RRB NTPC 12 Jan 2021 Shift 1 Solution

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1. A can complete 25% of a task in 10 days. B can complete 40% of the task in $_3$1 40 days and C can complete the task in 13 days. Who among them has the fastest speed to complete the same task?
a. B
b. A
c. All have the same speed
d. C

Answer: d
Explanation:
Given:
A can complete 25% work in = 10 days
B can complete 40% work in = 40 days
C can complete 1/3rd of work in = 13 days
Calculation:
Number of days taken by A to complete work alone = 100/25 × 10 = 40 days
Number of days taken by B to complete work alone = 100/40 × 40 = 100 days
Number of days taken by C to complete work alone = 3 × 13 = 39 days
∴ From above, C has the fasted speed to complete the work.

2. If (2, 7), (5, 1), (x, 3) are the vertices of a triangle whose area is 18 (sq. units), then find the possible value of x.
a. –7
b. 7
c. 10
d. -10

Answer: c
Explanation:
Given:
Vertices of triangle = (2, 7), (5, 1), (x, 3)
Formula:

Area of triangle = 1/2 × [x1(y2 - y3) + x2(y3 - y1) + x3(y1 - y2)]
Calculation:
⇒ 18 = 1/2 × [2(1 - 3) + 5(3 - 7) + x(7 - 1)]
⇒ 36 = -4 - 20 + 6x
⇒ 6x = 60
⇒ x = 10
∴ Value of x = 10.
NOTE: Options are changed as given options are not correct.

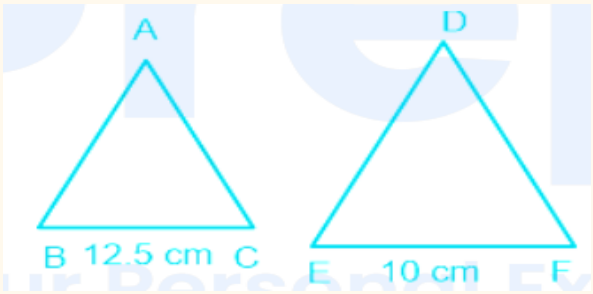
3. The cost price of a car was Rs. 150000. Raju sold it to Montoo at a profit of 5%, and later Montoo sold it back to Raju at 2% loss. Find The total profit or loss in the entire transaction.
a. Raju's gain Rs. 4,500
b. Raju's loss Rs. 4,350
c. Raju's gain Rs. 3,150
d. Raju's gain Rs. 4,350

Answer: c
Explanation:
Given:
The cost price of car = Rs.150000
Formula:
Profit = SP - CP
SP = CP × (100 + Profit%)/100
Calculation:
SP for Raju = 150000 × 105/100 = Rs.157500
CP for Montoo = SP for Raju
Then,
CP for Raju = 157500 × 98/100 = Rs.154350
Total profit Raju had = 157500 - 154350 = Rs.3150
∴ Raju's profit in entire transaction is Rs.3150

4. Given that ΔABC ~ ΔDEF, if BC = 12.5 cm and EF = 10 cm, then the areas of ΔABC and ΔDEF are in the ratio of:
a. 3 : 4
b. 25 : 16
c. 16 : 25

d. 1 : 2

Answer: b
Explanation:
Given:
ΔABC ~ ΔDEF,
If BC = 12.5 cm and EF = 10 cm
Calculation:



According to the question ΔABC ~ ΔDEF ,
Applying similarity rule
AB/DE = BC/EF = AC/DF
Then, Using formulae
Area of (ΔABC) : Area of (ΔDEF) = BC 2/EF2= (12.5/10)2= 25/16
∴ Area of (ΔABC) : Area of(ΔDEF) = 25 : 16

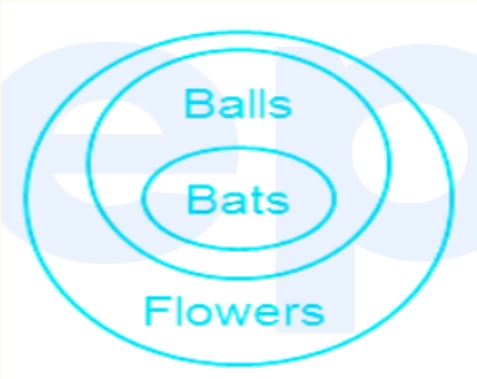
5. Sariska National Park is located in :
a. Karnataka
b. Uttarakhand
c. Rajasthan
d. Sikkim

Answer: c
Explanation:
The correct answer isRajasthan.
Sariska National park is located in Rajasthan .
Sariska Tiger Reserve is well nestled in the Aravali Hills covering an 800 sq km area divided into grasslands, dry deciduous forests, sheer cliffs, and rocky landscape.

The Sariska Wildlife Sanctuary houses the ruins of medieval temples of Garh-Rajor that date back to the 10th and 11th centuries . Also, a 17thcentury castle on a hilltop at Kankwari provides a panoramic view of flying vultures and eagles .
The Sariska was declared a sanctuary in 1955 and attained the status of a National Park in 1979.

6. Read the given statements carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, select the conclusion from the given options which logically does NOT follow from the statements.
Statements:
(i)All balls are flowers.
(ii) All bats are balls
a. No ball is a flower.
b. Some flowers are bats.
c. Some ball are bats.
d. All bats are flowers.

Answer: a
Explanation:
Given:
Statements:
(i) All balls are flowers.
(ii) All bats are balls.
The least possible diagram for the given statements is as follows



Conclusions:

Option (1) No ball is a flower → False (Because All balls are flowers so some flowers will be also balls).
Option (2) Some flowers are bats → True (Because All bats are balls and All balls are flowers so definitely some flowers will be bats).
Option (3) Some balls are bats → True (Because All bats are balls so some balls will be also bats).
Option (4) All bats are flowers → True (Because All bats are balls and All balls are flowers so definitely all bats will be also flowers).
Hence, " Option (1) " does NOT follow from the statements .

7. Who was Speaker of 16th Lok Sabha?
a. Manohar Joshi
b. Sumitra Mahajan
c. Somnath Chatterjee
d. Meira Kumar

Ans. b
Explanation:
The correct answer is Sumitra Mahajan.
Sumitra Mahajan was the Speaker of the 16 th Lok Sabha.

8. The Challenger Deep in the _____ is considered to be the deepest point known on Earth.
a. Mariana Trench
b. Lake Eyre
c. Puerto Rico Trench
d. Java Trench

Answer: a
Explanation:
The correct answer isMariana Trench.
The Challenger Deep in the Mariana Trench is considered to be the deepest point known on Earth .

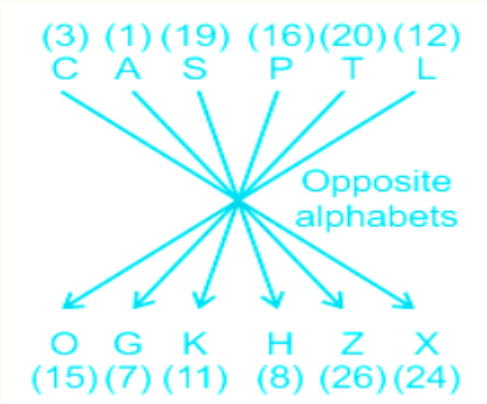
9. In India, all the bills introduced and passed by both the houses (Lok Sabha & Rajya Sabha) can come into force only after they receive the assent of:

a. President
b. Parliament
c. Supreme Court
d. Prime Minister

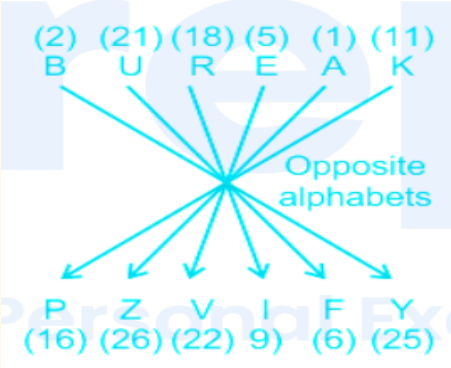
Answer: a
Explanation:
The correct answer isPresident.
In India, all the bills introduced and passed by both the houses (Lok Sabha & Rajya Sabha) can come into force only after they receive the assent of the President of India**.**

10. In a certain code language, 'BUREAK' is written as 'PZVIFY'. What is the code for 'CASPTL' in that code language?
a. OHKGZX
b. PHKGYX
c. PGKHYX
d. OGKHZX

Answer: d
Explanation:
The pattern for the code is as follows,



So, 'BUREAK' is written as 'PZVIFY'
Similarly,



Hence, CASPTL is coded as OGKHZX .

