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PLOT NO.2, SSI INDUSTRIAL AREA, G.T. KARNAL ROAD, JAHANGIRPURI, DELHI

29. (C) The new alphabet series is
A B C D E F G H I J K L M
Z Y X W V U T S R Q P O N
The twelfth letter from the left is L.
The seventh letter to the right of L is U.
30. (B) Clearly, number of boys in the line
= $(11 + 1 + 3) = 15$.
 \therefore Number of boys to be added = $28 - 15 = 13$.
31. (B) Ashish leaves his house at 6:40 a.m.
He reaches Kunal's house in another 25 minutes i.e. 7:05 a.m.
Both leave for office in 15 minutes after 7:05 a.m. i.e. at 7:20 a.m.
32. (C) After using the correct symbols, we have
expression = $(3 \times 15 + 19) \div 8 - 6$
= $(45 + 19) \div 8 - 6 = 64 \div 8 - 6 = 8 - 6 = 2$
33. (D) From (ii) and (iii) we have

Sign on front face	×	◆	◁
Sign on opposite face	×	○	→

Here, (•) is missing as it is opposite to (×).

34. (A) The alphabets are coded as shown

T	W	E	N	Y	L	V
8	6	3	9	5	2	0

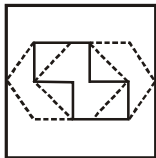
So, in TWELVE,
T is coded as 8,
W as 6, E as 3, L as 2, V as 0.
Thus, the code for TWELVE is 863203.

35. (D) A is the daughter of B means A is the sister of the son (say D) of B i.e. A/D × B.

36. (D)

37. (B)

38. (C)



39. (B) The aeroplane fly in the 'sky' and the 'sky' is called 'sea'. So, the aeroplane fly in the 'sea'.

40. (A)



41. (C)

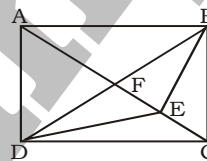
42. (D) From (i) and (iii)
Common word is 'peru' which means 'fine'
From (ii) and (iii)
Common word is 'lisa' which means 'clear'
So, **don**a means weather.

43. (B) Above information can be analysed as below :

	English	Hindi	Mathematics	Geography	History	French
A	×	×	×			
B	×	×			×	×
C	×			×		
D	×	×	×	×		
E					×	×

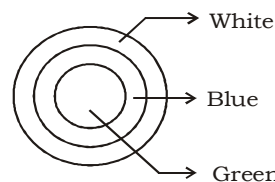
Hence, B teaches maximum number of subjects, i.e 5

44. (D) The number in the second column is three times the difference between the numbers in the third and first columns.
So, missing number = $3 \times (16 - 7) = 3 \times 9 = 27$.
45. (B) $2^2 + 1^3 + 3^3 = 8 + 1 + 27 = 36$.
 $0^3 + 4^3 + 3^3 = 0 + 64 + 27 = 91$.
So, missing number = $4^3 + 2^3 + 1^3$
= $64 + 8 + 1 = 73$.
46. (B) We have, $3 + 4 =$ number below $4 = 7$
 $3 + 4 + 5 =$ number below $5 = 12$.
 $3 + 7 + 12 =$ number below $12 = 22$.
 \therefore Missing number = $3 + 7 = 10$.
47. (C) The figure may be labeled as shown.



The simplest triangles are AFB, FEB, EBC, DEC, DFE and AFD i.e. 6 in number.
Triangles composed of two components each are AEB, FBC, DFC, ADE, DBE and ABD i.e. 6 in number.
Triangles composed of three components each are ADC and ABC i.e. 2 in number.
There is only one triangle i.e. DBC which is composed of four components.
Thus, there are $6 + 6 + 2 + 1 = 15$ triangles in the figure.

48. (A)



1. True 2. True 3. False 4. Doubt
Only (1) and (2) follows.

49. (B)

50. (B)

51. (A) "Regulating Act of 1773" :
Governance of East India Company was put under British parliamentary control to setup a Supreme Court in Calcutta.

The Governor of Bengal was nominated as Governor General for Calcutta, Bombay and Madras.

In March 1942, Sir Stafford Cripps came with a draft declaration on the proposals of the British Government.

