सत्यमेव जयते

रेलवे भर्ती बोर्ड | RAILWAY RECRUITMENT BOARD

सीईएन ०१/२०२६ सहायक लोको पायलट (एएलपी) के पद पर भर्ती

CEN 01/2026 Recruitment of Assistant Loco Pilot (ALP)

Test Date	05/11/2026
Test Time	12:30 PM - 1:30 PM
Subject	RRB ALP 2026 CBT 1

*** Note**
Correct Answer will carry 1 mark per Question.
Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.
2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : **RRB ALP**

Q.1 **The monthly salaries (in ₹) of five workers in a factory are 12,000, 15,000, 18,000, 17,000, and 16,000. What is the arithmetic mean of their salaries?**

Ans
- ✗ A. ₹18,000
- ✗ B. ₹17,200
- ✗ C. ₹16,500
- ✓ D. ₹15,600

Q.2 **Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?**
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans
- ✓ A. XSD
- ✗ B. RMH
- ✗ C. EZU
- ✗ D. SNI

Q.3 **A shopkeeper bought six identical mobile phones for ₹18,000. He sold two of them for ₹18,000. What was his gain percentage on the two mobile phones sold?**

Ans
- ✗ A. 100%
- ✓ B. 200%
- ✗ C. 150%
- ✗ D. 250%

Q.4 **Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?**
YUW 12, TPR 18, OKM 24, JFH 30, ?

Ans
- ✗ A. FAC 36
- ✗ B. EBD 34
- ✗ C. EAD 34
- ✓ D. EAC 36

Q.5 **What does the ovary of a flower transform into after fertilisation is complete?**

Ans
- ✗ A. Zygote
- ✓ B. Fruit
- ✗ C. Seedcoat
- ✗ D. Seed

Q.6 In this question, a group of number/symbol is coded using letter codes as per the codes given below and the conditions which follow. The correct combination of codes following the conditions is your answer. If none of the conditions follow, then codes for the respective Number/Symbol are to be followed directly as given in the table.

Number/symbol	+	4	9	5	8	7	2	@	%	$
Code	E	R	G	P	Q	A	B	K	T	V

Conditions –
(i) If the first element is a symbol and the last element is a number, interchange the codes of the first and the last elements.
(ii) If the second and third elements are odd numbers, code the third element as the code of the second element.
(iii) If the fourth element is a symbol and the fifth element is a number, code both elements as ©.

What is the code for the following group of number-symbols?
+ 4 9 5 8

Ans
✗ A. PRGPQ
✓ B. QRGPE
✗ C. ERGPQ
✗ D. ERGPK

Q.7 **ABCD is a square. M is an external point towards side AB such that triangle MAB is an equilateral triangle. What is the value of $\angle AMD + \frac{1}{3}\angle MCD$?**

Ans
✓ A. 40^o
✗ B. 45^o
✗ C. 60^o
✗ D. 50^o

Q.8 **Based on the English alphabetical order, three of the following four letter cluster pairs are alike in a certain way and thus form a group. Which is the one that does not belong to that group?**
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

Ans
✓ A. WT−UU
✗ B. MJ−LI
✗ C. FC−EB
✗ D. JG−IF

Q.9 **Which of the following structural features helps the plant remain firm and upright?**

Ans
✗ A. Parenchyma tissue
✗ B. Flexible membranes
✗ C. Transparent cytoplasm
✓ D. Presence of a cell wall

Q.10 **Each of P, Q, R, S, T, U and V has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. P has an exam on Friday. Only one person has an exam between P and T. R has an exam on the day immediately before Q but not on a Monday. U has an exam on the day immediately after S but not on a Sunday. V has an exam on the day immediately after T. How many people have exams before T?**

Ans
✗ A. One
✗ B. Three
✓ C. Two
✗ D. None

Q.11 **If ₹2000 is invested for 2 years at an annual compound interest rate of 5% compounded annually, what is the compound interest earned at the end of 2 years?**

Ans
✗ A. ₹210
✗ B. ₹190
✓ C. ₹205
✗ D. ₹200

Q.12 A household purchases 4 kg of oil at ₹80 per kg and 6 kg of oil at ₹60 per kg. What is the weighted average price per kg of the oil?

Ans
- ✗ A. ₹88
- ✗ B. ₹78
- ✗ C. ₹58
- ✓ D. ₹68

Q.13 Select the pair which follows the same pattern as that followed by the two set of pairs given below. Both pairs follow the same pattern.

