SET 2

1. For any natural number n,6^n-5^n always ends with:

1) 5
2) 3
3) 7
4) 1

Ans: (4) 6^n-5^n

Explanation : Let n = 1

$6^1 - 5^1 = 6 - 5 = 1$

putting n = 2

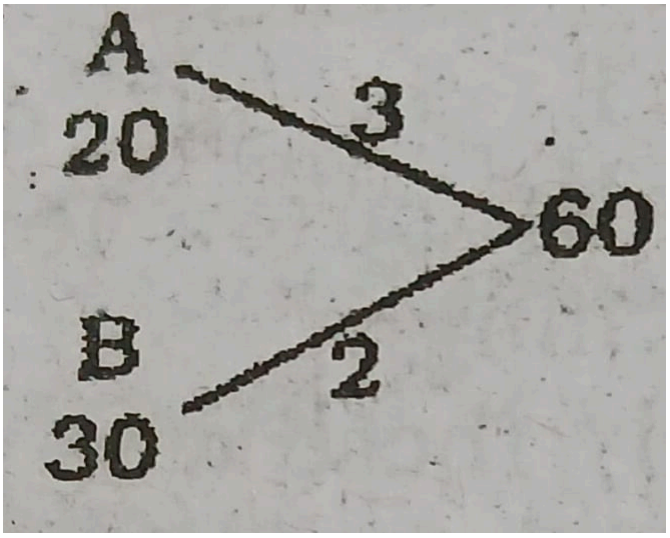
$6^2 - 5^2 = 36 - 25 = 11$

Putting n = 3

$6^2 - 5^3 = 216 - 125 = 91$

For any natural number n the last digit of the result of is 6^n-5^n always 1.

2. A can complete a piece of work in 20 days and B alone can complete the work in 30 days. Due to some other work, A had to leave the work before completion and for the last 5 x days B alone did the work. The total time taken to complete the work is:
(1) 12 days
(2) 18 days
(3) 15 days
(4) 20 days
Ans: (3) 15 days
Explanation:



Work done by B in 5 days = 5 x 2 = 10
Remaining work= 60-10=50
Time taken by (A + B) to complete 50 works = $\frac{50}{3+2}$ = 10
Total time = 10 + 5 = 15 days

3. The numerator of a fraction is 2 less than the denominator. If the numerator is multiplied by 2 and the denominator is multiplied by 3. then the fraction becomes fraction is:$\frac{2}{9}$ .The fraction is:

(1) $\frac{5}{7}$

(2) $\frac{3}{5}$

(3) $\frac{7}{9}$

(4) $\frac{1}{3}$

Ans:(4) $\frac{1}{3}$

Explanation:

Let x be denominator, then x - 2 is the numerator.

$\frac{2(x-2)}{3x} = \frac{2}{9}$, $\frac{2x-4}{3x} = \frac{2}{9}$

18x-36 = 6x

x=$\frac{36}{12} = 3$

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

4. The sum of two numbers is 1500. Their LCM is 16379. Two numbers are:

(1) 1489, 11

(3) 1453, 47

(2) 1479.21

(4) 1053,447

Ans:(1) 1489, 11

Explanation:

Let the numbers be x and y

x + y = 1500 - - - (l)

xy = 16379

x - y = $\sqrt{(x-y)^2 - 4xy}$

$=\sqrt{2250000 - 65516}$

$=\sqrt{2184484} = 1478$

x-y=1478- - - (2)

Solving (1) and (2)

x=$\frac{1500+1478}{2} = \frac{2978}{2}$

=1489

y=1500-1489=11

5. Which of the following is NOT a part of the circulatory system?

(1) Blood

(2) Heart

(3) Large intestine

(4) Arteries

Ans:(3) Large intestine

Explanation:

- **The circulatory system consists of three independent systems that work together: the heart (cardiovascular), lungs (pulmonary), and arteries, veins, coronary and portal vessels (systemic).**

- **This system is responsible for the flow of blood, nutrients, oxygen and other gases, and as well as hormones to and from cells.**

- **The large intestine is long tube-like organ that is connected to the small intestine at one end and the anus at the other. The large intestine has four parts: cecum, colon, rectum and anal canal. Partly digested food moves through the cecum into the colon, where water and some nutrients and electrolytes are removed. The remaining material, solid waste called stool, moves through the colon, is stored in the rectum and leaves the body through the anal canal and anus.**

6. The Global Climate Change Alliance is an initiative of:
(1) European Union
(2) Continental Union
(3) World Union
(4) Greek Union
Ans: (1) European Union
Explanation:

- **The Global Climate Change Alliance (GCCA) is an initiative of the European Union.**
- **Its overall objective is to build a new alliance on climate change between the European Union and the poor developing countries that are most affected and that have the least capacity to deal with climate change.**
- **In 2015, GCCA entered a new phase by becoming the flagship initiative Global Climate Change Alliance Plus (GCCA+).**

7. A number was increased by 40% and there after decreased by 40% The net change in the number in percentage is
(1) no change

(2) 16% increase
(3) 16% decrease
(4) 32% decrease
Ans:(4) $\frac{1}{3}$
Explanation:

Correct percentage of change in number = $(x+y+\frac{xy}{100})\%$

$(40-40-\frac{40 \times 40}{100})\%$

= -16%
=16% decrease

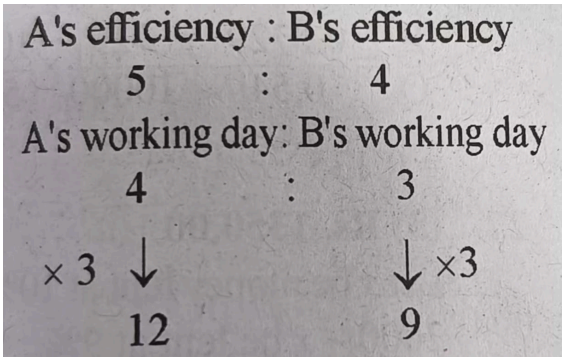
8. Yen is the currency of:
(1) Japan
(2) Bali
(3) Maldives
(4) South Korea
Ans:(1) Japan
Explanation:

- **The yen is the official currency of Japan.**
- **It is the third most traded currency in the foreign exchange market, after the United States dollar and the Euro.**
- **It is also commonly used as a third reserve currency following the U.S. dollar and the Euro.**

9. Who gave the idea of a constituent assembly of India for the first time?
(1) Dr. Rajendra Prasad
(2) M.N. Roy
(3) B.N. Rau
(4) B.R. Ambedkar
Ans:(2) M.N. Roy
Explanation:

- **M.N Roy, a pioneer of the Communist movement in India and an advocate of radical democracy proposed an idea for a Constituent Assembly in 1934.**
- **It became an official demand of the Indian National Congress in 1935.**
- **Swaraj Party proposed the idea of Constitutent Assembly to frame a constitution for India.**
- **The session where the Indian National Congress formally discussed the need for a Constituent Assembly-Bombay Session (1934-1935)**

10. The capacity of working by A and B is in the ratio 3: 4. If A takes 12 days to finish the work, the time taken by B to finish the same work is:
(1) 9 days
(2) 16 days
(3) 18 days
(4) 12 days
Ans:10. (1) 9 days
Explanation:



Time taken by B to complete the work = 9 days

11. The region of planet Earth, where life exists is known as
(1) Biosphere
(2) Atmosphere
(3) Cryosphere
(4) Hemisphere
Ans: (1) Biosphere

Explanation:

- **The biosphere is made up of the parts of Earth where life exists.**

- **Scientists describe earth in terms of spheres. The solid surface layer of earth is the lithosphere. The atmosphere is the layer of air that stretches above the lithosphere. the earth's water - on the surface, in the ground, and in the air -makes up the hydrosphere.**

- **Since life exists on the ground, in the air and in the water, the biosphere overlaps all these spheres.**

12. Which of the following Awards is associated with only Music?
(1) Grammy
(2) Tagore
(3) Oscar
(4) Cannes
Ans: (1) Grammy
Explanation:
The Grammy Award or just Grammy, is an award presented by the Recording Academy to recognize achievement in the music industry.

Grammy Awards - 2024 (66th)

- **Album of the year**

- Midnights (Taylor Swift)

- **Record of the year**

- Flowers (Miley Cyrus)

- **Song of the year**

-What was I made for ?

(Album-Barbie) (Billie Eilish)

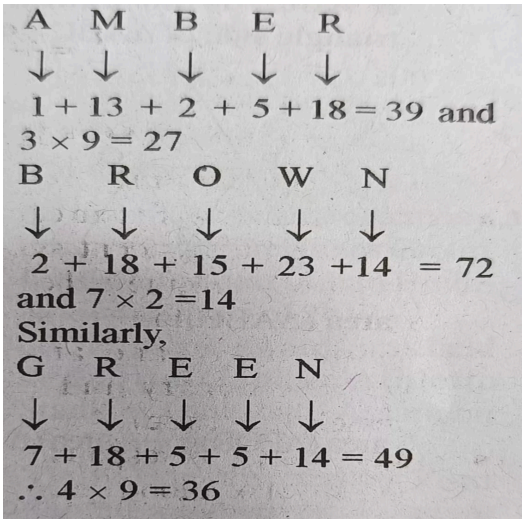
- **Best New Artist**

-Victoria Monet

- **Best Global Music Album**

- This Moment (Shakti)

13. If AMBER = 27 and BROWN = 14, then GREEN will be equal to:
(1) 28
(2) 36
(3) 39
(4) 24
Ans:(2) 36
Explanation:



14. The first attempt to calculate national income in India was made by:
(1)VKRV Rao
(2) SD Tendulkar
(3) PC Mahalanobis
(4) Dadabhai Naoroji
Ans:(4) Dadabhai Naoroji
Explanation:

- **The first attempt to calculate national income of India was made by Dadabhai Naoroji in 1867-68.**

- **V.K.R. V Rao is the first person to scientifically estimate the national income of India.**

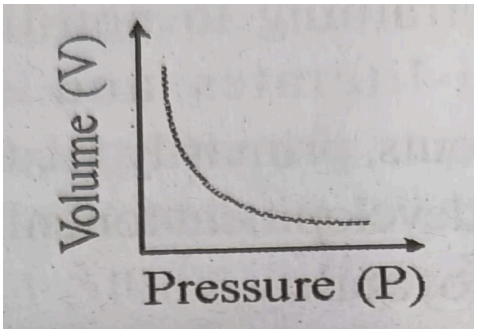
- **The first official attempt to estimate national income was made by the National Income Committee chaired by Prof.P.C. Mahalanobis in 1949.**

15. According to which law, at constant temperature, the volume of a gas is inversely proportional to pressure?
(1) Graham's Law
(2) Charle's Law
(3) Boyle's Law
(4) Gay-Lussac's Law
Ans:15. (3) Boyle's Law
Explanation:
Boyle's law states that at constant temperature the volume of a given mass of a dry gas is inversely proportional to its pressure.

