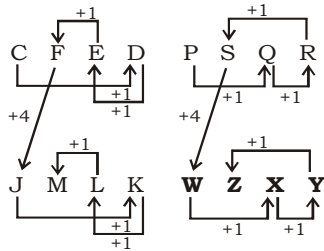


**CPO MOCK TEST - 28 (SOLUTION)**

1. (D) Devotion is the characteristic of a monk whereas **wanderlust** is the characteristic of a Nomad.
2. (C) Slapstick results in laughter and horror results in **fear**.
3. (D) A Maestro leads an orchestra and a **skipper** leads a **crew**.
4. (B) Being erudite is a trait of a professor and being **imaginative** is a trait of an **inventor**.
5. (C) A finch is a type of bird and a Dalmatian is a type of **dog**.
6. (C) Honeybee, parrot and bat all have wings and they are capable of flying. Similarly, kangaroo, rabbit and grasshopper are all capable of hopping.
7. (C) Fly is to ant as snake is to lizard. The fly and ant both are insects similarly the snake and lizard both are reptiles.

8. (C)



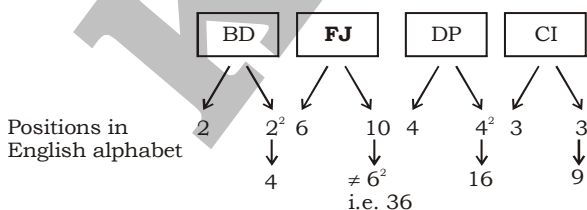
9. (C) As,  $23^2 + 23 = 552$  Similarly,  $30^2 + 30 = 930$

10. (A) As,  $\frac{6^3 + 6^2}{2} = \frac{216 + 36}{2} = \frac{252}{2} = 126$

Similarly,  $\frac{8^3 + 8^2}{2} = \frac{512 + 64}{2} = \frac{576}{2} = 288$

11. (D) In all the numbers, the middle digit is sum of digits of the product of two other digits. Now,  $9 \times 2 = 18$ ,  $1 + 8 = 9$  (middle digit in 992)  
 $7 \times 3 = 21$ ,  $2 + 1 = 3$  (middle digit in 733)  
 $8 \times 5 = 40$ ,  $4 + 0 = 4$  (middle digit in 845)  
 But,  $9 \times 7 = 63$ ,  $6 + 3 = 9 \neq 4$ . Hence 947 is different from others.

12. (B)



13. (A) All except Spider are flying insects.

14. (A) All except Jaipur are hill stations.

15. (A) Except Iron box, all need some type of energy to function.

16. (A) All except 63 are prime numbers.

17. (B) Except Param veer chakra, rest are civilian awards.

18. (A) Except (41-72), in other options second number is divisible by sum of the digits of the first number.

$4 + 1 = 5$  and 72 is not divisible by 5.

$3 + 0 = 3$  and 30 is divisible by 3,

$5 + 1 = 6$  and 42 is divisible by 6,

$2 + 0 = 2$  and 18 is divisible by 2.

19. (B) Given:  $2 + 8 \times 16 - 4 \div 2$

After interchanging the signs we have,

$= 2 \times 8 - 16 \div 4 \times 2$

$= 2 \times 8 - 4 \times 2$

$= 16 - 8 = 8$

20. (C)

21. (A) Let the number of guests be  $x$ . Then,

The number of bowls of rice =  $\frac{x}{2}$ .

The number of bowls of dal =  $\frac{x}{3}$ .

The number of bowls of meat =  $\frac{x}{4}$ .

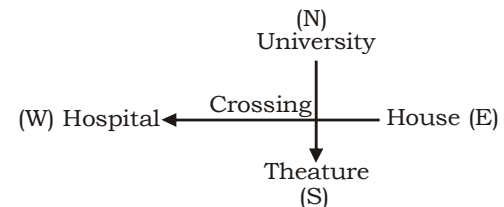
$\therefore \frac{x}{2} + \frac{x}{3} + \frac{x}{4} = 65 \Rightarrow \frac{6x + 4x + 3x}{12} = 65$

$\Rightarrow 13x = 65 \times 12$

$\Rightarrow x = \left( \frac{65 \times 12}{13} \right) = 60$ .

So, the number of guests = 60.

22. (A)

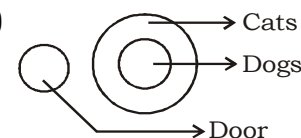


Therefore the University is in North direction.

23. (A) Hence D is the letter which is missing and it is opposite to face A.