UST : WPV
YMX : AJZ

Ans
- ✗ A. TKY : WGB
- ✓ B. CGB : EDD
- ✗ C. AYM : DWP
- ✗ D. HAM : KXP

Q.14 A car's radiator should contain a solution of 71% antifreeze. A motorist has 15 litres of 27% antifreeze. How many litres (rounded off to 2 decimal places) of 92% antifreeze liquid should he add to his solution to produce a 71% antifreeze?

Ans
- ✗ A. 27.86
- ✓ B. 31.43
- ✗ C. 32.46
- ✗ D. 33.99

Q.15 Shivraj is three times as old as his son, and his daughter is 3 years younger than the son. If the sum of the ages of these three people 3 years ago was 103 years, then Shivraj's present age (in years) is:

Ans
- ✗ A. 55
- ✓ B. 69
- ✗ C. 61
- ✗ D. 68

Q.16 A shop offers a 'Buy One Get Two Free' scheme on a shirt priced at ₹900 each. What is the effective price per shirt if a customer buys three shirts under this offer?

Ans
- ✗ A. ₹600
- ✗ B. ₹450
- ✗ C. ₹900
- ✓ D. ₹300

Q.17 This question is based on the five, three-digit numbers given below.
842 974 121 352 465
(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

What will be the resultant if the second digit of the highest number is added to the third digit of the lowest number?

Ans
- ✓ A. 8
- ✗ B. 10
- ✗ C. 5
- ✗ D. 6

Q.18 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

MGG 9 KIJ -4 IKM -17 GMP -30 ?

Ans
- ✗ A. KJU -44
- ✗ B. GYT -41
- ✗ C. JIU -34
- ✓ D. EOS -43

Q.19 Find the value of $\sec A + \sin A(1 + \tan A) + \cos A(1 + \cot A) - \sqrt{1 + \cot^2 A} + 1$.

Ans
- ✗ A. $\sec A + \sin A$
- ✗ B. $2\sec^2 A - 1$
- ✗ C. $\cos A + \operatorname{cosec} A$
- ✓ D. $2\sec A + 1$

Q.20 **Refer to the following letter series and answer the question that follows. Counting to be done from left to right only.**
(Left) A F I E G M L A X F I E Q R T J I L U E Y H (Right)
How many such consonants are there, each of which is immediately preceded by a vowel and also immediately followed by a vowel?

Ans
- ✓ A. 2
- ✗ B. 1
- ✗ C. 3
- ✗ D. 4

Q.21 **If 'A' stands for '÷' , 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-' , what will come in place of the question mark '?' in the following equation?**
48 A 3 C 7 B 2 D 18 = ?

Ans
- ✗ A. 7
- ✗ B. 10
- ✓ C. 12
- ✗ D. 4

Q.22 **This question is based on the five, three-digit numbers given below.**
(Left) 147 459 582 456 193 (Right)
(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)
NOTE - All operations to be done from left to right.
What will be the resultant if the third digit of the highest number is added to the second digit of the lowest number?

Ans
- ✗ A. 2
- ✓ B. 6
- ✗ C. 8
- ✗ D. 4

Q.23 Find the area of a triangle whose sides are in the ratio of 7:12:14, and perimeter is 264 meters.

Ans
- ✓ A. $48\sqrt{3135}\ m^2$
- ✗ B. $24\sqrt{1005}\ m^2$
- ✗ C. $32\sqrt{1956}\ m^2$
- ✗ D. $41\sqrt{2684}\ m^2$

Q.24 **In this question, a question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and decide the appropriate answer.**

Q. Five students – Abeer, Charvi, Dhruvika, Eshan and Farah – scored different marks. Who scored the highest marks?

(I) Eshan scored more than Dhruvika, who scored more than Charvi.
(II) Farah scored less than Eshan but more than Abeer, and Abeer scored more than Dhruvika.

Ans
- ✗ A. Both statements I and II together are NOT sufficient to answer the question
- ✗ B. Data in Statement I alone is sufficient to answer the question while data in Statement II is not
- ✓ C. Both statements I and II together (and not statement I alone or statement II alone) are sufficient to answer the question
- ✗ D. Data in Statement II alone is sufficient to answer the question while data in Statement I is not

Q.25 8 is related to 40 following a certain logic. Following the same logic, 12 is related to 60. To which of the given options is 26 related, following the same logic?
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

Ans
- ✗ A. 140
- ✓ B. 130
- ✗ C. 150
- ✗ D. 120

Q.26 YVYU is related to SPSO in a certain way based on the English alphabetical order. In the same way, OLOK is related to IFIE. To which of the given options is RORN related, following the same logic?