$V\alpha\frac{1}{P}$(T, n constant),

V= Constant $\times \frac{1}{P}$

PV=Constant



16. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

(1) RASZ

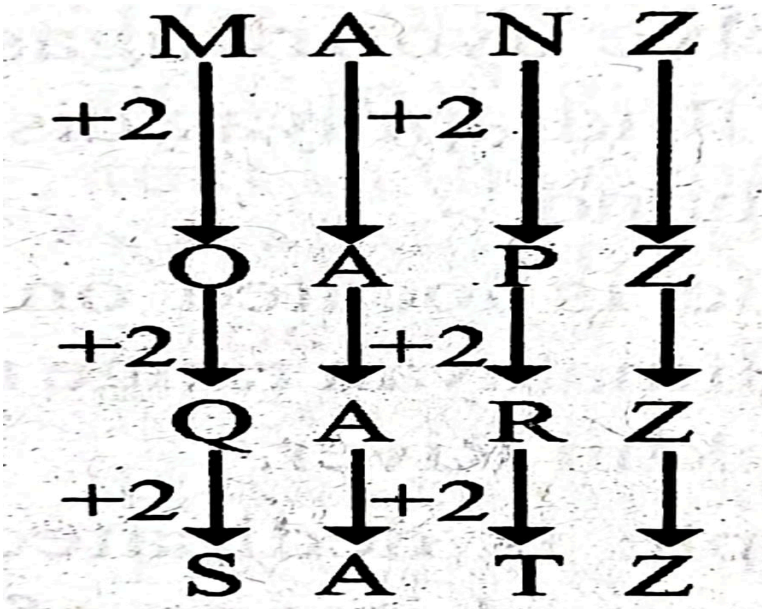
(2) NAOZ

(3) PAQZ

(4) SATZ

Ans: (4) SATZ

Explanation:



17. Where is the headquarters of United Nations Security Council located?

(1) New Jersey

(2) Chicago

(3) New York

(4) Boston

Ans: (3) New York

Explanation:

- **The United Nations Security Council is headquartered in New York City.**

- **The first meeting of the United Nations Security Council was held on January 17, 1946.**

- **The United Nations Security Council has 15 members, including 10 non - permanent members.**

- **Japan holds the record for the most non - permanent membership, having been elected for 11 times.**

18. Jan Shikshan Sansthan (JSS) operates under the aegis of:

(1) Ministry of Home Affairs
(2) Ministry of Defence
(3) Ministry of Skill Develop-ment and Entrepreneurship
(4) Ministry of Human Resource Development

Ans: (3)Ministry of Skill Develop-ment and Entrepreneurship

Explanation:

- **The scheme of Jan Shikshan Sansthan (JSS) formerly known as Shramik Vidyapeeth is implemented through a network of NGOs in the country since March 1967.**
- **The scheme of Jan Shikshan Santhan was consequently transferred from Ministry of Education to Ministry of Skill Development & Entrepreneurship in 2018.**
- **It is an initiative aimed at providing vocational education and training to non-literates semi-literates and school dropouts, primarily focusing on skill development for enhancing employability.**

19. If x = a sin t, y=b & tan t, then

$\frac{a^2}{x^2} - \frac{b^2}{y^2}$ *is*

(1) 0
(2) 2
(3) -1
(4) 1

Ans. (4) 1
Explanation:

x = a sin t

$\Rightarrow \frac{a}{x} = \frac{1}{\sin t} = cosec\ t$

y=b tan t $\Rightarrow \frac{b}{y} = \frac{1}{\tan t} = cot\ t$

$\frac{a^2}{x^2} - \frac{b^2}{y^2} = cosec^2 t - cot^2 t = 1$

20. If cos 2θ = sinθ *and* θ lies between 0 and 90°, then θ will be:

(1) 45°
(2) 90°
(3) 30°
(4) 60°
Ans:(3) 30°
Explanation:

cos 2θ = sinθ
⇒cos 2θ = cos(90°-θ)
⇒2θ = 90°-θ
⇒3θ = 90°
$\Rightarrow \theta = \frac{90°}{3}$
=30°

21. Who is called the father of taxonomy ?
(1) Engler
(2) Eichler
(3) Bentham and Hooker
(4) Carl Linnaeus
Ans:(4) Carl Linnaeus
Explanation:

- **Carl Linnaeus, also known as Carl von Linné or Carolus Linnaeus, is often called the, Father of Taxonomy.**

- **Taxonomy is the science of naming, describing and classifying organisms and includes all plants, animals and micro organisms of the world.**

- **The term taxonomy was coined by A.P. de Candolle.**

22.Who among the following is a famous Santoor instrumentalist?
(1) Shiv Kumar Sharma
(2) Ustad Binda Khan
(3) Sajjad Hussain
(4) Nikhil Banerjee
Ans:(1) Shiv Kumar Sharma
Explanation:

- **Pandit Shiv Kumar Sharma is an Indian music composer and santoor player from the state of Jammu and Kashmir.**
- **Shiv Kumar Sharma is credited with converting the santoor. which was mainly played in Kashmir, into a major instrument of Indian classical music.**

23. ABC is an equilateral triangle. P, Q and R are the midpoints of sides AB, BC and AC respectively. The length of the side of the triangle is 4 cm. The area of triangle PQR is:

(1) $\frac{\sqrt{3}}{9}$**cm²**

(2) $\frac{\sqrt{3}}{2}$**cm²**

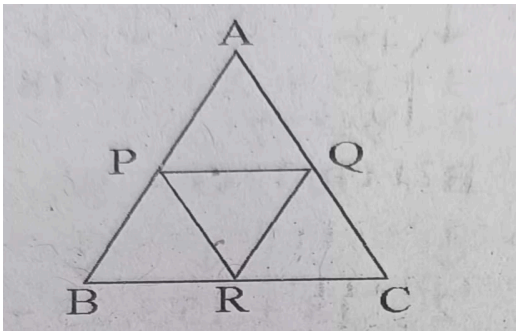
(3) $\sqrt{3}$ **cm²**

(4) $\frac{1}{4}\sqrt{3}$ **cm²**

Ans:(3) $\sqrt{3}$ **cm²**

Explanation:

Δ ABC is an equilateral triangle side of Δ ABC = 4 cm.



area(Δ ABC) $= \frac{\sqrt{3}}{4} \times 4^2$

$= \sqrt{3} \times 4$

area(Δ PQR) $= \frac{1}{4} \times area$**(Δ ABC)**

$= \frac{1}{4} \times \sqrt{3} \times 4 = \sqrt{3}$ **cm²**

24.Which of the following states has a Legislative Council?

(1) Assam

(2) Madhya Pradesh

(3) Andhra Pradesh

(4) Himachal Pradesh

Ans: (3) Andhra Pradesh

Explanation:

- **Some states in India have bicameral legislature.**
- **Legislative Council or Vidhan Parishad is the Upper House.**
- **Such Councils are formed or abolished by Article 169 of the Constitution of India.**
- **As of Dec 2024, 6 out of 28 states have a State Legislative Council.**
- **They are Andhra Pradesh, Karnataka, Telangana, Maharashtra, Bihar, and Uttar Pradesh**

25. Six friends are sitting around a round table. Mohan is sitting opposite to Rohit who is sitting between Ram and Mohit. Mohit is sitting opposite to Shyam. Who is sitting opposite Rohan?

(1) Ram

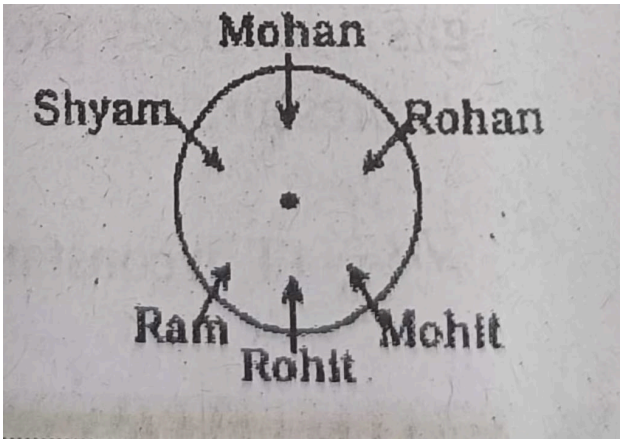
(2) Mohit

(3) Shyam

(4) Rohit

Ans: (1) Ram

Explanation:



From above sitting arrangement 'Ram' is sitting opposite to 'Rohan'.

26. If P = 0.3 x 0.3 + 0.03 + 0.03-06 x 0.03 and Q = 0.54 then $\frac{P}{Q}$ is equal to:

(1) 4.5

(2) 0.45

(3) 4.05

(4) 0.135

Ans: (4) 0.135

Explanation:

P = 0.3 × 0.3 + 0.03 × 0.03 − 0.6 × 0.03

= 0.0909 - 0.018 = 0.0729

Q = 0.54

$$\frac{P}{Q} = \frac{0.0729}{0.54} = \frac{729}{10000} \times \frac{100}{54} = 0.135$$

27. A sum of money of Rs. 2600.00 was lent out in two parts in such a way that the simple interest on the first part at 10% per annum for 5 years is the same as the interest of the second part at 9% per annum for 6 years. The part lent out at 10% is:

(1) Rs. 1150.00

(2) Rs. 1250.00

(3) Rs. 1350.00

(4) Rs. 1450.00

Ans:(3) Rs. 1350.00

Explanation:

Let x be money lent at 10% and $2600 - x$ be lent at 9%.

$$\frac{x \times 10 \times 5}{100} = \frac{(2600 - x) \times 9 \times 6}{100}$$

$$\Rightarrow 50x = 2600 \times 54 - 54x$$

$$\Rightarrow 104x = 2600 \times 54$$

$$\Rightarrow x = \frac{2600 \times 54}{104} = \text{Rs. } 1350$$

28. The famous Gol Gumbaz is located in:

(1) Karnataka

(2) Rajasthan

(3) Gujarat

(4) Punjab

Ans:(1) Karnataka

Explanation:

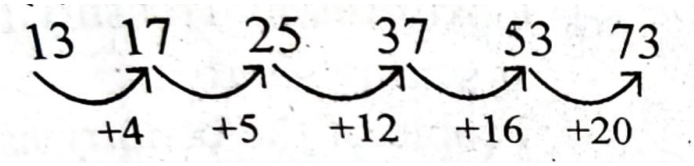
- **Gol Gumbaz is the tomb of King Mohammed Adil Shah, Adil Shahi Dynasty.**

- **Construction of the tomb, located in Bijapur, Karnataka, India, was started in 1626 and was completed in 1656.**

29. Select the option that will fill in the blank and complete the given series.

13, 17, 25, 37, 53 , ––––––

(1) 69
(2) 63
(3) 73
(4) 65
Ans:(3) 73
Explanation:



30. Select the option that is related to the third term in the same way as the second term is related to the first term.

Dog: Guard :: Horse : ?
(1) Stable
(2) Cart
(3) Ride
(4) Saddle
Ans:(3) Ride
Explanation:
As, Dog related to Guard, similarly Horse related to Ride

31. If $p^2+q-r^2 = 0$, then the value of $p^6+q^6-r^6 \div p^2q^2r^2$, is:

(1) 3
(2) $\frac{1}{3}$
(3) -3
(4) 3pqr
Ans: -3
Explanation:

$$P^2 + q^2 - r^2 = 0$$
$$\Rightarrow p^2 + q^2 = r^2$$
$$(p^2 + q^2)^3 = (r^2)^3$$
$$p^6 + q^6 + 3\,p^2\,q^2\,(p^2 + q^2) = r^6$$

$$\Rightarrow p^6 + q^6 + 3p^2\,q^2\,r^2 = r^6$$
$$(p^6 + q^6 - r^6) \div p^2\,q^2\,r^2$$
$$= -3p^2q^2\,r^2 \times \frac{1}{p^2q^2r^2} = -3$$

32. A man invested $\frac{1}{2}$ of his 2 capital at 5% rate of interest per 1 annum $\frac{1}{3}$ of his capital at 8% per annum and the remaining at 10% rate of interest per annum. His total income from three investments is Rs. 820.00 in a year. The total capital invested is

(1) Rs. 16000.00

(2) Rs. 6400.00

(3) Rs. 8000.00

(4) Rs. 12000.00

Ans: (4) Rs. 12000.00

Explanation:

Let x be total invested capital

$$\frac{x}{2}\times\frac{5}{100}+\frac{x}{3}\times\frac{8}{100}+(x-\frac{x}{2}-\frac{x}{3})\times\frac{10}{100}=820$$

$$\Rightarrow\frac{x}{40}+\frac{2x}{75}+\frac{x}{60}=820.00$$

$$\Rightarrow\frac{15x+16x+20x}{600}=820.00$$

$$\Rightarrow x=\frac{820\times600}{41}=\text{Rs. }12000$$

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

14	12	10	8
10	8	6	4
8	6	4	2
?	14	12	10

(1) 12
(2) 8
(3) 16
(4) 0
Ans: (3) 16
Explanation:
From Row I : 14 + 8 = 12 + 10

From Row II : 10 + 4 = 8 + 6
From Row III: 8+2 = 6+4
Similarly, From Row IV
(?+10)= 14 + 12
?= 26 - 10 = 16

34. Out of the four number-pair listed, three are alike in some manner and one is different.
Select the odd one.
(1) 4-64
(2) 7-27
(3) 6-216
(4) 9-729
Ans:(2) 7-27
Explanation:

$4 - 64,\ 4^3 = 64$
$7 - 27,\ 7^3 = 343 \neq 27$ (odd one)
$6 - 216,\ 6^3 = 216$
$9 - 729,\ 9^3 = 729$

35.The Moplah Rebellion took place between the years:
(1) 1914-1915
(2) 1923-1924
(3) 1917-1919
(4) 1921-1922
Ans:(4) 1921-1922
Explanation:

- **The Moplah Rebellion, also known as the Moplah Riots of 1921 was the culmination of a series of riots by Mappila Muslims of Kerala in the 19th and early 20th centuries against the British and the Hindu landlords in Malabar (Northern Kerala).**
- **It was an armed revolt.**
- **Variyamkunnath Kunjahammed Haji led it.**

36. Read the following information and answer the question that follows.
(i) I, J, K, L, M and N are playing hockey.
(ii) I and M are sisters and N is the brother of M.
(iii) K is the only son of I's paternal uncle.
(iv) J and L are the sons of a brother of K's father.
How K is related to M?
(1) Cousin
(2) Sister
(3) Uncle
(4) Brother
Ans: (1) Cousin
Explanation:
Since 'K' is the only Son of I's paternal uncle and I and M are sisters to each other, So 'K' is cousin of M