52. (C) Area of Pacific Ocean is 465.2 million sq.km.
Area of Atlantic Ocean is 106.4 million sq.km.
Area of Indian Ocean is 73.56 million sq.km.
Area of Indian Ocean is 14.06 million sq.km.
- 55.(D) Wrestler Divya Kakran has won Bronze Medal in 68kg category in 2018 Asian Games. She is from Purbaliyan village in Budhana tahsil of Muzaffarnagar district in *Uttar Pradesh*.
57. (B) Six fundamental rights provided by our Constitution are
1. Right to equality
 2. Right to liberty
 3. Right against exploitation
 4. Right to freedom of religion
 5. Cultural and Educational rights
 6. Right to constitutional remedy
- 60.(C) Chhattisgarh Government has decided to re-name state's new capital Naya Raipur as "Atal Nagar" in memory of late Prime Minister Atal Bihari Vajpayee. The state government has also decided to name a battalion of state police force as "Pokharan battalion".
63. (A) Field Marshal Kodandera Madappa Cariappa (28 January 1899 - 15 May 1993) was the first Indian Chief of Army Staff of the Indian Army and led the Indian forces on the Western Front during the Indo-Pakistan War of 1947.
67. (C) Harry Brearley of England invented Stainless Steel in 1913.
Electric Iron was invented by H.W. Seeley of USA in 1882.
Electromagnet was invented by W. Sturgeon of England in 1824.
Gramophone was invented by T.A. Edison of USA in 1878.
70. (C) Surface temperature of Sun is about 6000°C and temperature at the centre is around $15,000,000^{\circ}\text{C}$.
- 71.(A) President Ram Nath Kovind has appointed governors for seven states —
Bihar, Haryana, Uttarakhand, Jammu and Kashmir, Sikkim, Meghalaya and Tripura.
- Governor Satya Pal Malik has been transferred from Bihar to Jammu and Kashmir to replace NN Vohra, while senior BJP leader Lalji Tandon has been

appointed the Governor of Bihar, replacing Malik.

- Kaptan Singh Solanki, the Governor of Haryana, has been transferred to Tripura, while Satyadev Narayan Arya will be the new Haryana governor.
 - Tripura governor Tathagata Roy has been transferred to Meghalaya, and Ganga Prasad, the Governor of Meghalaya, has been transferred to Sikkim.
 - Baby Rani Maurya will be the new Governor of Uttarakhand.
73. (B) Nazi Party, by the name of National Socialist German Workers' Party was a political party of the mass movement known as National Socialism. Under the leadership of Adolf Hitler, the party came to power in Germany in 1933 and governed it by totalitarian methods until 1945. It was founded as the German Worker's Party by Anton Drexler, a Munich locksmith, in 1919. Hitler attended one of its meetings that year, and his energy and oratorical skills soon enabled him to take over the party.
74. (D) Diameter of moon is 3475 km and its circumference is 10864 km.
76. (C) Mahapadma was also known as "Ugrasena" means 'Owner of huge army'.
78. (A) Mountains of Asia are : Pamir knot, Himalayas, Karakoram, Altai, Tien Shan, Kunlun, Hindu Kush, Stanovio, Yablonovoi, Urals, Taurus, Elbruz, Pontic, Zagros, Sulaiman.
79. (C) Ammeter - Measures strength of electric current.
Audiometer - Measures intensity of sound.
Anemometer - Measures force and velocity of wind and direction.
82. (B) Wilson Jones (2nd May, 1922 - 5th October, 2003) was a professional player of English billiards from India. Jones, a dominant national amateur was a champion for more than a decade and won the amateur world championship twice, in 1958 and 1964.
83. (A) A Uniform Resource Locator (URL) is commonly informally referred to as a web address, although the term is not defined identically. It is a reference to a web resource that specifies its location on a computer network and a mechanism for retrieving it. URLs occur most commonly to reference web pages (http), and is also used for file transfer (ftp), email (mailto), database access (JDBC), and many other applications.
86. (B) Burma was separated from India in the year 1937 by the British Government.

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short trick:-

$$\text{Formula} = \frac{\text{Days}}{\text{And}}$$

OR

$$= \frac{469}{\frac{7}{2} + \frac{5}{5} + \frac{2}{7}} = \frac{469 \times 70}{335} = 98 \text{ days}$$

109. (D) Let the Ratio be $3x, 2x$ and x
Initial price = $(6x)^2 = 36x^2$
After breaking into pieces
= $9x^2 + 4x^2 + x^2 = 14x^2$
Loss = $36x^2 - 14x^2$
 $4620 = 22x^2$
 $x^2 = 210$
Initial price = $36x^2 = 36 \times 210 = ₹ 7560$

short trick:-

Weight	→	3 : 2 : 1	→	36	(Square of weight)
		↓ ↓ ↓			
Cost	→	9 : 4 : 1	→	14	
				22	
				↓ ×210	
				4620	