Ans
- ✗ A. LIKH
- ✗ B. LJKN
- ✗ C. LHKH
- ✓ D. LILH

Q.27 MLMN is related to POPQ in a certain way based on the English alphabetical order. In the same way, JIJK is related to MLMN. To which of the following is WVWX related, following the same logic?

Ans
- ✗ A. ZYYA
- ✗ B. ZXYA
- ✗ C. ZZYZ
- ✓ D. ZYZA

Q.28 What should come in place of '?' in the given series?
216 176 140 108 80 ?

Ans
- ✗ A. 58
- ✓ B. 56
- ✗ C. 62
- ✗ D. 61

Q.29 Vivek starts from Point A and drives 8 km towards north. He then takes a left turn, drives 15 km, turns left and drives 10 km. He then takes a left turn and drives 18 km. He takes a final left turn, drives 2 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90-degree turns only unless specified.)

Ans
- ✗ A. 8 km to the east
- ✗ B. 6 km to the east
- ✓ C. 3 km to the west
- ✗ D. 6 km to the west

Q.30 The position(s) of how many letters will remain unchanged if each letter in the word PIGEON is arranged in the English alphabetical order?

Ans
- ✗ A. Two
- ✗ B. Three
- ✓ C. One
- ✗ D. None

Q.31 Seven people, E, F, G, H, W, X and Y, are sitting around a circular table, facing the center of the table. Y sits to the immediate right of W. H sits to the immediate left of E. F sits second to the right of E. G sits third to the left of Y. Who sits second to the right of X?

Ans
- ✓ A. E
- ✗ B. G
- ✗ C. F
- ✗ D. H

Q.32 **Seven boxes, A, B, C, D, G, H and I, are kept one over the other, but not necessarily in the same order.**
A is kept immediately above C. G is kept immediately above I. Only D is kept above H.
Only two boxes are kept above A. G is not kept at third position from the bottom.
How many boxes are kept between B and D?

Ans
- ✗ A. One
- ✗ B. Four
- ✓ C. Three
- ✗ D. Two

Q.33 **If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−', what will be come in place of question mark '?' in the following equation?**

7 B 4 D 12 A 6 C 12 = ?

Ans
- ✗ A. 42
- ✗ B. 36
- ✓ C. 38
- ✗ D. 40

Q.34 **A student lifts a 20 kg box to a shelf 2 meters high in 5 seconds. What is the power developed by the student? (Take g = 10 m/s^2)**

Ans
- ✗ A. 200 watts
- ✓ B. 80 watts
- ✗ C. 40 watts
- ✗ D. 100 watts

Q.35 **Each letter in the word KNIFERS is arranged in the English alphabetical order. How many letters are there in the English alphabetical order between the letter which is fourth from the left and the one which is first from the right in the new letter cluster thus formed?**

Ans
- ✓ A. 7
- ✗ B. 6
- ✗ C. 3
- ✗ D. 9

Q.36 **A tap fills a tank in 6 hours. Another tap empties the full tank in 15 hours. How long (in hours) will it take to fill half of the tank, if the tank is empty initially and both the taps are opened together?**

Ans
- ✗ A. 15
- ✗ B. 10
- ✓ C. 5
- ✗ D. 30

Q.37 **A toy is sold for ₹180, gaining a profit of 20%. What was its cost price?**

Ans
- ✗ A. ₹160
- ✗ B. ₹170
- ✗ C. ₹140
- ✓ D. ₹150

Q.38 **In this question, a question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and decide the appropriate answer.**
Among 5 poles, A,W,V,G and E each having a different height, which pole is the shortest?
(I)E is shorter than W. G is shorter than A
(II)G is taller than E

Ans
- ✓ A. Both statements I and II together are NOT sufficient to answer the question
- ✗ B. Data in Statement II alone is sufficient to answer the question while data in statement I is not
- ✗ C. Both statements I and II together (and not statement I alone or statement II alone) are sufficient to answer the question.
- ✗ D. Data in Statement I alone is sufficient to answer the question while data in statement II is not

Q.39 **In this question, a group of number/symbol is coded using letter codes as per the codes given below and the conditions which follow. The correct combination of codes following the conditions is your answer. If none of the conditions follow, then codes for the respective Number/Symbol are to be followed directly as given in the table.**

Number/symbol	7	!	+	*	@	%	#	4	3	6
Code	U	Y	Q	G	E	O	Z	H	C	T

Conditions –
(i) If the first element is a symbol and the last element is a number, interchange the codes of the first and the last elements.
(ii) If the second and third elements are odd numbers, code the third element as the code of the second element.
(iii) If the fourth element is a symbol and the fifth element is a number, code both elements as ©.