37. The length of the longest pole, that could be placed in a room of dimensions 10 m, 8 m and 6 m, is:
(1) 18 m
(2) 14 m
(3) $10\times\sqrt{2}$m
(4) 15 m
Ans: (3) $10\times\sqrt{2}$m
Explanation:

Length of longest pole

$$= \sqrt{l^2+b^2+h^2}$$

$$= \sqrt{100+64+36} = \sqrt{200}$$

$$= 10\sqrt{2}\text{ m}$$

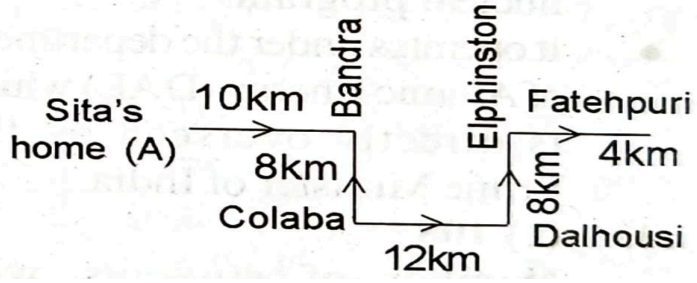
38. Which of the following was given the Filmfare Award for Best Film in 2020?
(1) Article 15
(2) Gully Boy
(3) Andhadhun
(4) Padman
Ans:(2) Gully Boy
Explanation:

- **65th Filmfare Awards ceremony, presented by The Times Group, honored the best Indian Hindi-language films of 2019.**

- **65th Filmfare Awards was held at Indira Gandhi Athletic Stadium Guwahati, Assam on 15th February 2020.**
- **'Gully Boy' directed by Zoya Akhtar received the Filmfare Award for the best film in 2020.**
- **Ranveer Singh was awarded Best Actor in a leading role and Alia Bhatt was awarded Best Actress in leading role at the 65th Filmfare Awards for their performances in Gully Boy.**

39. Sita took an auto from her home in Andheri (A) to go to her college in Fatehpuri (F). Rather than continuing straight on the direct road to the college that had no turns, the auto driver took a diversion after 10 km and turned right at Bandra (B) crossing, then at Colaba T-point (C) after 8 km turned left, again after covering 12 km turned left at Dalhousi Building (D) and soon after 8 km turned right at Elphinston point (E) and after covering 4 km reached Fatehpuri (F). Had the auto driver taken the direct route how much less distance would Sita have actually travelled between the starting point and the destination?
(1) 12 km
(2) 10 km
(3) 18 km
(4) 16 km
Ans:(4) 16 km
Explanation:

According to Question:



Total distance covered by auto driver =10+8+12+8+4 = 42km
Shortest distance = 10+12+4= 26 km

Distance Sita actually travelled = 42-26 =16 km

40. Jallianwala Bagh massacre took place during the term of Viceroy:
(1) Lord Irwin
(2) Lord Chelmsford
(3) Lord Dalhousie
(4) Lord Ripon
Ans:(2) Lord Chelmsford
Explanation:

- **Lord Chelmsford (1921-26) was the Viceroy of India when Jallianwala Bagh Massacre took place.**
- **A large but peaceful crowd had gathered at the Jallianwala Bagh in Amritsar, Punjab to protest against the arrest of pro - Indian independence leaders Dr. Saifuddin Kitchlu and Dr. Satya Pal.**
- **In response to the public gathering, the British Brigadier General R. E. H. Dyer surrounded the Bagh with his soldiers.**
- **The Governor of Punjab at the time of Jallianwala Bagh Massacre was Michael O' Dwyer.**
- **The Hunter Commission was established in 1919 to investigate the events surrounding the Jallianwala Bagh Massacre.**

41. The smallest square number which is exactly divisible by 12, 15 and 18 is:

(1) 625
(2) 1225
(3) 900
(4) 400

Ans:(3) 900

Explanation:

LCM (12, 15, 18) = 180

Out of the options, 900 is divisible by 180.

42. On which date did Jallianwala Bagh massacre take place?

(1) 13th April, 1919
(2) 30 April, 1919
(3) 30th April, 1920
(4) 13th April, 1920

Ans: (1) 13th April, 1919

Explanation:

- Jallianwala Bagh (Punjab, Amritsar) Massacre took place on April 13, 1919.

- This incident shocked Rabindranath Tagore (the first Indian and Asian Nobel laureate) to such an extent that he renounced his knighthood.

- Mahatma Gandhi and Sarojini Naidu were among the prominent figures who returned the Kaiser- e- Hind title in protest of the Jallianwala Bagh Massacre.

43. Which of the following projects is in Uttarakhand?

(1) Chamera Hydroelectric Project
(2) Tehri Hydro Power Complex
(3) Koyna Hydroelectric Project
(4) Sharavathi Hydroelectric Project

Ans: (2) Tehri Hydro Power Complex

Explanation:

- Tehri Hydro Power Complex is a multipurpose scheme on river Bhagirathi in Uttarakhand. It is designed for storing surplus water of

river Bhagirathi during monsoon and releasing the stored water to fulfil the irrigation and drinking water needs of the population in the Gangetic plains of Uttarakhand and Uttar Pradesh during non -monsoon period.

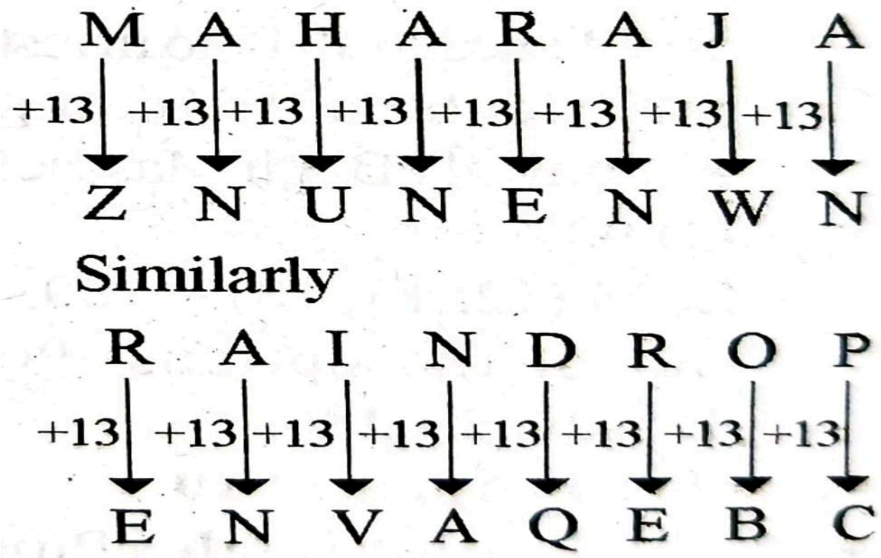
- Chamera Hydroelectric Project: Himachal Pradesh
- Koyna Hydroelectric Project: Maharashtra
- Sharavathi Hydro Power Plant: Karnataka.

44. In a certain code language. MAHARAJA is written as ZNUNENWN. How will RAINDROP be coded as in that language?

(1) ENVAQEBC
(2) ENVAEQBC
(3) EVNAQEBC
(4) ENAVQEBC

Ans: (1) ENVAQEBC

Explanation:



45. The Theory of Relativity is associated with:

(1) Newton

(2) Kelvin
(3) WC Rontgen
(4) Albert Einstein

Ans: (4) Albert Einstein
Explanation:

- **The theory of relativity usually encompasses two interrelated theories by Albert Einstein: special relativity and general relativity, proposed and published in 1905 and 1915, respectively.**
- **Special relativity applies to all physical phenomena in the absence of gravity. General relativity explains the law of gravitation and its relation to other forces of nature.**

46. What is Net National Product (NNP)?

(1) NNP = GNP - Depreciation
(2) NNP = GDP + Income from abroad
(3) NNP = GDP- Income from abroad
(4) NNP = GNP + Depreciation
Ans: (1) NNP=GNP-Depreciation
Explanation:

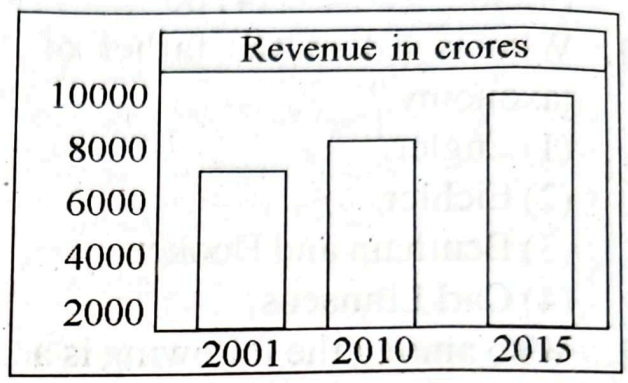
- **When depreciation charges is deducted from the GNP we get - NNP (Net National Product)**
  NNP=GNP-Depreciation

- **Depreciation : Depreciation is the fall in the value of capital goods, due to wear and tear in the process of production**

- **Net National Product at factor cost is also called as National Income (NNP_{FC}).**

- **Net National Product at factor cost is equal to sum total of value added at factor cost.**

47. The revenue earned by Company A in 2001 is Rs. 6,300 crore, that earned in 2010 is Rs 8.100 crore and that earned in 2015 is Rs 10,800 crore What is the ratio of the Increase in revenue between 2001 to 2010 and between 2010 to 2015?



(1) 2:3
(2) 1:2
(3) 1:1
(4) 3:2

Ans: (1) 2:3

Explanation:

Required ratio $= \frac{8100-6300}{10899-8100}$

$$\frac{1800}{2700} = \frac{2}{3} = 2:3$$

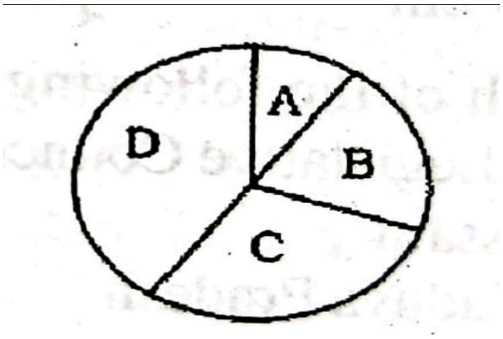
48. Bhabha Atomic Research Centre (BARC) is located in:
(1) Chennai
(2) Tarapur
(3) Hyderabad
(4) Mumbai
Ans: (4) Mumbai
Explanation:

- **The Bhabha Atomic Research Centre (BARC) is India's premier nuclear research facility, headquartered in Trombay, Mumbai, Maharashtra. Founded by Homi Jehangir Bhabha Atomic Energy**

establishment, Trombay (AEET) as a multi disciplinary research program essential for India's nuclear program.

- It operates under the department of Atomic Energy (DAE) which is directly overseen by the Prime Minister of India.

49. Of the 360 students who sat for Class X Board exams, 10% students scored A grade, 20% students scored B grade, 30% students scored C grade and 40% scored D grade. From the given pie chart, find the total number of students who scored Grade A and Grade B.



(1) 108
(2) 144
(3) 72
(4) 36s
Ans: (1) 108

Explanation:

Number of students who obtained Grade A and Grade B
$= \frac{360 \times 30}{100} = 108$

50. Choose the mirror Image of CHIVALRY

(1) YRALVIHC
(2) YRLAVIHC
(3) YRLVAIHC

(4) CHIVALRY

Ans: (2) CHIVALRY

Explanation:

51. The process of taking out stored results out of physical memory of Computers is known as:

(1) input process

(2) processing

(3) programming

(4) output process

Ans: 51. (4) output process
Explanation:
Output is the result of processed data that is presented to the user in a usable format The process of taking out stored result out of physical memory of Computer is known as output process.

52. Who fought the Battle of Plassey against the East India Company?

(1) Alivardi Khan

(2) Tipu Sultan.

(3) Mir Jafar

(4) Sirajuddaulah

Ans:52. (4) Sirajuddaulah
Explanation:
The Battle of Plassey was a pivotal moment in Indian History fought on June 23 1757 and marked the beginning of British dominance in India

It was a key conflict between the British East India Company led by Robert Clive and the forces of Siraj-ud-Daula.

Siraj-ud-Daula fought against the British and captured Calcutta in 1756.

The widespread looting and extraction of wealth by the British East India Company following their victory in the Battle of Plassey is known as Plassey Plunder.