∴ Initial cost of gold
= 36×210
= ₹ 7560

110. (D) Let principal be P .
Clearly, S.I. = P
Time = 5 years
Rate = R_1
- $$\therefore \text{S.I.} = \frac{P \times R \times T}{100} \Rightarrow \text{S.I.} = \frac{P \times R_1 \times 5}{100}$$
- Thus, $R_1 = 20\%$
When, S.I. = $2P$
 $T = 12$ years
Rate = R_2
- $$\text{Then, } 2P = \frac{P \times R_2 \times 12}{100}$$
- $$\therefore R_2 = \frac{50}{3} = 16\frac{2}{3}\%$$
- ∴ $R_2 < R_1$
- ∴ The required rate of interest = $16\frac{2}{3}\%$

111. (A) Let the amount paid by A originally = 100 units

A	B
100	115
↑ +15%	
138	115
↓ +20%	

profit = $(138 - 115) = 23$ units
According to the question,
 $23 \text{ units} = ₹ 69$
 $1 \text{ unit} = ₹ 3$
 $100 \text{ units} = ₹ 3 \times 100 = ₹ 300$

112. (B) Let the required number of non-officers = x
Then, $110x + 460 \times 15 = 120(15 + x)$
 $110x + 460 \times 15 = 120 \times 15 + 120x$
or, $120x - 110x = 460 \times 15 - 120 \times 15$
or, $10x = 15 \times 340$
∴ $x = 15 \times 34$
= 510

short trick:-

From Alligation

460	110
\ /	
120	
/ \	
10	340
1	34
↓ ×15	↓ ×15
15	510

113. (B) A can do $\frac{1}{3}$ of a work in 5 days
∴ A can complete the work in
= $5 \times 3 = 15$ days
- B can do $\frac{2}{5}$ of a work in 10 days
∴ B can complete the work in
 $10 \times \frac{5}{2} = 25$ days
- (A + B)'s 1 day work = $\frac{1}{15} + \frac{1}{25}$
= $\frac{5+3}{75} = \frac{8}{75}$ part.
∴ (A + B)' together completes the work in
 $\frac{75}{8}$ days
i.e., $9\frac{3}{8}$ days

short trick

A → $\frac{1}{3} = 5 = 15$	5
\ /	
75	
/ \	
B → $\frac{2}{5} = 10 = 25$	3

- ∴ Total time to complete the work = $\frac{75}{8}$
= $9\frac{3}{8}$ days
114. (D) Here after two years, the interest would be $\left(2 + 4 + \frac{2 \times 4}{100}\right)\%$

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i.e. 6.08% of the sum
After three years, the interest would be

$$\left(6.08 + 5 + \frac{6.08 \times 5}{100}\right)\%$$

i.e. 11.3840% of the sum
Thus, at the end of the third year the total amount to be paid would be $(100 + 11.3840)\%$ of the sum.

$$\therefore \text{Required amount} = \frac{13000 \times 111.3840}{100} = ₹ 14479.92$$

short trick:-

$$2\% = \frac{1}{50}, 4\% = \frac{1}{25}, 5\% = \frac{1}{20}$$

Principal	—	Amount
50	—	51
25	—	26
20	—	21
25000	—	27846

$$\therefore \text{Amount after 3 year} = \frac{13000}{25000} \times 27846 = ₹ 14479.92$$

115. (C) Listed price of the washing machine = ₹ 10,000

$$10\% = \frac{1}{10}, 20\% = \frac{1}{5}$$

$$\text{Cost price} = 10,000 \times \frac{9}{10} \times \frac{4}{5} = ₹ 7200$$

$$\begin{aligned} \text{Cost price after transport Cost} \\ = 7200 + 7200 \times \frac{10}{100} = ₹ 7920 \end{aligned}$$

$$\text{Selling price} = 7920 \times \frac{11}{10} = ₹ 8712$$

116. (A) A : B : C
= 3,20,000 × 4 : 5,10,000 × 3 : 2,70,000 × 5
= 32 × 4 : 51 × 3 : 27 × 5
= 128 : 153 : 135
= Total profit = 1,24,800
∴ A's share profit

$$= \frac{128}{128 + 153 + 135} \times 124800$$

$$= \frac{128}{416} \times 124800 = ₹ 38,400$$

117. (C) Number of valid votes = $180,000 \times \frac{90}{100} = 162000$

Valid votes in favour of second candidate = $(100 - 80)\%$ of 162000

$$= \frac{20}{100} \times 162000 = 32400$$

118. (A) Initial speed of man = 5 km/h
New speed of man = 6 km/h

$$\text{Distance} = \frac{xy}{x-y} (t_2 - t_1)$$

$t_2 - t_1 = 10 - 5 = 5 \text{ min} = \frac{1}{12} \text{ hour}$
put all values in the above formula.