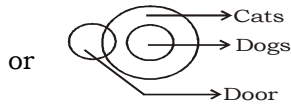
Top face	A	B	F
Bottom face	A	E	C

24. (D)



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1. ✘ 2. ✘ 3. ✔ 4. ✘

Hence, only (3) follows.

25. (D)  $12 \times 8 - 7 = 96 - 7 = 89$ ,  
 $15 \times 4 - 12 = 60 - 12 = 48$ ,  
 $25 \times 3 - 13 = 75 - 13 = 62$

26. (C)  $\sqrt{25 \times 9} = 5 \times 3 = 15$   
 and  $\sqrt{36 \times 81} = 6 \times 9 = 54$

Therefore  $\sqrt{16 \times 169} = 4 \times 13 = 52$

27. (B)  $14 + 23 + 48 = 19 + 15 + 51 = 12 + 37 + 36$   
 The sum in each case = 85.

28. (A) P @ Q → P is the wife of Q ... (i)  
 Q \$ T → Q is the brother of T ... (ii)  
 T # U → T is the daughter of U  
 Hence, Q is the son of U ... (iii)  
 U \* W → U is the father of W.

From (i) and (iii), we can conclude that U is the father-in-law of P.

29. (C) Father of Kamal's daughter's father → Kamal's father.  
 Hence, the person is the brother of Kamal's father.  
 Therefore, the person is the uncle of Kamal.

30. (B) Both Mercury and Zinc are metals.

31. (C) After Studying the pattern carefully we can observe that in the first segment, two letters face right and the next two face left. The first letter in the second segment repeats the last letter of the previous segment. The same is true for the third segment. But in the fourth segment it changes again. Here, it is opposite of the first segment, so the last two letters must face right.

32. (B)  $7 + 1^2 = 8$ ,  $8 + 2^2 = 12$ ,  $12 + 3^2 = 21$ ,  
 $21 + 4^2 = 37$ ,  $37 + 5^2 = 62$

33. (D) In this series, the letters remain the same i.e. DEF.  
 The subscript numbers follow this series : 111, 112, 122, 222, 223, .... and so on.

34. (C) The first two letters PQ are common. The third letter is in alphabetical order, beginning with R and the number series is in descending order beginning with 5.

35. (D) The situation demands creating awareness among the people about the dangers of drinking polluted water so that they themselves refrain from the same and at the same time taking steps to provide safe drinking water. So, both the courses of

action follow.

36. (C) Let number of horses = number of men =  $x$

Then, number of legs =  $4x + 2 \times \left(\frac{x}{2}\right) = 5x$ .

So,  $5x = 70$  or  $x = 14$ .

∴ The number of horses is 14

37. (C) Let there be  $(x + 1)$  members,

Father's share =  $\frac{1}{4}$ .

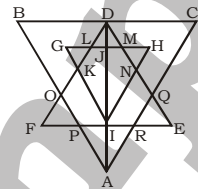
Share of each other member =  $\frac{3}{4x}$ .

∴  $3 \left(\frac{3}{4x}\right) = \frac{1}{4} \Rightarrow 4x = 36 \Rightarrow x = 9$ .

∴ Hence, total number of family members = 10.

38. (C)

39. (A) The figure may be labelled as shown.



The simple triangles are GLK, DLJ, DJM, HMN, QRE, IRA, IPA and FPO i.e. 8 in number.

The triangles having two components are BDO, CDQ, DLM, PRA, KFI, NEI, HJI, GJI, DKI and DNI i.e. 10 in number.

Triangles having four components are DIE, DFI, DOA, DQA and GHI i.e. 5 in number.

Triangles having six components are DCA and DBA i.e. 2 in number.

DEF is the only triangle having eight components.

ABC is the only triangle having twelve components.

Thus, there are  $8+10+5+2+1+1 = 27$  triangles in the figure.

40. (D) 1, 3 contain a V-shaped element inside a geometrical figure.

2, 4, 5 contain two similar elements, one placed inside the other and touching it.

6, 7 contain geometrical figures which are divided into four equal parts by two mutually perpendicular straight lines.

41. (B)

42. (A)

$$\begin{array}{r} 7 \ 1 \ 3 \\ \times \ 2 \ 7 \\ \hline 4 \ 9 \ 9 \ 1 \\ 1 \ 4 \ 2 \ 6 \\ \hline 1 \ 9 \ 2 \ 5 \ 1 \end{array}$$

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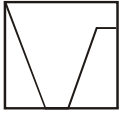
43. (D) when a cube is formed by folding the sheet shown in the question figure, then



is the one of the faces of the cube and this face lies opposite to a blank face. Also, a face bearing a square lies opposite to another blank face. The remaining two blank faces lie opposite to each other. Clearly, in the cube shown in figure (1), the face consisting of the four symbols which is not the same as that formed. Hence, the cube in figure (1) cannot be formed.

