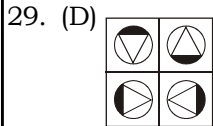


28. (A) Anupam's son-in-law is the brother of the lady who was sitting in the car. Hence, the husband is also the **son-in-law** of Anupam.



30. (B) Suppose boy got x sums right and $2x$ sums wrong.

Then, we have

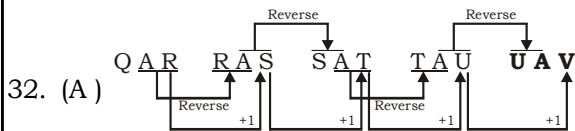
$$x + 2x = 48$$

$$\Rightarrow 3x = 48$$

$$\Rightarrow x = 16$$

So, he had solved **16** sums correctly.

31. (A) The series is $10^2 + 1 = 101$, $11^2 - 1 = 120$, $12^2 + 1 = 145$, $13^2 - 1 = 168$, $14^2 + 1 = 197$, $15^2 - 1 = \mathbf{224}$.



33. (B) 28 days after 26/2/12 is 25/3/12. As, in the given series the difference between two consecutive dates is 28 days.

Note: 2012 was a leap year.

34. (A) $1 \times 1 + 1 = 2$; $2 \times 2 + 2 = 6$, $6 \times 3 + 3 = 21$; $21 \times 4 + 4 = \mathbf{88}$.

35. (C) **Both assumptions I and II are implicit.** Clearly, the penalty is imposed to prevent people from misusing the alarm chain. This means that some people misuse it. So, I is implicit. The alarm chain is provided to stop the running train at the time of urgency. So, II is also implicit.

36. (D)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
																							1	2	3	4

Required letter is = **M**

37. (C)

9	19	40	83	170	345
	↖	↖	↖	↖	↖
	$\times 2 + 1$	$\times 2 + 2$	$\times 2 + 3$	$\times 2 + 4$	$\times 2 + 5$

38. (A) $714 = 51 \times 14$
 $915 = 61 \times 15$
 $1136 = 71 \times 16$
 $\mathbf{1377 = 81 \times 17}$

39. (D) $9 - 5 = 4$; $4 \times 2 = 8$
 $17 - 11 = 6$; $6 \times 2 = 12$
 $\mathbf{26 - 19 = 7}$; $7 \times 2 = 14$

40. (D) All the numbers mentioned here are consecutive prime numbers. So, the next prime number in the series is **23**.

41. (A) $4 + 3 = 7$; $7^3 = 343$

$$4 + 4 = 8; 8^3 = 512$$

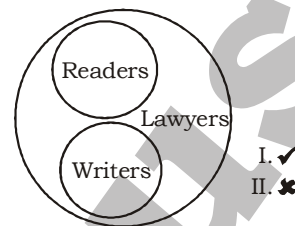
$$\therefore 4 + 5 = 9; 9^3 = \mathbf{729}$$

42. (A) $13^2 + 14^2 = 169 + 196 = 365$

$$15^2 + 16^2 = 225 + 256 = 481$$

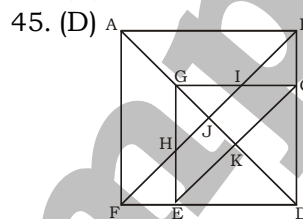
$$\therefore 18^2 + 19^2 = 324 + 361 = \mathbf{685}$$

43. (A) "Some readers are writers" may be a possibility but cannot be concluded from the given statements.



Only conclusion I follows.

44. (C)



Simple triangles are EFH, BIC, GHJ, GIJ, EKD and CKD i.e. 6 in number.

Triangles composed of two components are ABJ, AFJ, GCK, GEK, CED and GHI i.e. 6 in number.

Triangles composed of three components are GCD, GED, DJB and DJF i.e. 4 in number.

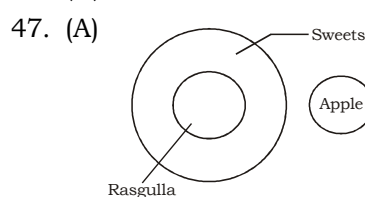
Triangles composed of four components are ABF and GCE i.e. 2 in number.

Triangles composed of five components are ABD and AFD i.e. 2 in number.

There is only one triangle i.e. FBD composed of six components.

\therefore Total number of triangles in the figure = $6 + 6 + 4 + 2 + 2 + 1 = 21$.

46. (D)



Rasagulla is one of the sweets, while apple is different from these.