11. The present age of Myra and Meera are in the ratio of 6 : 5 and after fifteen years the ratio will be 9 : 8. Meera's age is:
a. 30 years
b. 35 years
c. 25 years
d. 20 years

Answer: c
Explanation:
The ratio of the present ages of Myra and Meera is 6 : 5.
Calculation:
Let the present ages of Myra and Meera be 6x & 5x respectively.
According to question,
After fifteen years the ratio of Myra and Meera age will be 9 : 8
⇒ (6x + 15) : (5x + 15) = 9 : 8
Cross multiplication both side;
⇒ (6x + 15) × 8 = (5x + 15) × 9
⇒ 48x + 120 = 45x + 135
⇒ 48x – 45x = 135 – 120
⇒ 3x = 15
⇒ x = 5
Meera present date is 5x = 5 × 5 = 25.
∴ The present age of Meera is 25 years.

12. The Ajanta caves are located in _____.
a. Chhattisgarh
b. Delhi

c. Tamil Nadu
d. Maharashtra

Answer: d
Explanation:
The correct answer isMaharashtra.
The Ajanta caves are located in the Aurangabad district of Maharashtra .
The first Buddhist cave monuments at Ajanta date from the 2nd and 1st centuries B.C. During the Gupta period (5th and 6th centuries A.D.).

13. Which of the following is the oldest Nuclear research reactor of India?
a. Kamini
b. Cirus
c. Dhruva
d. Apsara

Answer: d
Explanation:
The correct answer isApsara.
Apsara is the oldest Nuclear research reactor in India.
Apsara is a highly versatile swimming pool-type of reactor that was built in August 1956. It was shut down in 2009 for a revamp.

14. Identify the number that DOES NOT belong to the following series. 10, 17, 26, 39, 50
a. 26
b. 39
c. 17
d. 50

Answer: b
Explanation:
The pattern followed here is -
10 + 7 = 17
17 + 9 = 26
26 + 11 = 37

37 + 13 = 50
Hence, the correct answer is "39"

15. ISRO has established the _____, at Bharati station, Antarctica, for receiving IRS data.
a. NCAOR
b. NRSC
c. AGEOS
d. IMGEOS

Answer: c
Explanation:
The correct answer is AGEOS.
Key Points
ISRO has established the AGEOS , at Bharati Station, Antarctica, for receiving IRS data.

16. What is the value of the following expression?
$(243)^2 \div (27)^2 \times 6 \div 18$
a. 81
b. 162
c. 27
d. 1

Answer: c
Explanation:
Given:
$? = (243)^2 \div (27)^2 \times 6 \div 18$
Calculation:
$\Rightarrow ? = (243)2 \div (27)2 \times 6 \div 18$
$\Rightarrow ? = 81 \times 6 \div 18$
$\Rightarrow ? = 27$
$(243)^2 \div (27)^2 \times 6 \div 18=27$

17. 'Glove' is related to 'Hand' in the same way as 'Cap' is related to '_____'.
a. Foot

b. Neck
c. Head
d. Back

Answer: c
Explanation:
The logic followed here is:
'Glove' is related to 'Hand' → Gloves are worn on the hands.
Similarly,
'Cap' is related to ‘Head' → Cap is worn on the head .
Hence, ‘Head’ is the correct answer.

18. Which of the following is the correct full form of 'MRTP' in MRTP Act 1969? a. Money Reservation Trade Policy Act
b. Money Reservation Trade Practices Act
c. Monopolies and Restrictive Trade Practices Act
d. Monopolies Reservation Trade Practices Act

Answer: c
Explanation:
The correct answer is the Monopolies and Restrictive Trade Practices Act.
the correct full form of 'MRTP' in the MRTP Act 1969 is the Monopolies and Restrictive Trade Practices Act .

9. Which one country of the following was not a part of former USSR? a. Moldova
b. Georgia
c. Finland
d. Russia

Answer: c
Explanation:
The correct answer is Finland.
Key Points
Finland was not a part of the former USSR.

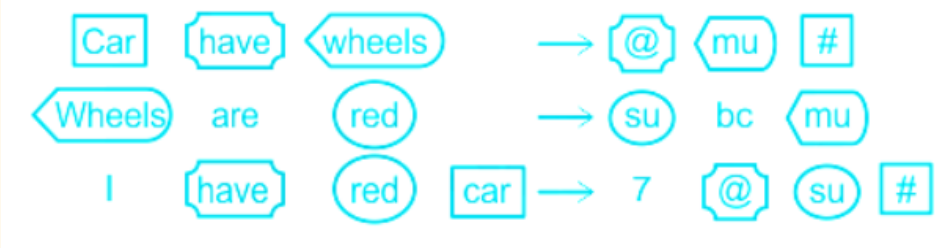
20. If sin(A + B) = $\frac{\sqrt{3}}{2}$ and cos(A − B)=$\frac{\sqrt{3}}{2}$then which of the following will be possible values of A and B?

a. A = 45°, B = 15°
b. A = 45°, B = 30°
c. A = 10°, B = 45°
d. A = 50°, B = 10°

Answer: a
Explanation:
Given:
sin(A + B) = $\frac{\sqrt{3}}{2}$ and cos(A − B)=$\frac{\sqrt{3}}{2}$
Calculation:
(A + B) = sin^{-1} (√3/2)
A + B = 60°
Then,
(A - B) = cos^{-1} (√3/2)
A - B = 30°
Solving,
∴ A = 45° and B = 15°

21. In a certain code language, 'Car have wheels' is written as '@ mu #', 'Wheels are red' is written as 'Su bc mu', 'I have red car' is written as '7 @ Su #'. Which among the following is the code for 'Wheels car' in that language?
a. # @
b. mu Su
c. mu #
d. Su #

Answer: c
Explanation:
According to the given information,



Car is coed as # or @.
Wheels are coed as mu.
'Wheels car' is coded as ‘mu #’ .
Or,
'Wheels car' is coded as ‘mu @’ .
But "mu @" is not given in options.
Hence , ‘mu #’ is the correct answer.

22. If $19\frac{2}{3} - 7\frac{1}{4} = x + 2\frac{1}{2}$ then what will be the value of x?

a. $11\frac{9}{12}$

b. $\frac{11}{12}$

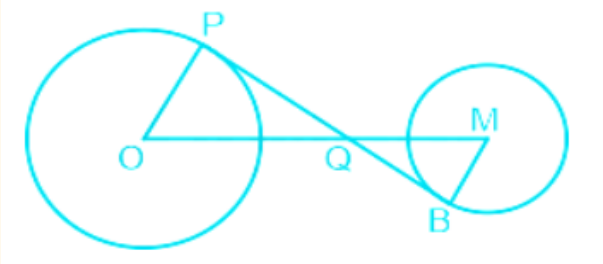
c. $9\frac{1}{12}$

d. $9\frac{11}{12}$

Answer: d
Explanation:
Given:
$19\frac{2}{3} - 7\frac{1}{4} = x + 2\frac{1}{2}$
Concept:
Calculation:
$19\frac{2}{3} - 7\frac{1}{4} = x + 2\frac{1}{2}$
⇒ 59/3 - 29/4 = x + 5/2
⇒ 236 - 87 = 12x + 30
⇒ x = 119/12
∴ x = $9\frac{11}{12}$

23. If the radii of two circles are 4.5 cm and 3.5 cm and the length of the transverse common tangent is 6 cm, then the distance between the two centers will be:
a. 8 cm
b. 12 cm
c. 10 cm
d. 9 cm

Answer: c
Explanation:
Given:
Radii of two circles = 4.5 cm and 3.5 cm
Calculation:



In ΔOPQ and ΔMBQ
⇒ ∠OPQ = ∠MBQ = 90
⇒ ∠PQO = ∠MQB ----(Vertically opposite angles)
ΔOPQ ~ ΔMBQ.
⇒ OQ/QM = OP/MB = PQ/QB = 4.5/3.5 = 9/7
Then,
⇒ PQ + QB = 6
⇒ PQ = 9QB/7
PQ = 3.375cm and QB = 2.625 cm
Let OQ and QM be 9a and 7a respectively.
⇒ OM = OQ + QM = 16a
In ΔOPQ,
Using pythagoras theorem,
⇒ OP
2+ PQ 2= OQ 2
In ΔMBQ,
Using pythagoras theorem,

⇒ BQ 2+ BM 2= QM 2
Adding,
⇒ 81a 2+ 49a 2= 4.5^2 +3.5^2+3.375^2+ 2.625^2
⇒ a = 0.625
∴ then the distance between the two centers = 9a + 7a = 16a = 10cm

24. In Excel, what shortcut key is used to fill the selected cell with active cells to the right?
a. Ctrl + S
b. Ctrl + R
c. Ctrl + D
d. Ctrl + V

Answer: b
Explanation:
The correct answer is Ctrl + R.
In Excel, shortcut key Ctrl + R is used to fill the selected cell with active cells to the right.