44. (D)

45. (D)



46. (C)

47. (C) The correct order is : Mercury → Venus → Earth → Mars → Jupiter

48. (C) The series is  $abccab / bcaabc / abccab$ .

49. (A)  $289 = 17^2$ ,  $324 = 18^2$  and  $361 = 19^2$ .

50. (C)

52.(D) Iran has unveiled the next generation Fateh Mobin short-range ballistic missile.  
IRAN :

- Capital: Tehran
- Currency: Rial
- President: Hassan Rouhani

55. (C) Darul Uloom Deoband is an Islamic school where the Deobandi Islamic Movement was started. Deoband had opposed the Jinnah's Demand for the partition of British India into Muslim and Non-Muslim sections. The school advocates an orthodox version of Islam and has repeatedly distanced itself from religious extremism.

58.(B) Special film festival on theme "Freedom Struggle & Freedom Fighters" was conducted in Mumbai.

61. (A) Narsingh Mehta was a poet-saint of Gujarat, (India) and a member of the Nagar Brahmins community, notable as a bhakta, an exponent of Vaishnava poetry. He has been especially revered in Gujarati literature, where he is acclaimed as its Adi Kavi (Sanskrit form "First among Poets"). His bhajan, 'Vaishnav Jan To' was Mahatma Gandhi's favourite and had become synonymous to him. The bhajan tells us about the life, ideals and mentality of a Vaishnav Jana (A follower of Vishnu or Krishna).

66. (C) Dhanvantri is an Avatar of Vishnu in the Hindu tradition. He appears in the Vedas and

Puranas as the physician of the gods (devas) and the god of Ayurvedic medicine. It is common practice in Hinduism for worshipers to pray to Dhanvantri seeking his blessings for sound health for themselves and/or others. Dhanvantri is depicted as Vishnu with four hands, holding medical herbs in one hand and a pot containing rejuvenating nectar called amrita in another. The Purans state that Dhanvantri emerged from the 'Ocean of Milk' and appeared with the pot of nectar during the story of the Samudra or Sagar manthan whilst the ocean was being churned by the devas and asuras, using the Mandara mountain and the serpent Vasuki.

68.(B) Madhya Pradesh Government has observed Shaheed Saman Diwas on 14th August in all districts of the state.

71. (A) An electric organizer is a small calculator-sized computer which is found often with an in-built diary application and also with few other functions such as an address book and calendar. It normally has a small alphanumeric keypad and an LCD screen of one, two or three lines.

72.(C) Odisha Governor Prof Ganeshi Lal has released the Odia edition of "Exam Warriors", a book written by Prime Minister Narendra Modi on how to tackle examination woes.

73. (C) Fossils are the remains of the dead plants or animals trapped in the layers of rocks. Coal, oil and natural gas are called fossil fuels.

75. (B) The assets of the banks are the loans and advances given to the public. Banks earn interest on these loans and advance is the main source of income for the banks.

78.(D) Former Indian Spinner Ramesh Powar has been named as the head coach of the women's national team till the ICC World T20.

83. (C) Ecosystem is a relationship among the living resources, habitats and residents of an area. It includes plants, trees, animals, fish, birds, micro-organisms, water, soil people, etc.

84.(A) Sunil Chhetri has been chosen the 'Best Sports person of the Year' at the Calcutta Sports Journalists' Club annual awards.

87. (D) Though temperature and humidity are key elements of weather crucial for a good harvest in Indian agriculture, it is said to be the handmaid of monsoon. This is on account of the lack of irrigational facilities across the country. A good monsoonal year often means a bumper harvest.

