RRB NTPC CBT-1 EXAM
HELD ON: 07:01:2021(Shift-1)

1. India boycotted the first Belt and Road Forum in 2017 after protesting against Beijing over the controversial ----------

(1) China-Bhutan Economic Corridor

(2) China-Afghanistan Economic Corridor

(3) China-Nepal Economic Corridor

(4) China-Pakistan Economic Corridor
ans:(4) China-Pakistan Economic Corridor
Explanation:
It is a part of China's ambitious One Belt One Road (OBOR) Initiative to link China with Europe.

CPEC is started in 2013, it is a developmental project between Pakistan and its all-weather friend China.

China-Pakistan Economic Corridor is a whopping 46 billion dollar project which will connect Kashgar in Xinjiang province of China, with Gwadar port in Baluchistan which is the largest province in Pakistan.

It is connected through a vast and complex network of roads as well as other infrastructure projects such as dams, hydropower projects, railways, and pipelines.

2. If the difference between squares of two consecutive positive odd integers is 56, then the two consecutive odd integers are:

(1) 13, 15

(2) 11, 13

(3) 15, 17

(4) 17, 19

ans:(1) 13, 15

Explanation:

Let x, x+2 be consecutive odd integers

$(x+2)^2-x^2 = 56$

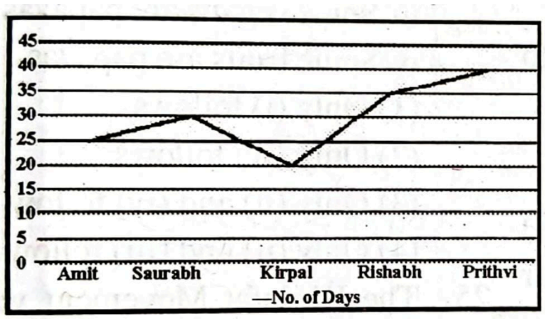
$x^2+4x+4-x^2= 56$

$4x=52$

$x = 13$

Two odd integers are 13, 15

3. The following graph represents the number of days taken by five boys individually to complete a piece of work. If Saurabh and Kirpal work together, find the number of days taken by them to complete the work.



(1) 12 days

(2) 6 days

(3) 20 days

(4) 18 days
ans:(1) 12 days

Explanation:
Number of days taken by Saurabh and Kirpal to complete the work together

$$= \frac{30 \times 20}{30 + 20} = \frac{600}{50}$$
$$= 12 \text{ days}$$

4. Name the element which has an electronic configuration of 2, 8, 7.

(1) Hydrogen

(2) Helium

(3) Chlorine

(4) Carbon
ans:(3) Chlorine
Explanation:
The element having electronic configuration 2, 8, 7 is Chlorine

It is the member of group 17 It is a p - block element which means the valence shel containing the valence shel electrons in the p subshell.

The systematic way of writing the configuration is $1s^2$, 2s2 2p6 3s2 3p5. So the last 5 electrons are filled in p subshell.

Chlorine is a chemical element with the symbol Cl and atomic number 17.

5. Which of the following is NOT a Government of India initiative to attract Foreign Direct Investments (FDI) in India?

(1) The Government of India has cased the approval mechanism for FDI proposals.

(2) Proposals of FDI are mandated to be cleared within ten days of receiving the application.

(3) States must focus on streng-thening the single window clearance system.

(4) The Government of India announced Entrepreneur-ship Curriculum' to be taken up by the states.
ans:(4) The Government of India announced Entrepreneur-ship Curriculum' to be taken up by the states.
Explanation:
A foreign direct investment (FDI) is an investment made by a firm or individual in one country into business interests located in another country. Generally, FDI takes place when an investor establishes foreign business operations or acquires foreign business assets in a foreign company.

India continues to open up its economy to global investors by raising FDI limits, removing regulatory barriers, developing infrastructure and improving business environment. For this,

The Government of India has implemented several initiatives and policies to enhance Foreign Direct Investment (FDI) some of them are:

5G Spectrum Auction, National E-Commerce Policy (Draft), Revised FDI Rules for E-Commerce, National Digital Communications Policy, 2018, Real Estate Broking Services, Single-Window Clearance System, Timely Approval Process, Production Linked Incentive (PLI) Scheme etc

6. Which country ranked first in the world as per the human development index of 2020 ?

(1) Japan

(2) Norway

(3) USA

(4) Australia

ans:(2) Norway
Explanation:
The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledge able and having a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

HDI was published by UNDP.

As per Human Development Index 2020 Norway topped the index, followed by Ireland and Switzerland
Switzerland hold the first position in Human Development Index 2021 and also in 2022.

Norway and Ireland held 2nd and 3rd position in 2021 and 2022.

7. What facilitates remote login on a computer?

(1) HTTP

(2) Telnet

(3) FTP

(4) RTP

ans:(2) Telnet

Explanation:
(2) Telnet

Remote access means any application that empowers users to remotely access another computer (no matter how far away).

Telnet is a network protocol used to virtually access a computer and provide a two-way, collaborative and text-based communication channel between two machines.

Telnet was developed in 1969.

It allows users to execute various application programmes on a distant site and then transport the results back to their local computer.

8. From the 3 sets of statements, A, B and C given below, choose the sets in which the third statement is a logical conclusion of the first two statements.

A. Some cars are Suzuki. All Suzukis are MPVs. Some cars are MPVs.

B. All men are humans. No human is red. No man is red.

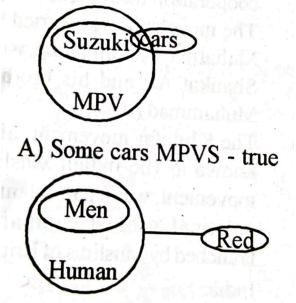
C. Every man loves his wife. All wives are beautiful. No beautiful has a husband.
(1) Only B

(2) Only A

(3) A and B only

(4) B and C only
ans:(3) A and B only

Explanation:



A) Some cars MPVS - true

B) No man is red - true
C) No beautiful has a husband - false

9. When is World Book and Copyright Day celebrated?

(1) 13th May

(2) 23rd April

(3) 19th January

(4) 27th April
ans:(2) 23rd April

Explanation:
World Book and Copyright Day is a celebration to promote the enjoyment of books and reading Each year, on 23 April, celebrations take place all over the world to recognize the scope of books a link between the past and the future, a bridge between generations and across cultures.

On this day UNESCO aims to make a community so that readers across the world can connect with each other in turn combat isolation.

The 2024 theme is 'Read Your Way' which emphasizes nurturing a love for reading across all ages.

10. When is National Panchayati Raj Day observed in India ?

(1) 10th April

(2) 24th April

(3) 4th June

(4) 3rd May

ans:(2) 24th April
Explanation:

The National Panchayati Raj Day, recognized annually by the Ministry of Panchayati Raj on 24th April, commemorates the 73rd Amendment Act, 1992 of the Constitution coming into effect in the year 1993.

This day celebrates the national local self-governance and 'democratic decentralization.

The Prime Minister of India Manmohan Singh declared the first National Panchayati Raj Day on 24 April 2010.

From 2011, the central government of India decided to observe 24 April every year as National Panchayati Raj Day.

11. A sum of 12,000.00 deposited at compound interest becomes double at the end of 5 years. At the end of 15 years the sum will be :

(1) 1,08,000.00

(2) 1,20,000.00

(3) 84,000.00

(4) 96,000.00

ans:(4) 96,000.00
Explanation:
5 years →2 times the amount 15 years →6 times the amount

Sum=12,000×6=96000.00

12. How many such consonants are there in the following arrangement, each of which is immediately followed by a vowel but not preceded by a number?

TRB50%U7C4#KF$2 UE*1813V@9IX@LAB

(1) Two

(2) More than three

(3) Three

(4) One
ans:(4) One

Explanation:
Consonants followed by a vowel = AB
Number of consonants followed by a vowel = 1

13. A circle touches the side BC of triangle ABC at P. Side AB and AC are produced to touch the circle at points Q and R respectively. The length of AQ is:
(1) $\frac{1}{2}$ **(BC+CA+ AB)**

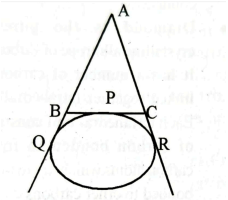
(2) $\frac{1}{2}$(2BC+2CA + 2AB)

(3) $\frac{1}{3}$ (BC + CA + AB)

(4) $\frac{1}{4}$(BC+CA+AB)

ans: (1) $\frac{1}{2}$ (BC+CA+ AB)

Explanation:



AQ = AR, BQ = BP,
CP = CR (tangents)
AB + BC + AC = AB + (BP + PC) + (AR – CR)
=(AB+BQ)+PC+(AQ–PC)
= AQ + AQ = 2AQ
$AQ = \frac{1}{2}(AB + BC + AC)$

14. Which sea route is the busiest in the world?

(1) The South Pacific sea route

(2) The North Pacific sea route

(3) The North Atlantic sea route.

(4) The Cape of Good Hope sca route

ans: (3) The North Atlantic sea route.

Explanation:

The North Atlantic sea route connects two industrially developed parts of the world.

The North Atlantic sea route connects ports of the western coast of Europe with the ports on the east coast of North America. It carries the foreign trade greater than that of the rest of the world combined altogether.

One-fourth of the world foreign trade moves through this route.

15. Which of the following is an allotropic form of carbon?

(1) Gypsum

(2) Chalk

(3) Marble

(4) Diamond

ans: (4) Diamond
Explanation:
Carbon has three main types of allotropes they are graphite. diamond, and fullerene. Different allotropes have different properties, and they have varied levels of electric conductivity.

Diamond is the purest crystalline allotrope of carbon. It has a number of carbons linked together tetrahedrally. Each tetrahedral unit consists of carbon bonded to four carbon atoms which are in turn bonded to other carbons.

Diamond is the hardest naturally occurring substance.

16. Identify the number that does NOT belong to the given series of numbers.

46, 31, 22, 17, 30, -32, -89, -179

(1) -32

(3)-89

(2) 30

(4) 22
ans:(2) 30
Explanation:

The series in decreasing order. But 30 is greater than 17.
30 not belong to series.

17. The ratio of two numbers is 2: 3. When 4 is added to the numbers, the ratio becomes 7: 10. The difference between the numbers is

(1) 12

(3) 08

(2) 10

(4) 24
ans:(1) 12
Explanation:

Let the number be $2x$, $3x$

$$\frac{2x+4}{3x+4}=\frac{7}{10}$$

$20x + 40 = 21x + 28$

$x = 12$

Difference between numbers

$= (3 - 2) \times 12 = 12$

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

Y, V, Q, J, ?

(1) A

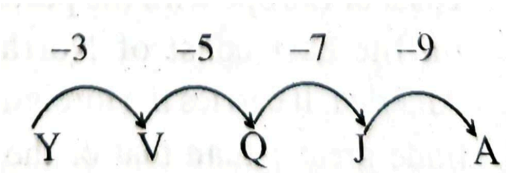
(2) C

(3) D

(4) B

ans:(1) A

Explanation:



19. The difference between the mean of first 5 composite numbers and the mean of the first five prime numbers is:

(1) 1.8

(2) 2.4

(3) 1.6

(4) 2.6

ans:(1) 1.8

Explanation:

Mean of first 5 composite numbers

$$= \frac{4+6+8+9+10}{5} = \frac{37}{5}$$

Mean of first 5 prime numbers

$$= \frac{2+3+5+7+11}{5} = \frac{28}{5}$$

Required difference

$$= \frac{37}{5} - \frac{28}{5} = \frac{9}{5} = 1.8$$

20. Which country was placed first in the Asian Games held in Jakarta in 2018?

(1) Australia

(2) Japan

(3) India

(4) China
ans:(4) China
Explanation:
Indonesia hosted the 2018 Asian Games in Jakarta and Palembang.
China topped the Medal tally with 132 golds and a total of 289 Medals.

China hosted 2022 Asian (held in 2023) Games in Hangzhou China topped the medal tally with 201 golds and a total of 383 medals.

21. Choose the conclusion(s) which logically follow from the given statements.

Statements:

MS Dhoni is a popular cricketer.

All cricketers are fit and healthy.

MS Dhoni earns a handsome amount every year through advertisements of various products.

Conclusions:

A. All popular cricketers earn a handsome amount through advertisement.

B. MS Dhoni is fit and healthy.

C. MS Dhoni, being famous, advertises only famous products.

(1) Conclusions A and C follow

(2) Only conclusion B follows

(3) Only conclusion C follows

(4) Conclusions A and B follow
Ans:(2) Only conclusion B follows

Explanation:
According to the statement MS. Dhoni is popular cricketer, all cricketers are fit and healthy, and MS Dhoni earns good amount on every year and only conclusion B is true.

22. Given below is a paragraph. While S1 and S6 are the first and last sentences of this paragraph, the parts that are labelled 1, 2, 3 and 4 are jumbled up. Rearrange them to form a meaningful and coherent paragraph.

S1: Shruti has been trying to lose weight.

(1) Regular exercising keeps our body fit and healthy.

(2) The trainer has suggested her to start with regular exercising in the morning

(3) She has not yet started her exercising sessions

(4) She says that because of late night office hours, it is difficult for her to get up early in the morning
S6: I think it is just a lame excuse for her laziness.

(1) 1,2,4,3

(2) 3,2,1,4

(3) 2,1,3,4

(4) 4,2,3,1

Ans:(3) 2,1,3,4
Explanation:
The given sentences are arranged in the order 2, 1, 3, 4 to make a meaningful paragraph

23. The value of a car depreciates at the rate of 20% every year. After two years the value of the car will be ₹4,80,000/-. The original price of the car is :

(1) ₹5,50,300/-

(2) ₹6,00,000/-

(3) ₹7,50,000/-

(4) ₹6,20,000/-
Ans:(3) ₹7,50,000/-
Explanation:

Let x be original price,

$$x \times \frac{80}{100} \times \frac{80}{100} = 4,80,000$$

$$x = \frac{4,80,000 \times 100 \times 100}{80 \times 80}$$

$$= 7,50,000$$

24. 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:

A. All papayas are fruits

B. Some fruits are vegetables.

C. All vegetables are vegan.

Conclusions:

i. Some vegetables are papayas

ii. Some vegans are fruits.

iii. Some vegans are papayas.

iv. Some fruits are papayas.