25. If (3x + 2y) : (3x – 2y) = 5 : 3 then find x : y.
a. $\frac{16}{3}$
b. $\frac{8}{3}$
c. $\frac{32}{3}$
d. $\frac{4}{3}$

Answer: b
Explanation:
Given:
(3x + 2y) : (3x – 2y) = 5 : 3
Calculation:
⇒ 9x + 6y = 15x - 10y
⇒ 6x = 16y
⇒ x/y = 16/6 = 8/3
∴ x : y = 8 : 3

26. According to the Constitution of India, the minimum age requirement for being a member of Panchayat is _____.
a. 24 years
b. 18 years
c. 21 years
d. 28 years

Answer: c
Explanation:
The correct answer is 21 years.
According to the Constitution of India, the minimum age requirement for being a member of Panchayat is 21 years .

27. Which of the following terms best describes the biological study of animal behaviour?
a. Ethology
b. Ethnology
c. Entomology
d. Etiology

Answer: a
Explanation:
The correct answer is Ethology.
Ethology is best describes the biological study of animal behaviour.

28. 10.53 divided by 0.09 gives:
a. 117
b. 100.9
c. 1.019
d. 109

Answer: a
Explanation:
Calculation:
? = 10.53/0.09
= 1053/9

= 117
∴ 10.53/0.09 = 117

29. Shree Guru Nanak Dev Ji was born in Rai Bhoi Ki Talwandi (present day Nankana Sahib) in:
a. 1539
b. 1465
c. 1456
d. 1469

Answer: d
Explanation:
The correct answer is1469.
Key Points
Shree Guru Nanak Dev Ji was born in Rai Bhoi Ki Talvandi (present day Nankana Sahib) in 1469 .

30. Who invented the modern mercury thermometer with a standardised scale?
a. Anders Celsius
b. Galileo Galilei
c. Grand Duke
d. Daniel Gabriel Fahrenheit

Answer: d
Explanation:
The correct answer isDaniel Gabriel Fahrenheit.
Daniel Gabriel Fahrenheit invented the modern mercury thermometer with a standardised scale .

31. Hampi was declared a World Heritage site by _____.
a. IMF
b. UNO
c. WHO
d. UNESCO

Answer: d
Explanation:

The correct answer is UNESCO.
Hampi was declared a World Heritage site by UNESCO .

32. Seven students A, B, C, D, E, F and G take a series of test. No two students get the same marks. A always scores more than B. G always scores more than A. Each time either C scores the highest and E scores the least or D scores the highest and F or B scores the least.
If D is ranked sixth and B is ranked fifth according to their marks, then which of the following can be true?
a. G is ranked first or fourth
b. E is ranked fourth or third
c. F is ranked third or fourth
d. A is ranked second or seventh

Answer: c
Explanation:
Given:
A always scores more than B.
A > B
G always scores more than A.
G > A
Condition 1 - Each time either C scores the highest and E scores the least.
C > _ > _ > _ > _ > _ > E
Condition 2: D scores the highest and F or B scores the least.
D > _ > _ > _ > _ > _ > F/B
Given:
D is ranked sixth and B is ranked fifth.
_ > _ > _ > _ > B > D > _
So, condition 2 is false
Then,
C > _ > _ > _ > B > D > E.
We know that,
G always scores more than A.
So, arranging the order of rank according to the given information
Arrangement 1 : C > G > F/A > F/A > B > D > E
Arrangement 2 : C > F > G > A > B > D > E
Now check the options

Option (1) G is ranked first or fourth → False
Because in both arrangements, G is not ranked first or fourth.
Option (2) E is ranked fourth or third → False
Because in both arrangements, E is not ranked fourth or third
Option (3) F is ranked third or fourth → True
Because in arrangements 1 F is ranked third or fourth.
Option (4) A is ranked second or seventh → False
Because in both arrangements, A is not ranked second or seventh
Hence, “F is ranked third or fourth” is the correct answer.

33. According to India's Election Commission, political parties cannot release their manifesto in pre poll silence period of:
a. 60 h
b. 36 h
c. 24 h
d. 48 h

Answer: d
Explanation:
The correct answer is48 h.
According to India's Election Commission, political parties cannot release their manifesto in a pre-poll silence period of 48 hours .

34. In a certain code language FMOPRA is written as 834207 and KQMATL is written as 953761. How will QTMPRL be written as in that language?
a. 652301
b. 563201
c. 562301
d. 635210

Answer: b
Explanation:
The codes have been assigned as follows,
FMOPRA →

F	M	O	P	R	A
8	3	4	2	0	7

KQMATL →

K	Q	M	A	T	L
9	5	3	7	6	1

Similarly,
QTMPRL →

Q	T	M	P	R	L
5	6	3	2	0	1

Hence, QTMPRL is coded as 563201

35. Which of the following monument is built with some influence of Gujarati style to welcome King George and Queen Mary to India?
a. Jallianwala Bagh
b. Sun Temple
c. India Gate
d. Gateway of India

Answer: d
Explanation:
The correct answer isGateway of India.
The Gateway of India monument is built with some influence of Gujarati style to welcome King George V and Queen Mary to India.

36. Study the given information and answer the question that follows. i) Six students P, Q, R, S, T, and U are in a class.

ii) Q and R are lighter than U but taller than P.
iii) S is taller than Q and heavier than R.
iv) T is lighter than S but heavier than U.
v) U is taller than S.
vi) P is lighter than T but heavier than U.
vii) P is taller than T.
Who among the students is the shortest?
a. T
b. R
c. Q
d. P

Answer: a
Explanation:
Given:
Six students - P, Q, R, S, T, and U
i) Q and R are lighter than U but taller than P.
Weight – U > Q and R
Height – Q and R > P
ii) S is taller than Q and heavier than R.
Weight – S > R
Height – S > Q
iii) T is lighter than S but heavier than U.
Weight– S > T ;T > U
iv) U is taller than S.
Height – U > S
v) P is lighter than T but heavier than U.
Weight – T > P; P > U
vi) P is taller than T.
Height – P > T
Arranging the information in sequence -
Weight – S > T > P > U > Q and R
Height – U > S > Q and R > P > T
Hence, “T” is the shortest among the students.

37. When did Sir William Jones found Asiatic Society?
a. 1793

b. 1784
c. 1854
d. 1782

Answer: b
Explanation:
The correct answer is1784.
In 1784,Sir William Jones founded the Asiatic Society.

38. When did Nadir Shah invade India and sack Delhi?
a. 1739
b. 1765
c. 1750
d. 1754

Answer: a
Explanation:
The correct answer is1739.
In 1739 Nadir Shah invaded India and sacked Delhi .
The Battle of Karnal, was a decisive victory for Nader Shah , the founder of the Afsharid dynasty of Iran , during his invasion of India.