What is the code for the following group of number-symbols?
7 ! + * @

Ans
- ✗ A. OYQGE
- ✗ B. UYOGE
- ✓ C. UYQGE
- ✗ D. UZQGE

Q.40 **F, G, H, M, N and O live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6.**
Only two people live between F and N. Only two people live between M and H. No one lives above M. N lives below H but above O.
On which floor does G live on?

Ans
- ✗ A. Floor numbered 2
- ✓ B. Floor numbered 4
- ✗ C. Floor numbered 3
- ✗ D. Floor numbered 5

Q.41 **Refer to the following letter series and answer the question that follows. Counting to be done from left to right only.**
(Left) P W U T K B R E T W R O N E L A U J J U T L (Right)
How many such vowels are there, each of which is immediately preceded by a consonant and also immediately followed by a consonant?

Ans
- ✗ A. 7
- ✓ B. 5
- ✗ C. 4
- ✗ D. 6

Q.42 **In this question, a group of number/symbol is coded using letter codes as per the codes given below and the conditions which follow. The correct combination of codes following the conditions is your answer. If none of the conditions follow, then codes for the respective Number/Symbol are to be followed directly as given in the table.**

Number/symbol	2	@	9	5	$	&	3	%	7	#	4	8	1	6
Code	T	F	A	J	L	E	W	Q	P	D	B	U	R	S

Conditions –
(i) If the first element is a symbol and the last element is a number, interchange the codes of the first and last elements.
(ii) If the second and third elements are odd numbers, the third element is coded as the code of the second element.
(iii) If the fourth element is a symbol, code the fourth element as ©.

What is the code for the following group of number-symbols?
8952$

Ans
- ✗ A. UAJAL
- ✓ B. UAATL
- ✗ C. UAJTL
- ✗ D. UAATQ

Q.43 In △ABC, BD ⊥ AC at D and ∠DBC = 53°. E is a point on BC such that ∠CAE = 58°. What is the measure of ∠AEB?

Ans

✗ A. 87°

✗ B. 81°

✗ C. 109°

✓ D. 95°

Q.44 What should come in place of '?' in the given series?
4 9 15 22 30 ?

Ans

✓ A. 39

✗ B. 38

✗ C. 40

✗ D. 37

Q.45 Which of the following statements correctly differentiates audible, infrasonic, and ultrasonic sounds?

Ans

✓ A. Audible sounds lie between 20 Hz and 20,000 Hz, infrasonic below 20 Hz, and ultrasonic above 20,000 Hz.

✗ B. Audible sounds have frequencies below 20 Hz, infrasonic between 20 Hz and 20,000 Hz, and ultrasonic above 20,000 Hz.

✗ C. Audible, infrasonic, and ultrasonic sounds all have the same frequency range but differ in loudness.

✗ D. Audible sounds lie between 20 Hz and 20,000 Hz, infrasonic above 20,000 Hz, and ultrasonic below 20 Hz.

Q.46 When a sodium atom loses one electron, what does it become?

Ans

✓ A. A positively charged sodium ion

✗ B. A neutral sodium atom

✗ C. A sodium molecule

✗ D. A negatively charged sodium ion

Q.47 A person invested ₹56,000 at a rate of 12% per annum simple interest for 2 years. Find the amount (in ₹) he will receive after 2 years.

Ans

✗ A. 67,440

✗ B. 68,440

✓ C. 69,440

✗ D. 66,440

Q.48 Below are given two sets of numbers. In each set of numbers, a certain mathematical operation on first number results in the second number. Similarly, certain mathematical operation on second number results in the third number and so on. Which of the given options follows the same set of operations as in question?
(NOTE – A two/three digit number cannot be broken into individual digits for operations e.g. if 37 is followed by 10, the operation cannot be 3+7 as a two digit number cannot be broken into individual digits)
17 - 34 - 170 - 180
43 - 86 - 430 - 440

Ans

✗ A. 38 - 43 - 258 - 269

✗ B. 33 - 66 - 528 - 538

✓ C. 40 - 80 - 400 - 410

✗ D. 41 - 123 - 738 - 748

Q.49 Which of the following belongs to an aldehyde group?