53.Given below is the marks ob-tained by 20 students in mathematics out of 30 marks. 7,9,12, 12, 13, 12, 14, 14, 14, 14, 15, 16, 17, 18, 18, 19, 20, 18, 20, 13, 14. Then (2 x median -mode) of the data is equal to:

(1) 14

(3) 12

(2)0

(4) 18

Ans: (1) 14

Arranging the data in ascending order 7, 9, 12, 12, 12, 13, 13 14, 14, 14, 14, 15, 16, 17, 18 18, 18, 19, 20, 20

No. of terms = 20

Median =

$$\frac{\left(\frac{20}{2}\right)^{th}\text{ term} + \left(\frac{20}{2}+1\right)^{th}\text{ term}}{2}$$

$$= \frac{10^{th}\text{ term} + 11^{th}\text{ term}}{2}$$

$$= \frac{14+14}{2} = \frac{28}{2} = 14$$

$$\text{Mode} = 14$$

$$2 \times \text{median} - \text{mode}$$

$$= 2 \times 14 - 14 = 14$$

54.The radius of the circumcircle of an quadrilateral triangle of side $\sqrt{3}$ unit,is:

(1) $\frac{2}{3}$unit

(2) $\frac{1}{2}$unit

(3) $\frac{1}{4}$unit

(4) 1 unit

Ans: (4) 1 unit
Explanation:

side of equilateral triangle =$\sqrt{3}$;Circumradius of equilateral triangle= a/(sqrt(3)) = (sqrt(3))/(sqrt(3)) = 1 unit

55. Glowing surface of the sun is known as:

(1) photosphere

(2) atmosphere

(3) lithosphere

(4) chromosphere

Ans: (1)photosphere
Explanation:
The glowing surface of the sun is known as photosphere.

The temperature of the photosphere is around 5,500°C (about 9,900° F).

The photosphere is much cooler than the Sun's core.

56. The Tri-Color which was hoisted in Stuttgart by Madam Cama was smuggled into British India by:

(1) Kishan Singh

(2) Veer Savarkar

(3) Bhikaji Cama

(4) Indulal Yagnik

Ans: (4) Indulal Yagnik
Explanation:

Following Cama's 1907 Stuttgart address, the flag she raised there was smuggled into British India by Indulal Yagnik and is now on display at the Maratha and Kesari Library in Pune.

Madam Bhikaiji Cama became the first person to hoist the Indian flag in foreign land on 22 August 1907. While unfurling the flag at the International socialist Conference in Stuttgart, Germany, she appealed for equality and autonomy from the British which had taken over the Indian sub-continent.

57. The smallest number which should be subtracted from the smallest number of four digits to make it a perfect square is:

(1) 120

(2) 39

(3) 159

(4) 24

Ans: (2) 39

Smallest 4 digit number = 1000 Let x be smallest number to be subtracted
⇒ x = 1000 - 961
⇒x = 39

58. If x satisfies the equation $x^2-2x+1=0$, then the value of 3 is:

(1) 1

(2)-1

1 (3)

(4)0

Ans: (4) 0
Explanation:

$$x^2 - 2x + 1 = 0$$

$$\Rightarrow x^2 + 1 = 2x, \quad x + \frac{1}{x} = 2$$

$$x - \frac{1}{x} = \sqrt{\left(x + \frac{1}{x}\right)^2 - 4}$$

$$= \sqrt{4 - 4} = 0$$

$$x^3 - \frac{1}{x^3} = \left(x - \frac{1}{x}\right)^3 + \left(x - \frac{1}{x}\right)$$

$$= 0$$

59. Which Nation has hosted the Commonwealth Games five times?

(1) Australia

(2) England

(3) Canada

(4) New Zealand

Ans: (1) Australia
Explanation:

Australia has hosted the Commonwealth Games five times (1938, 1962, 1982, 2006 and 2018); this is more times than any other nation.

Two cities have hosted Common wealth Games more than once: Auckland (1950, 1990) and Edinburgh (1970, 1986).

22nd Commonwealth Games 2022

Venue - Birmingham (England)

Official mascot - Perry (Bull)

Official Motto - Games for Everyone

Australia topped medal table (67 gold, 57 silver, 54 bronze)

India's rank - 4 (22 gold, 16 silver, 23 bronze)

60. Which of the following is NOT a part of auxiliary memories in a Computer system?

(1) Floppy

(2) Magnetic tapes

(3) PROM

(4) CD-ROM

Ans:(3) PROM
Explanation:
Types of Read Only Memory (ROM):

PROM (Programmable Read Only Memory)

EPROM (Erasable Programmable Read Only Memory)

EEPROM (Electrically Erasable Programmable Read Only Memory)

61. The first Indian Communication satellite is:

(1) Aryabhata

(3) MOM

(2) Rohini

(4) APPLE

Ans:(4) APPLE

India's first indigenous experimental communication satellite - APPLE

(19th June 1981) (Ariane - 1(V-3) (Arine Passenger Payload Experiment)

The first satellite of India

Aryabhatta

Aryabhatta was launched from

Kapustin Yar (Volgograd) (Russia) (19th April 1975)

First satellite launched from India - Rohini (18th July 1980)

Launch vehicle of Rohini SLV-3

62. Which of the following is a scalar quantity?

(1) Momentum

(2) Force

(3) Mass

(4) Velocity

Ans: (3) Mass

Mass is categorized as a scalar quantity as it requires only its magnitude to describe it, but does not require its direction.

The mass of 1 Kg object will be the same as that on the moon too.

The SI unit of mass is kilograms or Kg.

63. Three persons invested an amount of money in a business in the ratio $\frac{1}{2}$:$\frac{1}{3}$:$\frac{1}{4}$. At the end of a year, the total profit was Rs. 15600. The largest share received in profit will be:

(1) Rs. 7200
(2) Rs. 8000

(3) Rs. 7500

(4) Rs. 7000

Ans: (1) Rs. 7200

Ratio of investment

$=\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$ = 6:4:3

Largest share = $\frac{6}{13}\times 15600$

=7200

64. Solve the following:

$$\frac{1}{2}\times\frac{2}{3}-\frac{3}{4}\left(\frac{1}{2}\times\frac{1}{3}+\frac{5}{6}\right)\times\frac{4}{21}=?$$

(1) 2

(2) $\frac{1}{3}$

(3) $\frac{1}{2}$

(4) $\frac{4}{21}$

Ans:

64. **(4) $\frac{4}{21}$**

$$\frac{1}{2}\times\frac{2}{3}-\frac{3}{4}\left(\frac{1}{2}\times\frac{1}{3}+\frac{5}{6}\right)\times\frac{4}{21}$$

$$=\frac{1}{3}-\frac{3}{4}\times\frac{6}{6}\times\frac{4}{21}=\frac{1}{3}-\frac{1}{7}$$

$$=\frac{4}{21}$$

65. If $\frac{\sqrt{19-x\sqrt{12}}}{1}=\sqrt{4}-\sqrt{3}$ then the value of x is equal to:

(1) $\sqrt{3}+2$

(2) $\sqrt{2}+2\sqrt{3}$

(3) $\sqrt{3}-2$

(4) $\sqrt{2}+4\sqrt{3}$

Ans:(2) $2+2\sqrt{3}$

Explanation:

$$\sqrt{69-x\sqrt{12}}=\sqrt{4}-\sqrt{3}$$

Squaring,

$$19-x\sqrt{12}=\left(\sqrt{4}-\sqrt{3}\right)^2$$

$$19-x\sqrt{12}=4+3-2\sqrt{12}$$

$$x\sqrt{12}=19-7+2\sqrt{12}$$

$$x\sqrt{12}=12+2\sqrt{12}$$

$$x=2+2\sqrt{3}$$

66. 49th parallel is a boundary between:

(1) India and Pakistan

(2) France and Germany

(3) North Korea and South Korea

(4) USA and Canada

Ans: (4) USA and Canada

49 Parallel is the boundary between USA and Canada.

It is a border between Canadian provinces of Alberta, British Columbia, Manitoba and Saskatchewan in the north and US States of Idaho, Minnesota. North Dakota, Washington and Montana in the south

67. The difference between the mean of the first eight com-posite natural numbers and the mean of the first eight prime numbers, is:

(1) $\frac{3}{20}$

(2) $\frac{1}{5}$

(3) $\frac{1}{8}$

(4) $\frac{1}{4}$

Ans: (3) $\frac{1}{8}$

Explanation:

Mean of first 8 composite numbers

$= \frac{(4+6+8+9+10+12+14+15)}{8}$

$= \frac{78}{8}$

Mean of first 8 prime numbers

$$\frac{(2+3+5+7+11+13+17+19)}{8}$$

$$= \frac{77}{8}$$

Difference $= \frac{78}{8} - \frac{77}{8} = \frac{1}{8}$

68. Which colour is associated with the revolution in fertilisers?

(1) Grey

(2) Black

(3) Golden

(4) Pink

Ans: (1) Grey
Explanation:

The Grey Revolution in India is associated with an increase in fertilizer production.

This was in succession to the green revolution that was responsible for the high-yielding variety of seeds.

It aims to build a promising future for farmers and develop the agricultural sector in India.

69. In a school, the average age of boys and girls together is 16.8 years, the average age of boys is 15.4 years, and the average age of girls is 18.2 years. The ratio of number of boys to girls in the school is:

(1) 2:3

(2) 1:1

(3) 3:2

(4) 3:5

Ans: (2) 1:1
Explanation:

Let no. of boys = x

No. of girls = y

$(x+y)16.8 = x \times 15.4 + y \times 18.2$

$\Rightarrow 16.8x + 16.8y = 15.4x + 18.2y$

$\Rightarrow 16.8x - 15.4x = 18.2y - 16.8y$

$\Rightarrow 1.4x = 1.4y$

$\Rightarrow \frac{x}{y} = \frac{1.4}{1.4} = \frac{1}{1}$

x: y = 1:1

70. The Sahitya Academy is head quartered at:

(1) Mumbai

(2) Bangalore

(3) Hyderabad

(4) New Delhi

Ans: (4) New Delhi
Explanation:

The Main headquarters of Sahitya Akademi is located in New Delhi.

It was formally inaugurated by the Government of India on 12th March 1954.

It is an organization dedicated to the promotion of literature in the languages of India.

71. IFP-2+02+(02-2)-1-2 Q-2-02-(02-21-3×2 P then is equal to.

(1) 1.0

(2) 1.5

(3)-0.5

(4)0.5

Ans: (1) 1.0
Explanation:

$$P = 2 + 0.2 \div (0.2 \times 2) - 1 \times 2$$
$$= 2 + \frac{0.2}{0.4} - 2$$
$$= 2 + \frac{1}{2} - 2$$
$$= \frac{1}{2}$$
$$Q = 2 - 0.2 \div (0.2 \times 2) - \frac{1}{2} \times 2$$
$$= 2 - \frac{0.2}{0.4} - 1$$
$$= 1 - \frac{1}{2} = \frac{1}{2}$$
$$\frac{P}{Q} = \frac{\frac{1}{2}}{\frac{1}{2}} = \frac{1}{2} \times \frac{2}{1}$$
$$= 1$$

72. The 'Indradhanush' framework, an Indian government initiative, is for:

(1) resource mobilisation

(2) capacity building in Private Sector Banks

(3) revamping of Public Sector Banks

(4) revamping of Private Sector Banks

Ans: (3) revamping of Public Sector Banks

Mission Indradhanush for PSBs that was launched by the Government in 2015.

The government, to resolve the issues faced by the Public Sector Banks, launched a 7 pronged plan called "Mission Indradhanush."

The Indradhanush for PSBS mission aims at revamping the functioning of the Public Sector Banks to enable them to compete with the Private Sector Banks.

It seeks to revive economic growth through the reduction of political interference in the functioning of PSBs and improving credit.

73. If 'A' means '+' 'S' means ' - M' means 'x' 'D' means '' 'B' means "(' and 'F' means ')' then solve the following expression:
B700A110S90FDB9M10S10F

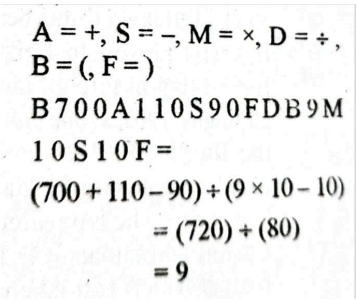
(1)9

(2)7

(3) 10

(4) 90

Ans:(1)9
Explanation:


A = +, S = –, M = ×, D = ÷,
B = (, F =)
B 7 0 0 A 1 1 0 S 9 0 F D B 9 M
1 0 S 1 0 F =
(700 + 110 – 90) + (9 × 10 – 10)
= (720) + (80)
= 9

74.Lichen is an organism which monitors:

(1) water pollution

(2) gas pollution

(3) air pollution

(4) soil pollution

Ans:(3) air pollution
Explanation:
Lichens are a complex life form that is a symbiotic partnership of two separate organisms, a fungus and an alga. The dominant partner is the fungus. which gives the lichen the majority of its characteristics from its thallus shape to its fruiting bodies.