39. If the average age of A, B and C is 22 years and the average age of B and C is 25 years, then find A's age after 9 years.
a. 35 years
b. 50 years
c. 45 years
d. 25 years

Answer: d
Explanation:
Given:
Average age of A, B and C = 22 years
Average age of B and C = 25 years
Calculation:
Total age of A, B and C = 22 × 3 = 66 years
Total age of B and C = 25 × 2 = 50 years

A's present age = 66 - 50 = 16 years
∴ A's age after 9 years = 16 + 9 = 25 years

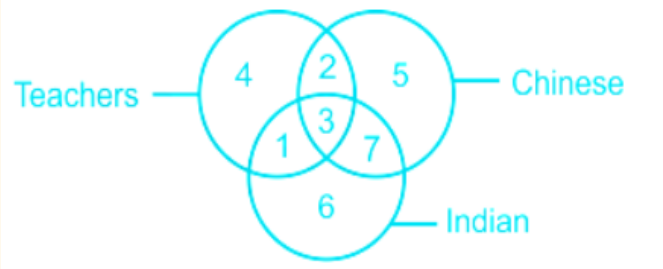
40. Which organisation has launched Samwad with students (SwS) as a part of its programme on New Year Day, 2019?
a. NCERT
b. BARC
c. DRDO
d. ISRO

Answer: d
Explanation:
The correct answer is ISRO.
ISRO has launched Samwad with students (SwS) as a part of its program on New Year Day, 2019.

41. Who has written Bahuroopi Gandhi?
a. Jawaharlal Nehru
b. Chakravarti Rajagopalachari
c. Amrita Pritam
d. Anu Bandyopadhyaya

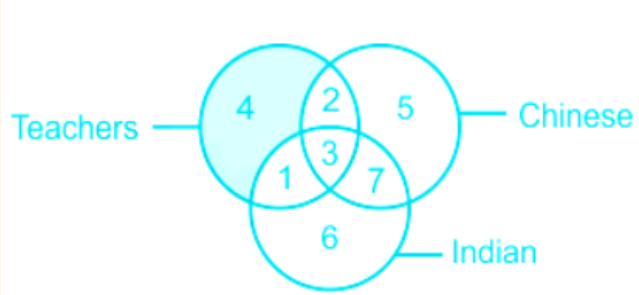
Answer: d
Explanation:
The correct answer is Anu Bandyopadhyaya.
Anu Bandyopadhyaya wrote the novel 'Bahuroopi Gandhi'

42. Study the diagram and identify the region representing teachers who are not Indian and not Chinese.



a. 4, 2

b. 4, 1
c. 4, 2, 1
d. 4
Answer: d
Explanation:
The shaded part represents is the number of teachers who are not Indian and not Chinese.



The number of teachers who are not Indian and not Chinese = 4
Hence, ‘ 4’ number of teachers who are not Indian and not Chinese.

43. Privatisation of the public sector enterprises by selling off part of the equity of PSEs to the public is known as:
a. outsourcing
b. commercialisation
c. modernisation
d. disinvestment

Answer: d
Explanation:
The correct answer is disinvestment.
Key Points
Privatisation of the public sector enterprises by selling off part of the equity of PSEs to the public is known as disinvestment .

44. In an examination, 35% students failed in one subject and 42% failed in the other subject, 30% failed in both the subjects. If total number of students is 2500 then how many students passed only in one subject?
a. 1050

b. 1750
c. 750
d. 425

Answer: d
Explanation:
Given:
35% failed in one subject
42% failed in other subjects
Calculation:
% failed in only one subject = 35% of 2500
⇒ 875
% failed in only other subject = 42% of 2500
⇒ 1050
% failed in both subject
⇒ 30% of 2500
⇒ 750
Passed in one subject = (875 - 750) + (1050 - 750)
⇒ 425

45. Which of the following is the major hazard of nuclear power generation?
a. Limited availability
b. Storage and Dispersal
c. Installation
d. Energy requirement

Answer: b
Explanation:
The correct answer isStorage and Dispersal.
Major hazards of nuclear power generation:
Storage and disposal of spent or used fuels: This is because the uranium used decays into harmful subatomic particles radiations which are harmful to health. Further, there is a risk of accidental leakage of nuclear radiation.

46. Who among the following freedom fighters was NOT involved in the Kakori Train Robbery?

a. Chandrashekhar Azad
b. Ram Prasad Bismil
c. Bhagat Singh
d. Ashfaqullah Khan

Answer: c
Explanation:
The correct answer isBhagat Singh.
Freedom fighter Bhagat Singh was not involved in the Kakori Train Robbery .

47. The digit of hundred's place value of 19! Is:
a. 1
b. 0
c. 4
d. 9

Answer: b
Explanation:
Calculation:
After 5! = One zero at the end of the number
After 10! = two Zeros at end of number
After 15!= three zeroes at end of number→
then,
19! we get minimum three zeros
∴ The digit of hundred's place value of 19! = 0

48. LCM and HCF of two numbers are 1920 and 16 respectively. If one of the numbers is 240, then find the other number.
a. 128
b. 182
c. 150
d. 112

Answer: a
Explanation:
Given:
LCM = 1920

HCF = 16
Formula:
LCM × HCF = product of numbers
Calculation:
Other number = (1920 × 16)/240 = 128
∴ Other number is 128

49. When was WTO (World Trade Organization) established?
a. 1995
b. 1948
c. 1999
d. 1983

Answer: a
Explanation:
The correct answer is 1995.
WTO (World Trade Organization) was established in 1995 .

50. Which of the following neighbouring countries is separated from India by a narrow channel of sea formed by the Palk Strait and the Gulf of Mannar?
a. Nepal
b. Sri Lanka
c. Maldives
d. Pakistan

Answer: b
Explanation:
The correct answer isSri Lanka.
Sri Lanka is separated from India by a narrow channel of sea formed by the Palk Strait and the Gulf of Mannar.

51. Who among the following received Mexico's highest civilian honour for foreigners in 2019?
a. Pratibha Singh Patil
b. Narendra Modi
c.Amitabh Bacchan

d. Pranab Mukherji

Answer: a
Explanation:
The correct answer isPratibha Singh Patil.
Pratibha Singh Patil received Mexico's highest civilian honour for foreigners in 2019 .

52. What is the value of the following expression?
$(-20)^3 + (13)^3 + (7)^3$
a. 4560
b. –5460
c. –4650
d. 4566

Answer: b
Explanation:
Given:
? = (–20) 3+ (13) 3+ (7) 3
Formula:
a 3+ b 3+ c 3-3abc = (a + b + c)(a 2+ b 2+ c 2- ab - bc - ac)
Calculation:
Where, a = -20, b = 13, c = 7
-20 + 13 + 7 = 0
Then,
⇒ (–20) 3+ (13) 3+ (7) 3= 3 × (-20) × 13 × 7 = -5460
∴ The value of (–20) 3+ (13) 3+ (7) 3 is -5460.

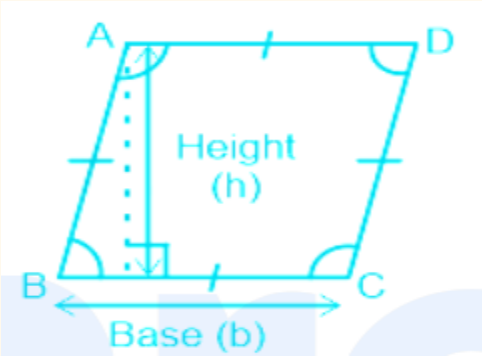
53. Which of the following plants has 'hidden reproductive organs'?
a. Ipomoea
b. Marsilea
c. Pinus
d. Deodar

Answer: b
Explanation:
The correct answer is Marsilea.

Marsilea plants have hidden reproductive organs.

54. The perimeter of a rhombus is 120 m and the distance between any two parallel sides is 15 m. The area of the rhombus is:
a. 450 cm ^{2}
b. 450 m ^{2}
c. 4.5 m ^{2}
d. 45 m ^{2}

Answer: b
Explanation:
Given:
Perimeter of rhombus = 120 m
Calculation:



Length of each side of rhombus = 120/4 = 30 m
Height of rhombus = 15m
Area of rhombus = base of length × height
= 30 × 15
= 450 sq.m
∴ Area of rhombus is 450 m 2

55. Which of the following is the process of converting sugar into alcohol?
a. Oxidation
b. Pasteurisation
c. Bleaching
d. Fermentation

Answer: d
Explanation:
The correct answer is Fermentation.
The process of converting sugar into alcohol is called Fermentation .