48. (B)

49. (D)

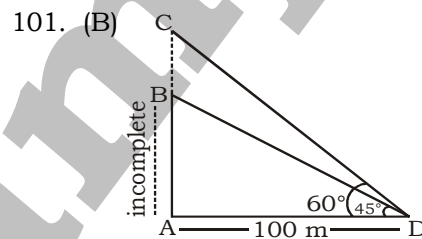
50. (B)

51. (A) The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank that aims to support the building of infrastructure in the Asia-Pacific region. The Headquarters of the Bank is located in Beijing, China. The 3rd Annual Meeting of the AIIB is hosted by Mumbai, India. The theme of third meeting was 'Mobilising Finance for Infrastructure: Innovation and Collaboration'.
52. (D) Red Crescent Society is a worldwide humanitarian organization providing assistance without discrimination as to nationality, race, religious beliefs, class or political opinions. It provided medical help to the Turkish troops in the Balkan War.
53. (D) The first session of the Indian National Congress was held from 28-31 December, 1885 at Gokul Das Tejpal Sanskrit College, Bombay and was attended by 72 delegates. Its president was Wyomesh Chandra Banerjee. Indian National Congress was formed during times of Governor General Lord Dufferin.
54. (B) Mixed melting point is considered the best criteria for purity of a substance. The purified sample is mixed with a small quantity of pure compound and melting point of mixture is determined. If melting point of mixture is same as that of the pure compound, the sample compound is pure, otherwise it requires further purification.
55. (D) Apart from India, Tamil is an official language in Sri Lanka and Singapore. In Malaysia and Mauritius, it is a recognized minority language.
56. (D) The Coriolis effect influences the paths of moving objects on Earth and is caused by Earth's rotation. Because Earth's surface rotates at different velocities at different latitudes, objects in motion tend to veer to the right in the Northern Hemisphere and to the left in the Southern Hemisphere. The Coriolis effect is nonexistent at the equator but increases with latitude, reaching maximum at the poles.
57. (D) The world's largest wetland is the Pantanal, which covers 200,000 square kilometres (during the wet season) through Brazil, Paraguay and Bolivia, although 80% of it is in Brazil. It is a land of flooded grasslands, savannas and tropical forests.
59. (C) The Gujarat government announced wind-solar hybrid power policy - 2018, aiming to make optimum utilisation of the land and grid. The policy, which will have the coverage period of five years, provides encouragement to renewable power producers supplying to the grid as well as to those having captive use.
60. (A) The current age of retirement for Supreme Court judge is 65 years while High Court Judge is 62 years. There was a bill introduced to raise the age of retirement of high court judges also to 65 years but that bill has never passed.
62. (A) L.M.Singhvi Committee was formed by the government to study the Panchayati Raj. The Gram Sabha was considered the base of a decentralized democracy, and PRIs viewed as institutions of self-governance which would actually facilitate the participation of the people in the process of planning and development. Its salient recommendations are as follows: Local self-government should be constitutionally recognized, protected and preserved by the inclusion of new chapter in the Constitutional non-involvement of political parties in Panchayat elections.
67. (A) Muhammad Ghori is known to have adopted the seated goddess Lakshmi on the coins of Gahadavalas for circulation in the Gahadavala territories. He got the figure of Goddess Lakshmi stamped on his coins and had his name inscribed in Devnagari Characters.
68. (B) The Central Water Commission (CWC) has entered into an agreement with Google to improve flood forecast systems and disseminate flood-related information by using technology developed by the tech giant in the country.
70. (D) The International Seabed Authority (ISA) is an inter-governmental body to organize, regulate and control all mineral-related activities in the international sea-bed area beyond the limits of national jurisdiction, an area underlying most of the world's oceans. The headquarters of ISA is located at Kingston, Jamaica.
71. (A) The historic Chandragiri Fort was venue of the 545th birth anniversary of Vijayanagara emperor Sri Krishnadevaraya in February 2016. The fort is under the control of the Archaeological Survey of India (ASI) and is located at Chandragiri, Tirupati in Andhra Pradesh. A fort with same name is also located in Kasaragod District of Kerala.
72. (A) "Although aluminum is the most abundant metal in the earth's crust, it is never found free in nature. All of the earth's aluminum has combined with other elements to form various compounds. Two of the most common compounds are alum, such as potassium aluminum sulphate, and aluminum oxide (Al_2O_3). About 8.2% of the earth's crust is composed of aluminum."