Lichens directly benefit humans is through their ability to absorb everything in their atmosphere, especially pollutants

Any heavy metals or carbon or sulfur or other pollutants in the atmosphere are absorbed into the lichen thallus.

Scientists can extract these toxins and determine the levels that are present in our atmosphere

75. By which of the following Amendments of the Constitution, Fundamental Duties of the citizens were added to the Constitution of India?

(1) 42 Constitutional Amendment Act

(2) 35 Constitutional Amendment Act

(3) 44 Constitutional Amendment Act

(4) 36 Constitutional Amendment Act

Ans: (1) 42nd Constitutional Amendment Act
Explanation:
The Fundamental Duties (On the recommendation of Sardar Singh committee) were incorporated in Part IV-A of the Constitution by the 42nd Amendment Act, 1976

There are 11 Fundamental Duties described under Article 51-A of which 10 were introduced by the 42nd Amendment and the 11th was added by the 86th Amendment in 2002.

76. ABCD is a parallelogram. Side BC is produced to E such that BCCE, Join AE which intersects side CD at P. The area of triangle ABE is:

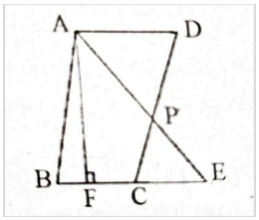
(1) to $\frac{1}{3}$ of the area of parallelogram ABCD

(2) less than the area of parallelogram ABCD

(3) to the area of parallelogram ABCD

(4) to $\frac{1}{2}$ of the area of parallelogram ABCD

Ans: (3) to the area of parallelogram ABCD
Explanation:
Area of parallelogram ABCD = BC × AF



Area ΔABE = 12 2 × BE × AF

1

= = x (BC + CE) × AF 2 1 = x (BC+BC) × AF 2

1 =×2BC × AF = BC × AF

8

= Area of parallelogram ABCD

77. An article was sold at a gain of 12%. Had it been sold for Rs. 33 more, the gain would have been 14%. The cost price of the article is:

(1) Rs. 1800.00

(2) Rs. 1850.00

(3) Rs. 1750.00

(4) Rs. 1650.00

Ans: (4) Rs. 1650.00
Explanation:
Let x be cost price of article

Then,

$$\Rightarrow \frac{114x}{100} - \frac{112x}{100} = 33$$

$$\Rightarrow 114x - 112x = 33 \times 100$$

$$\Rightarrow 2x = 33 \times 100$$

$$\Rightarrow x = \text{Rs. } 1650$$

78. The disease related with apple is known as:

(1) green ear disease

(2) red rust disease

(3) fire blight

(4) tikka disease

Ans: (3) fire blight
Explanation:

Fire blight is a common and very destructive bacterial disease of apples and pears.

The disease is caused by the bacterium Erwinia amylovora

79. What does NIU stand for in Information technology?

(1) Network Interface Unit

(2) Networking Internal Unit

(3) National Information Usage

(4) Nominal Internal Unit

Ans:(1) Network Interface Unit
Explanation:
A Network Interface Unit (NIU) is a device that connects devices to a Local Area Network (LAN) or to an outside network. It can also be used as a common interface for other devices on a LAN.

80. Who received the Nobel Prize for Economic Sciences in 2020?

(1) Dennis Mukherjee.

(2) George Smith

(3) James P. Allison

(4) Robert B. Wilson

Ans: (4) Robert B. Wilson
Explanation:
The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2020 was awarded to Paul R. Milgrom and Robert B. Wilson for improvements to auction theory and inventions of new auction formats.

The 2024 Nobel Prize in Economic Sciences was awarded to Daron Acemoglu, Simon Henry Roberts Johnson and James A Robinson for studies of how institutions are formed and affect prosperity.

81. If $\sqrt{2}+\sqrt{x}=\sqrt{3}$ then the value of x is equal to:

(1) $-2\sqrt{6}-5$

(2) $2\sqrt{6}-5$

(3) $5+2\sqrt{6}$

(4) $5-2\sqrt{6}$

Ans:(4) $5-2\sqrt{6}$
Explanation:

$\Rightarrow\sqrt{x}=\sqrt{3}-\sqrt{2}$
Squaring,
x=$(\sqrt{3}-\sqrt{2})^2$
=3+2 - $2\sqrt{6}$
= 5 - $2\sqrt{6}$

82. India's 1st atomic power station was commissioned in:

(1) 1967

(2) 1969

(3) 1968

(4) 1966

Ans: (2) 1969
Explanation:
Tarapur Atomic Power Station or TAPS is located in Maharashtra's Thane district.

TAPS was India's first atomic power project when it began operations on 28 October, 1969.

It was the first commercial nuclear power station built in India.

83. The following table shows the Air Quality Index (AQI) (PM2.5) for the four weeks of February 2018. What is the difference in the average of AQI in Kolkata and Delhi in the month of February?

Toxic Trend Air Quality Index		
Period	Kolkata	Delhi
February 1st - 7th	306	248
February 8th - 14th	288	246
February 15th - 21st	274	246
February 22nd - 28th	172	236

(1) 14

(2) 18

(3) 12

(4) 16

Ans: 83. (4) 16
Explanation:

Average of AQI in month of february in kolkata
$= \frac{(306 + 288 + 247 + 172)}{4} = 260$
Average of AQI in month of February in Delhi
$= \frac{(248 + 246 + 246 + 236)}{4} = 244$
Required difference = 260-244 = 16

84. In an election, there were only two candidates. The winning candidate got 48% of the total votes. His opponent got 6800 votes which was 34% of the total votes. Some of the votes were invalid. The winning margin of the candidate who won the election and the number of invalid votes respectively are:

(1) 3200 votes, 3600 votes

(2) 2800 votes, 3600 votes

(3) 3600 votes, 2800 votes

(4) 3000 votes, 3600 votes

Ans: (2) 2800 votes, 3600 votes

Explanation:

Let total no. of votes = x

$\Rightarrow$ **x** $= \frac{(6800 \times 100)}{34}$

= 20000

Votes got by winning candidate

$= \frac{(20000 \times 48)}{100}$ **= 9600**

Winning Margin=9600 - 6800 = 2800

Percentage of invalid votes

= 100-(34+48) = 18%

No. of invalid votes $\frac{20000 \times 18}{100}$ **= 3600**

85. A can complete a piece of work in 12 days. B is 20% less efficient than A. The number of days it will take for B to complete the work is:

(1) 16 days

(2) 20 days

(3) 15 days

(4) 18 days.

Ans: (3) 15 days

Explanation:

A's efficiency: B's efficiency

100 : 80

5 : 4

A's working day: B's working day

4 : 5
↓ ↓

4 × 3 = 12 5 × 3 = 15

∴Time taken by B to complete the work 15 days

86. In a certain code language, ACCESS is written as 13351919. How will EXCELLENCE be coded as in that language?

(1) 53351414123435

(2) 52345121414335

(3) 524351414355

(4) 52435121251435

Ans: (4) 52435121251435
Explanation:

A = 1 , B = 2.....z = 26

A	C	C	E	S	S
↓	↓	↓	↓	↓	↓
1	3	3	5	19	19

E	X	C	E	L	L	E	N	C	E
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

5 24 3 5 12 12 5 14 3 5

87. Shanti's daughter Chandini is married to Abhi. Anchal is married to Sandy, the grand-son of Shanti. Abhi's grand-son is Karan. Rashmi is the mother of Karan. Shaurya is Anchal's son. How is Shaurya related to Karan?

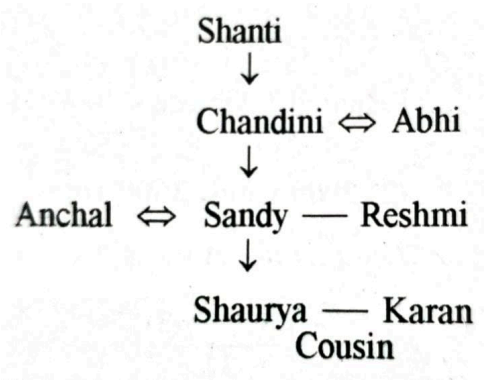
(1) Son

(2) Brother

(3) Nephew

(4) Cousin

Ans: (4) Cousin
Explanation:



88. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

ZaF, YbE, XcD, WdC, VeB, ?

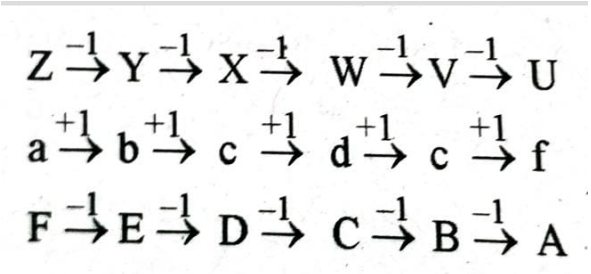
(1) UcD

(2) UeA

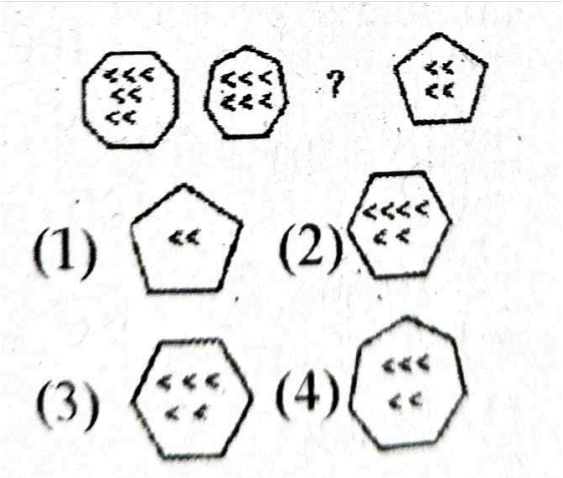
(3) UaB

(4) UîA

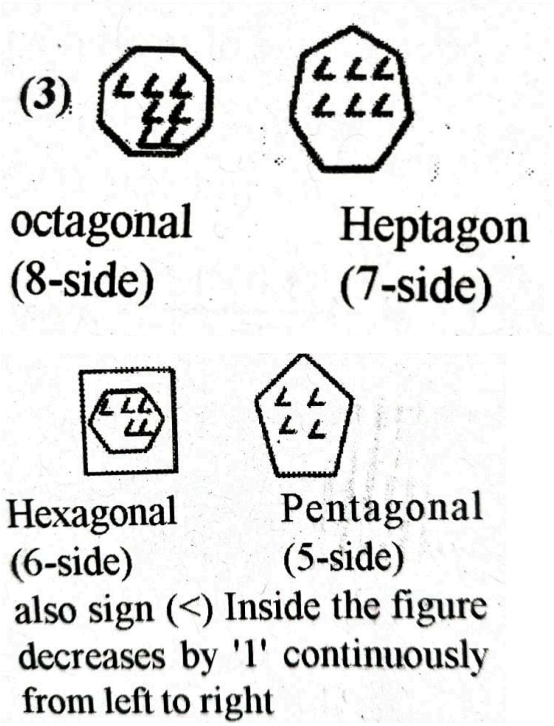
Ans: (4) UîA
Explanation:



89. Select the figure that can replace the question mark (?) in the following series.



Ans:(3)
Explanation:



90. Which of the following con-clusions can be derived from the given statement? Students have to pay fine for late payment of exam fees.

(1) Students follow deadline 9 only if penalised.

(2) All fees are to be paid time-ly, else they must pay penalty

(3) Many students do not pay exam fee in time.

(4) Fines for late payment of exam fees is a large source of revenue.

Ans:(2) All fees are to be paid timely, else they must pay penalty
Explanation:
According to the statement, conclusion '2' can be derived because students obey the timeline when the Institution charge Penalty.

91. Select the option that is related to the third term in the same way as the second term is related to the first term. Grasshopper: Insect :: Hyena:?

(1) Mammal

(2) Reptile

(3) Amphibian
(4) Herbivore

Ans: (1) Mammal
Explanation:
Grasshopper is a group of insects, Similar to Hyena is a group of mammals.

92. Out of the four sports listed. three are alike in some manner and one is different. Select the odd one. Discus throw, Golf, Shot-put, Hammer throw

1(1) Hammer throw

(2) Golf

(3) Shot-put

(4) Discus throw

Ans: (2) Golf
Explanation:
Discus throw, shot put, Hammer throw are alike in some manner because in that game throw something at some distance. but 'Golf' is different from these.

93. Which of the given options best classifies the following items Spear, Catapult, Pistol, Rifle

(1) Cannon

(2) Battle

(3) Weapons

(4) Guns

Ans: (3) Weapons
Explanation:
Spear, Catapult, Pistol and Rifle all come under weapons.