56. During which financial year was Jal Kranti Abhiyan launched by the Government of India?
a. 2015-16
b. 2003-2004
c. 2018-19
d. 2017-18

Answer: a
Explanation:
The correct answer is 2015-16.
During the financial year 2015-16, the Jal Kranti Abhiyan was launched by the Government of India.

57. If $16\sec^2\theta - 40\sec\theta + 25 = 0$ and θ is an acute angle, then what will be the value of tan θ?
a. $\frac{3}{4}$
b. $\frac{4}{5}$
c. $\frac{4}{3}$
d. $\frac{3}{5}$

Answer: a
Explanation:
Given:
$16\sec^2\theta - 40\sec\theta + 25 = 0$
Calculation:
⇒ 16 sec2 θ – 40 sec θ + 25 = 0
⇒ 16 sec2 θ – 2 × 4 × 5 sec θ + 25 = 0
⇒ (4secθ - 5)2= 0
⇒ 4secθ = 5

⇒ secθ = 5/4
Then,
⇒ 1 + tan2θ = sec2θ
⇒ tan2θ = 25/16 - 1 = 9/16
∴ tanθ = 3/4

58. A shopkeeper gives 20% discount on MRP. Joginder buys a suitcase from the shop, at an additional discount of 20% on the reduced price. If the MRP of the suitcase is Rs. 1,200, then find the purchasing price paid by Joginder.
a. Rs. 864
b. Rs. 800
c. Rs. 768
d. Rs. 600

Answer: c
Explanation:
Given:
Discount = 20%
Calculation:
Marked price = Rs.1200
Single equivalent discount = (20 + 20) - (20 × 20)/100 = 36%
Selling price = purchasing price = 1200 × (100 - 36)/100 = Rs.768
∴ The purchasing price is Rs.768

59. Which of the following includes genetic engineering?
a. Gene revolution
b. Bloodless revolution
c. Globalisation
d. Green revolution

Answer: a
Explanation:
The correct answer is Gene revolution.
The gene revolution is the application of biotechnology in food production.

60. Who among the following was the first Indian woman to win the Booker Prize?

a. Anita Desai
b. Amrita Pritam
c. Arundhati Roy
d. Sarojini Naidu

Answer: c
Explanation:
The correct answer is Arundhati Roy.
The first Indian woman to win the Booker Prize is Arundhati Roy

61. Which of the following options defines Operating System?
a. It is a set of programs used to convert high level language to low level language.
b. It is a set of programs that controls the way a computer works and runs other programs.
c. It is a software that is used to convert source program instructions to set programs.
d. It is the actual way of working on computers.

Answer: b
Explanation:
The correct answer is It is a set of programs that controls the way a computer works and runs other programs.
"A set of programs that controls the way a computer works and runs other programs" is known as an Operating system.

62. A company sold six different cars Swift, Santro, Creta, Audi, I10 and Magna during a period of Monday to Saturday. Only one car was sold on a particular day. No car was sold twice. Atleast four cars were sold after the car Santro. The car Magna was sold on Tuesday. The car Audi was sold immediately after the car Creta and car Creta was sold atleast before three cars. Both the cars Santro and I10 were sold atleast before one car. On which day was Swift car sold?
a. Thursday
b. Friday
c. Monday
d. Saturday

Answer: d
Explanation:

Given:
Six cars - Swift, Santro, Creta, Audi, I10 and Magna.

1) Atleast four cars were sold after the car Santro. The car Magna was sold on Tuesday.

Days	Cars
Monday	Santro
Tuesday	Megna
Wednesday	
Thursday	
Friday	
Saturday	

2) The car Audi was sold immediately after the car Creta and car Creta was sold atleast before three cars.

Days	Cars
Monday	Santro
Tuesday	Megna
Wednesday	Creata
Thursday	Audi
Friday	
Saturday	

3) Both the cars Santro and I10 were sold atleast before one car

Days	Cars
Monday	Santro
Tuesday	Megna
Wednesday	Creata
Thursday	Audi
Friday	I10
Saturday	Swift

Hence, “Saturday” was Swift car sold.

63. For which of the following diseases has U.S. FDA approved the first vaccine Dengvaxia in 2019?
a. Dengue
b. Cholera
c. Swine flu
d. Chikungunya

Answer: a
Explanation:
The correct answer isDengue.
U.S. FDA approved Dengvaxia as the first vaccine for Dengue disease in 2019 . .
In May 2019, Dengvaxia was approved in the United States as the first vaccine approved for the prevention of dengue disease caused by all dengue virus serotypes.

64. What is the value of the following expression?
394 × 394 + 2 × 394 × 106 + 106 × 106
a. 25000
b. 500

c. 250000
d. 2500

Answer: c
Explanation:
Given:
394 × 394 + 2 × 394 × 106 + 106 × 106
Formula:
(A + B)2= A2+ 2AB + B2
Calculation:
⇒ 394 × 394 + 2 × 394 × 106 + 106 × 106 = (394 + 106)2
∴ 394 × 394 + 2 × 394 × 106 + 106 × 106 = 250000

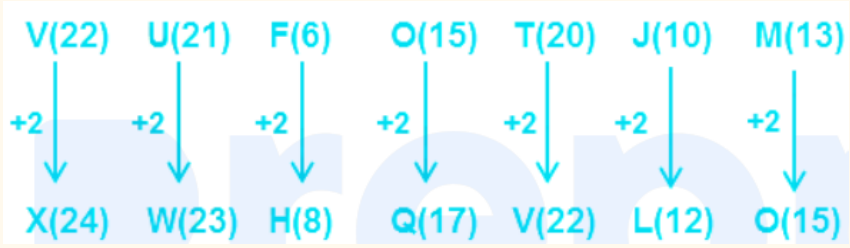
65. PQ is the diameter of a circle whose centre is O. If a point R lies on the circle and and ∠RPO is 39°, then what will be the measure of ∠RQP?
a. 51°
b. 129°
c. 125°
d. 151°

Answer: a
Explanation:
Given:
∠RPO = 39°
Calculation:
∠RPO = ∠RPQ = 39°
Due to point R, triangle PRQ formed in semicircle.
∠PRQ = 90° ----(angle is semicircle)
In ΔPRQ,
∠PRQ + ∠RPQ + ∠RQP = 180°
∴ ∠RQP = 51 °

66. In a certain code language, VUFOTJM is written as XWHQVLO. How will ENTGYH be written as in that code language?
a. GPVIJA
b. GPVJAI
c. GPVJIA

d. GPVIAJ

Answer: d
Explanation:
The pattern for the code is as follows,



So, HSBTQ is written as CNWOL
Similarly,

Hence, ENTGYH is coded as GPVIAJ .

67. Find the smallest positive number which must be subtracted from the number 5970 for the difference to be a perfect square
a. 9
b. 25
c. 41
d. 16

Answer: c
Explanation:
Calculation:
From options:
1) 5970 - 9 = 5961 is not perfect square
2) 5970 - 25 = 5945 is not perfect square
3) 5970 - 41 = 5929 = √5929 = 77 is a perfect square
4) 5970 - 16 = 5954 is not perfect square
∴ 41 is the smallest positive number.

68. In a reunion of class XII, out of 45 students, 30 students participated in the function. If all present in the function shake hands with one other, find the total number of handshakes.
a. 870
b. 435
c. 841
d. 900

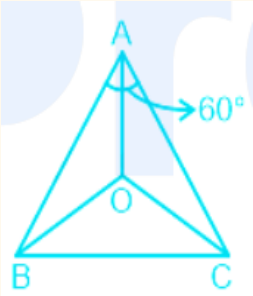
Answer: b
Explanation:
Given:
Students participated in function = 30
Calculation:
Number of students not participated in function = 45 - 30 = 15
Arithmetic progression for number of hands shake = 1, 2, ..., 29
Number of terms in this AP =
⇒ 29 = 1 + (n - 1)1
⇒ n = 29
Sum of all terms in AP = 29/2 × [2 × 1 + (29 - 1) × 1)] = 435
∴ Number of handshakes = 435

69. When did Moplah revolt (Malabar Rebellion) in Kerala take place?
a. 1928
b. 1921
c. 1945
d. 1934

Answer: b
Explanation:
The correct answer is1921.
In 1921 Moplah revolt (Malabar Rebellion) took place in Kerala .
The Malabar Rebellion happened from August 20, 1921 , to 1922 in the Malabar region of Kerala . It was also known as the Moplah massacre, Moplah riots , and Mappila riots.