79. (A) The second statement is incorrect. Attorney General holds the office during the pleasure of the president, while solicitor general is appointed and removed by central government.
80. (A) Article 19 is the most important and key article which embodies the "basic freedoms". Article 19 provides that all citizens shall have the right- (originally 7, now 6).
- to freedom of speech and expression;
 - to assemble peacefully and without arms;
 - to form associations or unions;
 - to move freely throughout the territory of India;
 - to reside and settle in any part of the territory of India;
 - omitted by 44th amendment act. (it was right to acquire, hold and dispose of property)
 - to practice any profession, or to carry on any occupation, trade or business.
83. (D) There was a series of 4 Russo-Persian wars in 1722-1723, 1796, 1804, 1826-1828 and in all of the wars Russia was victorious.
85. (B) American Doctor Daniel Hale Williams is credited with having performed open heart surgery on July 9, 1893 before such surgeries were established. In 1913, Daniel Hale Williams was the only African-American member of the American College of Surgeons.
87. (A) Xerophthalmia is a more serious eye disease caused by a lack of vitamin A, and can occur if nightblindness is not treated. In xerophthalmia, the tear ducts do not produce enough tears, which lubricate the eye. This leads to the cornea (the clear part of the eye covering the pupil and iris) and conjunctiva (the clear covering to the white of the eye) becoming inflamed.
88. (D) The first evidence of the Stone Age culture in India surfaced in Karnataka as early as in 1842 when Dr. Primrose discovered polished stone knives and arrow heads at Lingsugur in Raichur district of Karnataka.
89. (B) The chairman and members of a SPSC(State Public Service Commission) are appointed by the governor, but they can only be removed by the president (and not by the governor) on the report of Supreme Court.
90. (C) Constitution of India, Article 15: Prohibition of Discrimination on Grounds of Religion, Race, Caste, Sex or Place of Birth
91. (D) Nichrome is an alloy of nickel (80%)+chromium(20)% has very high resistance.
93. (A) Konark Sun Temple is a 13th century temple of Odisha, built by Narasimhadeva I

of the Eastern Ganga Dynasty. It is also known as Black Pagoda. It's a World Heritage Site. It is considered architectural marvel for which Odisha is best known worldwide.

94. (B) The Indian Ocean consists of one gyre, the Indian Ocean (Majid) Gyre, which exists mostly in the Southern Hemisphere. It is named after Ahmad Bin Majid, the 15th century Arab mariner.
95. (A) Recently, the Rajasthan government has inaugurated the state's second biological park 'Machia Biological Park' in Jodhpur. The new park will have a food store, cafeteria, interpretation centre, ticket window, visitors and service roads and will be opened for public in March 2016. The park is spread over 41 hectare and is the house of lions, tigers, jackals, hyenas, desert cats and desert foxes, etc.
99. (B) The National Advisory Council was set up on 4th June 2004 by Prime Minister Manmohan Singh, during the tenure of the first UPA government, to implement the National Common Minimum Programme.



AB is complete pillar and BC is increased height

$$\angle ADB = 45^\circ \text{ and } \angle ADC = 60^\circ$$

$$\therefore \tan 45^\circ = \frac{AB}{AD}$$

$$\therefore 1 = \frac{AB}{100} \Rightarrow AB = 100 \text{ m}$$

$$\text{In } \angle ACD, \tan 60^\circ = \frac{AC}{AD}$$

$$\therefore \frac{\sqrt{3}}{1} = \frac{BC+100}{100} = BC + 100 = 100\sqrt{3}$$

$$\therefore BC = 100\sqrt{3} - 100 = 100(\sqrt{3} - 1) \text{ m}$$

102. (A) Let the larger number be x and smaller be y

$$\therefore x - \frac{y}{2} = \left(y - \frac{y}{2}\right) \times 5$$

$$\frac{2x - y}{2} = \frac{y}{2} \times 5$$

$$2x - y = 5y$$

$$2x = 6y \Rightarrow \frac{x}{y} = \frac{6}{2}$$

$$x : y = 3 : 1$$

103. (D) For minimum value of $x^2 + \frac{1}{x^2+1} - 3$

$$x^2 + \frac{1}{x^2+1} \text{ would be 0, for this } x = 0$$

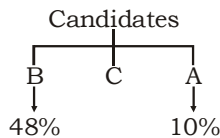
$$\therefore \text{ minimum value of } x^2 + \frac{1}{x^2+1} - 3$$

$$= 0 + \frac{1}{0+1} - 3$$

$$= 0 + 1 - 3$$

$$= -2$$

104. (C)