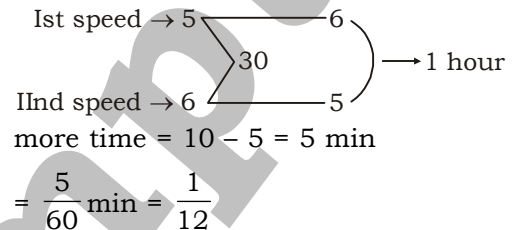
$$D = \frac{5 \times 6}{1} \times \frac{1}{12} = 2.5 \text{ km}$$

$$\text{Speed} = \frac{\text{distance}}{\text{time}}$$

$$\text{Time} = \frac{2.5}{5} = 30 \text{ min}$$

$$\text{New speed} = \frac{2.5}{20} \times 60 = 7.5 \text{ km/h}$$

short trick:-



$$\text{Total distance} = \frac{30}{12} = 2.5 \text{ km}$$

$$\therefore \text{Normal speed} = 5 \times 2.5 = 7.5 \text{ km/hr}$$

119. (D) Average speed

$$= \frac{2 \times S_1 \times S_2}{S_1 + S_2} = \frac{2 \times 20 \times 30}{20 + 30} = 24 \text{ km/hr.}$$

120. (A) Pipe (A + B + C) together fill the tank in 1 hour

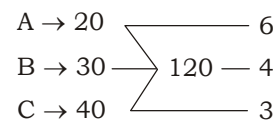
$$= \frac{1}{20} + \frac{1}{30} - \frac{1}{40}$$

$$= \frac{6 + 4 - 3}{120} = \frac{7}{120} \text{ part.}$$

Thus, they together fill the whole tank in

$$\frac{120}{7} \text{ hours.} = 17 \frac{1}{7} \text{ hours.}$$

short trick:-



$$\therefore \text{tank will fill in} = \frac{120}{7}$$

$$= 17 \frac{1}{7} \text{ hours}$$

121. (C) Let the no. of boys be x and girls be $(15 + x)$

ATQ,

$$(15 + x) \times \frac{110}{100} - x \times \frac{116}{100} = 9$$

$$\Rightarrow 1650 + 110x - 116x = 900$$

$$\Rightarrow 6x = 750$$

$$\Rightarrow x = 125$$

\therefore Total no. of students

$$= 125 + (125 + 15)$$

$$= 265$$

$$122. (A) \frac{52725}{\left(\frac{25}{28} + \frac{625}{784} + \frac{15625}{21952}\right)}$$

$$= \frac{52725 \times 21952}{(19600 + 17500 + 15625)}$$

$$= \frac{52725 \times 21952}{52725} = ₹ 21952$$

$$123. (A) \angle BDC = \angle BAC = 30^\circ$$

$$\therefore \angle BCD + \angle BDC + \angle DBC = 180^\circ$$

$$\therefore \angle BCD = 180^\circ - (30^\circ + 60^\circ) = 90^\circ$$

$$124. (D) \frac{144}{0.144} = \frac{14.4}{x}$$

$$\Rightarrow 144 \times x = 14.4 \times 0.144$$

$$\Rightarrow x = \frac{14.4 \times 0.144}{144}$$

$$\therefore x = \frac{144 \times 144}{144 \times 10000} = 0.0144$$

$$125. (D) \text{ Side of square} = \sqrt{484} = 22 \text{ cm}$$

$$\therefore \text{ length of wire} = 22 \times 4 = 88 \text{ cm}$$

$$\therefore 2\pi r = 88$$

$$\Rightarrow 2 \times \frac{22}{7} \times r = 88$$

$$\Rightarrow r = \frac{88 \times 7}{2 \times 22} = 14 \text{ cm}$$

$$\therefore \text{ Area} = \pi r^2$$

$$= \frac{22}{7} \times 14 \times 14 = 616 \text{ cm}^2.$$

$$126. (D) \angle DCK = \angle FDG$$

$$= 55^\circ \text{ (vertically opposite)}$$

$$\text{So, } \angle AEC = 180^\circ - (40^\circ + 55^\circ)$$

$$= 85^\circ$$

$$\therefore \angle HAB = \angle AEC$$

$$= 85^\circ \text{ (corresponding)}$$

$$\text{Hence, } x = 85^\circ$$

$$127. (D) \tan 9^\circ = \frac{p}{q}$$

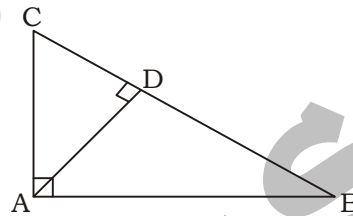
$$\therefore \frac{\sec^2 81^\circ}{1 + \cot^2 81^\circ} = \frac{\sec^2 81^\circ}{\operatorname{cosec}^2 81^\circ}$$