(1) Only (i) follows

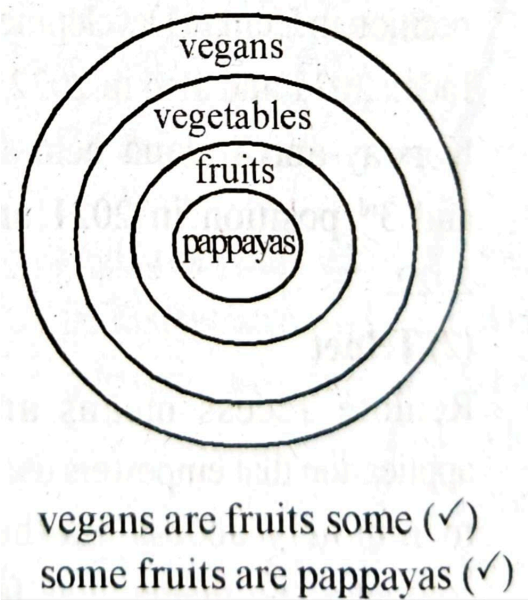
(2) Only (iv) follows

(3) Only (ii) and (iv) follow

(4) Only (ii) and (iii) follow

Ans:(3) Only (ii) and (iv) follow

Explanation:



25. The Khilafat Movement was led by:

(1) Shaukat Ali and Muhammad Ali

(2) Armaan Ali and Muhammad Ali

(3) Shaukat Ali and Armaan Ali

(4) Shaukat Aliond

Ans:(1) Shaukat Ali and Muhammad Ali

Explanation:
The Khilafat Movement is a political campaign launched by Indian Muslims in British India from 1919 to 1922.

It aimed to protest against British policies towards Turkey and the dismantling of the Ottoman Empire after World War I. The movement sought to address the grievances of Turkey and promote Hindu-Muslim unity. The movement ended in 1922 after the conclusion of the non-cooperation movement.

The movement was started by Mahatma Gandhi along with Shaukat Ali and his brother Muhammad Ali

The Khilafat movement, also known as the Indian Muslim movement, was a pan-Islamist political protest campaign launched by Muslims of British India.

26. As of August, 2019, how many Himalayan peaks are open for trekking for domestic and foreign mountaineers?

(1) 137

(2) 120

(3) 140

(4) 130

Ans:(1) 137
Explanation:

The government of India has allowed access to 137 mountain peaks to foreigners desirous of obtaining a Mountaineering Visa for mountaineering and trekking.

These Himalayan peaks are located in the States of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and Sikkim.

The highest number of 51 peaks in Uttarakhand and 15 peaks of Jammu and Kashmir have also been included in the list.

The Indian Adventure Tourism Guidelines 2018 cover land, air, and water-based activities including mountaineering, trekking, paragliding, bungee jumping, river rafting, kayaking, scuba diving, snorkeling, and many other sports.

27. In a school, the number of boys and girls were in the ratio 5:7. Eight more boys were admitted during the session. The new ratio of girls and boys is 1:1 In the beginning the difference between the number of boys and that of girls was :

(1) 10

(2) 12

(3) 02

(4) 08

Ans:(4) 08
Explanation:

Let $5x$ and $7x$ be no. of boys and girls

$$\frac{5x+8}{7x} = \frac{1}{1}$$

$$5x + 8 = 7x$$

$$2x = 8$$

$$x = 4$$

Difference between no.of boys and girls = $(7 - 5) \times 4$

$= 2 \times 4 = 8$

28.

One root of the equation $2x^2 - 8x - m = 0$, is $\frac{5}{2}$

The other root of the equation and the value of m are respectively :

(1) $\frac{5}{2}$ and $\frac{-15}{2}$ (2) $\frac{3}{2}$ and $\frac{-15}{2}$

(3) $\frac{-5}{2}$ and $\frac{15}{2}$ (4) $\frac{-3}{2}$ and $\frac{15}{2}$

Ans:(2)

Explanation:

From options

When $x = \frac{3}{2}$ and $m = \frac{15}{2}$

$2x^2 - 8x - m$

$= 2 \times \left(\frac{3}{2}\right)^2 - 8 \times \frac{3}{2} + \frac{15}{2}$

$= 2 \times \frac{9}{4} - 4 \times 3 + \frac{15}{2}$

$= \frac{9}{2} - 12 + \frac{15}{2}$

$= \frac{9 - 24 + 15}{2}$

$= 0$

LHS = RHS

29. The least multiple of 23 when divided by 18, 21 and 24 leaves the remainder 7, 10 and 13 respectively. The number is :

(1) 3131

(2) 3013

(3) 3103

(4) 3113

Ans:(2) 3013

Explanation:

L.C.M (18, 21, 24) = 504

Here (18-7) = 11, (21-10) = 11,

(24-13)=11

Let the required number be 504k - 11 , k = 6, 504 * 6 - 11 = 3024-11

= 3013

30.

If $P = 2+\sqrt{3}, Q = 2-\sqrt{3}$,

then $\frac{P}{Q}$?

(1) $\frac{7+4\sqrt{3}}{1}$ (2) $4\sqrt{6}+5$

(3) $7-2\sqrt{6}$ (4) $4\sqrt{3}-5$

Ans:(1)

Explanation:

$$\frac{P}{Q} = \frac{2+\sqrt{3}\left(2+\sqrt{3}\right)}{2-\sqrt{3}\left(2+\sqrt{3}\right)}$$

$$= \frac{\left(2+\sqrt{3}\right)^2}{4-3}$$

$$= \frac{4+4\sqrt{3}+3}{1}$$

$$= \frac{7+4\sqrt{3}}{1}$$

31. Which watershed development and management program is being implemented by the central and state governments?

(1) Hariyali

(2) Arvary Pani Sansad

(3) Neeru-Mecru

(4) Desh Sudhar
Ans:(1) Hariyali

Explanation:
Hariyali is a watershed development and management program implemented by the central and state governments. The project is being implemented at the Grama Panchayat level with peoples participation

The main objectives of the Hariyali program are:

*** Harvesting every drop of rainwater for purposes of irrigation, plantations to create sustainable sources of income for the village community as well as for drinking water supplies.**

*** Overall development of rural areas by creating regular sources of income for the Panchayat from rainwater harvesting and management.**

***Employment generation and poverty alleviation in rural areas**

32. How many output ports are there in peripheral I/O?

(1) 256

(3) 264

(2) 24

(4) 512
Ans:(1) 256
Explanation:
The input/output ports are addressed using special instructions such as IN for input and OUT for output.

An 8-bit port address should be followed by the IN or OUT instruction mnemonic.

An 8-bit address is assigned to each I/O device to identify it.

There will be 28 =256 input ports and 256 output ports are possible in an 8085-based microcomputer.

The port number usually followed from 0-255.

33. Who among the following was awarded the Nobel Prize in Literature in the year 2020?

(1) Andrea Ghez

(2) Reinhard Genzel

(3) Louise Gluck

(4) Roger Penrose
Ans:(3) Louise Gluck
Explanation:
The Nobel Prize in Literature for 2020 is awarded to the American poet Louise Gluck "for her unmistakable poetic voice that with austere beauty makes individual existence universal".

Louise Gluck was born in 1943 in New York and lives in Cambridge, Massachusetts. Apart from her writing, she is a professor of English at Yale University, New Haven, Connecticut.

Her collections "The Triumph of Achilles" (1985) and "Ararat" (1990) address "almost brutally straightforward images of painful family relations."

She has received several prestigious awards, the Pulitzer Prize in 1993 for her collection "The Wild Iris" and the National Book Award for her latest collection, "Faithful and Virtuous Night", in 2014.

The 2024 Nobel Prize in Literature was awarded to Han Kang, a south korean author for her intense poetic prose that confronts historical traumas and exposes the fragility of human life.

34. According to the Census of 2011 is the most populated state of India.

(1) Andhra Pradesh

(2) West Bengal

(3) Uttar Pradesh

(4) Tamil Nadu
Ans:(3) Uttar Pradesh

Explanation:
✲According to the Census 2011, the most populated state in India is Uttar Pradesh.

✲The least populated state in the country is Sikkim

✲Most populous Union Territory

Delhi

✲Least populous Union Territory

Lakshadweep

35. Which city is NOT a part of The Golden Quadrilateral highway network?

(1) Mumbai

(2) Hyderabad

(3) Delhi

(4) Kolkata
Ans:(2) Hyderabad
Explanation:
The Golden Quadrilateral highway network is a plan to build four six-lane highways to connect India's four metro cities.

This superhighways connect the cities of Delhi, Kolkata, Chennai and Mumbai.

The National Highways Authority of India is in charge of the Golden Quadrilateral superhighway project.

The length of the Golden Quadrilateral is 5,846 kilometers (3,633 miles)

36. If x : y = 3: 4, (4x+3y): (4y - 4x) = ?
(1) 2:3

(2) 6:1

(3) 1:6

(4) 3:2

Ans:
Explanation:

$$\frac{x}{y}=\frac{3k}{4k} \Rightarrow x=3k, y=4k$$

$$(4x+3y) : (4y-4x)$$
$$= 12k+12k : 4\,(k)$$
$$= 24k : 4\,k = 6 : 1$$

37. How many demands did Mahatma Gandhi make in his letter to Lord Irwin some of which were agreed to and came to be known as Gandhi-Irwin Pact?

(1) 13

(2) 11

(3) 10

(4) 12
Ans:
Explanation:
It was linked to India's civil disobedience campaign.

Mahatma Gandhi and Lord Irwin signed the pact On March 5, 1931.

Before the second round table conference in London, this was arranged.

As per Gandhi-Irwin Pact, Gandhi discontinued the Civil Disobedience movement and agreed to attend the second round table conference.

The Lahore Congress of 1929 had given the mandate to launch the civil disobedience movement along with the non-payment of taxes.

Mahatma Gandhi presented his 11 demands to the Viceroy Lord Irwin and gave him the ultimate of January 31, 1932, to accept these demands.

38. Consider the given statement and decide which of the given assumptions is/are implicit in the statement.
Statement:

The electricity board has started going from home to home to collect bills.

Assumptions:

A. Electricity board considers going home to home an effective way to collect bills.

B. The electricity board has increased its focus on collecting bills.

(1) Both A and B are implicit

(2)Only assumption A is implicit

(3) Neither A nor B is implicit

(4) Only assumption B is implicit

Ans:(1) Both A and B are implicit
Explanation:
According to the statement, electricity board going from home to home to collect bills, and both conclusions are true for given statement

39. What was India's rank in terms of size of economy according to the GDP ranking of 2019?

(1) 7th

(2) 11th

(3) 9th

(4) 5th

Ans:(4) 5th
Explanation:
Gross domestic product (GDF is the most common measure for the size of an economy, and it measures the value of tota final output of goods and services produced by that economy in a certain period of time.

India had overtaken the UK in 2019 to become the fifth largest economy in the world

The United States ranked number one in the 2019 report

India also stands in the 5th place in the world GDP of 2024

40. How many times has India been elected as non-permanent member of the UN Security Council till Oct, 2020?

(1) 4

(2) 8

(3) 5

(4) 10
Ans:(2) 8
Explanation:
The United Nations Security Council is one of the UN'S most important bodies.

It is in charge of maintaining international peace and security in the first place.

India has been elected as a non-permanent member of the UN Security Council 8 times till Oct 2020.

India has been elected as a non-permanent member of the Council for the years 1950-1951, 1967 1968, 1972 1973, 1977 1978, 1984. 1985, 1991-1992, 2011-2012, and 2021-2022.

India assumed the presidency of the United Nations Security Council (UNSC) for one month in August 2021.

41. A positively charged ion is called a/an:

(1) anion

(2) cation

(3) molecule

(4) atom
Ans:(2) cation
Explanation:
Cations are positively charged ions and they are formed when a metal loses its electrons.

For example Calcium (Ca^2), Potassium (K), Hydrogen (H*)

Anions are negatively charged ions

Atom is the smallest particle of a chemical element that can exist.

Molecule is made up of one or more atoms.

42. Three electronic bells are fixed in three adjoining temples. The priests of these temples decided to ring the bells at different times with the intervals of 2, 3 and 5 min. If the bells start: tolling together for the first time at 8:00:00 in the morning, up to 9:00:00 in the morning they will toll together:
(1) 5 times after the starting time
(2) 2 times after the starting time
(3) 15 times after the starting time
(4) 4 times after the starting time
Ans:(2) 2 times after the starting time
Explanation:
LCM (2, 3, 5) = 30 min

Difference between 8:00-9:00 = 1 hour

Bell ring in 60 min= 60 30 =2 times

Bell ring 2 times after the starting time
43. The denominator of a fraction is 2 more than the numerator. When the numerator is multiplied by 3 and the denominator is multiplied by 2 the fraction becomes $\frac{1}{2}$ The given fraction is:

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

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

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

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

Ans:
Explanation:
Let x be the numerator

$$\frac{x \times 3}{2(x+2)} = \frac{1}{2}$$
$$6x = 2x + 4$$
$$4x = 4$$
$$x = 1$$
Denominator = 3

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

44. Devesh leaves his home every day at 7 a.m. and reaches office at 8:30 am. One day he left his home at 7 a.m. but travelled a fifth of the distance at 5/6 of the usual speed and the rest of the distance at 6/5 of the usual speed. Approximately at what time did Devesh reach office on that day?

(1) 8:40 a.m.

(2) 8:25 a.m.

(3) 8:21 a.m.

(4) 8:36 a.m.
Ans:(3) 8:21 a.m.

Explanation:

Let 'd' be the distance and 's' be the speed

Time = 8 : 30 – 7 = 1.5 hours

$$\frac{d}{5}\times\frac{6}{5}s+\frac{4d}{5}\times\frac{5}{6}s$$

$$=\frac{6d}{25s}+\frac{2d}{3s}$$

$$=\left(\frac{6}{25}+\frac{2}{3}\right)\times\frac{d}{s}$$

$$=\frac{68}{75}\times 1.5$$

$$=\frac{68}{75}\times\frac{3}{2}=\frac{34}{25}$$

$$=1\text{ hour }\frac{9}{25}\times 60\text{ min}$$

= 1 hour 21 min

Devesh reach at office at 8 : 21 am

45. A sector is cut off from a circle of radius 21 cm. The angle of the sector is 40 degrees. Find the area of the sector in square cm?