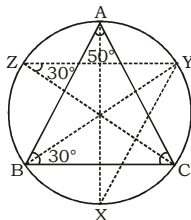


$$\therefore \text{ C got } = 42\%$$

$$\text{Diff. between B and C's votes} = 6\%$$

$$\therefore \text{ Total no. of votes} = \frac{1200}{6} \times 100 = 20,000$$

105. (A)



$$\therefore \angle CZY = \angle CBY = 30^\circ$$

$$\therefore \angle ABC = 2 \times 30 = 60^\circ$$

$$\text{In } \triangle ABC = \angle BCA + 60^\circ + 50^\circ = 180^\circ$$

$$\therefore \angle BCA = 180^\circ - 110^\circ = 70^\circ$$

$$\therefore \angle BCZ = \frac{70}{2} = 35^\circ$$

$$\therefore \angle BYZ = \angle BCZ$$

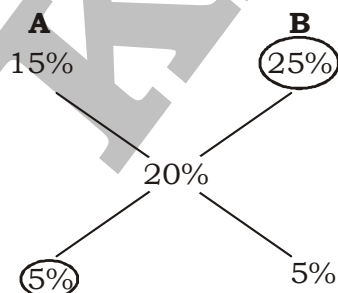
$$\therefore \angle BYZ = \angle BCZ = 35^\circ$$

106. (A) The area of lawn = $30 \times 16 = 480 \text{ m}^2$

$$\text{The area with path} = 34 \times 20 = 680 \text{ m}^2$$

$$\therefore \text{ The area of path} = 680 - 480 = 200 \text{ m}^2$$

107. (A)



So,

	CP	SP
A	100	115
B	100	125

$$10 \text{ units} = 4800$$

$$100 \text{ units} = 48000$$

$$\text{CP of each cycle} = ₹ 48,000$$

108. (C) From question : $\Delta s \propto \sqrt{n}$

$$\Rightarrow \Delta s = k\sqrt{n} \quad \dots(i)$$

where $\Delta s \rightarrow$ reduction in speed, $n \rightarrow$ no. of wagons, $\Delta s = (36 - 30) = 6 \text{ km/h}$, $n = 9$, put values in equ. (i)

$$6 = k\sqrt{9} \Rightarrow k = 2$$

$$\text{for maximum wagons} \Rightarrow \Delta s = 36 \text{ km/h}$$

$$36 = 2\sqrt{n}, n = 324$$

$$\text{maximum wagons} = 324 - 1 = 323$$

$$n = 323$$

109. (D) Let the rate of interest allowed by the bank is R

$$\therefore \text{ interest after 3 years} = \frac{P \times R \times T}{100}$$

$$= \frac{12000 \times R \times 3}{100} = ₹ 360 R$$

$$\text{and interest after 5 years} = \frac{P \times R \times T}{100}$$

$$= \frac{12000 \times 10 \times 5}{100} = ₹ 6000$$

$$\therefore 6000 - 360 R = 3320$$

$$R = \frac{2680}{360} = 7\frac{4}{9}\%$$

110. (A) Total quantity of petrol consumed in 3 years

$$= \left(\frac{4000}{7.50} + \frac{4000}{8} + \frac{4000}{8.50} \right) \text{ litres}$$

$$= 4000 \left(\frac{2}{15} + \frac{1}{8} + \frac{2}{17} \right) \text{ litres}$$

$$= \left(\frac{76700}{51} \right) \text{ litres}$$

$$\text{Total amount spent} = ₹ (3 \times 4000) = ₹ 12000.$$

$$\therefore \text{ Average cost} = ₹ \left(\frac{12000 \times 51}{76700} \right)$$

$$= ₹ \frac{6120}{767} = ₹ 7.98$$

111. (A) If $a + b + c = 0$ then $a^3 + b^3 + c^3 = 3abc$

$$\therefore \frac{a^2}{bc} + \frac{b^2}{ca} + \frac{c^2}{ab} = \frac{a^3 + b^3 + c^3}{abc} = \frac{3abc}{abc}$$

$$\Rightarrow 3$$

112. (D) $40\% = \frac{2}{5}$

5	7
5	7
5	7
-----	-----
125	343
↓ ×400000	↓ ×400000
50,000000	137200000
Three years ago	Present value