94. There are four friends Sharayu, Pinky. Tanisha and Mamta. Two study in J college, one each in X college and A college. Each one is definitely good at one subject and one is good at all the subjects. The subjects are English, Science, Maths and Computers. Of those studying in J college, one is good at Maths and the other in all subjects. Tanisha is studying in A college. Pinky is good at Maths. Sharayu is not good at Science. Find who is good at all the subjects.

(1) Pinky

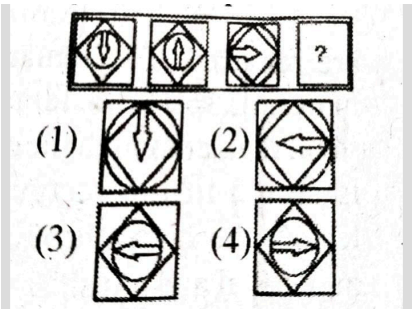
(2) Tanisha

(3) Sharayu

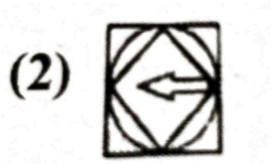
(4) Mamta
Si
nce Pinky is good in maths, So
Ans: (4) Mamta

Explanation: she studying in 'J' college Tanisha study 'A' college. Since sharayu is not good at Science so she studying in 'X' college. Hence Mamta' is good at subjects.

95. Select the figure from among the given options that when placed in the blank block with question marks (?) will complete the pattern.



Ans: (2)



Explanation:
As, small circle inside the first figure move 180° clockwise/anti clockwise direction, then figure (2) obtained. Similarly when

96. Select the number from among the given options that can replace the question mark (?) in the following series.
8, 18, 32, 50, ?

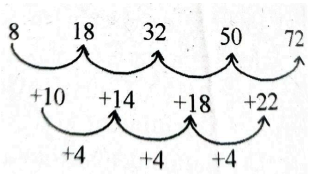
(1) 72

(2) 70

(3) 62

(4) 68

Ans:(1) 72
Explanation:



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

19, 29, 59, 79,?

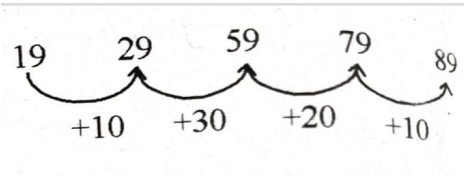
(1) 99

(2) 89

(3) 119

(4) 109

Ans: (2) 89
Explanation:



98. Which of the following conclusions can be derived from the given statement?

For applying for the post of lecturer, passing NET is mandatory.

(1) NET helps to make people better teachers.

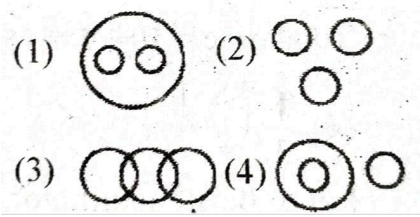
(2) NET is a desirable qualification for college teaching.

(3) Only those who pass NET qualify for college teaching.

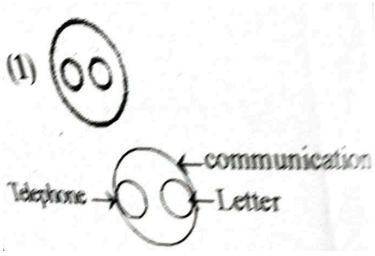
(4)NET gives one an advantage in teaching.

Ans: (3) Only those who pass NET qualify for college teaching.
Explanation:
According to statement conclusion '3' can derived because only those who pass NET quality for college teaching.

99 .Select the Venn diagram that best represents the relationship between the following classes. Communication. Telephone. Letter



Ans:



100. The table below gives the number of students passing an exam in a particular town.

Year	Girls	Boys
2016	128734	115526
2017	130567	124313
2018	129209	122131

Find the approximate average pass percentage in all three years, if the number of stu-dents appearing for the exam in any given year is 354000.

(1) 74%

(2) 68%

(3) 71%

(4) 73%

Ans: (3) 71%
Explanation:

Average no. of passed students in exam

$$= \frac{12873 + 115526 + 130567 + 124313 + 128209 + 122131}{3}$$

$$= \frac{750480}{3} = 250160$$

Required percent

$$= \frac{250160}{354000} \times 100 = 70.66\,\% = 71\%$$

89. Read the given statements and conclusions carefully. Assum-ing 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 con-clusions logically follow(s) from the statements.

Statements:

I. All children are bottles.

II. No bottles are intelligent.

Conclusions:

I. All bottles are intelligent.

II. No children are intelligent.

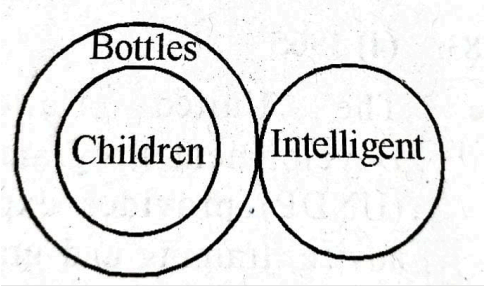
(1) Only conclusion II follows.

(2) Neither I nor II follows.

(3) Both I and II follow.

(4) Only conclusion I follows.

Ans: (1) Only conclusion II follows.
Explanation:
According to statement:



Conclusion: I. All Bottles are Intelligent: (×)

II. No children are intelligent: (√)

∴ Only conclusion 'II' follow from the given statements.

51. The process of taking out stored results out of physical memory of Computers is known as:

(1) input process

(2) processing

(3) programming

(4) output process

Ans: 51. (4) output process
Explanation:
Output is the result of processed data that is presented to the user in a usable format The process of taking out stored result out of physical memory of Computer is known as output process.

52. Who fought the Battle of Plassey against the East India Company?

(1) Alivardi Khan

(2) Tipu Sultan.

(3) Mir Jafar

(4) Sirajuddaulah

Ans:52. (4) Sirajuddaulah
Explanation:
The Battle of Plassey was a pivotal moment in Indian History fought on June 23 1757 and marked the beginning of British dominance in India

It was a key conflict between the British East India Company led by Robert Clive and the forces of Siraj-ud-Daula.

Siraj-ud-Daula fought against the British and captured Calcutta in 1756.

The widespread looting and extraction of wealth by the British East India Company following their victory in the Battle of Plassey is known as Plassey Plunder.

53.Given below is the marks ob-tained by 20 students in mathematics out of 30 marks. 7,9,12, 12, 13, 12, 14, 14, 14, 14, 15, 16, 17, 18, 18, 19, 20, 18, 20, 13, 14. Then (2 x median -mode) of the data is equal to:

(1) 14

(3) 12

(2)0

(4) 18

Ans: (1) 14

Arranging the data in ascending order 7, 9, 12, 12, 12, 13, 13 14, 14, 14, 14, 15, 16, 17, 18 18, 18, 19, 20, 20

No. of terms = 20

Median =

$$\frac{\left(\frac{20}{2}\right)^{th}\text{ term} + \left(\frac{20}{2}+1\right)^{th}\text{ term}}{2}$$
$$= \frac{10^{th}\text{ term} + 11^{th}\text{ term}}{2}$$
$$= \frac{14+14}{2} = \frac{28}{2} = 14$$
$$\text{Mode} = 14$$
$$2 \times \text{median} - \text{mode}$$
$$= 2 \times 14 - 14 = 14$$

54.The radius of the circumcircle of an quadrilateral triangle of side $\sqrt{3}$ unit,is:

(1) $\frac{2}{3}$ unit

(2) $\frac{1}{2}$ unit

(3) $\frac{1}{4}$ unit

(4) 1 unit

Ans: (4) 1 unit
Explanation:
side of equilateral triangle =$\sqrt{3}$;Circumradius of equilateral triangle= a/(sqrt(3)) = (sqrt(3))/(sqrt(3)) = 1 unit

55. Glowing surface of the sun is known as:

(1) photosphere

(2) atmosphere

(3) lithosphere

(4) chromosphere

Ans: (1)photosphere
Explanation:
The glowing surface of the sun is known as photosphere.

The temperature of the photosphere is around 5,500°C (about 9,900° F).

The photosphere is much cooler than the Sun's core.

56. The Tri-Color which was hoisted in Stuttgart by Madam Cama was smuggled into British India by:

(1) Kishan Singh

(2) Veer Savarkar

(3) Bhikaji Cama

(4) Indulal Yagnik

Ans: (4) Indulal Yagnik
Explanation:
Following Cama's 1907 Stuttgart address, the flag she raised there was smuggled into British India by Indulal Yagnik and is now on display at the Maratha and Kesari Library in Pune.

Madam Bhikaiji Cama became the first person to hoist the Indian flag in foreign land on 22 August 1907. While unfurling the flag at the International socialist Conference in Stuttgart, Germany, she appealed for equality and autonomy from the British which had taken over the Indian sub-continent.

57. The smallest number which should be subtracted from the smallest number of four digits to make it a perfect square is:

(1) 120

(2) 39

(3) 159

(4) 24

Ans: (2) 39

Smallest 4 digit number = 1000 Let x be smallest number to be subtracted
⇒ x = 1000 - 961
⇒x = 39

58. If x satisfies the equation $x^2-2x+1=0$, then the value of 3 is:

(1) 1

(2)-1

1 (3)

(4)0

Ans: (4) 0
Explanation:

$$x^2 - 2x + 1 = 0$$

$$\Rightarrow x^2 + 1 = 2x, \quad x + \frac{1}{x} = 2$$

$$x - \frac{1}{x} = \sqrt{\left(x + \frac{1}{x}\right)^2 - 4}$$

$$= \sqrt{4 - 4} = 0$$

$$x^3 - \frac{1}{x^3} = \left(x - \frac{1}{x}\right)^3 + \left(x - \frac{1}{x}\right)$$

$$= 0$$

59. Which Nation has hosted the Commonwealth Games five times?

(1) Australia

(2) England

(3) Canada

(4) New Zealand

Ans: (1) Australia
Explanation:

Australia has hosted the Commonwealth Games five times (1938, 1962, 1982, 2006 and 2018); this is more times than any other nation.

Two cities have hosted Common wealth Games more than once: Auckland (1950, 1990) and Edinburgh (1970, 1986).

22nd Commonwealth Games 2022

Venue - Birmingham (England)

Official mascot - Perry (Bull)

Official Motto - Games for Everyone

Australia topped medal table (67 gold, 57 silver, 54 bronze)

India's rank - 4 (22 gold, 16 silver, 23 bronze)

60. Which of the following is NOT a part of auxiliary memories in a Computer system?

(1) Floppy

(2) Magnetic tapes

(3) PROM

(4) CD-ROM

Ans:(3) PROM
Explanation:
Types of Read Only Memory (ROM):

PROM (Programmable Read Only Memory)

EPROM (Erasable Programmable Read Only Memory)

EEPROM (Electrically Erasable Programmable Read Only Memory)

61. The first Indian Communication satellite is:

(1) Aryabhata

(3) MOM

(2) Rohini

(4) APPLE

Ans:(4) APPLE

India's first indigenous experimental communication satellite - APPLE

(19th June 1981) (Ariane - 1(V-3) (Arine Passenger Payload Experiment)

The first satellite of India

Aryabhatta

Aryabhatta was launched from

Kapustin Yar (Volgograd) (Russia) (19th April 1975)

First satellite launched from India - Rohini (18th July 1980)

Launch vehicle of Rohini SLV-3

62. Which of the following is a scalar quantity?

(1) Momentum

(2) Force

(3) Mass

(4) Velocity

Ans: (3) Mass

Mass is categorized as a scalar quantity as it requires only its magnitude to describe it, but does not require its direction.

The mass of 1 Kg object will be the same as that on the moon too.

The SI unit of mass is kilograms or Kg.