(1) 156

(2) 154

(3) 144

(4) 145

Ans:(2) 154

Explanation:

$$\text{Area of sector} = \frac{\pi r^2 \theta}{360}$$

$$= \frac{22 \times 21 \times 21 \times 40}{7 \times 360}$$

$$= 154 \text{ cm}^2$$

46. When the side of an equilateral triangle is made three times the original side, the area of the new equilateral will become:

(1) 3 times of the original area

(2) 6 times of the original area

(3) 9 times of the original area

(4) 12 times of the original area

Ans:(3) 9 times of the original area
Explanation:

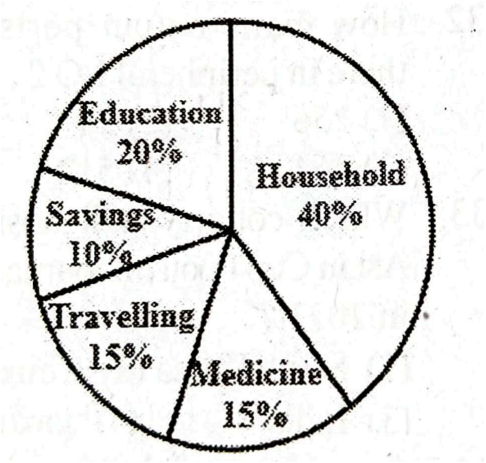
$$\text{Area of equilateral triangle} = \frac{\sqrt{3}}{4}a^2$$

$$\text{New area} = \frac{\sqrt{3}}{4}(3a)^2$$

$$= \frac{\sqrt{3}}{4}9a^2 = 9\left(\frac{\sqrt{3}}{4}a^2\right)$$

9 times of the original area

47. The Pie Chart represents the share of savings and expenses under different heads, from the monthly salary of Manish



If Manish's salary is ₹ 50,000 and he wishes to double his monthly savings and spend 50% of the balance amount on his Household expenses, by what amount would he need to reduce on the other expenses.

(1) ₹20,000

(2) ₹5,000

(3) ₹10,000

(4) ₹15,000
Ans:
Explanation:

Old savings $= 50{,}000 \times \frac{10}{100}$

$= 5000$

Old household expense

$= 50{,}000 \times \frac{40}{100} = 20{,}000$

Old amount on other expense

$= 50{,}000 - (20{,}000 + 5000)$

$= 25{,}000$

New savings $= 5000 \times 2$

$= 10{,}000$

New balance $= 40{,}000$

House hold expense

$= 40{,}000 \times \frac{50}{100}$

$= 20{,}000$

Other expense $= 50000 - (10{,}000+20{,}000) = 20{,}000$

Required reduction

$= 25{,}000 - 20{,}000 = 5000$

48. The difference between the compound interest compounded anually and the simple interest on a certain sum of money for 2 years at 4% per anmum is 20.00, The sum is:

(1) ₹11,500.00

(2) ₹8,500.00

(3) ₹12,500.00

(4) ₹10,500.00

Ans:(3) ₹12,500.00

Explanation:

$$\text{Difference} = P \times \left(\frac{r}{100}\right)^2$$

$$20 = P \times \frac{4^2}{(100)^2}$$

$$P = \frac{20 \times 100^2}{16} = 12500$$

49. For which Indian spice did the Indian government challenge the US patenting and force them to revoke it ?

(1) Clove

(2) Mustard

(3) Turmeric

(4) Cardamom

Ans:(3) Turmeric

Explanation:

Indian government challenges the US for patenting turmeric and forces them to revoke it. American researchers of Indian origin, Suman K. Das and Hari Har P. Cohly of the University Of Mississippi Medical Center put a claim to the US Patent and Trademark Office, maintaining that they had discovered haldi's healing properties.

In March 1995, they received a patent for the Haldi medication.

On March 6, 1997, the United States filed its first complaint with the World Trade Organization (WTO) against India's 'patent protection for pharmaceutical and agricultural chemical products.'

The Council of Scientific and Industrial Research requested a reexamination from the US Patent Office.

This came after Indian experts screamed from the rooftops about how we are losing our traditional knowledge to marauding foreign firms stealing our ancient medicinal practices.

The US Patent Office said it made a mistake and revoked the turmeric patent.

50. What type of pollution causes various diseases related to the respiratory system?

(1) Water pollution

(2) Noise pollution

(3) Air pollution

(4) Land pollution
Ans:(3) Air pollution
Explanation:

Air pollution has an impact on most of the organs and systems of the human body.

Air pollution causes various diseases related to the respiratory system such as:

♦ Chronic obstructive pulmonary disease (COPD)

♦Lung Cancer

♦Asthma

Air pollutants have complex chemical and physical features dependent on the sources of pollutants.

Pneumoconiosis is a respiratory disease commonly found in coal minors.

51. The Rowlatt Act was passed in —----------

(1) 1921

(2) 1922

(3) 1919

(4) 1920

Ans: (3) 1919
Explanation:
The Rowlatt Act was passed by the British government to increase their grip on power over the common folk.

This law was passed in March 1919 by the Imperial Legislative Council which gave them the power to arrest any person without any trial.prala

To abolish this act, Gandhi and the other leaders called for a Hartal (suspension of work) to show Indians' objection to this rule, called the Rowlatt Satyagraha. od mode

Anti-Rowlatt Satyagraha movement was started by Gandhiji against the Rowlatt Act, 1919 for the exclusion of freedom of press and detention without trial

52. Two men start travelling from the same place in the same direction at the rate of 5 km/h and 5.5 km/h respectively. To be 8.5 km apart from each other, the time taken by them is

(1) 16 h 15 min

(2) 17h

(3) 4 h 15 min

(4) 8 h 30 min

Ans: (2) 17h
Explanation:
Relative speed = 5.5-5 = 0.5 km/h
Distance =8.5 km
time = $\frac{8.5}{0.5}$ **= 17 hours**

53. From the top of a building 60 m high, the angles of depression of the top and the bottom of a tower are 30° and 60° respectively. The height of the tower is:

(1) 18 m

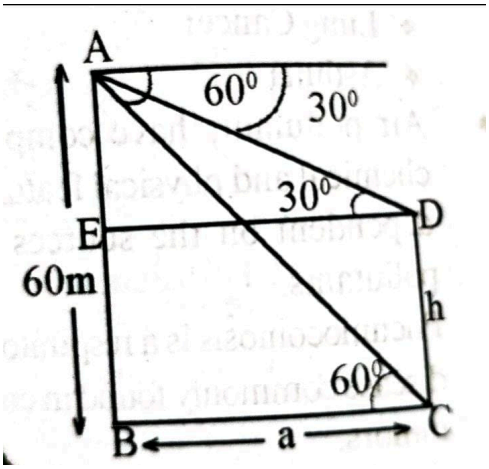
(2) 40 m

(3) 30 m

(4 30 m

Ans: (2) 40 m

Explanation:



$$\tan 30^\circ = \frac{AE}{DE}$$

$$\frac{1}{\sqrt{3}} = \frac{60-h}{a}$$

$$a = 60\sqrt{3} - \sqrt{3}h$$

$$\tan 60^\circ = \frac{AB}{BC}$$

$$\sqrt{3} = \frac{60}{a}$$

$$\sqrt{3} = \frac{60}{60\sqrt{3} - \sqrt{3h}}$$

$$60 = 180 - 3h$$

$$h = \frac{180-60}{3}$$

$$h = 40 \text{ m}$$

Height of tower is 40 m

54. India has ——— states and ———— union territories as of 31 October, 2020.

(1) 26 and 6

(2) 29 and 9

(3) 24 and 7

(4) 28 and 8

Ans: (4) 28 and 8
Explanation:
As of 31st October 2020, India comprises twenty-eight states and eight union territories.

The 8 union territories in India include Delhi, Jammu and Kashmir, Ladakh, Dadra and Nagar Haveli and Daman and Diu, Puducherry, Chandigarh, Andaman, and the Nicobar Islands, and Lakshadweep.

As per the Jammu and Kashmir Reorganization Act, 2019, two Union Territories of Jammu and Kashmir and Ladakh were appointed to the two Union Territories.

This is the first time in history that a state is being bifurcated into two union territories. Now, as of 26 January 2020, the total number of states in the country is 28, and India now has 8 union territories.

The Union Territory of Daman and Diu, Dadra, and Nagar Haveli has become a Union Territory with effect from 26 January by a bill passed by the Parliament during the winter season. With the merger of Daman and

Diu and Dadra and Nagar Haveli, the number of Union Territories in India has gone up to eight.

55. During which five year plan di India opt for a mixed economy

(1) Second Five Year Plan

(2) Fourth Five Year Plan

(3) First Five Year Plan

(4) Third Five Year Plan

Ans: (1) Second Five Year Plan
Explanation:
The second five year plan was conceived in an atmosphere of economic stability.

India opted for a mixed economy during the 2nd five year plan to achieve rapid economic growth, promote social welfare and build a strong industrial base

Industries got more importance in the second five-year plan.

The Indian government boosted the manufacturing of industrial goods in the country This was done primarily to develop the public sector.

The Plan focused on rapit industrialization- heavy basic industries and advocated huge imports through foreign loans.

56. Who was the first Muslim President of the Indian National Congress ?

(1) Badruddin Tyabji

(2) Dada Bhai Naoroji

(3) Nawab Syed Muhammad Bahadur

(4) Abul Kalam Azad

Ans: (1) Badruddin Tyabji
Explanation:
Badruddin Tyabji was the first Muslim President of INC and third president of INC in 188

Badruddin Tyabji was a prominent lawyer, Indian independence movement activist, and politician during times of British India.

57. Who founded India's three stage Nuclear Power Programme?

(1) K Kasturirangan

(2) Dr. Homi Bhabha

(3) APJ Abdul Kalam

(4) Vikram Sarabhai

Ans: (2) Dr. Homi Bhabha
Explanation:
Homi Jehangir Bhabha was an Indian nuclear physicist known as father of the Indian nuclear programme. Founding director of Tata Institute of fundamental Research and Bhabha Atomic Research Centre.

India's three-stage nuclear power program was formulated by Homi Bhabha in the 1950s to secure the country's long-term energy independence, through the use of uranium and thorium reserves found in the monazite sands of coastal regions of South India

The program's ultimate goal is to fully exploit India's massive Thorium deposits and become self-sufficient in nuclear energy generation. India has little native uranium resources. However we have plenty of Thorium. India has planned a three stage nuclear programme to use Thorium.

Thorium is particularly attractive for India, as it has only around 1-2% of the global uranium reserves, but one of the largest shares of global thorium reserves.

However, at present thorium is not economically viable because global uranium prices are much lower.

The recent Indo-US Nuclear Deal and the NSG waiver, which ended more than three decades of international isolation of the Indian civil nuclear program, have created many hitherto unexplored alternatives for the success of the three-stage nuclear power program.

Thorium itself is not a fissile material and thus cannot undergo fission to produce energy.

58. In an examination a student scored 65% marks but was 20 marks below the qualifying marks. Another student scored 80% marks and scored 5% more marks than the qualifying marks, Total marks of the examination are:

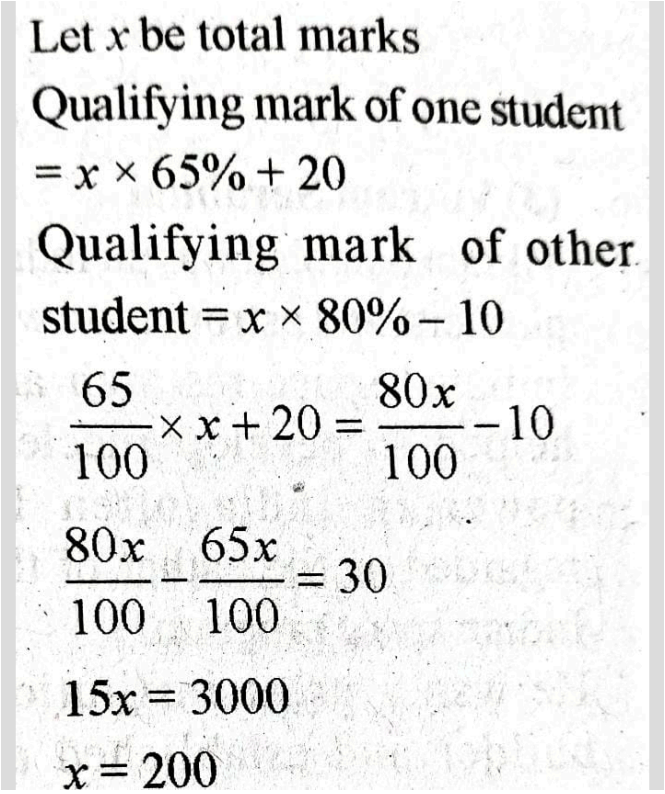
(1) 500

(2) 200

(3) 300

(4) 400

Ans: (2) 200
Explanation:


Let x be total marks

Qualifying mark of one student $= x \times 65\% + 20$

Qualifying mark of other student $= x \times 80\% - 10$

$$\frac{65}{100} \times x + 20 = \frac{80x}{100} - 10$$

$$\frac{80x}{100} - \frac{65x}{100} = 30$$

$$15x = 3000$$

$$x = 200$$

59. In the parallelogram ABCD, AL and CM are perpendicular to CD and AD respectively, AL=20 cm, CD =18 cm and CM-15 cm. The perimeter of the parallelogram is:

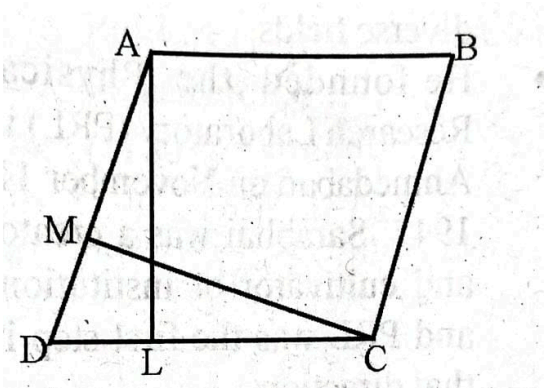
(1) 80 cm

(2) 84 cm

(3) 76 cm

(4) 64 cm

Ans: (2) 84 cm
Explanation:



Area of ABCD

$= 18 \times 20 = 360 \text{ cm}^2$

$AD \times CM = 360$

$AD \times 15 = 360$

$AD = \frac{360}{15} = 24\text{cm}$

Perimeter $= 2\,(24 + 18)$

$= 2 \times 42$

$= 84$ cm

60. What was the main reason for calling off the Non-Cooperation Movement by Gandhiji in 1922?

(1) Gandhiji was seriously ill

(2) A police station at Chauri Chaura in Uttar Pradesh was set on fire by a mob

(3) The movement was completed by achieving the target.

(4) Gandhiji was arrested and compelled to stop the movement

Ans: (2) A police station at Chauri Chaura in Uttar Pradesh was set on fire by a mob
Explanation:
The Non-cooperation movement was launched on 5th September 1920 by the Indian National Congress (INC) under the leadership of Mahatma Gandhi.
In September 1920, in a Congress session in Calcutta, the party introduced the Non Cooperation program.

The Non-Cooperation Movement was a sequel to the Rowlatt Act, the Jallianwala Bagh massacre, and the Khilafat Movement.

It was approved by the INC at the Nagpur session in December 1920. Khadi & Charkha became a symbol of NCM.