113. (A) Let the salary of C be ₹ 100 then, we have salary of B = ₹ 25 salary of A = ₹ 10

$$\therefore \text{Required \%} = \frac{100 - 10}{10} \times 100\% = 900\%$$

114. (A) $5a + \frac{1}{3a} = 5$

multiply by $\frac{3}{5}$ on both sides,

$$5 \times \frac{3}{5} a + \frac{3}{5} \times \frac{1}{3a} = 5 \times \frac{3}{5}$$

$$3a + \frac{1}{5a} = 3$$

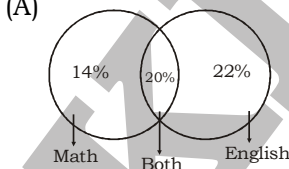
$$\therefore 9a^2 + \frac{1}{25a^2} + \frac{6}{5} = 9$$

$$9a^2 + \frac{1}{25a^2} = 9 - \frac{6}{5} = \frac{39}{5}$$

115. (B) Let the no. be 30 and 28 respectively. then, the sum of no. = 30 + 28 = 58 Now, divide the no. by 17, then we have 7 as the remainder.

116. (C) $a^4 + b^4 - a^2b^2 = 0$
Now, $a^6 + b^6 = (a^2)^3 + (b^2)^3$
 $= (a^2 + b^2)(a^4 + b^4 - a^2b^2)$
 $= (a^2 + b^2)(0)$
 $= 0$

117. (A)



$$100\% - 56\% = 44\%$$

118. (C) $\frac{1}{\operatorname{cosec}^2 51^\circ} + \sin^2 39^\circ + \tan^2 51^\circ -$

$$\frac{1}{\sin^2 51^\circ \cdot \sec^2 39^\circ}$$

$$\sin^2 51^\circ + \sin^2 39^\circ + \tan^2 51^\circ - \frac{\cos^2 39^\circ}{\sin^2 51^\circ}$$

$$\sin^2 51^\circ + \cos^2 51^\circ + \tan^2 51^\circ - \frac{\sin^2 51^\circ}{\sin^2 51^\circ}$$

$$= 1 + \tan^2 51^\circ - 1$$

$$= \tan^2 51^\circ$$

$$= \cot^2 39^\circ$$

$$= \operatorname{cosec}^2 35^\circ - 1$$

$$= x^2 - 1$$

119. (B) $\therefore (x^4 + x^4) = 322$

$$\therefore x^4 + \frac{1}{x^4} = 322$$

the value of $x^2 + \frac{1}{x^2} = 18$

$$= x^2 + \frac{1}{x^2} - 2 = 16$$

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

$$x - x^{-1} = 4$$

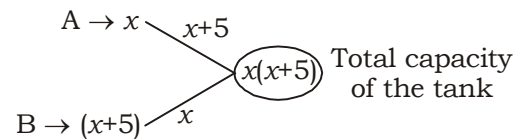
120. (C) $2(\cos^2 \theta - \sin^2 \theta) = 1$

$$\therefore \cos^2 \theta - \sin^2 \theta = \frac{1}{2}$$

$$\therefore \cos 2\theta = \cos 60^\circ \Rightarrow 2\theta = 60^\circ$$

$$\theta = \frac{60^\circ}{2} = 30^\circ$$

121. (B) Let the time taken by the faster pipe (A) = x hours



Then time taken by the slower pipe (B) = (x + 5) hours

ATQ,

$$\frac{x(x+5)}{x+(x+5)} = 6$$

$$\Rightarrow x^2 + 5x = 12x + 30$$

$$\Rightarrow x^2 - 7x - 30 = 0$$

$$\Rightarrow x^2 - 10x + 3x - 30 = 0$$

$$\Rightarrow x(x-10) + 3(x-10) = 0$$

$$\Rightarrow (x-10)(x+3) = 0$$

$$x = 10 \text{ hours}$$

122. (A) TSA of the remaining solid

$$= 2\pi rh + \pi r^2 + \pi rl$$

$$\therefore l = \sqrt{h^2 + r^2}$$

$$= 2 \times \pi \times 3 \times 4 + \pi \times 9 + \pi \times 3 \times 5$$

$$= \pi [24 + 9 + 15]$$

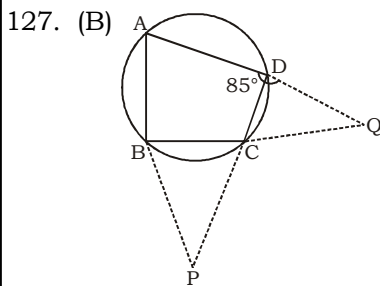
$$= \pi [48] \text{ cm}^2$$

123. (A) S.I for 1 year = 10%
C.I for 1 year half yearly = 10.25%
∴ 25% = 180
100% = ₹ 72,000