$$= \frac{1}{\cos^2 81^\circ} \times \sin^2 81^\circ$$

$$= \tan^2 81^\circ = \tan^2(90^\circ - 9^\circ)$$

$$= \cot^2 9^\circ = \frac{q^2}{p^2}$$

128. (D)



$$AB = \sqrt{AD^2 + BD^2} = \sqrt{36 + 16} = \sqrt{52} \text{ cm}$$

$$\triangle ABC \sim \triangle ABD$$

$$\therefore \frac{AB}{BC} = \frac{BD}{AB}$$

$$\Rightarrow AB^2 = BC \times BD$$

$$\Rightarrow 52 = BC \times 4$$

$$\Rightarrow BC = 13 \text{ cm}$$

$$129. (C) \text{ Area of the base} = 6 \times \frac{\sqrt{3}}{4} \times (2a)^2$$

$$= 6 \times \frac{\sqrt{3}}{4} \times 4a^2 = 6\sqrt{3} a^2 \text{ sq. cm.}$$

$$\text{Height} = \sqrt{\left(\frac{5a}{2}\right)^2 - (2a)^2}$$

$$= \sqrt{\frac{25}{4}a^2 - 4a^2} = \sqrt{\frac{9a^2}{4}} = \frac{3}{2}a \text{ cm}$$

\therefore volume of pyramid

$$= \frac{1}{3} \times \text{area of base} \times \text{height}$$

$$= \frac{1}{3} \times 6\sqrt{3}a^2 \times \frac{3}{2}a = 3\sqrt{3}a^3 \text{ cm}^3$$

130. (D) Given expression

$$= \left(1 + \frac{1}{x}\right) \left(1 + \frac{1}{x+1}\right) \left(1 + \frac{1}{x+2}\right) \left(1 + \frac{1}{x+3}\right)$$

$$= \frac{x+1}{x} \times \frac{x+2}{x+1} \times \frac{x+3}{x+2} \times \frac{x+4}{x+3}$$

$$= \frac{x+4}{x}$$

$$131. (A) \angle MAN = \frac{1}{2}(\angle B - \angle C)$$

$$= \frac{1}{2}(65^\circ - 30^\circ) = \frac{1}{2}(35^\circ) = 17.5^\circ$$

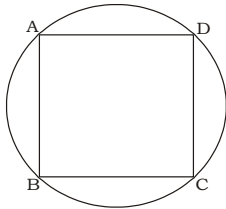
132. (C) Given :

$$\frac{x^2}{by + cz} = \frac{y^2}{cz + ax} = \frac{z^2}{ax + by} = 1$$

so,
 $x^2 = by + cz, y^2 = cz + ax, z^2 = ax + by$

$$\begin{aligned} \frac{a}{a+x} + \frac{b}{b+y} + \frac{c}{c+z} \\ &= \frac{ax}{ax+x^2} + \frac{by}{by+y^2} + \frac{cz}{cz+z^2} \\ &= \frac{ax}{ax+by+cz} + \frac{by}{by+ax+cz} + \frac{cz}{cz+ax+by} \\ &= \frac{ax+by+cz}{ax+by+cz} = 1 \end{aligned}$$

133. (A)



ABCD is a concyclic quadrilateral.

$$\angle A + \angle C = \angle B + \angle D = 180^\circ$$

$$\therefore \angle A = 180^\circ - \angle C$$

$$\therefore \cos A = \cos (180^\circ - C)$$

$$= -\cos C$$

and $\cos B = -\cos D$

$$\therefore \cos A + \cos B + \cos C + \cos D$$

$$= \cos A + \cos B - \cos A - \cos B = 0$$

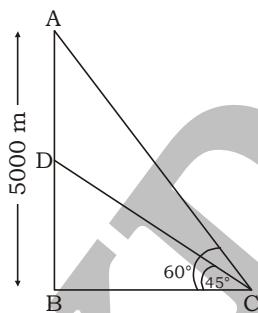
134. (D) $\angle ACB = \angle DAC = 50^\circ$ (Alternate interior \angle s)