The Non-Cooperation Movement was called off by Gandhiji after the incident of Chauri Chaura in Uttar Pradesh. On 5th Feb of 1922, the protest became violent when protesting people set fire to a Police Station, burning 22 Policemen alive.

Gandhiji felt that the movement was turning violent and satyagrahis needed proper training before they were ready for a mass struggle.

61. Which of the following is NOT a computer component ?

(1) Memory

(2) Paper

(3) CPU

(4) ALU

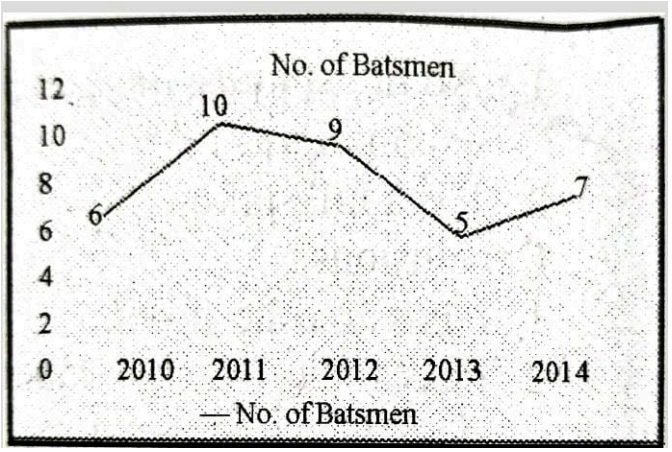
Ans: (2) Paper
Explanation:
Paper is not a computer component

A computer is an electronic device that receives data, processes it and gives meaningful information.

The processed data in a computer is called information.

Functional units of a computer are: Input, Central Processing Unit and Output.

62. The following line graph shows the number of batsmen who scored 500+ runs in the Indian Cricket League from 2010 to 2014 In which year did the maximum number of batsmen score 500 + runs?



(1) 2012

(2) 2014

(3) 2011

(4) 2013

Ans: (3) 2011

Maximum number of batsman scored 500+ runs in 2011 = 10

63. By reducing the selling price of an article by 50.00, a gain of 5% turns into a loss of 5%. Original selling price is :

(1) ₹550.00

(2) 525.00

(3) ₹600.00

(4) ₹500.00

Ans: (2) 525.00
Explanation:

Let x be original price

$$\frac{x \times 100}{105} = (x - 50) \times \frac{100}{95}$$

$$19x = 21x - 1050$$

$$2x = 1050$$

$$x = 525$$

64. Which of the following is in the third trophic level of the food chain?

(1)Primary consumers

(2) Secondary consumers

(3) Producers

(4) Top consumers

Ans: (2) Secondary consumers
Explanation:
A food chain shows the feeding relationship between different organisms in a particular environment and/or habitat.

A food chain shows how energy is passed from the sun to producers, from producers to consumers, and from consumers to decomposers such as fungi. They also show how animals depend on other organisms for food.

Based on the source of their nutrition or food, organisms occupy a specific place in the food chain that is known as their trophic level.

Producers belong to the first trophic level, herbivores (primary consumer) to the second and carnivores (secondary consumer) to the third.

The important point is that the amount of energy decreases at successive trophic levels.

65. Simplify the following.

$$\frac{1}{2} \div \left(\frac{1}{2} \times \frac{1}{2}\right) \times \frac{1}{2} + \frac{1}{2} \div \left(\frac{1}{4} \times \frac{3}{4}\right)$$

(1) $\frac{11}{8}$

(2) $\frac{11}{3}$

(3) $\frac{11}{2}$

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

(2) $\frac{11}{3}$

Ans:

Explanation:

$$\frac{1}{2} \div \frac{1}{4} \times \frac{1}{2} + \frac{1}{2} \div \frac{3}{16}$$

$$= 2 \times \frac{1}{2} + \frac{1}{2} \times \frac{16}{3}$$

$$= 1 + \frac{8}{3} = \frac{11}{3}$$

66. Who is known as the Father of India's Space Programme?

(1) Anuj Lall

(2) Aditya Sarabhai

(3) Vikram Sarabhai

(4) Vikram Seth

Ans: (3) Vikram Sarabhai

Explanation:

Vikram Sarabhai was an Indian physicist and astronomer who initiated space research and helped to develop nuclear power in India often regarded as the Father of the Indian space program.

He was a great institution builder and established or helped to establish a large number of institutions in diverse fields.

He founded the Physical Research Laboratory (PRL) in Ahmedabad on November 11, 1947. Sarabhai was a creator and cultivator of institutions and PRL was the first step in that direction.

Vikram Sarabhai is the first chairman of ISRO and also served as the Chairman of Atomic Energy Commission

Dr. Sarabhai was very interested in science education and founded a Community Science Centre at Ahmedabad in 1966. Today, the Centre is called the Vikram A Sarabhai Community Science Centre.

67. Which agency was created by the United Nations to provide emergency food and health care to children and mothers in the countries affected by World War II ?

(1) UNESCO

(2) IMF

(3) WHO

(4) UNICEF
Ans: (4) UNICEF
Explanation:
The United Nations Children's Fund (UNICEF), originally known as the United Nations International Children's Emergency Fund, was created by

the United Nations General Assembly on 11 December 1946, to provide emergency food and healthcare to children and mothers in countries that had been devastated by World War II.

UNICEF's mandate was expanded in 1950 to include the long-term needs of children and women in underdeveloped nations around the world.

The phrases "international" and "emergency" were omitted from the organization's name in 1953 when it became a permanent member of the United Nations System, however, the abbreviation "UNICEF" was kept.

It is the successor of the League of Nations International Children's Emergency Fund. The headquarters of UNICEF is located in New York City, USA

In 1965, UNICEF received the Nobel Peace Prize.

68. Simplify the following.

$$2.2 \times 0.2 \div (0.4 \times \frac{1}{2})$$
$$-\frac{1}{2} \times 4(1.04 - 0.2 \times 0.2)$$

(1) 0.3

(2) 0.6

(3) 0.2

(4) 0.5
Ans: (3) 0.2

Explanation:

$$2.2 \times 0.2 \div 0.2 - \frac{1}{2} \times 4 \times 1$$
$$2.2 \times 1 - 2 = 0.2$$

69. When 5 men can build a wall in 12 days, to build a wall 50% more than the original wall in 10 days, the number of men required is:

(1) 4

(2) 8

(3) 7

(4) 9

Ans: (4) 9
Explanation:

$$\frac{M_1 D_1}{w_1} = \frac{M_2 D_2}{w_2}$$
$$\frac{5 \times 12}{100} = \frac{M_2 \times 10}{150}$$
$$M_2 = \frac{150 \times 5 \times 12}{1000} = 9 \text{ mins}$$

70. Who led the Non-cooperation Movement in 1920-22?

(1) Jawaharlal Nehru

(2) Mahatma Gandhi

(3) Subhash Chandra Bose

(4) Motilal Nehru

Ans: (2) Mahatma Gandhi
Explanation:
In 1920 the non-cooperation movement was established.

The non-cooperation activity was Gandhi's first mass political movement. It was founded on September 5, 1920 by the Indian National Congress (INC) under the leadership of Mahatma Gandhi.

The party started the non-cooperation program in September 1920 at a Congress session in Calcutta.

The main goal of the non-cooperation movement was to work towards the abolition of untouchability in society. After the Chauri Chaura incident in the Gorakhpur region of Uttar Pradesh, Gandhi abruptly called off the movement on February 11, 1922. (22 policemen were burnt).

71. If $x\sqrt{12} = 4 + x\sqrt{3}$, the value of x is :

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

(2) $\sqrt{3}$

(3) $-\sqrt{3}$

(4) $2\sqrt{3}$

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

Explanation:

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

  $x\sqrt{3} = 4$

  $x = \frac{4}{\sqrt{3}}$

72. The least number that should be added to the largest three digit number to make it a perfect square, is :

(1) 01

(2) 12

(3) 25

(4) 24

Ans: (3) 25
Explanation:
Largest 3 digit number = 999
The perfect square near to 999 is 1024
Number added
= 1024-999 = 25

73. When did India test its first atomic bomb?

(1) 1969

(2) 1981

(3) 1976

(4) 1974

73. When did India test its first atomic bomb?

(1) 1969

(2) 1981

(3) 1976

(4) 1974

Ans: (4) 1974
Explanation:
India tested its first successful atomic bomb in May 1974.

The code name of the operation was Smiling Buddha.

The Indian Army, under the supervision of several important Indian generals, detonated the bomb on the army facility Pokhran Test Range (PTR) in Rajasthan.

It was India's first successful nuclear bomb test. It was also the first confirmed nuclear weapons test by a country not among the UN Security Council's five permanent members.

This test was described by the Indian Ministry of External Affairs (MEA) as a "peaceful nuclear explosion."

The Second Nuclear experiment was conducted by India in May 1988 and the code name was Operation Shakti.

It is a series of five nuclear weapon tests. The Bombs were detonated at the Indian Army's Pokhran Test Range in Rajasthan.

74. When the shadow of a pole of 10 m height is 10 $\sqrt{3}$ m, the angular elevation of the Sun is :

(1) 30°

(2) 60°

(3) 90°

(4) 75

Ans: (1) 30°
Explanation:

$$\tan\theta = \frac{10}{10\sqrt{3}}$$

$$= \tan\theta = \frac{1}{\sqrt{3}}$$

$$\theta = 30^\circ$$

75. Where was the 11th World Hindi Conference held in 2018?

(1) Chandigarh

(2) Kolkata

(3) Mauritius

(4) Mumbai

Ans: (3) Mauritius
Explanation:
The World Hindi Day, also known as the Vishwa Hindi Diwas is marked on January 10 every year.

The day is celebrated with its primary focus on the history and promotion of the Hindi language worldwide.

World Hindi Day is actually celebrated on the same day when the first World Hindi Conference took place in 1975.

World Hindi Day marks the anniversary of the conference that was inaugurated by the then Prime Minister of India, Indira Gandhi, in Nagpur.

The 11th World Hindi Conference, an event aimed at expanding the reach of the Hindi language at a global level, began in Mauritius on 18 August 2018.

Mauritius Prime Minister Praveen Kumar Jagannath inaugurated the conference in Port Louis. Former External Affairs Minister Sushma Swaraj and other ministers are also reaching Port Louis to attend the event.

The 12th world Hindi conference was held in Nadi, Fiji from 15-17 February 2023.

76. Given below is a paragraph. While S1 and S6 are the first and last sentences of this paragraph, the parts that are labelled 1, 2, 3 and 4 are jumbled up. Rearrange them to form a meaningful and coherent paragraph.

S1: Several metro lines have been planned in the NCR.

(1) Redline is the first among them

(2) They are expected to alleviate the problem of transportation.

(3) It starts from Shahdara and terminates at Tiz-Hazari in the initial phase.

(4) It caters to over 1 lakh commuters at present.

S6: Hopefully, the public transportation problem will not be as acute after all the metro lines are completed.

(1) 2, 3, 4, 1

(2) 1, 3, 4, 2

(3) 2, 1, 3, 4

(4) 1, 2, 3, 4

Ans: (3) 2, 1, 3, 4
Explanation:
The given sentences are arranged in the order 2, 1, 3, 4 to make a meaningful paragraph.

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

Gravity: Discovery:

Telephone: ?

(1) Explore

(2) Invention

(3) Experiment

(4) Construct

Ans: (2) Invention
Explanation:
Gravity was discovered by Isaac Newton.

Telephone was invented by Alexander Graham Bell

78. Which number from among the given options will come in place of (*) in the given number series?

1, 1, 2, 8, 3, 27, 4,(*), 5, 125....

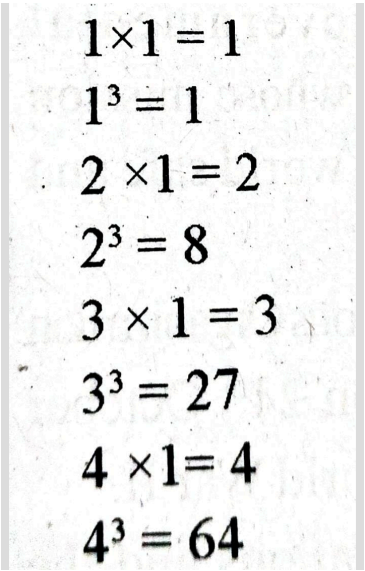
(1) 96

(2)64

(3) 36

(4) 32

Ans: (2)64
Explanation:


$1 \times 1 = 1$
$1^3 = 1$
$2 \times 1 = 2$
$2^3 = 8$
$3 \times 1 = 3$
$3^3 = 27$
$4 \times 1 = 4$
$4^3 = 64$

79. Two statements are given followed by two conclusions. Considering the two statements to be true irrespective of the commonly known facts, decide which of the two conclusions follow logically from these two statements.
Statements:

1: All hill stations have an echo-point.

2: P is a hill station.

Conclusions:

1: P has an echo-point.

2: Places other than hill stations do not have echo-points.

(1) Both conclusion 1 and conclusion 2 follow

(2) Only conclusion 1 follows

(3) Only conclusion 2 follows

(4) Neither conclusion 1 nor conclusion 2 follows

Ans: (2) Only conclusion 1 follows
Explanation:
According to the statement, all hill stations have an echo point and P is a hill station and only conclusion 1 is true for the statement.

80. When a number n is divided by 5, the remainder is 2. When n^2 is divided by 5, the remainder will be:

(1) 3

(2) 0

(3) 4

(4) 1

Ans: (3) 4
Explanation:

$\frac{n}{5} \rightarrow$ remainder $= 2$

$n = 7$ satisfy the condition.

$49 = 9 \times 5 + 4$ as

Remainder $= 4$

81. What does WCCB stand for in the context of Environment and Forest ?

(1) World Crime Control Bureau

(2) Wildlife Crime Control Bureau

(3) World Conservation Control Bureau

(4) Wildlife Conservation Control Bureau

Ans: (2) Wildlife Crime Control Bureau
Explanation:
Wildlife Crime Control Bureau is a statutory multi-disciplinary body.

It was established by the Government of India under the Ministry of Environment and Forests, to combat organized wildlife crime in the country.

The Wildlife Crime Control Bureau has its headquarters in New Delhi.

The provisions of the Wild Life (Protection) Amendment Act of 2006 came into effect on 4th September 2006.

82. How many organisations are a part of the United Nations in India?

(1) 28

(2) 22

(3) 26

(4) 12

Ans: (3) 26
Explanation:
The United Nations is an intergovernmental organisation whose mission is to keep the world safe and secure.

The United Nations Organization was formed on 24th October 1945, after World War II.

The United Nations and the Government of India have a long history of close cooperation,

India is a member of the United Nations since its inception.