124. (A) $27 \times \frac{64}{27} - 108 \times \frac{16}{9} + 144 \times \frac{4}{3} - 317$
⇒ $64 - 192 + 192 - 317$
⇒ -253

125. (B) $\cot 18^\circ \left[\cot 72^\circ \cdot \cos^2 22^\circ + \frac{1}{\tan 72^\circ \sec^2 68^\circ} \right]$
 $= \tan 72^\circ \left[\frac{\cos^2 22^\circ}{\tan 72^\circ} + \frac{\cos^2 68^\circ}{\tan 72^\circ} \right]$
⇒ $\tan 72^\circ \times \frac{1}{\tan 72^\circ} [\cos^2 22^\circ + \cos^2 68^\circ]$
⇒ $1 \times 1 = 1$

126. (C) In 5 years 2 times
∴ 8 times = 2^3 times
∴ $n = 5 \times 3 = 15$ years



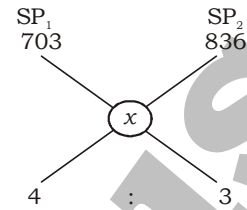
$\angle ADC = 85^\circ$
∴ $\angle CDQ = 180^\circ - 85^\circ = 95^\circ$
 $\angle PBC = \angle ADC = 85^\circ$
In $\triangle BCD$, $\angle PBC + \angle CPB + \angle BCP = 180^\circ$
⇒ $85 + 40 + \angle BCP = 180$
⇒ $\angle BCP = 180 - 125 = 55^\circ$
∴ $\angle DCQ = \angle BCP = 55^\circ$
In $\triangle CDQ$, $\angle C + \angle D + \angle Q = 180^\circ$
 $55 + 95 + Q = 180$
 $\angle Q = 180 - 150 = 30^\circ$
 $\angle CQD = 30^\circ$

128. (C) old salary 200 : 300 : 500
 ↓15% ↓10% ↓20%
new salary 230 : 330 : 600
 23 : 33 : 60

129. (A) One interior angle of the regular nonagon = $\frac{(2n-4) \times 90}{n}$
 $= \frac{(2 \times 9 - 4) \times 90}{9}$
 $= (18 - 4) \times 10 = 14 \times 10 \Rightarrow 140^\circ$

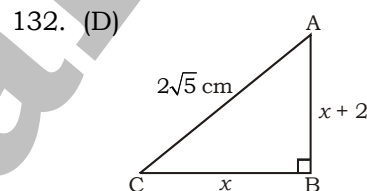
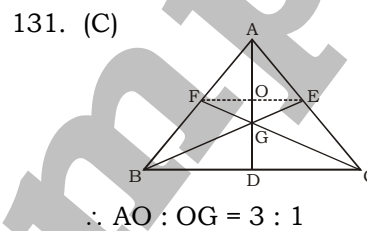
one exterior angle = $\frac{360}{9} = 40^\circ$
Required ratio = $40^\circ : 140^\circ = 2 : 7$

130. (A) $25\% = \frac{1}{4}$, Profit = 4, Loss = 3
Let the cost price = x
ATQ,



$$\frac{703 \times 4 + 836 \times 3}{4 + 3} = x \Rightarrow x = 760$$

New selling price = $760 \times \frac{120}{100} = ₹ 912$



$(x+2)^2 + x^2 = (2\sqrt{5})^2$
 $x^2 + 4 + 4x + x^2 = 20$
 $x^2 + 2x = 8 \Rightarrow x^2 + 2x - 8 = 0$
∴ $x^2 + 4x - 2x - 8 = 0 \Rightarrow (x+4)(x-2) = 0$
 $x = 2$
Now, $\cos^2 A - \cos^2 C$

$$\left(\frac{4}{2\sqrt{5}} \right)^2 - \left(\frac{2}{2\sqrt{5}} \right)^2$$

$$\frac{16}{20} - \frac{4}{20}$$

$$\frac{12}{20} = \frac{3}{5}$$

133. (A) Let radius = $5x$ cm and height = $12x$ cm

$$V = \frac{1}{3} \pi \times (5x)^2 \times 12x$$

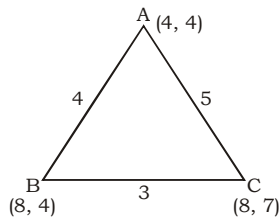
$$314 = \frac{1}{3} \times 3.14 \times 25 \times 12 \times x^3$$

$$\frac{300}{25 \times 12} = x^3$$

$$x = 1$$

$$l = \sqrt{h^2 + r^2} = \sqrt{5^2 + 12^2} = 13 \text{ cm}$$

134. (C)



$$\text{Incentre} = \frac{ax_1 + bx_2 + cx_3}{a + b + c}$$

where a, b, c are sides of the Δ .