$$\angle BOC = 180^\circ - 80^\circ = 100^\circ$$

\therefore Now, in $\triangle BOC$,

$$\angle OBC = 180^\circ - (100^\circ + 50^\circ) = 30^\circ$$

135. (C)



$$\angle ACB = 60^\circ$$

$$\angle DCB = 45^\circ$$

$$AB = 5000 \text{ metre}$$

$$AD = x \text{ metre}$$

\therefore From $\triangle ABC$,

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

$$\Rightarrow \sqrt{3} = \frac{5000}{BC}$$

$$\Rightarrow BC = \frac{5000}{\sqrt{3}} \text{ metre}$$

From $\triangle DBC$,

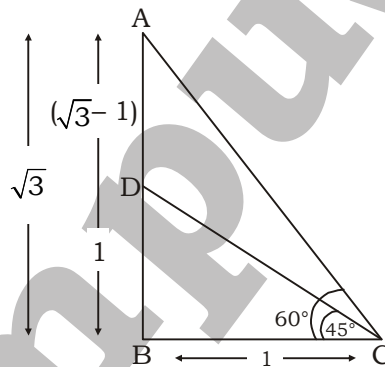
$$\tan 45^\circ = \frac{DB}{BC}$$

$$\Rightarrow DB = BC = \frac{5000}{\sqrt{3}}$$

$$\therefore AD = AB - BD$$

$$= 5000 - \frac{5000}{\sqrt{3}} = 5000 \left(1 - \frac{1}{\sqrt{3}}\right) \text{ m}$$

short trick:-



ATQ,

$$\sqrt{3} \text{ unit} = 5000 \text{ m}$$

$$\sqrt{1} \text{ unit} = \frac{5000}{\sqrt{3}} \text{ m}$$

\therefore vertical distance between the aeroplanes is

$$(AD) = \frac{5000}{\sqrt{3}} \times (\sqrt{3} - 1)$$

$$= 5000 \times \frac{(\sqrt{3} - 1)}{\sqrt{3}}$$

$$= 5000 \times \left(\frac{\sqrt{3}}{\sqrt{3}} - \frac{1}{\sqrt{3}}\right)$$

$$= 5000 \left(1 - \frac{1}{\sqrt{3}}\right) \text{ m}$$

136. (C) Since volume is constant

$$\therefore n \times \frac{4}{3} \pi (1)^3 = \frac{4}{3} \pi (4)^3$$

$$\Rightarrow n = 64$$

137. (C) $\tan(A + B) = \sqrt{3} = \tan 60^\circ$

$$\Rightarrow A + B = 60^\circ \dots(i)$$

$$\tan(A - B) = \frac{1}{\sqrt{3}} = \tan 30^\circ$$

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$$\Rightarrow A - B = 30^\circ \dots(ii)$$

$$\therefore A + B + A - B = 60^\circ + 30^\circ$$

$$\Rightarrow 2A = 90^\circ$$

$$\Rightarrow A = \frac{90^\circ}{2} = 45^\circ$$

138. (A) Third proportional of a and $b = \frac{b^2}{a}$

$$= \frac{(\sqrt{x^2 + y^2})^2}{\frac{x}{y} + \frac{y}{x}} = \frac{x^2 + y^2}{\frac{x^2 + y^2}{xy}} = xy$$

139. (D) $\sin^2\theta + \cos^2\theta + \sec^2\theta + \operatorname{cosec}^2\theta + \tan^2\theta + \cot^2\theta$
 $= 1 + \sec^2\theta - \tan^2\theta + \operatorname{cosec}^2\theta - \cot^2\theta + 2(\tan^2\theta + \cot^2\theta)$

$$= 3 + 2((\tan\theta - \cot\theta)^2 + 2) > 7 [(\tan\theta - \cot\theta)^2 > 0]$$