70. In ΔABC, ∠BAC = 60°, and O is a point inside ΔABC. If ∠OBC is two times ∠OBA and ∠OCB is two times ∠OCA, then what will be the measure of ∠BOC?
a. 60°
b. 120°
c. 80°
d. 100°

Answer: d
Explanation:
Given:
∠BAC = 60°
Calculation:



∠OBC = 2∠OBA
∠OCB = 2∠OCA
In ΔABC,
∠ABC + ∠ACB + ∠BAC = 180°
∠ABC + ∠ACB = 120°
∠OBA + ∠OBC + ∠OCA + ∠OCB = 120°
∠OBC/2 + ∠OBC + ∠OCB/2 + ∠OCB = 120°
∠OBC + ∠OCB = 80
In ΔOBC,
∠OBC + ∠OCB + ∠BOC = 180°
∴∠BOC = 180° - 80° = 100°

71. In which of the following states is the famous Sun Temple situated?
a. Punjab
b. Tamil Nadu
c. Andhra Pradesh
d. Odisha

Answer: d
Explanation:
The correct answer is Odisha.
The famous Sun Temple is situated in Odisha

72. In the field of computers and Internet, what does W3C stand for?
a. World Wide Web Content
b. World Wide Web Centre
c. World Wide Web Consortium
d. World Wide Web Commission

Answer: c
Explanation:
The correct answer is World Wide Web Consortium.
In the field of computers and the Internet, W3C stands for World Wide Web Consortium .

73. A sum of money doubles itself at a compound interest in 8 years. In how many years will it become four times itself?
a. 12
b. 20
c. 14
d. 16

Answer: d
Explanation:
Formula:
Let P = Principal, R = rate of interest and N = time
Compound interest = P(1 + R/100) N- P
Calculation:
Let P = Rs.100 and A = Rs.200
⇒ 200 = 100(1 + R/100)8
⇒ 2 = (1 + R/100)8
Squaring both sides,
⇒ 4 = (1 + R/100)16
∴ In 16 years, it will become four times.

74. If we increase 50% of the numerator and 80% of the denominator of a fraction, then what fraction of the original will be the new fraction?

a. $\frac{6}{5}$

b. $\frac{5}{6}$

c. $\frac{7}{9}$

d. $\frac{5}{8}$

Answer: b
Explanation:
Calculation:
Let fraction be a/b.
New numerator = 150a/100
New denominator = 180b/100
New fraction = 5a/6b
Then,
5a/6b = a/b × ?
∴ Required value = 5/6

75. The number between 6000 and 7000 that is divisible by each of 12, 21, 32 and 18 is:

a. 6040

b. 6480

c. 6048

d. 6064

Answer: c
Explanation:
Given :
Range of number = 6000 to 7000
Calculation:
LCM of 12, 21, 32 and 18 = 2016
6048 = 2016 × 3
∴ From options, 6048 is multiple of 2016, so it will be divisible by 12, 21, 32 and 18.

76. Among the four letter-clusters listed, three are alike in some manner and one is different. Select the odd one.

a. NARD

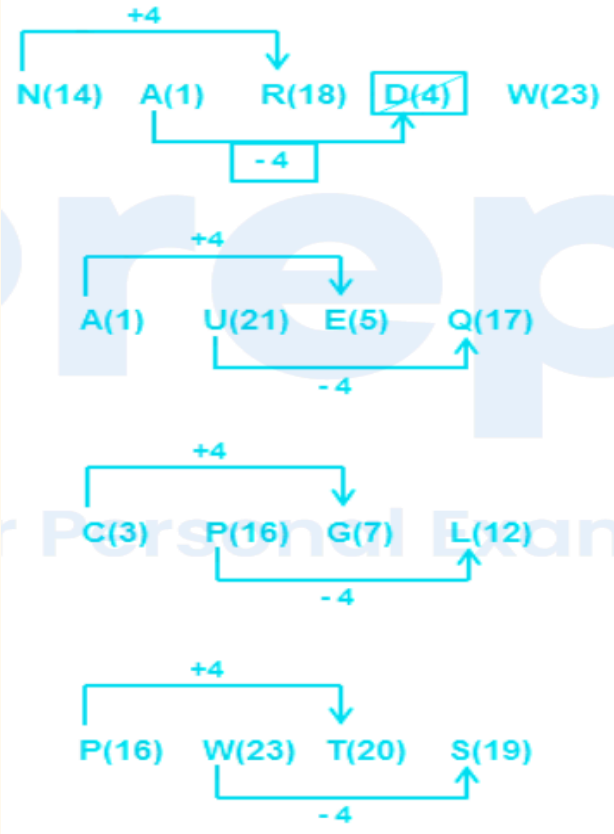
b. CPGL

c. AUEQ

d. PWTS

Answer: a

Explanation:



All follow the same pattern, except ‘ NARD ’.

Hence, “NARD” is the odd one.

77. Rohan can travel from Delhi to Kanyakumari in 30 h. If he reduces his speed by $\frac{1}{15}th$,he will go 10 km less in the same time. His speed is:

a. 8 km/h

b. 5 km/h

c. 3 km/h

Answer: b
Explanation:
Given:
Time = 30h
Calculation:
Let the distance between Delhi to Kanyakumari be a km.
Speed = $\frac{a}{30}$ kmph
New speed = $\frac{a}{30}$ × (1 - $\frac{1}{15}$) = $\frac{14a}{450}$ kmph
New distance = a - 10
Then,
⇒ $\frac{14a}{450} = \frac{a-10}{30}$
⇒ 14a = 15a - 150
⇒ a = 150 km
∴ His original speed = 150/30 = 5 kmph

78. Select the option that is related to the third term in the same way as the second term is related to the first term.
Patient : Doctor :: Student : ?
a. Monitor
b. School
c. Teacher
d. Lecture

Answer: c
Explanation:
The logic followed here is:
Patient : Doctor → Doctor treats Patient.
Similarly,
Student : Teacher → Teacher teach to Student .
Hence, 'Teacher' is the correct answer.

79. Among the four words listed, three are alike in some manner and one is different. Select the odd one.
a. Bitter
b. Salty

c. Sour
d. Delicious

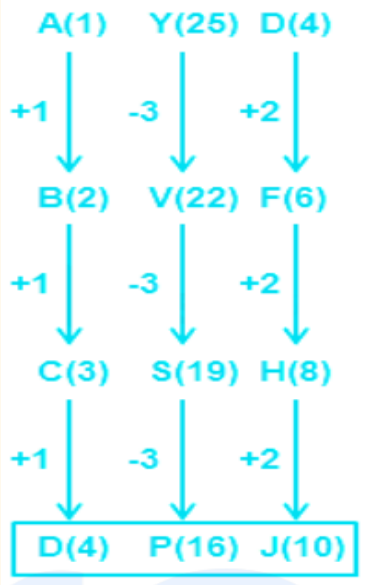
Answer: d
Explanation:
The logic followed here is:
Option (1) Bitter → Type of taste.
Option (2) Salty → Type of taste.
Option (3) Sour → Type of taste.
Option (4) Delicious → Not type of taste.
Hence, " Delicious " is an odd one.

80. The inner lining of the small intestine has numerous finger like projections that are called:
a. enzymes
b. tissues
c. villi
d. cells

Answer: c
Explanation:
The correct answervilli.
Intestinal villi are small, finger-like projections that extend into the lumen of the small intestine.

81. Select the letter-cluster that can replace the question mark (?) in the following series.
AYD, BVF, CSH, ?
a. DWS
b. DQI
c. EQK
d. DPJ

Answer: d
Explanation:
The logic is shown below –



Hence, “DPJ” is the term that completes the series.

82. The National Informatics Centre (NIC) was established in:
a. 1979
b. 1977
c. 1978
d. 1976

Answer: d
Explanation:
The correct answer is 1976.
Key Points
The National Informatics Centre (NIC) was established in 1976 under the Planning Commission by the Indian Government .