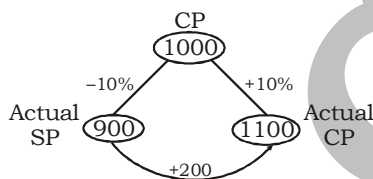
$$x = \frac{3 \times 4 + 4 \times 8 + 5 \times 8}{4 + 5 + 3} = \frac{84}{12} = 7$$

$$y = \frac{3 \times 4 + 7 \times 4 + 5 \times 4}{4 + 5 + 3} = \frac{12 + 28 + 20}{12}$$

$$= \frac{60}{12} = 5$$

coordinates of incentre = (7, 5).

135. (B) Let the cost price of 1 gm weight is ₹ 1



$$\% \text{ profit} = \frac{200}{900} \times 100 = 22\frac{2}{9}\%$$

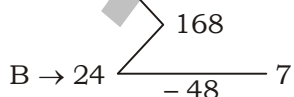
136. (A) Maximum value of $\sin\theta + \cos\theta$

$$= \sqrt{a^2 + b^2}$$

$$= \sqrt{13^2 + 84^2}$$

$$\Rightarrow \sqrt{7225} = 85$$

137. (B) A → 21 ——— 8



$$\frac{120}{15} = 8 \text{ days}$$

138. (A) Area of circle = $\pi r^2 = \frac{22}{7} \times 10.5 \times 10.5$
= 346.5 cm²

139. (C) A's 70 days work = B's 42 days work,
Ratio of the time = 70 : 42

$$\text{efficiency} = 3 : 5$$

↓ × 80

$$\text{Total work} = 240$$

$$\text{Time} = \frac{240}{8} = 30 \text{ days}$$

140. (B) Right cylinder's volume = It's curved surface area

$$\therefore \pi r^2 h = 2\pi r h \Rightarrow r = 2 \text{ units}$$

141. (B) Let the age of father and son 10 years ago be $3x$ and x years respectively.

$$\text{Then, } (3x + 10) + 10 = 2[(x + 10) + 10]$$

$$\Rightarrow 3x + 20 = 2x + 40$$

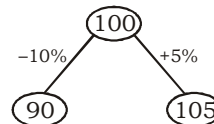
$$\Rightarrow x = 20$$

$$\therefore \text{Required ratio} = (3x + 10) : (x + 10)$$

$$= 70 : 30 = 7 : 3$$

142. (C) Let the cost price of the watch = ₹ 100

ATQ,



$$\text{Loss} = ₹ 10$$

$$\text{Profit} = ₹ 5$$

$$\text{Required percentage} = \frac{10}{5} \times 100 = 200\%$$

143. (B)

AC = Distance covered by train starting from A in 3 hours = $50 \times 3 = 150 \text{ km}$

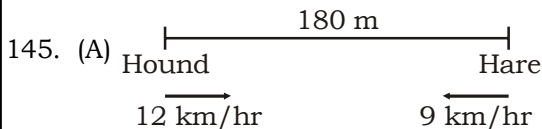
BC = Distance covered by train starting from B in 2 hours = $60 \times 2 = 120 \text{ km}$

$$\therefore AC : BC = 150 : 120 = 5 : 4$$

144. (A) ₹ 15 ₹ 20
 $\downarrow \times 2$ $\downarrow \times 2$
 30 60

$$\frac{15 \times 2 + 20 \times 3}{2 + 3} = \frac{90}{5} = 18$$

Required rate = ₹ 18/kg



ATQ,

Hound chases Hare after 1 min then distance covered by Hare in 1 min

$$d = \frac{9 \times 5 \times 60}{18} = 150 \text{ m}$$

Total distance travelled by hound to catch rabbit = (180 + 150) = 330 m

Now both are moving in same direction then relative speed = (12 - 9) km/h = 3 km/h