140. (B) $4\cos^2\theta - 4\cos\theta + 1 = 0$

$$\Rightarrow (2\cos\theta - 1)^2 = 0$$

$$\Rightarrow 2\cos\theta - 1 = 0$$

$$\Rightarrow 2\cos\theta = 1$$

$$\Rightarrow \cos\theta = \frac{1}{2} = \cos 60^\circ$$

$$\Rightarrow \theta = 60^\circ$$

$$\therefore \tan(\theta - 15^\circ) = \tan(60^\circ - 15^\circ)$$

$$= \tan 45^\circ = 1$$

141. (B) $x + y + z = a - b + b - c + c - a = 0$

$$\therefore x^3 + y^3 + z^3 - 3xyz = 0$$

142. (C) $+14\%$ Profit -6% Loss

$$\begin{array}{c} \swarrow \quad \searrow \\ (-4\%) \text{ Loss} \\ \swarrow \quad \searrow \\ -4 - (-6) = 2 \quad (14 - (-4)) = 18 \end{array}$$

$$\text{On } 14\% \text{ profit} = \frac{50}{20} \times 2 = 5 \text{ kg}$$

143. (B) $\frac{51.84}{4.32} = \frac{5184}{432} = 12$

$$\therefore \frac{0.005184}{0.432} = \frac{5184}{432} \times \frac{1}{1000}$$

$$= \frac{12}{1000} = 0.012$$

144. (A) The LCM of 5, 6, 8 and 9 = 360 seconds
 = 6 minutes

145. (B) Let the number of boys and girls in the room be x and y respectively.

According to the question,

$$x^2 = y^2 + 28$$

$$\Rightarrow x^2 - y^2 = 28 \dots(i)$$

$$\text{and } x = y + 2$$

$$\Rightarrow x - y = 2 \dots(ii)$$

On dividing equation (i) by equation (ii), we have

$$\frac{x^2 - y^2}{x - y} = \frac{28}{2}$$

$$\Rightarrow \frac{(x + y)(x - y)}{x - y} = 14$$

$$\Rightarrow x + y = 14$$

$$\therefore \text{Total number of boys and girls} = 14$$

146. (B) Required percent increase

$$= \frac{7500 - 5300}{5300} \times 100 = 41.5\%$$

147. (A) Profit in year 1996-97 = Gross Traffic Receipt - Total expenditure

$$= 8500 - 8000 = 500$$

Therefore, profit percent of Gross Traffic Receipt

$$= \frac{500}{8500} \times 100 = 5.88\% \approx 5.9\%$$

148. (C) Profit percent of Gross Traffic Receipt in year 1997-98

$$= \frac{9400 - 8800}{9400} \times 100$$

$$= 6.38\%$$

In year 1995-1996

$$\Rightarrow \frac{7500 - 5900}{7500} \times 100 = 21.33\%$$

149. (C) Profit percent

$$= \frac{\text{Gross Traffic Profit} - \text{Total expenditure}}{\text{Gross Traffic profit}} \times 100$$

$$\Rightarrow \frac{\text{Total Expenditure}}{\text{Gross Traffic Profit}}$$

$$= 1 - \frac{10}{100} = 0.9$$

According to question,
 Total expenditure = 5800

$$\therefore \text{Gross Traffic profit} = \frac{5800}{0.9}$$

$$= ₹ 6444 \text{ crores}$$

150. (D) Required increase

$$= ₹ (8800 - 5100) \text{ crores}$$

$$= ₹ 3700 \text{ crore}$$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Appease	To make (someone) pleased or less angry	मनाना, शांत करना
Ascetic	A person who lives in a simple and strict way, without physical pleasures	संन्यासी, आत्मसंयमी
Avid	Ardently or excessively desirous	लालायित
Bashful	Nervous or uncomfortable in social situations, afraid to talk to people because of a lack of confidence	संकोची
Brazen	Acting or done in a very open and shocking way without shame or embarrassment	बेशर्म
Burrow	A hole made by an animal, usually for shelter	बिल
Caucus	A group of people with similar interests, often within a larger organization or political party	दले, गुट
Ceramics	The art of making and decorating pottery	भूतका शिल्प
Courtesy	Polite behaviour that shows respect for other people	शिष्टाचार, शालीनता
Cramped	Constricted in size	तंग
Depict	To describe something in words, or give an impression of something in words or with a picture	दर्शाना
Dismal	Causing or showing sadness	शोकयुक्त, निराशाजनक
Evaders	Who avoids or tries to avoid fulfilling, answering, or performing (duties, questions, or issues)	बचने वाला
Get on with (something)	To continue doing something, especially after an interruption	लगातार प्रयासरत रहना
Hermetic	Completely sealed; completely airtight	वायुरूद्ध
Invigorating	Making somebody feel healthy and full of energy	स्फूर्तिदायक
Lamentable	Very disappointing	निराशाजनक
Meek	Humble in spirit or manner; suggesting retiring mildness or even cowed submissiveness	विनम्र, दब्बू
Nigging	Small and of little importance	महत्वहीन, नगण्य
Occult	Connected with magic powers and things that cannot be explained by reason or science	तंत्र-मंत्र संबंधित, रहस्यमय
On and off	Not regularly	कभी-कभी
Pedantic	Marked by a narrow focus on or display of learning especially its trivial aspects	पांडित्य प्रदर्शक
Pervade	To spread through all parts of (something) : to exist in every part of (something)	सर्वत्र व्याप्त होना
Sabotage	The act of destroying or damaging something deliberately	गड़बड़ करना