89. (A) The Vedas (Knowledge) are a large body of texts originating in ancient India, composed in Vedic Sanskrit. The texts constitute the oldest layer of Sanskrit literature and the oldest scriptures of Hinduism. The Vedas are apaurusheya ("not of human agency"). They are supposed to have been directly revealed, and thus are called Shruti ("What is heard"), distinguishing them from other religious texts, which are called Smriti ("What is remembered").
91. (C) Kovalam is a beach town by the Arabian Sea in Thiruvananthapuram city (Kerala). Kovalam has three beaches separated by rocky outcroppings in its 17 km coastline. The three beaches together form the famous crescent of the Kovalam beach.
92. (C) Asian Games Gold Medallist athlete Hakam Singh Bhattal has passed away recently. He was 60
93. (D) Venus can be seen with the unaided eye from Earth. It is the brightest planet in our Solar System. Venus was given the nickname evening star and morning star because of its bright consistent presence.
94. (B) Nagarjuna and Asvaghosha were the eminent Buddhist writers. Nagarjuna was the great exponent of Mahayana doctrine and Asvaghosha (a multifaceted personality) was known as a poet, musician, scholar and zealous Buddhist monk. Charaka, the most celebrated authority on Ayurveda was the court physician of Kanishka and Mathara, a politician of rare merit was his minister. Vasumitra presided over the fourth Buddhist Council.
96. (D) Human capital flight which is more commonly referred to as "brain drain" is the large-scale emigration of a large group of individuals with technically two aspects, which respectively come from countries and individuals. In terms of countries, the reasons may be social environment. In some countries it could be lack of opportunities, political instability, economic depression, health risks, etc. and in host countries it could be rich opportunities, political stability and freedom, developed economy, better living conditions, etc.
98. (A) The Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (formerly Prince of Wales Museum of Western India) is the main museum in Mumbai (formerly Bombay). It was founded in the early years of the

- 20<sup>th</sup> century by prominent citizens of Bombay with the help of the government to commemorate the visit of the Prince of Wales.
99. (D) In computer programming, an event handler is an asynchronous call back subroutine that handles inputs received in a program. Each event is a piece of application-level information from the underlying framework, typically the GUI. GUI events include the key presses, mouse movement and action selectral concept in event-driven programming.
100. (C) According to FICCI's Economic Outlook Survey, India's Gross Domestic Product Growth Rate is expected to 7.4 % in the Financial Year 2018-19.
101. (A) Let the price of 1 gm is ₹ 1  
Actual price : New price  

$$\begin{array}{ccc} 10 & \xrightarrow{+20\%} & 12 \\ \times 100 & & \times 100 \\ \hline 1000 & & 800 \end{array} \quad +400$$
 Required percentage profit  

$$= \frac{(1200 - 800)}{800} \times 100 = 50\%$$
102. (C) Total failed students  

$$= \frac{3}{5} \times 900 + \frac{1}{2} \times 1100$$

$$= 540 + 550 = 1090$$
 Required percentage =  $\frac{1090}{2000} \times 100 = 54.5\%$
103. (C)
- |                   |              |   |              |
|-------------------|--------------|---|--------------|
|                   | Laxman       |   | Gopal        |
| Last Year's Ratio | 3            | : | 5            |
|                   | / \          |   | / \          |
| Individual Ratio  | 2 : 3        |   | 4 : 5        |
|                   | Last Present |   | Last Present |
- Present  $3 \times \frac{3}{2}$  :  $5 \times \frac{5}{4}$   
 $\Rightarrow 18$  :  $25$   
 $\therefore$  Present salary of Lakshman  

$$= \frac{4300}{18 + 25} \times 18 = ₹ 1800$$
104. (B)  $\frac{12.4 \times x + 26}{x + 5} = 12$   
 $\Rightarrow 12.4x + 26 = 12x + 60$   
 $\Rightarrow 0.4x = 34$   
 $x = \frac{34}{0.4}$   
 $\therefore x + 5 = 85 + 5 = 90$

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105. (B) Here, 893 is exactly divisible by 47.  
Hence, the required remainder is obtained on dividing 193 by 47.

$$\therefore \text{Remainder} = 5$$

106. (A) Let ₹  $x$  be lent at 10% per annum.  
 $\therefore$  ₹  $(1500 - x)$  is lent at 7% per annum

$$\text{Now, } \frac{x \times 10 \times 3}{100} + \frac{(1500 - x) \times 7 \times 3}{100} = 396$$

$$\Rightarrow 30x + 31500 - 21x = 39600$$

$$\Rightarrow 9x = 39600 - 31500$$

$$\Rightarrow x = \frac{8100}{9} = ₹ 900$$

107. (B)  $\frac{12}{20} \times (10m + 10w) = \frac{10}{30} \times (6m + 30w)$

$$\Rightarrow 1m = 1w$$

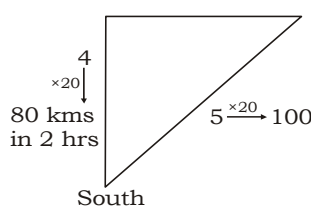
Let  $D$  days to finish the work

$$\frac{12}{20} \times (10m + 10w) = \frac{D}{120} \times (16m + 8w)$$

$$\Rightarrow \frac{12}{20} \times 20m = \frac{D}{120} \times 24m$$

$$D = 60 \text{ days}$$

108. (B)  $3 \xrightarrow{\times 20} 60 \text{ kms in 2 hours East}$



$$\therefore \text{Speed of the fastest swimmer} = \frac{80}{2} = 40 \text{ km/h}$$