63. Three persons invested an amount of money in a business in the ratio $\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$. At the end of a year, the total profit was Rs. 15600. The largest share received in profit will be:

(1) Rs. 7200
(2) Rs. 8000

(3) Rs. 7500

(4) Rs. 7000

Ans: (1) Rs. 7200

Ratio of investment
$=\frac{1}{2}:\frac{1}{3}:\frac{1}{4}$ = 6:4:3
Largest share = $\frac{6}{13}\times 15600$

=7200

64. Solve the following:

$$\frac{1}{2}\times\frac{2}{3}-\frac{3}{4}\left(\frac{1}{2}\times\frac{1}{3}+\frac{5}{6}\right)\times\frac{4}{21}=?$$

(1) 2

(2) $\frac{1}{3}$

(3) $\frac{1}{2}$

(4) $\frac{4}{21}$

Ans:

64. **(4)** $\frac{4}{21}$

$$\frac{1}{2}\times\frac{2}{3}-\frac{3}{4}\left(\frac{1}{2}\times\frac{1}{3}+\frac{5}{6}\right)\times\frac{4}{21}$$

$$=\frac{1}{3}-\frac{3}{4}\times\frac{6}{6}\times\frac{4}{21}=\frac{1}{3}-\frac{1}{7}$$

$$=\frac{4}{21}$$

65. If $\frac{\sqrt{19-x\sqrt{12}}}{1}=\sqrt{4}-\sqrt{3}$ **then the value of x is equal to:**

(1) $\sqrt{3}+2$

(2) $\sqrt{2}+2\sqrt{3}$

(3) $\sqrt{3}-2$

(4) $\sqrt{2}+4\sqrt{3}$

Ans:(2) $2+2\sqrt{3}$

Explanation:

$$\sqrt{69 - x\sqrt{12}} = \sqrt{4} - \sqrt{3}$$

Squaring,

$$19 - x\sqrt{12} = \left(\sqrt{4} - \sqrt{3}\right)^2$$

$$19 - x\sqrt{12} = 4 + 3 - 2\sqrt{12}$$

$$x\sqrt{12} = 19 - 7 + 2\sqrt{12}$$

$$x\sqrt{12} = 12 + 2\sqrt{12}$$

$$x = 2 + 2\sqrt{3}$$

66. 49th parallel is a boundary between:

(1) India and Pakistan

(2) France and Germany

(3) North Korea and South Korea

(4) USA and Canada

Ans: (4) USA and Canada

49 Parallel is the boundary between USA and Canada.

It is a border between Canadian provinces of Alberta, British Columbia, Manitoba and Saskatchewan in the north and US States of Idaho, Minnesota. North Dakota, Washington and Montana in the south

67. The difference between the mean of the first eight com-posite natural numbers and the mean of the first eight prime numbers, is:

(1) $\frac{3}{20}$

(2) $\frac{1}{5}$

(3) $\frac{1}{8}$

(4) $\frac{1}{4}$

Ans: (3) $\frac{1}{8}$

Explanation:

Mean of first 8 composite numbers

$= \frac{(4+6+8+9+10+12+14+15)}{8}$

$= \frac{78}{8}$

Mean of first 8 prime numbers

$\frac{(2+3+5+7+11+13+17+19)}{8}$

$= \frac{77}{8}$

Difference $= \frac{78}{8} - \frac{77}{8} = \frac{1}{8}$

68. Which colour is associated with the revolution in fertilisers?

(1) Grey

(2) Black

(3) Golden

(4) Pink

Ans: (1) Grey
Explanation:

The Grey Revolution in India is associated with an increase in fertilizer production.

This was in succession to the green revolution that was responsible for the high-yielding variety of seeds.

It aims to build a promising future for farmers and develop the agricultural sector in India.

69. In a school, the average age of boys and girls together is 16.8 years, the average age of boys is 15.4 years, and the average age of girls is 18.2 years. The ratio of number of boys to girls in the school is:

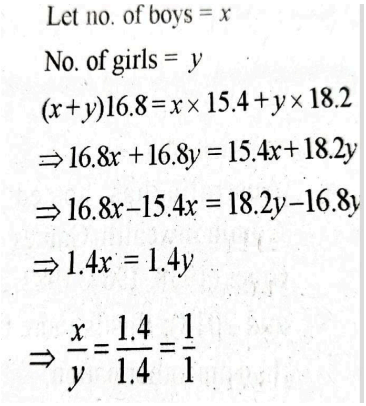
(1) 2:3

(2) 1:1

(3) 3:2

(4) 3:5

Ans: (2) 1:1
Explanation:


Let no. of boys = x

No. of girls = y

$(x+y)16.8 = x \times 15.4 + y \times 18.2$

$\Rightarrow 16.8x + 16.8y = 15.4x + 18.2y$

$\Rightarrow 16.8x - 15.4x = 18.2y - 16.8y$

$\Rightarrow 1.4x = 1.4y$

$\Rightarrow \frac{x}{y} = \frac{1.4}{1.4} = \frac{1}{1}$

x: y = 1:1

70. The Sahitya Academy is head quartered at:

(1) Mumbai

(2) Bangalore

(3) Hyderabad

(4) New Delhi

Ans: (4) New Delhi
Explanation:

The Main headquarters of Sahitya Akademi is located in New Delhi.

It was formally inaugurated by the Government of India on 12th March 1954.

It is an organization dedicated to the promotion of literature in the languages of India.

71. IFP-2+02+(02-2)-1-2 Q-2-02-(02-21-3×2 P then is equal to.

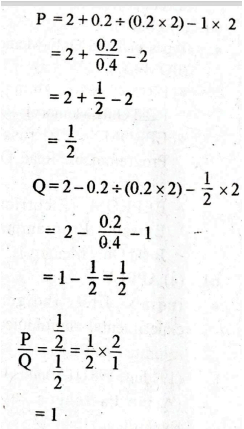
(1) 1.0

(2) 1.5

(3)-0.5

(4)0.5

Ans: (1) 1.0
Explanation:


$$P = 2 + 0.2 \div (0.2 \times 2) - 1 \times 2$$
$$= 2 + \frac{0.2}{0.4} - 2$$
$$= 2 + \frac{1}{2} - 2$$
$$= \frac{1}{2}$$
$$Q = 2 - 0.2 \div (0.2 \times 2) - \frac{1}{2} \times 2$$
$$= 2 - \frac{0.2}{0.4} - 1$$
$$= 1 - \frac{1}{2} = \frac{1}{2}$$
$$\frac{P}{Q} = \frac{\frac{1}{2}}{\frac{1}{2}} = \frac{1}{2} \times \frac{2}{1}$$
$$= 1$$

72. The 'Indradhanush' framework, an Indian government initiative, is for:

(1) resource mobilisation

(2) capacity building in Private Sector Banks

(3) revamping of Public Sector Banks

(4) revamping of Private Sector Banks

Ans: (3) revamping of Public Sector Banks

Mission Indradhanush for PSBs that was launched by the Government in 2015.

The government, to resolve the issues faced by the Public Sector Banks, launched a 7 pronged plan called "Mission Indradhanush."

The Indradhanush for PSBS mission aims at revamping the functioning of the Public Sector Banks to enable them to compete with the Private Sector Banks.

It seeks to revive economic growth through the reduction of political interference in the functioning of PSBs and improving credit.

73. If 'A' means '+' 'S' means ' - M' means 'x' 'D' means '' 'B' means "(' and 'F' means ')' then solve the following expression:
B700A110S90FDB9M10S10F

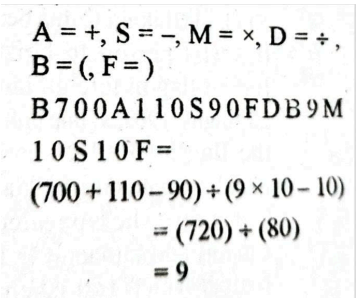
(1)9

(2)7

(3) 10

(4) 90

Ans:(1)9
Explanation:


A = +, S = –, M = ×, D = ÷,
B = (, F =)
B 7 0 0 A 1 1 0 S 9 0 F D B 9 M
1 0 S 1 0 F =
(700 + 110 – 90) ÷ (9 × 10 – 10)
= (720) ÷ (80)
= 9

74.Lichen is an organism which monitors:

(1) water pollution

(2) gas pollution

(3) air pollution

(4) soil pollution

Ans:(3) air pollution
Explanation:
Lichens are a complex life form that is a symbiotic partnership of two separate organisms, a fungus and an alga. The dominant partner is the fungus. which gives the lichen the majority of its characteristics from its thallus shape to its fruiting bodies.

Lichens directly benefit humans is through their ability to absorb everything in their atmosphere, especially pollutants

Any heavy metals or carbon or sulfur or other pollutants in the atmosphere are absorbed into the lichen thallus.

Scientists can extract these toxins and determine the levels that are present in our atmosphere

75. By which of the following Amendments of the Constitution, Fundamental Duties of the citizens were added to the Constitution of India?

(1) 42 Constitutional Amendment Act

(2) 35 Constitutional Amendment Act

(3) 44 Constitutional Amendment Act

(4) 36 Constitutional Amendment Act

Ans: (1) 42nd Constitutional Amendment Act
Explanation:
The Fundamental Duties (On the recommendation of Sardar Singh committee) were incorporated in Part IV-A of the Constitution by the 42nd Amendment Act, 1976

There are 11 Fundamental Duties described under Article 51-A of which 10 were introduced by the 42nd Amendment and the 11th was added by the 86th Amendment in 2002.

76. ABCD is a parallelogram. Side BC is produced to E such that BCCE, Join AE which intersects side CD at P. The area of triangle ABE is:

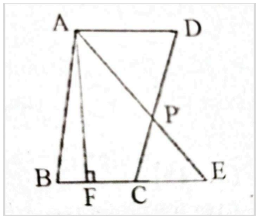
(1) to $\frac{1}{3}$ of the area of parallelogram ABCD

(2) less than the area of parallelogram ABCD

(3) to the area of parallelogram ABCD

(4) to $\frac{1}{2}$ of the area of parallelogram ABCD

Ans: (3) to the area of parallelogram ABCD
Explanation:
Area of parallelogram ABCD = BC × AF



Area ΔABE = 12 2 × BE × AF

1

= = x (BC + CE) × AF 2 1 = x (BC+BC) × AF 2

1 =×2BC × AF = BC × AF

8

= Area of parallelogram ABCD

77. An article was sold at a gain of 12%. Had it been sold for Rs. 33 more, the gain would have been 14%. The cost price of the article is:

(1) Rs. 1800.00

(2) Rs. 1850.00

(3) Rs. 1750.00

(4) Rs. 1650.00

Ans: (4) Rs. 1650.00
Explanation:
Let x be cost price of article

Then,

$$\Rightarrow \frac{114x}{100} - \frac{112x}{100} = 33$$

$$\Rightarrow 114x - 112x = 33 \times 100$$

$$\Rightarrow 2x = 33 \times 100$$

$$\Rightarrow x = \text{Rs. } 1650$$

78. The disease related with apple is known as:

(1) green ear disease

(2) red rust disease

(3) fire blight

(4) tikka disease

Ans: (3) fire blight
Explanation:

Fire blight is a common and very destructive bacterial disease of apples and pears.

The disease is caused by the bacterium Erwinia amylovora

79. What does NIU stand for in Information technology?

(1) Network Interface Unit

(2) Networking Internal Unit

(3) National Information Usage

(4) Nominal Internal Unit

Ans:(1) Network Interface Unit
Explanation:
A Network Interface Unit (NIU) is a device that connects devices to a Local Area Network (LAN) or to an outside network. It can also be used as a common interface for other devices on a LAN.

80. Who received the Nobel Prize for Economic Sciences in 2020?

(1) Dennis Mukherjee.

(2) George Smith

(3) James P. Allison

(4) Robert B. Wilson

Ans: (4) Robert B. Wilson
Explanation:
The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2020 was awarded to Paul R. Milgrom and Robert B. Wilson for improvements to auction theory and inventions of new auction formats.

The 2024 Nobel Prize in Economic Sciences was awarded to Daron Acemoglu, Simon Henry Roberts Johnson and James A Robinson for studies of how institutions are formed and affect prosperity.

81. If $\sqrt{2}+\sqrt{x}=\sqrt{3}$ then the value of x is equal to:

(1) $-2\sqrt{6}-5$

(2) $2\sqrt{6}-5$

(3) $5+2\sqrt{6}$

(4) $5-2\sqrt{6}$

Ans:(4) $5-2\sqrt{6}$
Explanation:

$\Rightarrow\sqrt{x}=\sqrt{3}-\sqrt{2}$
Squaring,
$x=(\sqrt{3}-\sqrt{2})^2$
$=3+2-2\sqrt{6}$
$=5-2\sqrt{6}$

82. India's 1st atomic power station was commissioned in:

(1) 1967

(2) 1969

(3) 1968

(4) 1966

Ans: (2) 1969
Explanation:
Tarapur Atomic Power Station or TAPS is located in Maharashtra's Thane district.

TAPS was India's first atomic power project when it began operations on 28 October, 1969.

It was the first commercial nuclear power station built in India.

83. The following table shows the Air Quality Index (AQI) (PM2.5) for the four weeks of February 2018. What is the difference in the average of AQI in Kolkata and Delhi in the month of February?