CPO MOCK TEST - 29 (ANSWER KEY)

- | | | | | | | | |
|---------|---------|---------|----------|----------|----------|----------|----------|
| 1. (C) | 26. (A) | 51. (A) | 76. (C) | 101. (B) | 126. (D) | 151. (C) | 176. (C) |
| 2. (D) | 27. (B) | 52. (C) | 77. (C) | 102. (A) | 127. (D) | 152. (B) | 177. (C) |
| 3. (C) | 28. (C) | 53. (B) | 78. (A) | 103. (C) | 128. (D) | 153. (C) | 178. (C) |
| 4. (B) | 29. (C) | 54. (C) | 79. (C) | 104. (C) | 129. (C) | 154. (B) | 179. (A) |
| 5. (D) | 30. (B) | 55. (D) | 80. (C) | 105. (D) | 130. (D) | 155. (D) | 180. (A) |
| 6. (D) | 31. (B) | 56. (A) | 81. (A) | 106. (A) | 131. (A) | 156. (C) | 181. (B) |
| 7. (A) | 32. (C) | 57. (B) | 82. (B) | 107. (B) | 132. (C) | 157. (D) | 182. (B) |
| 8. (D) | 33. (D) | 58. (A) | 83. (A) | 108. (D) | 133. (A) | 158. (B) | 183. (A) |
| 9. (B) | 34. (A) | 59. (A) | 84. (B) | 109. (D) | 134. (D) | 159. (D) | 184. (C) |
| 10. (C) | 35. (D) | 60. (C) | 85. (B) | 110. (D) | 135. (C) | 160. (D) | 185. (B) |
| 11. (A) | 36. (D) | 61. (A) | 86. (B) | 111. (A) | 136. (C) | 161. (A) | 186. (A) |
| 12. (D) | 37. (B) | 62. (B) | 87. (A) | 112. (B) | 137. (C) | 162. (A) | 187. (D) |
| 13. (C) | 38. (C) | 63. (A) | 88. (A) | 113. (B) | 138. (A) | 163. (C) | 188. (D) |
| 14. (D) | 39. (B) | 64. (B) | 89. (C) | 114. (D) | 139. (D) | 164. (C) | 189. (A) |
| 15. (A) | 40. (A) | 65. (D) | 90. (D) | 115. (C) | 140. (B) | 165. (D) | 190. (B) |
| 16. (A) | 41. (C) | 66. (D) | 91. (C) | 116. (A) | 141. (B) | 166. (D) | 191. (D) |
| 17. (B) | 42. (D) | 67. (C) | 92. (C) | 117. (C) | 142. (C) | 167. (B) | 192. (C) |
| 18. (D) | 43. (B) | 68. (A) | 93. (B) | 118. (A) | 143. (B) | 168. (B) | 193. (B) |
| 19. (C) | 44. (D) | 69. (C) | 94. (B) | 119. (D) | 144. (A) | 169. (A) | 194. (C) |
| 20. (B) | 45. (B) | 70. (C) | 95. (D) | 120. (A) | 145. (B) | 170. (C) | 195. (B) |
| 21. (D) | 46. (B) | 71. (A) | 96. (B) | 121. (C) | 146. (B) | 171. (B) | 196. (C) |
| 22. (C) | 47. (C) | 72. (D) | 97. (D) | 122. (A) | 147. (A) | 172. (B) | 197. (A) |
| 23. (B) | 48. (A) | 73. (B) | 98. (A) | 123. (A) | 148. (C) | 173. (D) | 198. (A) |
| 24. (D) | 49. (B) | 74. (D) | 99. (D) | 124. (D) | 149. (C) | 174. (B) | 199. (D) |
| 25. (B) | 50. (B) | 75. (B) | 100. (C) | 125. (D) | 150. (D) | 175. (B) | 200. (A) |

151. (C) Use 'happier' in place of 'more happier'. Two comparative degrees never come together.
152. (B) Replace 'are' by 'have been'. An action (tax-evading) already started and still going on comes under present perfect continuous tense.
153. (C) Change 'this' into possessive adjective i.e., 'their'.
154. (B) Replace 'than' by 'but'. 'No other' should be followed by 'but'.
155. (D) No error.