On June 26, 1945, India and 50 other countries signed the United Nations Charter.

The United Nations system includes 26 organisations that have the privilege to serve in India. The Resident Coordinator. the designated representative of the UN Secretary-General to the Government leads the UN Country Team to advocate the mandate of the United Nations, while drawing on the support and guidance of the entire UN family.

The United Nations provides strategic support to India to help the country achieve its aspirations to end poverty and inequality and to promote sustainable development in line with the globally agreed SDGs. The UN also supports India, as the world's largest democracy, in the country's ambitious commitments to rapid change and development priorities.

83. Who are the famous Indian women lawyers who led the legal battle to strike Section 377 of the Indian Penal Code (IPC)?

(1) Karuna Nandi and Vrinda Grover

(2) Menaka Guruswamy and Arundhati Katju

(3) Menaka Gandhi and Arundhati Roy

(4) Menaka Guruswamy and Pinky Anand
Ans: (2) Menaka Guruswamy and Arundhati Katju
Explanation:
Katju and Guruswamy represented the petitioners against the ban on consensual gay sex in the country,

The duo highlighted those who suffered under the law by enlisting more than two dozen gay, lesbian, bisexual, and transgender people as co-petitioners.
They contested that people risked arrest for publicly identifying themselves as part of the LGBTQ (lesbian, gay, bisexual, transgender, queer) community

In September 2018, a constitutional bench of the Supreme Court partly struck down Section 377 in a unanimous decision.

The judgment was considered groundbreaking, as the country's top court finally overturned a colonial-era ban imposed on consensual gay sex.

The judgment was regarded as a welcome step in affirmation of human dignity.

84. If $\sqrt{3}\tan 2\theta - 3 = 0$ then θ is :

(1) $60°$

(2) 45°

(3) 150°

(4) 30°

Ans: (4) 30°

Explanation:

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

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

$$2\theta = 60°,\ \theta = 30°$$

85 Which of the following rural housing schemes by the Government of India is re structured into Pradhan Mants Gramin Awas Yojana ?

(1) Rajiv Awas Yojana

(2) Deendayal Antyodaya Yojana

(3) Jawahar Gram Samridhi Yojana

(4) Indira Awas Yojana

Ans: (4) Indira Awas Yojana

Explanation:

Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) is to achieve the objective of Housing for All by 2022, the erstwhile rural housing scheme Indira Awaas Yojana (IAY) was restructured to Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) on 1* April 2016.

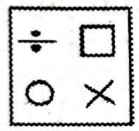
This scheme was launched by the Ministry of Rural Development.

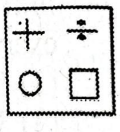
This scheme aims to provide a pucca house with basic amenities to all rural families, who are homeless or living in kutcha or dilapidated houses by the end of March 2022.

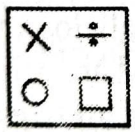
To help rural people Below the Poverty Line (BPL) in the construction of dwelling units and the upgradation of existing unserviceable kutcha houses by assisting in the form of a full grant.

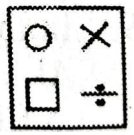
Beneficiaries of this scheme are People belonging to SCs/STs, freed bonded laborers and non-SC/ST categories, widows or next-of-kin of defence personnel killed in action, ex-servicemen, and retired members of the paramilitary forces, disabled persons, and minorities.

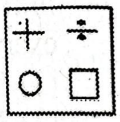
86. Choose the figure that is different from the others.

(1) 

(2) 

(3) 

(4) 

(2) 

Ans:

Explanation:

Option 2 contains '+'
All other option have '×',
∴ option 2 is odd one

87. Given below is a main statement followed by four subsidiary statements.

From the given options, choose the ordered pair of subsidiary statements, where the first statement implies the second and the two statements are logically consistent with the main statement.

Main Statement:

You can drive over 60 km/h only on the national highways Subsidiary Statements:

A. You are on the national highway.

B. You cannot drive over 60 km/h

C. You can drive over 60 km/h

D. You are not on the national highway.

(1) DB

(2) AB

(3) DA

(4) CD

Ans: (1) DB
Explanation:
A) You can drive over 60km/hr only on national highways. So first statement does not implies the given statement

B) You cannot drive over 60km/h which means you are not on the national highways B and D implies the given statement

C) C does not imply.
88. Last year, there were three sections in a competitive exam Out of them 33 students cleared the cut-off in Section A. 34 students cleared the cut-off in Section B and 32 students cleared the cut-off in Section C 10 students cleared the cut-off in section A and section B. 9 9 cleared the cut-off in section B and section Cand 8 cleared the cut-off in section A and section C. The number of students who cleared only one section was equal and was 21 for each section. How many students cleared all the three sections?

(1)6

(2) 8

(3) 7

(4) 9

Ans: (1)6
Explanation:
Number of students cleared three sections
= (10+8+9)-21
= 27-21=6

89. Five students Radha, Sujit, Mihir, Anshul and Vikas have a total of five books on the subjects of Accountancy, Business Studies, Mathematics, 9 Economics and English, written by authors Jain, Kohli, Das, Sharma and Edwin. Each student has only one book on one of the five subjects.

Jain is the author of the Accountancy book, which is not owned by Vikas or Radha. 9

Anshul owns the book written by Edwin.

Mihir owns the Mathematics book.

Vikas has the English book, which is not written by Kohli.

The Economics books are written by Sharma.

Identify the author of the Business Studies book

(1) Jain

(2) Edwin

(3) Das

(4) Sharma

Ans: (2) Edwin
Explanation:

Students	Books	Authors
	Accountancy	Jain
	Economics	Sharma
Mihir	Mathamatics	Kohli
Arishul	Business studies	Edwin
Vikas	English	

Edwin is the author of bewoners studies book

90. Pointing to a photograph, Rohit said, "She is the daughter of the only son of my father." How is Rohit related to the girl in the photograph?

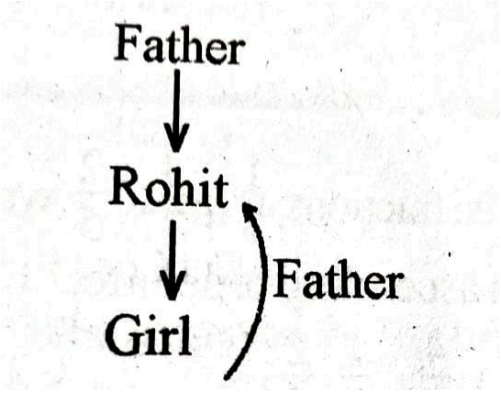
(1) Uncle

(2) Father

(3) Cousin

(4) Brother

Ans: (2) Father
Explanation:



91. Select the number from among the given options that can replace the question mark (?) in the following series. 4, 14, 60, 248, ?

(1) 1020

(2) 1008

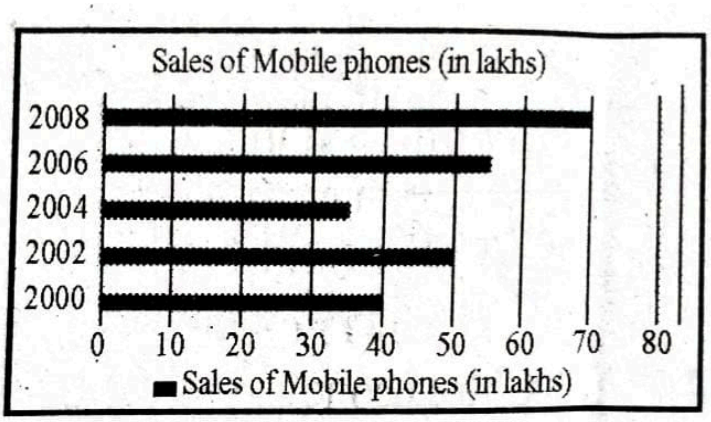
(3) 1012

(4) 1016

Ans: (2) 1008
Explanation:

$4 = 4^1 - 0$
$14 = 4^2 - 2^1$
$60 = 4^3 - 2^2$
$248 = 4^4 - 2^3$
$4^5 - 2^4 = 1024 - 16 = 1008$

92. Based on the bar graph given. calculate the approximate percentage increase in sales of mobile phones from 2004 to 2008.



(1) 50%

(2) 150%

(3) 100%

(4) 200%

Ans: (3) 100%
Explanation:
Percentage of increase in sales of mobile phones from 2004 to 2008

$$= \frac{70-35}{35} \times 100 = 100\ \%$$

93. Four awards have been listed, out of which three are alike in some manner and one is different. Select the odd one.

(1) Padma Bhushan

(2) Padma Vibhushan

(3) Param Vir Chakra

(4) Padma Shri

Ans: (3) Param Vir Chakra
Explanation:
The Padma Bhushan is the third-highest civilian award in the Republic of India.

The Padma Vibhushan is the second-highest civilian award of the Republic of India.

The Param Vir Chakra is India's highest military decoration, awarded for displaying distinguished acts of valour during wartime.

The Padma Shri is the fourth-highest civilian award of the Republic of India

94. Choose the word that is different from the other three.

(1) Treacherous

(2) Faithful

(3) Devoted

(4) Loyal

Ans: (1) Treacherous
Explanation:

All are the synonyms of each other, whereas Treacherous is antonyms of Devoted, Faithful, Loyal.

95. In a certain code, "best way to win' is written as 'fa ka la ju', "the way to hell' is written as 'lu la hu fa', 'win of the day' is written as 'na lu fu ka' and 'to sell of night' is written as 'na li ya la Which of the following represents 'of the way?

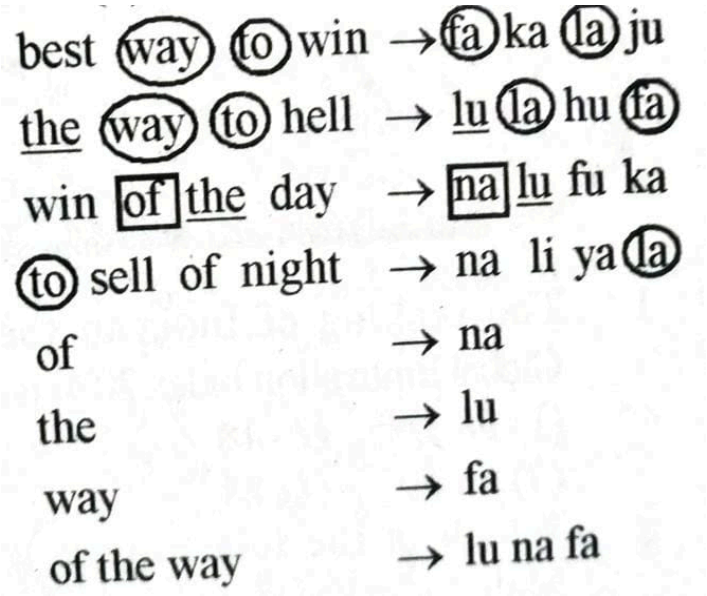
(1) lu na ya

(2) lu na fa

(3) ka lu na

(4) na ka fa

Ans: (2) lu na fa
Explanation:



96. In which of the given letter-clusters is the letters skipped between adjacent letters in the order 21, 22, 23

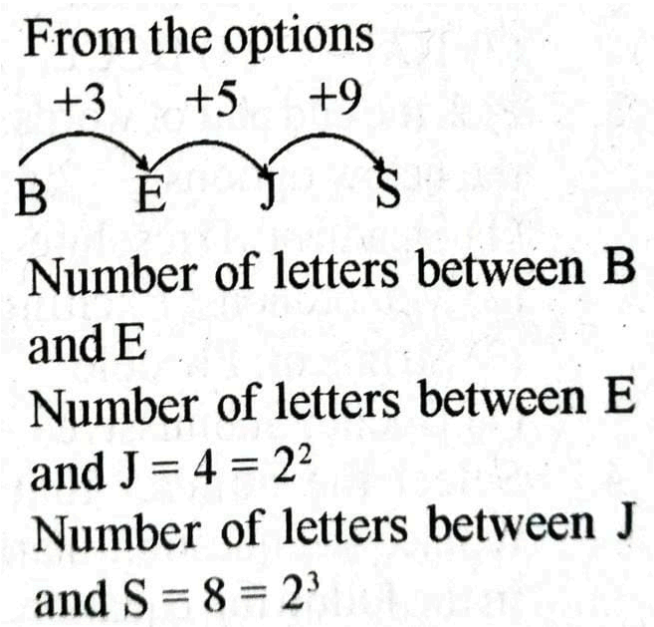
(1) BEJS

(2) EIRZ

(3) AEJS

(4) CFIS

Ans: (1) BEJS
Explanation:



97. Four brothers Aman, Gaurav, Aakash and Lokesh are at their family function sitting across a circular table. Their occupations are Lawyer, Doctor, Professor and Engineer. Lokesh who is not the Professor, starts a conversation about the on-going IPL and after him the Engineer gives a

long discourse about the teams that should reach the play offs. Aman, who is sitting across from the Engineer and next to the Professor responds to the Engineer's predictions. Akash speaks only at the end. Who is the Professor ?

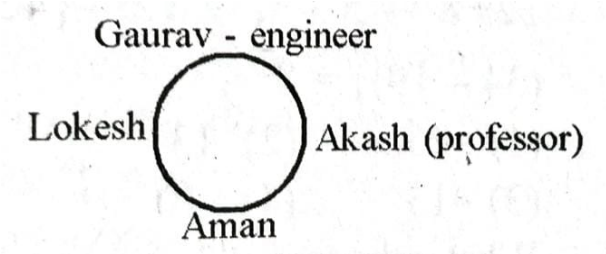
(1) Aakash

(2) Lokesh

(3) Gaurav

(4) Cannot be determined

Ans: (1) Aakash
Explanation:



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

Happiness Sorrow:: Conflict:?

(1) War

(2) Anger

(3) Harmony

(4) Competition

Ans: (3) Harmony
Explanation:
Happiness × Sorrow
Conflict × Harmony

99. Read the following information and answer the question that follows.

(i) Five ladies Simran, Vaishali, Namita, Preeti, and Bhawna meet in a hotel for a party They all sit around a circular table facing the centre of the table

(ii) Bhawna is sitting to the right of Vaishali

(iii) Simran is sitting to the left of Preeti.

(iv) Preeti is sitting between Namita and Simran.

Who is sitting to the right of Namita?