Toxic Trend Air Quality Index		
Period	Kolkata	Delhi
February 1st - 7th	306	248
February 8th - 14th	288	246
February 15th - 21st	274	246
February 22nd - 28th	172	236

(1) 14

(2) 18

(3) 12

(4) 16

Ans: 83. (4) 16

Explanation:

Average of AQI in month of february in kolkata

$= \frac{(306 + 288 + 247 + 172)}{4} = 260$

Average of AQI in month of February in Delhi

$= \frac{(248 + 246 + 246 + 236)}{4} = 244$

Required difference = 260-244 = 16

84. In an election, there were only two candidates. The winning candidate got 48% of the total votes. His opponent got 6800 votes which was 34% of the total votes. Some of the votes were invalid. The winning margin of the candidate who won the election and the number of invalid votes respectively are:

(1) 3200 votes, 3600 votes

(2) 2800 votes, 3600 votes

(3) 3600 votes, 2800 votes

(4) 3000 votes, 3600 votes

Ans: (2) 2800 votes, 3600 votes

Explanation:

Let total no. of votes = x

$\Rightarrow x = \frac{(6800 \times 100)}{34}$

= 20000

Votes got by winning candidate

$= \frac{(20000 \times 48)}{100} = 9600$

Winning Margin=9600 - 6800 = 2800

Percentage of invalid votes

= 100-(34+48) = 18%

No. of invalid votes $\frac{20000 \times 18}{100} = 3600$

85. A can complete a piece of work in 12 days. B is 20% less efficient than A. The number of days it will take for B to complete the work is:

(1) 16 days

(2) 20 days

(3) 15 days

(4) 18 days.

Ans: (3) 15 days

Explanation:

A's efficiency: B's efficiency

100 : 80

5 : 4

A's working day: B's working day

4 : 5

↓ ↓

4 × 3 = 12 5 × 3 = 15

∴Time taken by B to complete the work 15 days

86. In a certain code language, ACCESS is written as 13351919. How will EXCELLENCE be coded as in that language?

(1) 53351414123435

(2) 52345121414335

(3) 524351414355

(4) 52435121251435

Ans: (4) 52435121251435
Explanation:

A = 1 , B = 2.....z = 26

A	C	C	E	S	S
↓	↓	↓	↓	↓	↓
1	3	3	5	19	19

E	X	C	E	L	L	E	N	C	E
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
5	24	3	5	12	12	5	14	3	5

87. Shanti's daughter Chandini is married to Abhi. Anchal is married to Sandy, the grand-son of Shanti. Abhi's grand-son is Karan. Rashmi is the mother of Karan. Shaurya is Anchal's son. How is Shaurya related to Karan?

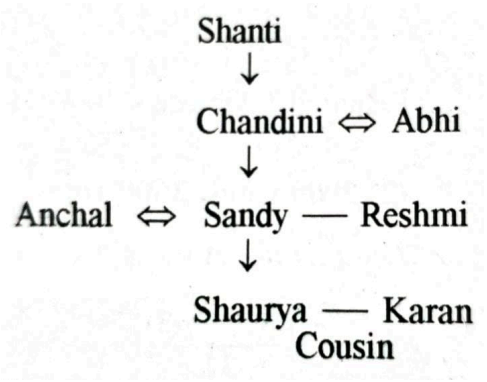
(1) Son

(2) Brother

(3) Nephew

(4) Cousin

Ans: (4) Cousin
Explanation:



88. Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

ZaF, YbE, XcD, WdC, VeB, ?

(1) UcD

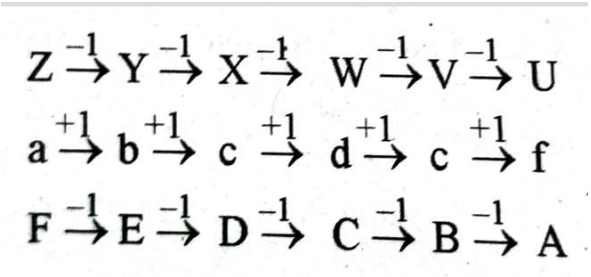
(2) UeA

(3) UaB

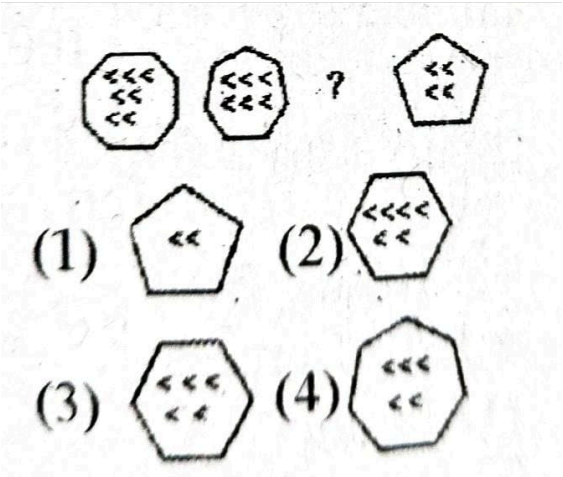
(4) UîA

Ans: (4) UîA

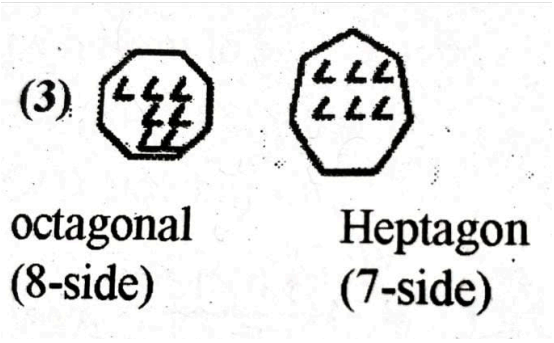
Explanation:

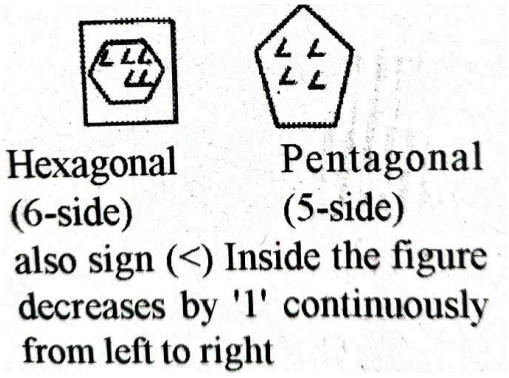


89. Select the figure that can replace the question mark (?) in the following series.



Ans:(3)
Explanation:





90. Which of the following con-clusions can be derived from the given statement? Students have to pay fine for late payment of exam fees.

(1) Students follow deadline 9 only if penalised.

(2) All fees are to be paid time-ly, else they must pay penalty

(3) Many students do not pay exam fee in time.

(4) Fines for late payment of exam fees is a large source of revenue.

Ans:(2) All fees are to be paid timely, else they must pay penalty
Explanation:
According to the statement, conclusion '2' can be derived because students obey the timeline when the Institution charge Penalty.

91. Select the option that is related to the third term in the same way as the second term is related to the first term. Grasshopper: Insect :: Hyena:?

(1) Mammal

(2) Reptile

(3) Amphibian
(4) Herbivore

Ans: (1) Mammal
Explanation:
Grasshopper is a group of insects, Similar to Hyena is a group of mammals.

92. Out of the four sports listed. three are alike in some manner and one is different. Select the odd one. Discus throw, Golf, Shot-put, Hammer throw

1(1) Hammer throw

(2) Golf

(3) Shot-put

(4) Discus throw

Ans: (2) Golf
Explanation:
Discus throw, shot put, Hammer throw are alike in some manner because in that game throw something at some distance. but 'Golf' is different from these.

93. Which of the given options best classifies the following items Spear, Catapult, Pistol, Rifle

(1) Cannon

(2) Battle

(3) Weapons

(4) Guns

Ans: (3) Weapons
Explanation:
Spear, Catapult, Pistol and Rifle all come under weapons.

94. There are four friends Sharayu, Pinky. Tanisha and Mamta. Two study in J college, one each in X college and A college. Each one is definitely good at one subject and one is good at all the subjects. The subjects are English, Science, Maths and Computers. Of those studying in J college, one is good at Maths and the other in all subjects. Tanisha is studying in A college. Pinky is good at Maths. Sharayu is not good at Science. Find who is good at all the subjects.

(1) Pinky

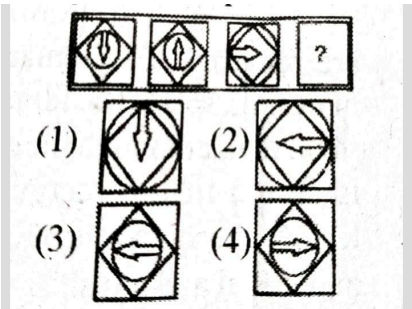
(2) Tanisha

(3) Sharayu

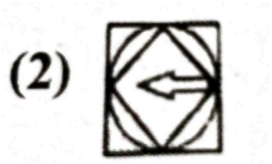
(4) Mamta

Ans: (4) Mamta
Explanation:
Since Pinky is good in maths, So she studying in 'J' college Tanisha study 'A' college. Since sharayu is not good at Science so she studying in 'X' college. Hence Mamta' is good at subjects.

95. Select the figure from among the given options that when placed in the blank block with question marks (?) will complete the pattern.



Ans: (2)



Explanation:
As, small circle inside the first figure move 180° clockwise/anti clockwise direction, then figure (2) obtained. Similarly when

96. Select the number from among the given options that can replace the question mark (?) in the following series.
8, 18, 32, 50, ?

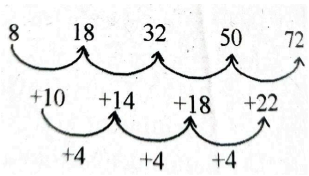
(1) 72

(2) 70

(3) 62

(4) 68

Ans:(1) 72
Explanation:



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

19, 29, 59, 79,?

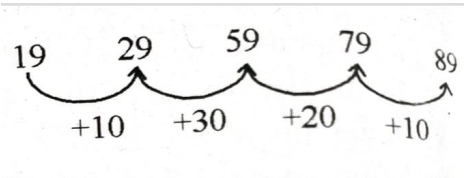
(1) 99

(2) 89

(3) 119

(4) 109

Ans: (2) 89
Explanation:



98. Which of the following conclusions can be derived from the given statement?

For applying for the post of lecturer, passing NET is mandatory.

(1) NET helps to make people better teachers.

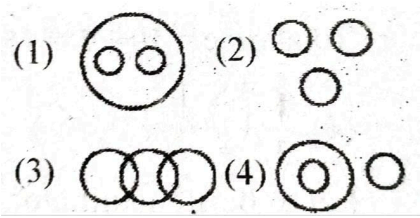
(2) NET is a desirable qualification for college teaching.

(3) Only those who pass NET qualify for college teaching.

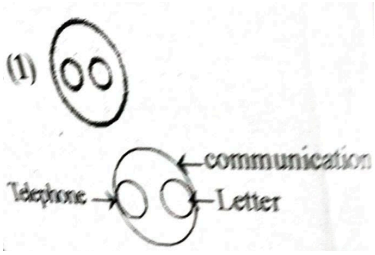
(4)NET gives one an advantage in teaching.

Ans: (3) Only those who pass NET qualify for college teaching.
Explanation:
According to statement conclusion '3' can derived because only those who pass NET quality for college teaching.

99 .Select the Venn diagram that best represents the relationship between the following classes. Communication. Telephone. Letter



Ans:



100. The table below gives the number of students passing an exam in a particular town.

Year	Girls	Boys
2016	128734	115526
2017	130567	124313
2018	129209	122131

Find the approximate average pass percentage in all three years, if the number of stu-dents appearing for the exam in any given year is 354000.

(1) 74%

(2) 68%

(3) 71%

(4) 73%

Ans: (3) 71%
Explanation:

Average no. of passed students in exam

$$= \frac{12873 + 115526 + 130567 + 124313 + 128209 + 122131}{3}$$

$$= \frac{750480}{3} = 250160$$

Required percent

$$= \frac{250160}{354000} \times 100 = 70.66\% = 71\%$$

89. Read the given statements and conclusions carefully. Assum-ing 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 con-clusions logically follow(s) from the statements.

Statements:

I. All children are bottles.

II. No bottles are intelligent.

Conclusions:

I. All bottles are intelligent.

II. No children are intelligent.

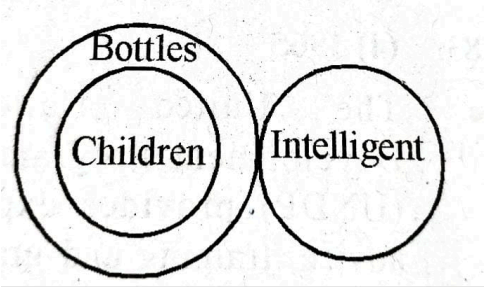
(1) Only conclusion II follows.

(2) Neither I nor II follows.

(3) Both I and II follow.

(4) Only conclusion I follows.

Ans: (1) Only conclusion II follows.
Explanation:
According to statement:



Conclusion: I. All Bottles are Intelligent: (×)

II. No children are intelligent: (√)

∴ Only conclusion 'II' follow from the given statements.

square move inside the third figure 180° clockwise/anti clockwise then we get next figure. which is same as option 2