83. If α and β are the zeroes of the polynomial $x^2 – 5x + m$ such that α – β = 1, then what will be the value of m.
a. 6
b. 10
c. 3
d. 2

Answer: a

Explanation:
Given:
Polynomial = x2– 5x + m
Calculation:
⇒ α + β = -b/a = -(-5/1) = 5
⇒ α – β = 1
Solving,
α = 3 and β = 2
Then,
⇒ αβ = c/a = m/1
⇒ 3 × 2 = m
⇒ m = 6
∴ m = 6

84. According to National Waterways 1 (NW1) in India, what is the length (stretch) of Allahabad (Prayagraj)-Haldia in km?
a. 891 km
b. 205 km
c. 1078 km
d. 1,620 km

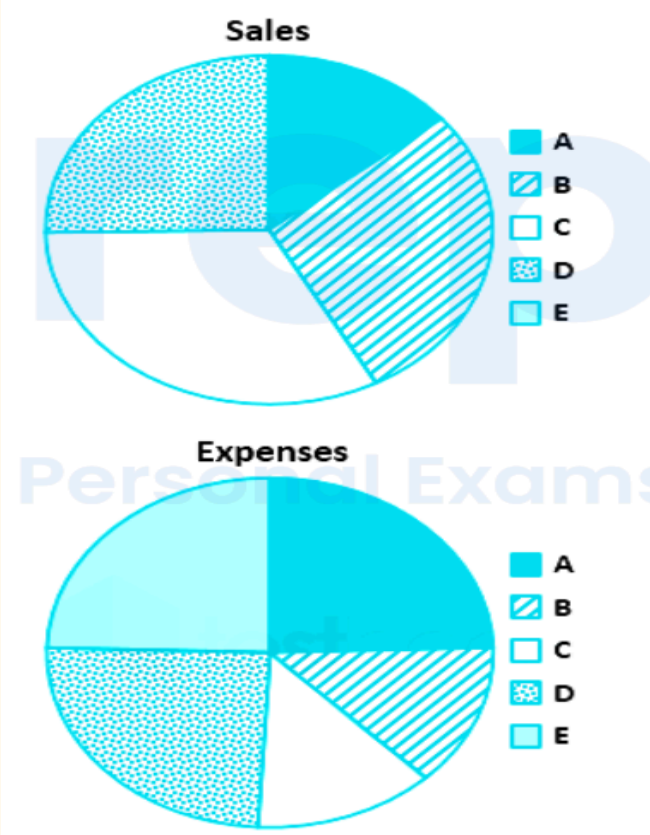
Answer: d
Explanation:
The correct answer is1620 km.
According to National Waterways 1 (NW1) in India, The length (stretch) of Allahabad (Prayagraj)-Haldia is 1620 km.

85. The least positive number, which must be added to the greatest number of 4 digits in order that the sum may be exactly divisible by 307, is:
a. 132
b. 131
c. 176
d. 175

Answer: a
Explanation:
Calculation:

Greatest four digit number = 9999
⇒ 9999 = 307 × 32 + 175
⇒ 307 - 175 = 132
∴ 132 is the number.

86. Study the given pie charts and answers the question that follows.
The pie charts represent the values of sales and expenses of five companies A, B, C, D, E in terms of percentages.

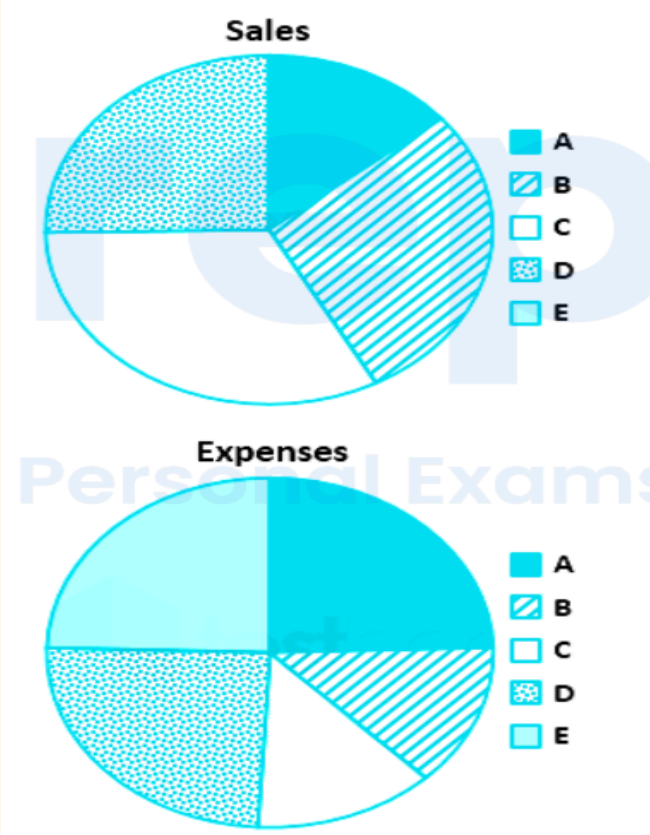


Based on the visual reading of the pie-chart, which company is the most profitable in percentage terms.
a. C
b. A
c. B
d. D

Answer: a
Explanation:
Calculation:
From above,

C and B has less % expenses but C has more sales than B so,
∴ C is most profitable company.

87. Study the given pie charts and answers the question that follows.
The pie charts represent the values of sales and expenses of five companies A, B, C, D, E in terms of percentages

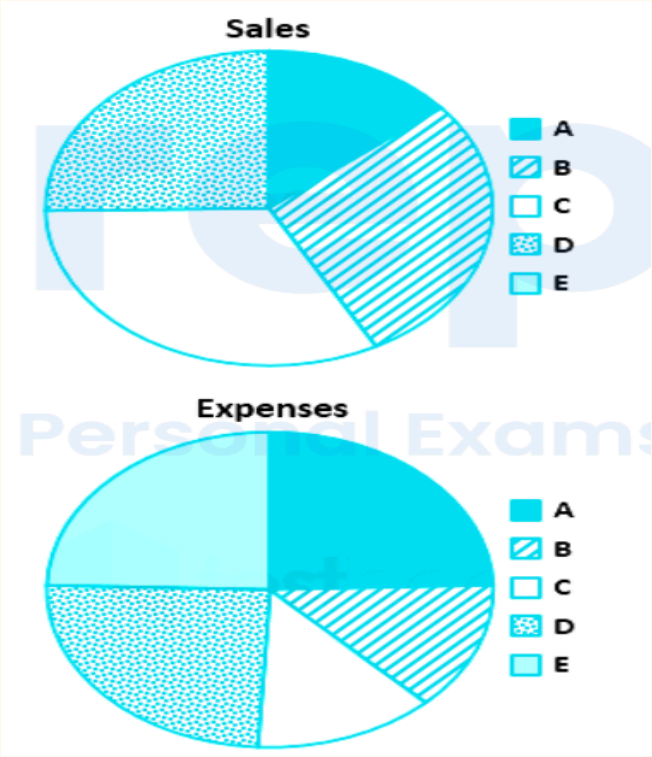


Based on the visual reading of the pie-chart, which of the companies has the highest percentage loss?
a. E
b. A
c. B
d. D

Answer: a
Explanation:
Calculation:
E has more expenses but it has no share in the sales.

∴ E has more % loss.

88. Study the given pie charts and answers the question that follows.
The pie charts represent the values of sales and expenses of five companies A, B, C, D, E in terms of percentages.

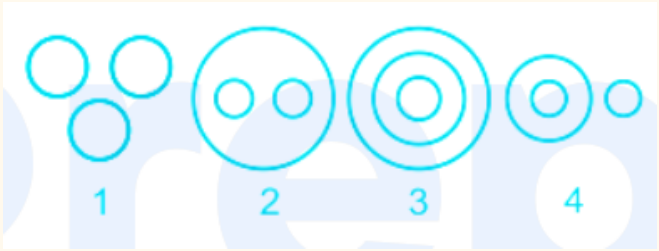


Based on the visual reading of the pie-chart, which of the companies reported no percentage profit/loss?
a. B
b. D
c. C
d. A

Answer: b
Explanation:
Calculation:
D has same % sales and expenses so,
∴ D has reported no profit/loss.