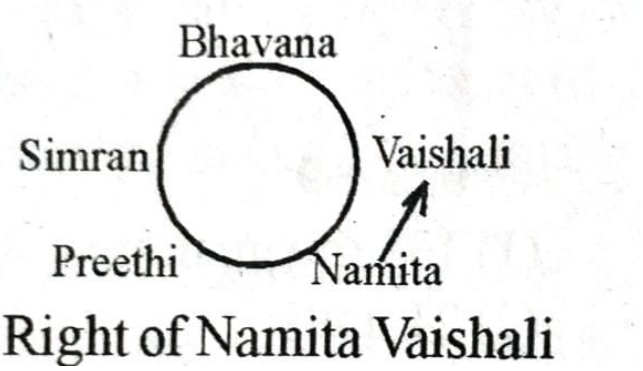
(1) Vaishali

(2) Preeti

(3) Bhawna

(4) Simran

Ans: (1) Vaishali
Explanation:



Right of Namita Vaishali

100. In a certain code language, PAINT is coded as 83527 and SCORE is coded as 49061 How would you code RECENT in the same language?

(1) 190985

(2) 648497

(3)619127

(4) 921235

Ans: (3)619127
Explanation:

P	A	I	N	T	
8	3	5	2	7	
S	C	O	R	E	
4	9	0	6	1	
R	E	C	E	N	T
6	1	9	1	2	7

51. The Rowlatt Act was passed in —----------

(1) 1921

(2) 1922

(3) 1919

(4) 1920

Ans: (3) 1919
Explanation:
The Rowlatt Act was passed by the British government to increase their grip on power over the common folk.

This law was passed in March 1919 by the Imperial Legislative Council which gave them the power to arrest any person without any trial.prala

To abolish this act, Gandhi and the other leaders called for a Hartal (suspension of work) to show Indians' objection to this rule, called the Rowlatt Satyagraha. od mode

Anti-Rowlatt Satyagraha movement was started by Gandhiji against the Rowlatt Act, 1919 for the exclusion of freedom of press and detention without trial

52. Two men start travelling from the same place in the same direction at the rate of 5 km/h and 5.5 km/h respectively. To be 8.5 km apart from each other, the time taken by them is

(1) 16 h 15 min

(2) 17h

(3) 4 h 15 min

(4) 8 h 30 min

Ans: (2) 17h
Explanation:
Relative speed = 5.5-5 = 0.5 km/h
Distance =8.5 km
time = $\frac{8.5}{0.5}$ **= 17 hours**

53. From the top of a building 60 m high, the angles of depression of the top and the bottom of a tower are 30° and 60° respectively. The height of the tower is:

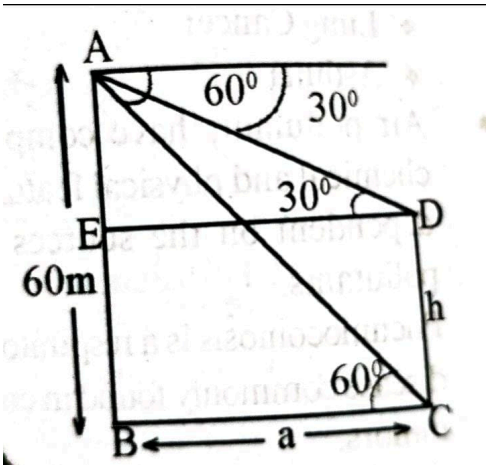
(1) 18 m

(2) 40 m

(3) 30 m

(4 30 m

Ans: (2) 40 m
Explanation:



$$\tan 30^\circ = \frac{AE}{DE}$$

$$\frac{1}{\sqrt{3}} = \frac{60-h}{a}$$

$$a = 60\sqrt{3} - \sqrt{3}h$$

$$\tan 60^\circ = \frac{AB}{BC}$$

$$\sqrt{3} = \frac{60}{a}$$

$$\sqrt{3} = \frac{60}{60\sqrt{3} - \sqrt{3h}}$$

$$60 = 180 - 3h$$

$$h = \frac{180-60}{3}$$

$$h = 40 \text{ m}$$

Height of tower is 40 m

54. India has ——— states and ———— union territories as of 31 October, 2020.

(1) 26 and 6

(2) 29 and 9

(3) 24 and 7

(4) 28 and 8

Ans: (4) 28 and 8
Explanation:
As of 31st October 2020, India comprises twenty-eight states and eight union territories.

The 8 union territories in India include Delhi, Jammu and Kashmir, Ladakh, Dadra and Nagar Haveli and Daman and Diu, Puducherry, Chandigarh, Andaman, and the Nicobar Islands, and Lakshadweep.

As per the Jammu and Kashmir Reorganization Act, 2019, two Union Territories of Jammu and Kashmir and Ladakh were appointed to the two Union Territories.

This is the first time in history that a state is being bifurcated into two union territories. Now, as of 26 January 2020, the total number of states in the country is 28, and India now has 8 union territories.

The Union Territory of Daman and Diu, Dadra, and Nagar Haveli has become a Union Territory with effect from 26 January by a bill passed by the Parliament during the winter season. With the merger of Daman and Diu and Dadra and Nagar Haveli, the number of Union Territories in India has gone up to eight.

55. During which five year plan di India opt for a mixed economy

(1) Second Five Year Plan

(2) Fourth Five Year Plan

(3) First Five Year Plan

(4) Third Five Year Plan

Ans: (1) Second Five Year Plan
Explanation:
The second five year plan was conceived in an atmosphere of economic stability.

India opted for a mixed economy during the 2nd five year plan to achieve rapid economic growth, promote social welfare and build a strong industrial base

Industries got more importance in the second five-year plan.

The Indian government boosted the manufacturing of industrial goods in the country This was done primarily to develop the public sector.

The Plan focused on rapit industrialization- heavy basic industries and advocated huge imports through foreign loans.

56. Who was the first Muslim President of the Indian National Congress ?

(1) Badruddin Tyabji

(2) Dada Bhai Naoroji

(3) Nawab Syed Muhammad Bahadur

(4) Abul Kalam Azad

Ans: (1) Badruddin Tyabji
Explanation:
Badruddin Tyabji was the first Muslim President of INC and third president of INC in 188

Badruddin Tyabji was a prominent lawyer, Indian independence movement activist, and politician during times of British India.

57. Who founded India's three stage Nuclear Power Programme?

(1) K Kasturirangan

(2) Dr. Homi Bhabha

(3) APJ Abdul Kalam

(4) Vikram Sarabhai

Ans: (2) Dr. Homi Bhabha
Explanation:
Homi Jehangir Bhabha was an Indian nuclear physicist known as father of the Indian nuclear programme. Founding director of Tata Institute of fundamental Research and Bhabha Atomic Research Centre.

India's three-stage nuclear power program was formulated by Homi Bhabha in the 1950s to secure the country's long-term energy

independence, through the use of uranium and thorium reserves found in the monazite sands of coastal regions of South India

The program's ultimate goal is to fully exploit India's massive Thorium deposits and become self-sufficient in nuclear energy generation. India has little native uranium resources. However we have plenty of Thorium. India has planned a three stage nuclear programme to use Thorium.

Thorium is particularly attractive for India, as it has only around 1-2% of the global uranium reserves, but one of the largest shares of global thorium reserves.

However, at present thorium is not economically viable because global uranium prices are much lower.

The recent Indo-US Nuclear Deal and the NSG waiver, which ended more than three decades of international isolation of the Indian civil nuclear program, have created many hitherto unexplored alternatives for the success of the three-stage nuclear power program.

Thorium itself is not a fissile material and thus cannot undergo fission to produce energy.

58. In an examination a student scored 65% marks but was 20 marks below the qualifying marks. Another student scored 80% marks and scored 5% more marks than the qualifying marks, Total marks of the examination are:

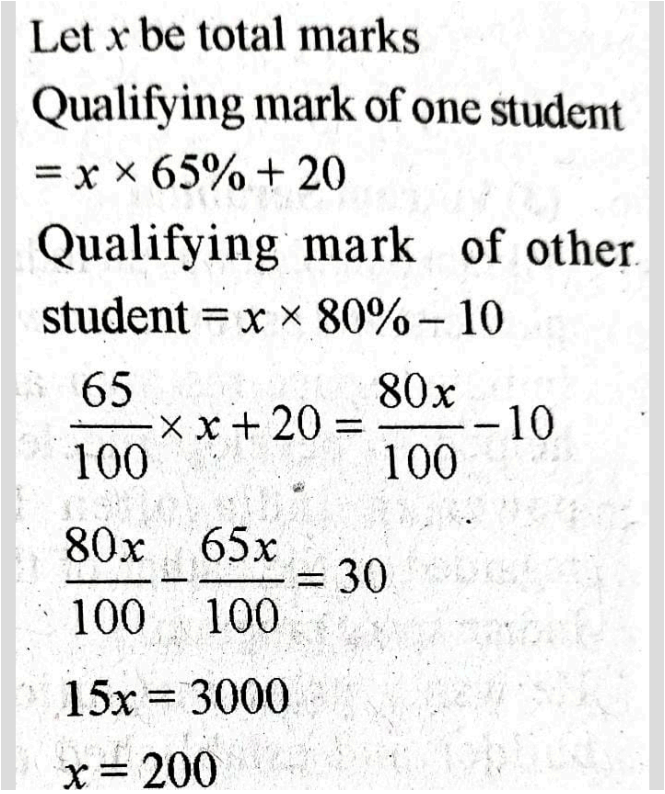
(1) 500

(2) 200

(3) 300

(4) 400

Ans: (2) 200
Explanation:


Let x be total marks

Qualifying mark of one student $= x \times 65\% + 20$

Qualifying mark of other student $= x \times 80\% - 10$

$$\frac{65}{100} \times x + 20 = \frac{80x}{100} - 10$$

$$\frac{80x}{100} - \frac{65x}{100} = 30$$

$$15x = 3000$$

$$x = 200$$

59. In the parallelogram ABCD, AL and CM are perpendicular to CD and AD respectively, AL=20 cm, CD =18 cm and CM-15 cm. The perimeter of the parallelogram is:

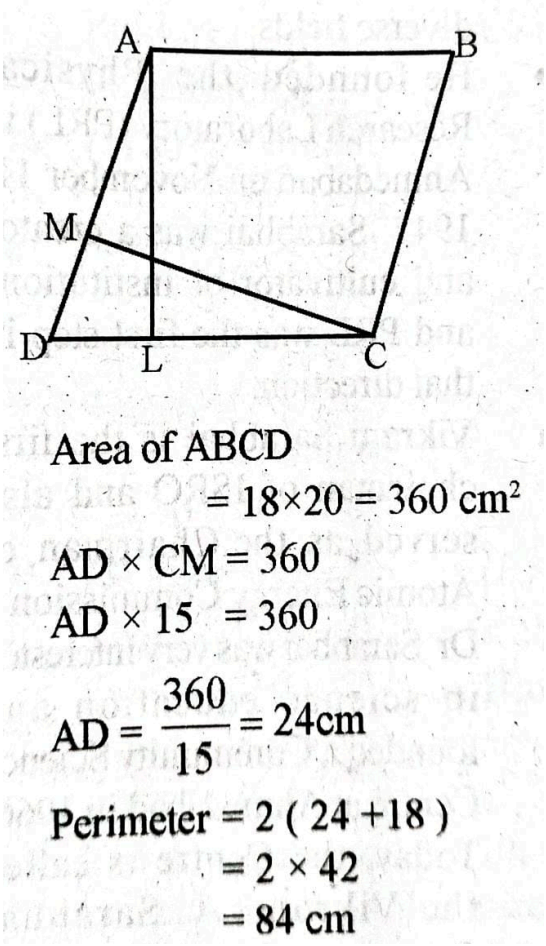
(1) 80 cm

(2) 84 cm

(3) 76 cm

(4) 64 cm

Ans: (2) 84 cm
Explanation:



Area of ABCD

$= 18 \times 20 = 360 \text{ cm}^2$

$AD \times CM = 360$

$AD \times 15 = 360$

$AD = \frac{360}{15} = 24\text{cm}$

Perimeter $= 2\,(24 + 18)$

$= 2 \times 42$

$= 84$ cm

60. What was the main reason for calling off the Non-Cooperation Movement by Gandhiji in 1922?

(1) Gandhiji was seriously ill

(2) A police station at Chauri Chaura in Uttar Pradesh was set on fire by a mob

(3) The movement was completed by achieving the target.

(4) Gandhiji was arrested and compelled to stop the movement

Ans: (2) A police station at Chauri Chaura in Uttar Pradesh was set on fire by a mob
Explanation:
The Non-cooperation movement was launched on 5th September 1920 by the Indian National Congress (INC) under the leadership of Mahatma Gandhi.
In September 1920, in a Congress session in Calcutta, the party introduced the Non Cooperation program.

The Non-Cooperation Movement was a sequel to the Rowlatt Act, the Jallianwala Bagh massacre, and the Khilafat Movement.

It was approved by the INC at the Nagpur session in December 1920. Khadi & Charkha became a symbol of NCM.

The Non-Cooperation Movement was called off by Gandhiji after the incident of Chauri Chaura in Uttar Pradesh. On 5th Feb of 1922, the protest became violent when protesting people set fire to a Police Station, burning 22 Policemen alive.

Gandhiji felt that the movement was turning violent and satyagrahis needed proper training before they were ready for a mass struggle.

61. Which of the following is NOT a computer component ?

(1) Memory

(2) Paper

(3) CPU

(4) ALU

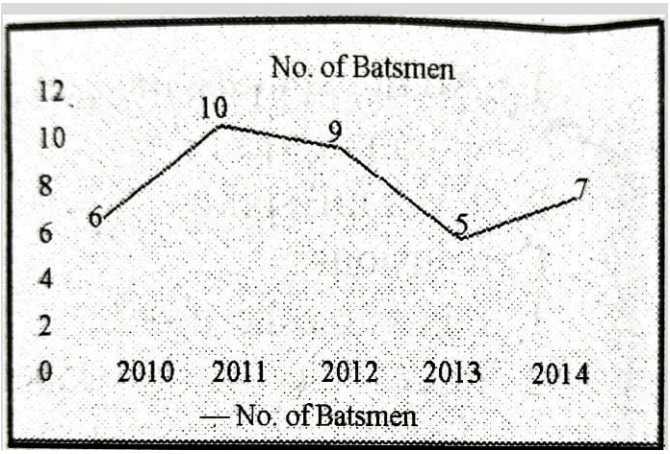
Ans: (2) Paper
Explanation:
Paper is not a computer component

A computer is an electronic device that receives data, processes it and gives meaningful information.

The processed data in a computer is called information.

Functional units of a computer are: Input, Central Processing Unit and Output.

62. The following line graph shows the number of batsmen who scored 500+ runs in the Indian Cricket League from 2010 to 2014 In which year did the maximum number of batsmen score 500 + runs?