Ans

✗ A. HCOOH

✗ B. CH_3CH_2OH

✓ C. CH_3CHO

✗ D. CH_3COOH

Q.50 Simplify $(14pq + 7q)^2 - (14pq - 7q)^2$.

Ans

✗ A. $196pq^2$

✗ B. $196p^2q^2$

✓ C. $392pq^2$

✗ D. $392p^2q$

Q.51 If the ratio of A's salary to B's salary is 3:2 and A earns ₹18,000 per month, what is B's monthly salary?

Ans
- ✗ A. ₹15,000
- ✗ B. ₹9,000
- ✗ C. ₹10,000
- ✓ D. ₹12,000

Q.52 Seven people, A, B, C, I, J, K and L are sitting in a row, facing north. Only B sits to the left of J. Only four people sit between B and A. Only C sits between I and K and I is not an immediate neighbor of A. Who sits at the extreme right of the line?

Ans
- ✗ A. A
- ✗ B. C
- ✗ C. I
- ✓ D. L

Q.53 The position(s) of how many letters will remain unchanged if each letter in the word SLACKEN is arranged in the English alphabetical order?

Ans
- ✗ A. Two
- ✗ B. Three
- ✓ C. None
- ✗ D. One

Q.54 If a mobile phone is sold at ₹12,000 after a 20% increase in its original price, what was its original price?

Ans
- ✗ A. ₹11,000
- ✗ B. ₹11,500
- ✗ C. ₹9,000
- ✓ D. ₹10,000

Q.55 A wildlife reserve's forest cover increased by 5% annually for two years and then decreased by 10% in the third year due to a forest fire. If the present forest area is 99,225 hectares, what was the original forest area (in hectares) before these changes?

Ans
- ✗ A. 1,10,250
- ✗ B. 99,750
- ✗ C. 99,000
- ✓ D. 1,00,000

Q.56 Which of the folowing creates the initial movement of water into the root from the soil?

Ans
- ✓ A. Active uptake of ions by root cells
- ✗ B. Passive absorption of minerals
- ✗ C. Translocation from the leaves
- ✗ D. Gravity pulling water downward

Q.57 A and B started a business in which B invests ₹1,80,000. At the end of the year, the total profit is ₹95,000, and A's share in the profit is ₹20,000. Find A's investment.

Ans
- ✗ A. ₹46,000
- ✓ B. ₹48,000
- ✗ C. ₹44,000
- ✗ D. ₹42,000

Q.58 In this question, a group of number/symbol is coded using letter codes as per the codes given below and the conditions which follow. The correct combination of codes following the conditions is your answer. If none of the conditions follow, then codes for the respective Number/Symbol are to be followed directly as given in the table.

Number/symbol	7	8	#	!	6	%	$	@	3	9
Code	I	Z	G	N	R	K	S	X	W	M

Conditions –
(i) If the first element is a symbol and the last element is a number, interchange the codes of the first and the last elements.
(ii) If the second and third elements are odd numbers, code the third element as the code of the second element.
(iii) If the fourth element is a symbol and the fifth element is a number, code both elements as ©.

What is the code for the following group of number-symbols?
7 8 # ! 6

Ans
- ✗ A. IZG©R
- ✗ B. ISGNR
- ✗ C. IZGN©
- ✓ D. IZG©©

Q.59 Given that $69^{0.63} = x$, $69^{0.6} = y$ and $x^z = y^2$, then the value of z is closest to:

Ans
- ✓ A. 1.9
- ✗ B. 3.7
- ✗ C. 3.4
- ✗ D. 1.3

Q.60 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. Only four people sit to the right of F. Only two people sit between D and F. G is the immediate neighbour of A and D. C sits to the immediate right of E. How many people sit between B and C?

Ans
- ✓ A. Four
- ✗ B. Two
- ✗ C. Three
- ✗ D. Five

Q.61 What will come in place of the question mark (?) in the following equation if '+' and '–' are interchanged and '×' and '÷' are interchanged?

333 – 84 × 4 ÷ 2 + 308 = ?