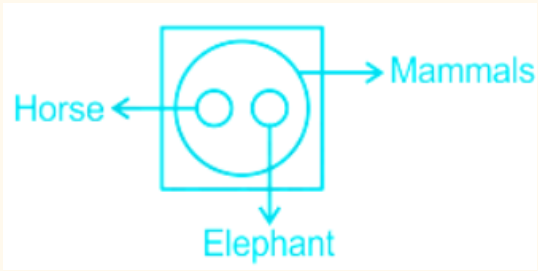
89. Select the Venn diagram that best represents the relationship between the

following classes.
Mammals, Horse, Elephant



a. 3
b. 4
c. 1
d. 2

Answer: d
Explanation:
The Venn diagrams best represent the relationship between - Mammals, Horse, Elephant figures are shown below:



Horses and Elephants both are mammal's animals.
Hence, ' option 4' is the correct answer.

90. Among the four places listed, three are alike in some manner and one is different. Select the odd one.
a. Ranchi
b. Patna
c. Bhopal
d. Punjab

Answer: d
Explanation:

The logic followed here is:
Option (1) Ranchi → Ranchi is the capital of Jharkhand state.
Option (2) Patna → Patna is the capital of Bihar state.
Option (3) Bhopal → Bhopal is the capital of Madhya Pradesh state.
Option (4) Punjab → Punjab is the state of India.
Hence, “Punjab” is an odd one

91. Read the given statements carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, select the conclusion from the given options which logically does NOT follow from the statements.

Statements:
(i) All children are cats.
(ii) All pots are children.
a. Some children are pots.
b. No pot is a cat.
c. Some cats are pots.
d. All pots are cats.

Answer: b
Explanation:
Given:
Statements:
(i) All children are cats.
(ii) All pots are children.
The least possible diagram for the given statements is as follows

Conclusions:
Option (1) Some children are pots → True (Because All pots are children so some children will be also pots)
Option (2) No pot is a cat → False (Because All pots are children and All children are cats so definitely all pots are cats)
Option (3) Some cats are pots → True (Because All pots are children and All children are cats so definitely Some cats will be also pots)
Option (4) All pots are cats → True (All pots are children and All children are cats so definitely all pots are cats)
Hence, " Option (2) " does NOT follow from the statements .

92. In a certain code language, HSBTQ is written as CNWOL. How will DSBOF be written as in that code language?
a. IOXKB
b. YWNJA
c. YNWJA
d. IXOWA

Answer: c
Explanation:
The pattern for the code is as follows,
HSBTQ is written as CNWOL

Similarly,
DSBOF be written as:

Hence, DSBOF is coded as YNWJA .

93. If '÷' means '+', '–' means '×', '×' means '–' and '+' means '÷', then find the value of 40 ÷ 20 × 10 + 10 – 5.
a. 25
b. 1
c. 52
d. 55

Answer: d
Explanation
Decoding the information,
Given:
40 ÷ 20 × 10 + 10 – 5
After replacing the signs from left to right and using the BODMAS rule,
40 + 20 – 10 ÷ 10 × 5
= 40 + 20 – 1 × 5
= 40 + 20 – 5
= 60 – 5
= 55
Hence, “55” is the correct answer.

94. Study the following carefully and answer the question that follows.
9 B Q = 5 R $ J @ 4 * P & 9 M X # G
Which of the given options is exactly midway between B and X?
a. @
b. *
c. &
d. $

Answer: a
Explanation:
Given Series:-
9 B Q = 5 R $ J @ 4 * P & 9 M X # G
Exactly midway between B and X,
9 B Q = 5 R $ J @ 4 * P & 9 M X # G
Hence, the correct answer is '@'

95. 7 members A, B, C, D, E, F and G are going to office in a particular order (not necessarily in the same order). C reached the office in the end. None of them reached the office at the same time. Atleast 3 members reached the office after G. E reached the office just after A and G reached the office just after E. F reached the office just before A but didn't reached the office after D.
Who among them reached the office first?
a. G
b. F
c. D
d. B

Answer: b
Explanation:
Given:
7 members - A, B, C, D, E, F and G
1) E reached the office just after A and G reached the office just after E.
A > E > G
2) At least 3 members reached the office after G.
A > E > G > _> _> _
3) C reached the office in the end
A > E > G > _> _> C
4) F reached the office just before A but didn't reached the office after D.
F > A > E > G > D/B > D/B > C
Hence, “F” among them reached the office first.

96. 'Cow' is related to 'Animal' in the same way as 'Sparrow' is related to '_____'.
a. Flower
b. Bird
c. Food
d. Insect

Answer: b
Explanation:
The logic followed here is:

'Cow' is related to 'Animal' → Because Cow is an animal
Similarly,
'Sparrow' is related to 'bird' → Because Sparrow is a bird.
Hence, 'Bird' is the correct answer

97. There are five girls in a group. K is second tallest. P is taller than M. R is taller than M. N is taller than P. Which of the following sequence about their height is not possible?
a. R > K > N > P > M
b. N > K > R > P > M
c. R > K > P > N > M
d. N > K > P > R > M

Answer: c
Explanation:
Given information;
1) K is second tallest.
K – Second tallest
2) P is taller than M.
P > M
3) R is taller than M.
R > M
4) N is taller than P.
N > P
Now check the options :
Option (1) : R > K > N > P > M
Given information;
1) K – Second tallest → True → Follow by the option
2) P > M → True → Follow by the option
3) R > M → True → Follow by the option
4) N > P → True → Follow by the option
Option (2) : N > K > R > P > M
1) K – Second tallest → True → Follow by the option
2) P > M → True → Follow by the option
3) R > M → True → Follow by the option
4) N > P → True → Follow by the option
Option (3) : R > K > P > N > M

1) K – Second tallest → True → Follow by the option
2) P > M → True → Follow by the option
3) R > M → True → Follow by the option
4) N > P → True → Not follow by the option
Option (4) : N > K > P > R > M
1) K – Second tallest → True → Follow by the option
2) P > M → True → Follow by the option
3) R > M → True → Follow by the option
4) N > P → True → Follow by the option
Hence, “Option (3)” sequence about their height is not possible .

98. If '×' means '+', '+' means ÷', '–' means '×', and '÷' means '–', then find the value of 16 × 15 + 5 – 2 ÷ 4.
a. 26
b. 18
c. 16
d. 22

Answer: b
Explanation:
Decoding the information,
Given:
16 × 15 + 5 – 2 ÷ 4
After replacing the signs from left to right and using the BODMAS rule,
16 + 15 ÷ 5 × 2 - 4
= 16 + 3 × 2 - 4
= 16 + 6 - 4
= 22 – 4
= 18
Hence, “18” is the correct answer.

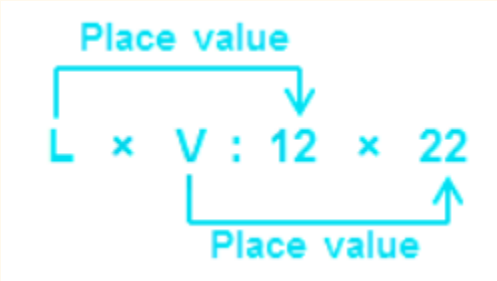
99. Select the word that will come in the middle if the given words are arranged in the order in which they would appear in an English dictionary.
Sports → Spoil → Spouse → Spit → Sparrow
a. Spit
b. Spouse
c. Sports

d. Spoil

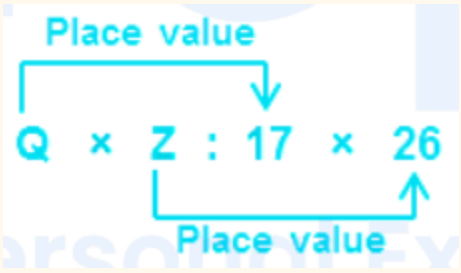
Answer: d
Explanation:
Given words:
Sports → Spoil → Spouse → Spit → Sparrow
According to the sequence in the dictionary:
The correct order of the given words is:
Sparrow
Spit
Spoil
Sports
Spouse
Hence, 'Spoil' will come in the middle.

100. Select the option that is related to the third expression in the same way as the second expression is related to the first expression.
L × V : 12 × 22 :: Q × Z : ?
a. 17 × 26
b. 18 × 10
c. 11 × 15
d. 12 × 14

Answer: a
Explanation:
The pattern for the code is as follows,
L × V : 12 × 22



Similarly,
Q × Z : 17 × 26



Hence, KHWS is coded as “17 × 26”.