(1) 2012

(2) 2014

(3) 2011

(4) 2013

Ans: (3) 2011

Maximum number of batsman scored 500+ runs in 2011 = 10

63. By reducing the selling price of an article by 50.00, a gain of 5% turns into a loss of 5%. Original selling price is :

(1) ₹550.00

(2) 525.00

(3) ₹600.00

(4) ₹500.00

Ans: (2) 525.00
Explanation:

Let x be original price

$$\frac{x \times 100}{105} = (x - 50) \times \frac{100}{95}$$

$$19x = 21x - 1050$$

$$2x = 1050$$

$$x = 525$$

64. Which of the following is in the third trophic level of the food chain?

(1)Primary consumers

(2) Secondary consumers

(3) Producers

(4) Top consumers

Ans: (2) Secondary consumers
Explanation:
A food chain shows the feeding relationship between different organisms in a particular environment and/or habitat.

A food chain shows how energy is passed from the sun to producers, from producers to consumers, and from consumers to decomposers such as fungi. They also show how animals depend on other organisms for food.

Based on the source of their nutrition or food, organisms occupy a specific place in the food chain that is known as their trophic level.

Producers belong to the first trophic level, herbivores (primary consumer) to the second and carnivores (secondary consumer) to the third.

The important point is that the amount of energy decreases at successive trophic levels.

65. Simplify the following.

$$\frac{1}{2} \div \left(\frac{1}{2} \times \frac{1}{2}\right) \times \frac{1}{2} + \frac{1}{2} \div \left(\frac{1}{4} \times \frac{3}{4}\right)$$

(1) $\frac{11}{8}$

(2) $\frac{11}{3}$

(3) $\frac{11}{2}$

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

Ans: (2) $\frac{11}{3}$

Explanation:

$$\frac{1}{2} \div \frac{1}{4} \times \frac{1}{2} + \frac{1}{2} \div \frac{3}{16}$$

$$= 2 \times \frac{1}{2} + \frac{1}{2} \times \frac{16}{3}$$

$$= 1 + \frac{8}{3} = \frac{11}{3}$$

66. Who is known as the Father of India's Space Programme?

(1) Anuj Lall

(2) Aditya Sarabhai

(3) Vikram Sarabhai

(4) Vikram Seth

Ans: (3) Vikram Sarabhai
Explanation:
Vikram Sarabhai was an Indian physicist and astronomer who initiated space research and helped to develop nuclear power in India often regarded as the Father of the Indian space program.

He was a great institution builder and established or helped to establish a large number of institutions in diverse fields.

He founded the Physical Research Laboratory (PRL) in Ahmedabad on November 11, 1947. Sarabhai was a creator and cultivator of institutions and PRL was the first step in that direction.

Vikram Sarabhai is the first chairman of ISRO and also served as the Chairman of Atomic Energy Commission

Dr. Sarabhai was very interested in science education and founded a Community Science Centre at Ahmedabad in 1966. Today, the Centre is called the Vikram A Sarabhai Community Science Centre.

67. Which agency was created by the United Nations to provide emergency food and health care to children and mothers in the countries affected by World War II ?

(1) UNESCO

(2) IMF

(3) WHO

(4) UNICEF
Ans: (4) UNICEF
Explanation:
The United Nations Children's Fund (UNICEF), originally known as the United Nations International Children's Emergency Fund, was created by the United Nations General Assembly on 11 December 1946, to provide emergency food and healthcare to children and mothers in countries that had been devastated by World War II.

UNICEF's mandate was expanded in 1950 to include the long-term needs of children and women in underdeveloped nations around the world.

The phrases "international" and "emergency" were omitted from the organization's name in 1953 when it became a permanent member of the United Nations System, however, the abbreviation "UNICEF" was kept.

It is the successor of the League of Nations International Children's Emergency Fund. The headquarters of UNICEF is located in New York City, USA

In 1965, UNICEF received the Nobel Peace Prize.

68. Simplify the following.

$$2.2 \times 0.2 \div (0.4 \times \frac{1}{2})$$
$$-\frac{1}{2} \times 4(1.04 - 0.2 \times 0.2)$$

(1) 0.3

(2) 0.6

(3) 0.2

(4) 0.5
Ans: (3) 0.2
Explanation:

$$2.2 \times 0.2 \div 0.2 - \frac{1}{2} \times 4 \times 1$$
$$2.2 \times 1 - 2 = 0.2$$

69. When 5 men can build a wall in 12 days, to build a wall 50% more than the original wall in 10 days, the number of men required is:

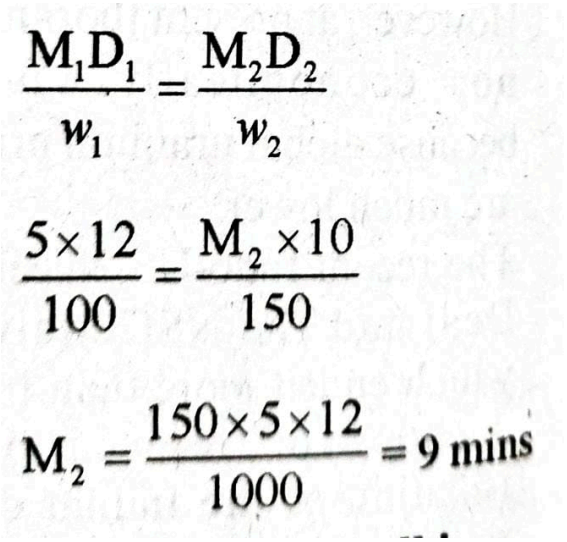
(1) 4

(2) 8

(3) 7

(4) 9

Ans: (4) 9
Explanation:



$$\frac{M_1D_1}{w_1} = \frac{M_2D_2}{w_2}$$

$$\frac{5\times12}{100} = \frac{M_2\times10}{150}$$

$$M_2 = \frac{150\times5\times12}{1000} = 9 \text{ mins}$$

70. Who led the Non-cooperation Movement in 1920-22?

(1) Jawaharlal Nehru

(2) Mahatma Gandhi

(3) Subhash Chandra Bose

(4) Motilal Nehru

Ans: (2) Mahatma Gandhi
Explanation:
In 1920 the non-cooperation movement was established.

The non-cooperation activity was Gandhi's first mass political movement. It was founded on September 5, 1920 by the Indian National Congress (INC) under the leadership of Mahatma Gandhi.

The party started the non-cooperation program in September 1920 at a Congress session in Calcutta.

The main goal of the non-cooperation movement was to work towards the abolition of untouchability in society. After the Chauri Chaura incident in the Gorakhpur region of Uttar Pradesh, Gandhi abruptly called off the movement on February 11, 1922. (22 policemen were burnt).

71. If $x\sqrt{12} = 4 + x\sqrt{3}$, the value of x is :

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

(2) $\sqrt{3}$

(3) $-\sqrt{3}$

(4) $2\sqrt{3}$

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

Explanation:

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

  $x\sqrt{3} = 4$

  $x = \frac{4}{\sqrt{3}}$

72. The least number that should be added to the largest three digit number to make it a perfect square, is :

(1) 01

(2) 12

(3) 25

(4) 24

Ans: (3) 25
Explanation:
Largest 3 digit number = 999
The perfect square near to 999 is 1024
Number added
= 1024-999 = 25

73. When did India test its first atomic bomb?

(1) 1969

(2) 1981

(3) 1976

(4) 1974

73. When did India test its first atomic bomb?

(1) 1969

(2) 1981

(3) 1976

(4) 1974

Ans: (4) 1974

Explanation:
India tested its first successful atomic bomb in May 1974.

The code name of the operation was Smiling Buddha.

The Indian Army, under the supervision of several important Indian generals, detonated the bomb on the army facility Pokhran Test Range (PTR) in Rajasthan.

It was India's first successful nuclear bomb test. It was also the first confirmed nuclear weapons test by a country not among the UN Security Council's five permanent members.

This test was described by the Indian Ministry of External Affairs (MEA) as a "peaceful nuclear explosion."

The Second Nuclear experiment was conducted by India in May 1988 and the code name was Operation Shakti.

It is a series of five nuclear weapon tests. The Bombs were detonated at the Indian Army's Pokhran Test Range in Rajasthan.

74. When the shadow of a pole of 10 m height is 10 $\sqrt{3}$ m, the angular elevation of the Sun is :

(1) 30°

(2) 60°

(3) 90°

(4) 75

Ans: (1) 30°
Explanation:

$$\tan\theta = \frac{10}{10\sqrt{3}}$$

$$= \tan\theta = \frac{1}{\sqrt{3}}$$

$$\theta = 30^{\circ}$$

75. Where was the 11th World Hindi Conference held in 2018?

(1) Chandigarh

(2) Kolkata

(3) Mauritius

(4) Mumbai

Ans: (3) Mauritius
Explanation:
The World Hindi Day, also known as the Vishwa Hindi Diwas is marked on January 10 every year.

The day is celebrated with its primary focus on the history and promotion of the Hindi language worldwide.

World Hindi Day is actually celebrated on the same day when the first World Hindi Conference took place in 1975.

World Hindi Day marks the anniversary of the conference that was inaugurated by the then Prime Minister of India, Indira Gandhi, in Nagpur.

The 11th World Hindi Conference, an event aimed at expanding the reach of the Hindi language at a global level, began in Mauritius on 18 August 2018.

Mauritius Prime Minister Praveen Kumar Jagannath inaugurated the conference in Port Louis. Former External Affairs Minister Sushma Swaraj and other ministers are also reaching Port Louis to attend the event.

The 12th world Hindi conference was held in Nadi, Fiji from 15-17 February 2023.

76. Given below is a paragraph. While S1 and S6 are the first and last sentences of this paragraph, the parts that are labelled 1, 2, 3 and 4 are jumbled up. Rearrange them to form a meaningful and coherent paragraph.

S1: Several metro lines have been planned in the NCR.

(1) Redline is the first among them

(2) They are expected to alleviate the problem of transportation.

(3) It starts from Shahdara and terminates at Tiz-Hazari in the initial phase.

(4) It caters to over 1 lakh commuters at present.

S6: Hopefully, the public transportation problem will not be as acute after all the metro lines are completed.

(1) 2, 3, 4, 1

(2) 1, 3, 4, 2

(3) 2, 1, 3, 4

(4) 1, 2, 3, 4

Ans: (3) 2, 1, 3, 4
Explanation:
The given sentences are arranged in the order 2, 1, 3, 4 to make a meaningful paragraph.

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

Gravity: Discovery:

Telephone: ?

(1) Explore

(2) Invention

(3) Experiment

(4) Construct

Ans: (2) Invention
Explanation:

Gravity was discovered by Isaac Newton.

Telephone was invented by Alexander Graham Bell

78. Which number from among the given options will come in place of (*) in the given number series?

1, 1, 2, 8, 3, 27, 4,(*), 5, 125....

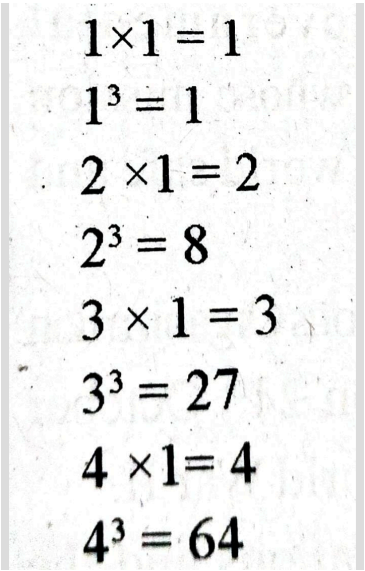
(1) 96

(2)64

(3) 36

(4) 32

Ans: (2)64
Explanation:



79. Two statements are given followed by two conclusions. Considering the two statements to be true irrespective of the commonly known facts, decide which of the two conclusions follow logically from these two statements.
Statements:

1: All hill stations have an echo-point.

2: P is a hill station.

Conclusions:

1: P has an echo-point.

2: Places other than hill stations do not have echo-points.

(1) Both conclusion 1 and conclusion 2 follow

(2) Only conclusion 1 follows

(3) Only conclusion 2 follows

(4) Neither conclusion 1 nor conclusion 2 follows

Ans: (2) Only conclusion 1 follows
Explanation:
According to the statement, all hill stations have an echo point and P is a hill station and only conclusion 1 is true for the statement.

80. When a number n is divided by 5, the remainder is 2. When n^2 is divided by 5, the remainder will be:

(1) 3

(2) 0

(3) 4

(4) 1

Ans: (3) 4
Explanation:

$\frac{n}{5} \rightarrow$ remainder $= 2$

$n = 7$ satisfy the condition.

$49 = 9 \times 5 + 4$ as

Remainder $= 4$

81. What does WCCB stand for in the context of Environment and Forest ?

(1) World Crime Control Bureau

(2) Wildlife Crime Control Bureau

(3) World Conservation Control Bureau

(4) Wildlife Conservation Control Bureau

Ans: (2) Wildlife Crime Control Bureau
Explanation:
Wildlife Crime Control Bureau is a statutory multi-disciplinary body.

It was established by the Government of India under the Ministry of Environment and Forests, to combat organized wildlife crime in the country.

The Wildlife Crime Control Bureau has its headquarters in New Delhi.

The provisions of the Wild Life (Protection) Amendment Act of 2006 came into effect on 4th September 2006.

82. How many organisations are a part of the United Nations in India?

(1) 28

(2) 22

(3) 26

(4) 12

Ans: (3) 26
Explanation:
The United Nations is an intergovernmental organisation whose mission is to keep the world safe and secure.

The United Nations Organization was formed on 24th October 1945, after World War II.

The United Nations and the Government of India have a long history of close cooperation,

India is a member of the United Nations since its inception.

On June 26, 1945, India and 50 other countries signed the United Nations Charter.

The United Nations system includes 26 organisations that have the privilege to serve in India. The Resident Coordinator. the designated representative of the UN Secretary-General to the Government leads the UN Country Team to advocate the mandate of the United Nations, while drawing on the support and guidance of the entire UN family.

The United Nations provides strategic support to India to help the country achieve its aspirations to end poverty and inequality and to promote sustainable development in line with the globally agreed SDGs. The UN also supports India, as the world's largest democracy, in the country's ambitious commitments to rapid change and development priorities.

83. Who are the famous Indian women lawyers who led the legal battle to strike Section 377 of the Indian Penal Code (IPC)?

(1) Karuna Nandi and Vrinda Grover

(2) Menaka Guruswamy and Arundhati Katju

(3) Menaka Gandhi and Arundhati Roy

(4) Menaka Guruswamy and Pinky Anand
Ans: (2) Menaka Guruswamy and Arundhati Katju
Explanation:
Katju and Guruswamy represented the petitioners against the ban on consensual gay sex in the country,

The duo highlighted those who suffered under the law by enlisting more than two dozen gay, lesbian, bisexual, and transgender people as co-petitioners.