Ans
- ✗ A. 62
- ✗ B. 65
- ✗ C. 60
- ✓ D. 67

Q.62 This question is based on the following words.

SEA CAZ LOT HAT

In each of the words, each vowel is changed to the second letter following it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. In how many letter-clusters thus formed, will no vowel appear?

Ans
- ✓ A. Four
- ✗ B. Two
- ✗ C. One
- ✗ D. Three

Q.63 Each of N, Q, K, L, T, P and V has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. Only two people have exams after N. Only three people have exams between L and N. T has the exam immediately after P but before N. Q does not have the exam on Sunday. V does not have the exam after P. Who has the exam immediately after Q?

Ans
- ✗ A. N
- ✗ B. P
- ✓ C. K
- ✗ D. V

Q.64 An ant travels toward a food source. It covers 40% of the total distance at a speed of 60 feet/hour, and the remaining 60% at a speed of 90 feet/hour. What is the average speed of the ant for the entire journey?

Ans
- ✗ A. 76 feet/hour
- ✗ B. 77 feet/hour
- ✓ C. 75 feet/hour
- ✗ D. 74 feet/hour

Q.65 A,B,C,D and E have scored different marks in an exam. E scored less than only 1 person. A scored more than B but less than D. B did not score the lowest. Who scored the lowest?

Ans
- ✗ A. A
- ✗ B. B
- ✓ C. C
- ✗ D. E

Q.66 24 is related to 140 following a certain logic. Following the same logic, 17 is related to 91. To which of the following is 26 related, following the same logic?
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

Ans
- ✗ A. 153
- ✗ B. 160
- ✓ C. 154
- ✗ D. 148

Q.67 A vessel in the form of an inverted cone has a radius of 18 cm. This cone is partly filled with oil, which is dripping from a hole in the tip of the cone at a rate of 1 cm^3 in 45 minutes. In the beginning, the level of oil is 6 cm from top and the surface area of oil is 196π cm^2. How long (in hours) will it take the cone to be completely empty?

Ans
- ✗ A. 1209π
- ✓ B. 1029π
- ✗ C. 1290π
- ✗ D. 1092π

Q.68 What is the nearest integer to 72979 that is divisible by 9?

Ans
- ✗ A. 72978
- ✗ B. 72980
- ✓ C. 72981
- ✗ D. 72977

Q.69 A worker uses a pulley system to lift a load vertically upwards with a constant speed. If the effort applied is 100 N and the load is 200 N, which statement best describes the system?

Ans
- ✗ A. The system is an ideal machine
- ✗ B. The system has a mechanical advantage of one
- ✓ C. The system has a mechanical advantage of two
- ✗ D. The effort is greater than the load

Q.70 Refer to the following letter and symbol series and answer the question that follows.

(Left) C G # E A @ $ R & U Ω T £ D J Y (Right)

If all the symbols are dropped from the series, which of the following will be fourth from the left?

Ans

✗ A. C

✓ B. A

✗ C. Y

✗ D. D

Q.71 What should come in place of '?' in the given series?
4 16 29 43 58 ?

Ans

✗ A. 70

✗ B. 77

✗ C. 75

✓ D. 74

Q.72 If 'A' stands for '÷' , 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-' , what will come in place of the question mark '?' in the following equation?
4 B 5 D 44 A 4 C 7 = ?

Ans

✗ A. 18

✗ B. 13

✓ C. 16

✗ D. 21

Q.73 Sourav starts from Point A and drives 40 km towards the South. He then takes a right turn, drives 58 km, then turns right and drives 69 km. He then takes a right turn and drives 79 km. He takes a final right turn, drives 29 km, and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90 degrees turns only, unless specified.)

Ans

✓ A. 21 km to the west

✗ B. 20 km to the west

✗ C. 24 km to the east

✗ D. 23 km to the east

Q.74 Which of the following numbers is divisible by both 33 and 46?

Ans

✗ A. 83947

✗ B. 82369

✗ C. 83018

✓ D. 81972

Q.75 A and B are angles such that $0 < B < A < \frac{\pi}{2}$. If $\tan(A+B) = \sqrt{3}$ and $\cos(A-B) = \frac{\sqrt{3}}{2}$, then what is the value of $4\cos^2 A + 9\tan^2 2B$?

Ans

✓ A. 5

✗ B. 7.5

✗ C. 6

✗ D. 8.2

"