speed = Distance /Time

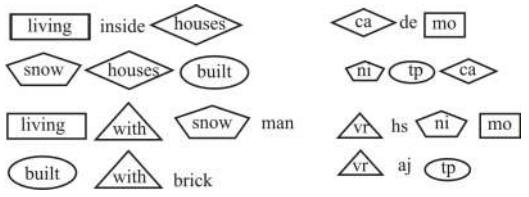
$$= \frac{825}{3 \times 60} \text{ m./sec.} = \frac{55}{12} \times \frac{18}{5} \text{ km/h} = 16.5 \text{ km/h}$$

75. In a certain code language.
'living inside houses' is coded as 'ca de mo'.
'snow houses built' is coded as ' ni tp ca'.
'living with snow man' is coded as 'vr hs ni mo'
(Note: All codes are two letter codes only)
If 'built with brick' is coded as 'vr aj tp'. What is the probable code for 'brick man' in the given code language?

(a) aj vr (b) mo to

(c) vr ni (d) hs aj

Ans. (d) :



Hence, possible code for 'brick man' will be 'aj hs'.

76. Six friends Sheela, Roma, Sheetal, Sreeja, Naina and Rahul are sitting on a bench facing north. Sreeja and Rahul are sitting at the 3rd and 4th positions respectively from the left end. Sheela and Naina are sitting at the extreme right and left ends, respectively, Sheela is sitting to the immediate right of Roma. Who is sitting immediately next to Naina?

(a) Sheela (b) Roma

(c) Sreeja (d) Sheetal

Ans. (d) : Their seating arrangement is as follows-

Naina Sheetal Sreeja Rahul Roma Sheela

(Left) ↑ ↑ ↑ ↑ ↑ ↑ (Right)

Hence, It is clear that Sheetal is sitting immediate next to Naina.

77. John bought three items from a store. The price of item A was $\frac{2}{3}$ of the price of item B while the price of item C was $\frac{3}{4}$ of the price of item B. If the price of item A was ₹ 88 then what was the price of item C?

(a) ₹ 108 (b) ₹ 90

(c) ₹ 121 (d) ₹ 99

Ans. (d) : Given that,

Price of item A = ₹ 88

According to the question,

$$\text{Price of item B} = 88 \times \frac{3}{2}$$

$$= ₹ 132$$

So, price of item C = $132 \times \frac{3}{4} = ₹ 99$

78. On simple interest a certain sum becomes ₹ 3,400 at 12% p.a. in 3 years. Find the sum (in ₹).

(a) 2,800 (b) 2,450

(c) 2,500 (d) 2,600

Ans. (c) : $P = \frac{A \times 100}{100 + RT}$

$$= \frac{3400 \times 100}{100 + 12 \times 3}$$

$$= \frac{3400 \times 100}{136}$$

$$= 25 \times 100$$

$\therefore$ P = ₹ 2500

79. For Assembly elections (February – March 2022) in Uttar Pradesh. Uttarakhand and Punjab, the expenditure limit for legislative assembly candidates was revised to ₹_____lakh in January 2022.

(a) 40 (b) 30

(c) 20 (d) 50

Ans. (a) : For Assembly elections (February – March 2022) in Uttar Pradesh, Uttarakhand and Punjab, the expenditure limit for legislative assembly candidates was revised to ₹40 lakh in January 2022.

80. The Losar festival, quite popular in Arunachal Pradesh is mainly celebrated by the ____tribe.

(a) Apatani (b) Hunas

(c) Monpa (d) Angami

Ans. (c) : Losar festival is celebrated in Arunachal Pradesh. It is celebrated by the people of the Monpa Tribes who are said to be inhabitants of Arunachal Pradesh.

81. Read the given statements and conclusion carefully. Assuming that the information given in the statements is true even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow (s) from the statements .

Statements:

All stools are round.

Some mountains are round.

Some ponds are mountains.

All ponds are square.

Conclusions:

I. Some ponds are round.

II. Some mountains are square.

III. Some ponds are both mountains and round.

IV. Some stools are square.

(a) Both conclusions III and IV follow.

(b) Both conclusions I and II follow.

(c) Only conclusion II follows.

(d) Both conclusions I and III follow.

Ans. (c) : Statements- Conclusion is as follows-

It is clear from above diagram that only conclusion II follows.

82. With which of the following states are 'Huchari' performance associated?

(a) Kerala (b) Odisha

(c) Maharashtra (d) Assam

Ans. (d) : State of Assam is associated with Bihu Huchori performance. During the reign of Ahom dynesty it was related to Royal Palace but at later it began to be practiced by common people.

83. When $\frac{3}{4}$ of a number is subtracted from $\frac{6}{7}$ 126, the answer is 33, what is the number?

(a) 112 (b) 96

(c) 92 (d) 100

Ans. (d) : Let number be x.

According to the question,

$$126\times\frac{6}{7}-x\times\frac{3}{4}=33$$

$$108-\frac{3x}{4}=33$$

$$\frac{3x}{4}=108-33$$

$$3x=75\times4$$

$$x=\frac{75\times4}{3}$$

$$\therefore x = 100$$

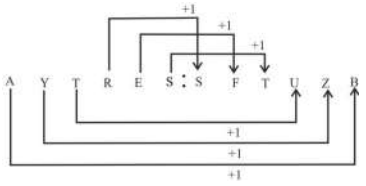
84. Select the option that is related to the fifth letter-cluster in the same way as the fourth letter-cluster is related to the third letter-cluster and the second letter-cluster is related to the first letter-cluster.

AYTRES : SFTUZB :: MINTED : UFEOJN :: LTREAD : ?

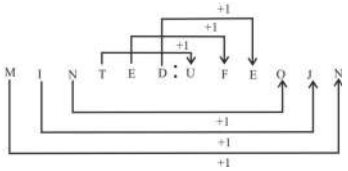
(a) DFRHRE (b) FBESUM

(c) FBETRS (d) DFRERT

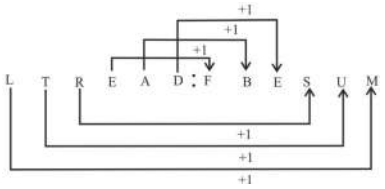
Ans. (b) : Just as,



And,



Same as,



85. Which of the following types of read only memory can be erased by exposing it to an electrical charge and can be reprogrammed?

(a) EEPROM (b) EPROM

(c) PROM (d) ROM

Ans. (a) : Electrically erasable programmable read only memory EEPROM is a user modifiable ROM. It can be erased and reprogrammed repeatedly through the application of an electrical voltage that is highes than normal.