They contested that people risked arrest for publicly identifying themselves as part of the LGBTQ (lesbian, gay, bisexual, transgender, queer) community

In September 2018, a constitutional bench of the Supreme Court partly struck down Section 377 in a unanimous decision.

The judgment was considered groundbreaking, as the country's top court finally overturned a colonial-era ban imposed on consensual gay sex.

The judgment was regarded as a welcome step in affirmation of human dignity.

84. If $\sqrt{3}\tan 2\theta - 3 = 0$ then θ is :

(1) $60°$

(2) $45°$

(3) $150°$

(4) $30°$

Ans: (4) $30°$

Explanation:

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

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

$$2\theta = 60°,\ \theta = 30°$$

85 Which of the following rural housing schemes by the Government of India is re structured into Pradhan Mants Gramin Awas Yojana ?

(1) Rajiv Awas Yojana

(2) Deendayal Antyodaya Yojana

(3) Jawahar Gram Samridhi Yojana

(4) Indira Awas Yojana

Ans: (4) Indira Awas Yojana
Explanation:
Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) is to achieve the objective of Housing for All by 2022, the erstwhile rural housing scheme Indira Awaas Yojana (IAY) was restructured to Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) on 1* April 2016.

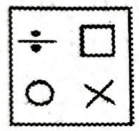
This scheme was launched by the Ministry of Rural Development.

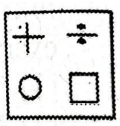
This scheme aims to provide a pucca house with basic amenities to all rural families, who are homeless or living in kutcha or dilapidated houses by the end of March 2022.

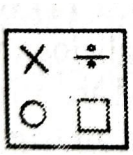
To help rural people Below the Poverty Line (BPL) in the construction of dwelling units and the upgradation of existing unserviceable kutcha houses by assisting in the form of a full grant.

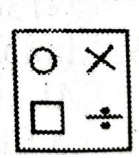
Beneficiaries of this scheme are People belonging to SCs/STs, freed bonded laborers and non-SC/ST categories, widows or next-of-kin of defence personnel killed in action, ex-servicemen, and retired members of the paramilitary forces, disabled persons, and minorities.

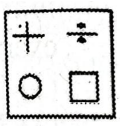
86. Choose the figure that is different from the others.

(1) 

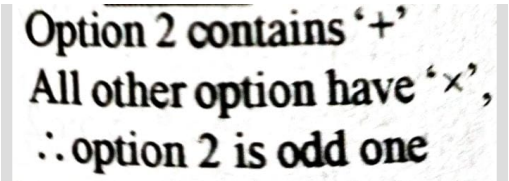
(2) 

(3) 

(4) 

Ans: (2) 

Explanation:



87. Given below is a main statement followed by four subsidiary statements.

From the given options, choose the ordered pair of subsidiary statements, where the first statement implies the second and the two statements are logically consistent with the main statement.

Main Statement:

You can drive over 60 km/h only on the national highways Subsidiary Statements:

A. You are on the national highway.

B. You cannot drive over 60 km/h

C. You can drive over 60 km/h

D. You are not on the national highway.

(1) DB

(2) AB

(3) DA

(4) CD

Ans: (1) DB
Explanation:
A) You can drive over 60km/hr only on national highways. So first statement does not implies the given statement

B) You cannot drive over 60km/h which means you are not on the national highways B and D implies the given statement

C) C does not imply.
88. Last year, there were three sections in a competitive exam Out of them 33 students cleared the cut-off in Section A. 34 students cleared the cut-off in Section B and 32 students cleared the cut-off in Section C 10 students cleared the cut-off in section A and section B. 9 9 cleared the cut-off in section B and section Cand 8 cleared the cut-off in section A and section C. The number of students who cleared only one section was equal and was 21 for each section. How many students cleared all the three sections?

(1)6

(2) 8

(3) 7

(4) 9

Ans: (1)6
Explanation:
Number of students cleared three sections
= (10+8+9)-21
= 27-21=6

89. Five students Radha, Sujit, Mihir, Anshul and Vikas have a total of five books on the subjects of Accountancy, Business Studies, Mathematics, 9 Economics and English, written by authors Jain, Kohli, Das, Sharma and Edwin. Each student has only one book on one of the five subjects.

Jain is the author of the Accountancy book, which is not owned by Vikas or Radha. 9

Anshul owns the book written by Edwin.

Mihir owns the Mathematics book.

Vikas has the English book, which is not written by Kohli.

The Economics books are written by Sharma.

Identify the author of the Business Studies book

(1) Jain

(2) Edwin

(3) Das

(4) Sharma

Ans: (2) Edwin
Explanation:

Students	Books	Authors
	Accountancy	Jain
	Economics	Sharma
Mihir	Mathamatics	Kohli
Arishul	Business studies	Edwin
Vikas	English	

Edwin is the author of bewoners studies book

90. Pointing to a photograph, Rohit said, "She is the daughter of the only son of my father." How is Rohit related to the girl in the photograph?

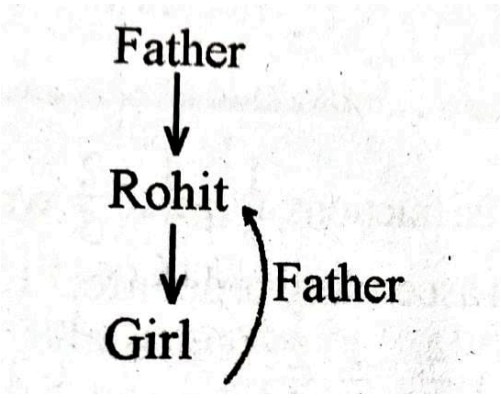
(1) Uncle

(2) Father

(3) Cousin

(4) Brother

Ans: (2) Father
Explanation:



91. Select the number from among the given options that can replace the question mark (?) in the following series. 4, 14, 60, 248, ?

(1) 1020

(2) 1008

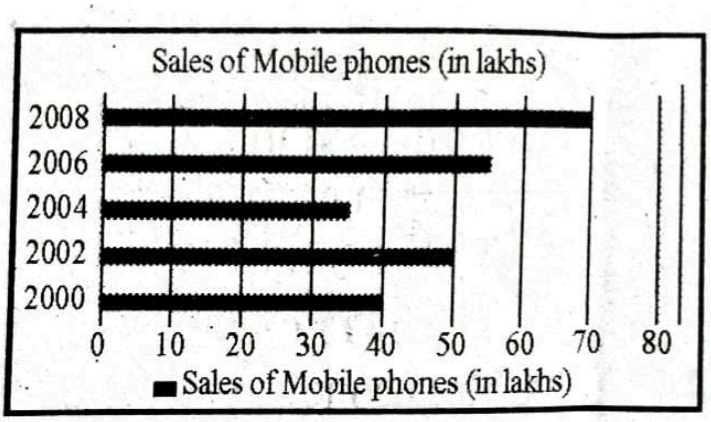
(3) 1012

(4) 1016

Ans: (2) 1008
Explanation:

$4 = 4^1 - 0$
$14 = 4^2 - 2^1$
$60 = 4^3 - 2^2$
$248 = 4^4 - 2^3$
$4^5 - 2^4 = 1024 - 16 = 1008$

92. Based on the bar graph given. calculate the approximate percentage increase in sales of mobile phones from 2004 to 2008.



(1) 50%

(2) 150%

(3) 100%

(4) 200%

Ans: (3) 100%
Explanation:
Percentage of increase in sales of mobile phones from 2004 to 2008

$$= \frac{70-35}{35} \times 100 = 100\ \%$$

93. Four awards have been listed, out of which three are alike in some manner and one is different. Select the odd one.

(1) Padma Bhushan

(2) Padma Vibhushan

(3) Param Vir Chakra

(4) Padma Shri

Ans: (3) Param Vir Chakra
Explanation:
The Padma Bhushan is the third-highest civilian award in the Republic of India.

The Padma Vibhushan is the second-highest civilian award of the Republic of India.

The Param Vir Chakra is India's highest military decoration, awarded for displaying distinguished acts of valour during wartime.

The Padma Shri is the fourth-highest civilian award of the Republic of India

94. Choose the word that is different from the other three.

(1) Treacherous

(2) Faithful

(3) Devoted

(4) Loyal

Ans: (1) Treacherous
Explanation:
All are the synonyms of each other, whereas Treacherous is antonyms of Devoted, Faithful, Loyal.

95. In a certain code, "best way to win' is written as 'fa ka la ju', "the way to hell' is written as 'lu la hu fa', 'win of the day' is written as 'na lu fu ka' and 'to sell of night' is written as 'na li ya la Which of the following represents 'of the way?

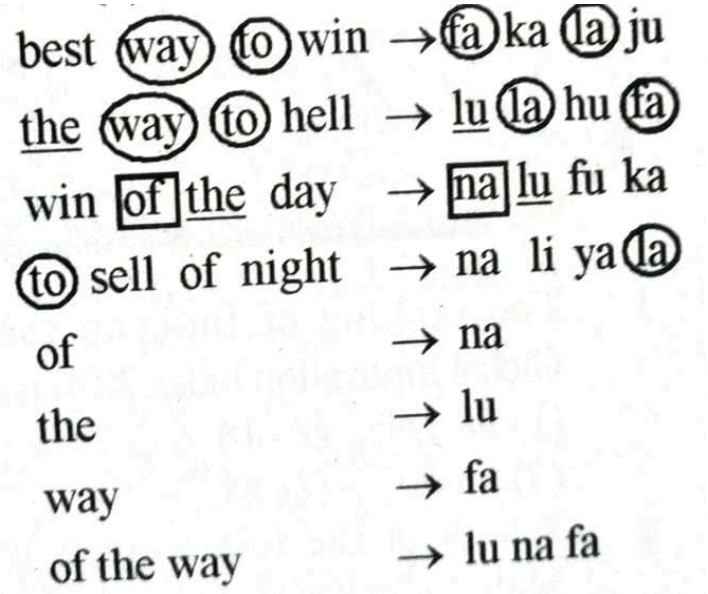
(1) lu na ya

(2) lu na fa

(3) ka lu na

(4) na ka fa

Ans: (2) lu na fa
Explanation:



96. In which of the given letter-clusters is the letters skipped between adjacent letters in the order 21, 22, 23

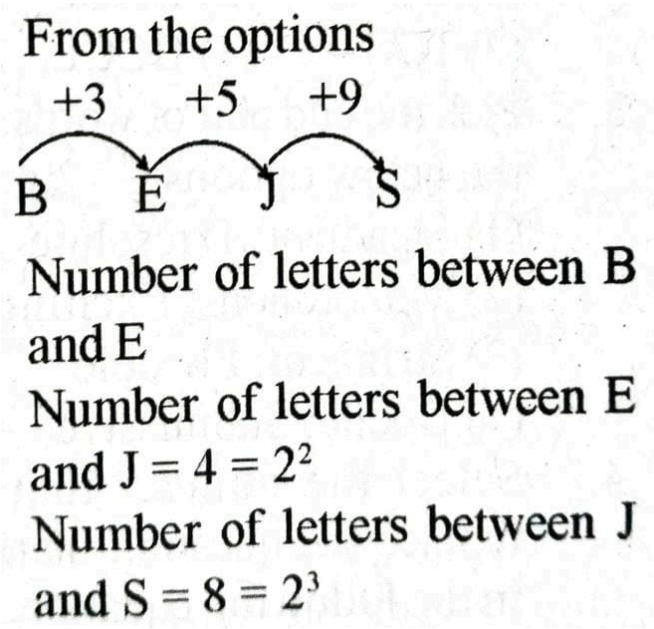
(1) BEJS

(2) EIRZ

(3) AEJS

(4) CFIS

Ans: (1) BEJS
Explanation:



97. Four brothers Aman, Gaurav, Aakash and Lokesh are at their family function sitting across a circular table. Their occupations are Lawyer, Doctor, Professor and Engineer. Lokesh who is not the Professor, starts a conversation about the on-going IPL and after him the Engineer gives a long discourse about the teams that should reach the play offs. Aman, who is sitting across from the Engineer and next to the Professor responds to the

Engineer's predictions. Akash speaks only at the end. Who is the Professor ?

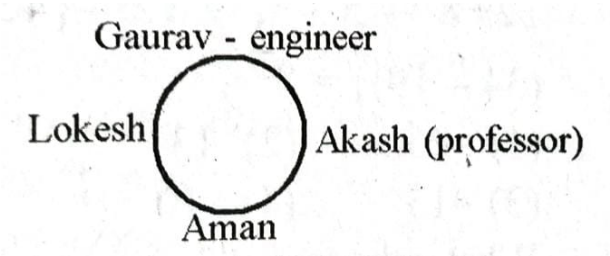
(1) Aakash

(2) Lokesh

(3) Gaurav

(4) Cannot be determined

Ans: (1) Aakash
Explanation:



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

Happiness Sorrow:: Conflict:?

(1) War

(2) Anger

(3) Harmony

(4) Competition

Ans: (3) Harmony
Explanation:
Happiness × Sorrow
Conflict × Harmony

99. Read the following information and answer the question that follows.

(i) Five ladies Simran, Vaishali, Namita, Preeti, and Bhawna meet in a hotel for a party They all sit around a circular table facing the centre of the table

(ii) Bhawna is sitting to the right of Vaishali

(iii) Simran is sitting to the left of Preeti.

(iv) Preeti is sitting between Namita and Simran.

Who is sitting to the right of Namita?

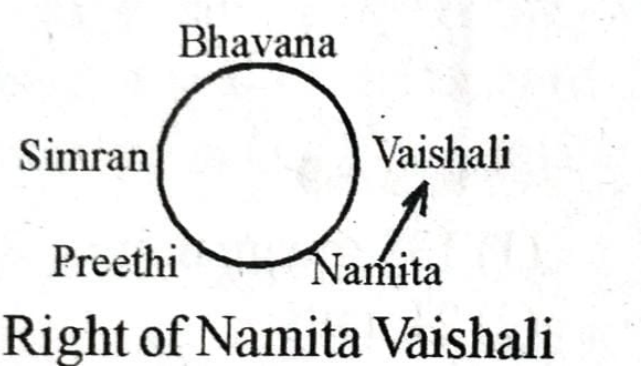
(1) Vaishali

(2) Preeti

(3) Bhawna

(4) Simran

Ans: (1) Vaishali
Explanation:



Right of Namita Vaishali

100. In a certain code language, PAINT is coded as 83527 and SCORE is coded as 49061 How would you code RECENT in the same language?

(1) 190985

(2) 648497

(3)619127

(4) 921235

Ans: (3)619127
Explanation:

P	A	I	N	T	
8	3	5	2	7	
S	C	O	R	E	
4	9	0	6	1	
R	E	C	E	N	T
6	1	9	1	2	7