Time taken by hound to catch the Hare

$$= \frac{\text{distance}}{\text{relative speed}}$$

$$t = \frac{330 \times 18}{3 \times 5}, t = 396 \text{ sec}$$

Distance travelled by hound = $t \times v$

$$= 396 \times 12 \times \frac{5}{18} = 1320 \text{ m}$$

146. (A) No. of teachers in Physics

$$= 1800 \times \frac{17}{100} = 306$$

No. of female teachers in Physics

$$= \frac{2}{9} \times 306 = 2 \times 34 = 68$$

No. of male teachers = 306 - 68 = 238

$$\text{Required percentage} = \frac{238}{23 \times 18} \times 100 \approx 57\%$$

147. (B) Required number of teachers = 62% of 1800 = 1116

148. (B) Teachers who teach English + Physics = 44% of 1800

Teachers who teach Mathematics + Biology together = 25% of 1800

Required difference = 19% of 1800 = 342

149. (D) Required ratio = 13 : 8

150. (C) New strength of Mathematics teachers

$$= 234 + \left(\frac{1}{2} \times 13\% \text{ of } 1800 = 117\right) = 351$$

New strength of Hindi teachers = $\frac{3}{4} \times 8\%$ of 1800 = 108

Collective strength of both subject teachers = 357 + 108 = 459

151. (A) Replace 'from' by 'of'. 'Deprive' will take 'of'.

152. (C) Replace function by functioning. 'Start' take 'V₁+ing' after it.

153. (B) Replace 'are' by 'has', as the sentence takes present perfect form and 'cost' being a singular noun will take singular verb.

154. (C) Replace 'are' by 'is', as 'Neither of' takes a singular verb after it.

155. (C) 'coward' and 'person' can't come together. This is superfluous. Remove 'person' or change 'coward' into 'cowardly'.

156. (D) 'Absolve somebody of/from something' means 'to state formally that somebody is not responsible for something'.

157. (C) By 'impressionable age' we mean 'the young age when someone gets easily influenced or impressed by something'.

158. (A) A habit or usual action always takes simple present tense if the person is alive.

159. (A) 'unsavoury' means 'something not considered morally acceptable'.

160. (C) 'Protruding' means 'sticking out from a place or surface'.

175. (D) 'An invaluable advice' is extremely useful piece of advice.'

176. (B) Verb 'avoids' takes 'V₁+ing' after it.

177. (C) 'precipitate' means 'cause a situation, which is bad or undesirable, to happen suddenly or unexpectedly'.

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Acquisitive	excessively interested in acquiring money or material things	कुछ प्राप्त करने की लालसा वाला
Association	an official group of people who have joined together for a particular purpose	संघ
Capitalist system	an economic system in which a country's businesses and industry are controlled and run for profit by private owners rather than by the government	पूंजीवादी व्यवस्था
Catalysis	the acceleration of a chemical reaction by a catalyst	उत्प्रेरण
Conjure up	to make something appear as a picture in your mind	दिमाग में छवि बनाना
Council	a group of people chosen to give advice, make rules, do research, provide money, etc.	परिषद्
Endocrinologist	a doctor who studies the part of medicine concerning the endocrine system and hormones	अन्तःस्त्रावविज्ञानी
Exploitation	the action of making use of and benefiting from resources	शोषण
Fanatic	a person filled with excessive zeal, especially for an extreme religious or political cause	कट्टरपंथी
Fatalist	a person who believes that events are decided by fate and cannot be controlled	भाग्यवादी
Fatuous	silly and pointless	बुद्धिहीन
Foster	encourage or promote the development of (something, typically something regarded as good)	पोषण करना
Genial	friendly and cheerful	हंसमुख
Hapless	(especially of a person) unfortunate.	बदकिस्मत
Harrowed	Distressed, shocked, frightened or upset	पीड़ित, व्यथित
Impart	to give a particular quality to something	प्रदान करना
Indispensable	absolutely necessary	अति आवश्यक
Inspid	not interesting or exciting	नीरस, उबाऊ
Judicious	having, showing, or done with good judgment or sense	न्यायसंगत
Juvenile	connected with young people who are not yet adults	किशोर
Pedantic	too worried about small details or rules	रूढ़िवादी
Perpetrate	carry out or commit (a harmful, illegal, or immoral action)	अनैतिक कार्रवाई करना
Perpetuate	make (something, typically an undesirable situation or an unfounded belief) continue indefinitely	बनाये रखना
Redress	remedy or set right (an undesirable or unfair situation)	निवारण करना
Succour	assistance and support in times of hardship and distress	मदद



KD Campus Pvt. Ltd

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CPO MOCK TEST - 21 (ANSWER KEY)

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

For all general competitive exams