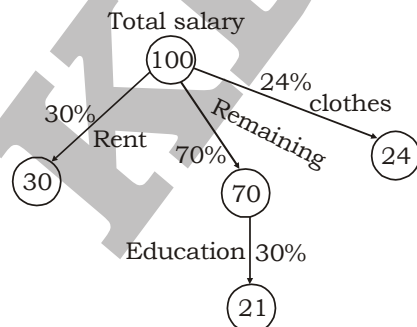
109. (C) Leak  $\rightarrow 6$   $\left\{ \begin{array}{l} 4 \\ 24 \\ 3 \end{array} \right.$   
L + Fill  $\rightarrow 8$

F = 1, Time = 24 hr

1 min  $\rightarrow$  4 litre

$$\therefore \text{capacity of tank} = 4 \times 60 \times 24 = 5760 \text{ litre}$$

110. (C)



$$\text{Total spend money} = 30 + 21 + 24 = 75$$

Remaining salary =  $(100 - 75) = 25$

According to the question

25 unit  $\rightarrow$  2500

$$1 \text{ unit} \rightarrow \frac{2500}{25} = 100$$

Total salary =  $100 \times 100 = ₹ 10,000$

111. (D) Worth of house for A = ₹ 10,000

$$\text{Cost price of house for B} = \frac{10,000 \times 115}{100}$$

$$= ₹ 11,500$$

$$\text{New cost price for A} = \frac{11500 \times 85}{100}$$

$$= ₹ 9775$$

$$\text{Total profit} = (11500 - 10000) + (10000 - 9975) = 1500 + 225 = ₹ 1725$$

$$\text{percentage gain} = \frac{1725}{10000} \times 100 = 17.25\%$$

112. (B)  $\frac{6}{4} = \frac{h}{50}$  (Assuming 'h' be the height of pole)

$$\Rightarrow h = \frac{50 \times 6}{4} = 75 \text{ feet}$$

113. (C)  $7 \times 8 : 9 \times y$   
( $y$  is the number of months for which B invests)

$$\Rightarrow \frac{7 \times 8}{9 \times y} = \frac{8}{9}$$

$$\Rightarrow \frac{56}{9y} = \frac{8}{9} \Rightarrow \frac{7}{y} = \frac{1}{1}$$

$$\therefore y = 7 \text{ months}$$

114. (A) If the HCF =  $H$ , then

LCM =  $44H$

$$\therefore 44H + H = 1125$$

$$\Rightarrow 45H = 1125$$

$$\therefore H = \frac{1125}{45} = 25$$

$$\therefore \text{LCM} = 44 \times 25 = 1100$$

Now

1st number  $\times$  2nd number = LCM  $\times$  HCF

$$\Rightarrow 25 \times 2\text{nd number} = 1100 \times 25$$

$$\therefore \text{Second number} = \frac{1100 \times 25}{25} = 1100$$

115. (B) The total interest for the two consecutive periods of six month each would be

$$= \left( \frac{6}{2} + \frac{6}{2} + \frac{6 \times 6}{100} \right) \%$$

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$$= \left( 3 + 3 + \frac{3 \times 3}{100} \right) \%$$

i.e. 6.09% of the sum

Hence, the amount to be paid after one year would be (100 + 6.09)%

i.e. 106.09% of the sum

∴ Required amount

$$= \frac{9000 \times 106.09}{100} = ₹ 9548.10$$

116. (A) Train covers 84 m length of platform in 21 - 9 = 12 sec.

$$\therefore \text{speed of the train} = \frac{84}{12} = 7 \text{ m/sec}$$

$$= 7 \times \frac{18}{5} \text{ km/hr} = 25.2 \text{ km/hr}$$

117. (A) A → 10 days  $\begin{matrix} 6 \text{ units/day} \\ 4 \text{ units/day} \\ 3 \text{ units/day} \end{matrix}$   
B → 15 days  $\begin{matrix} 4 \text{ units/day} \\ 6 \text{ units/day} \\ 3 \text{ units/day} \end{matrix}$   
C → 20 days  $\begin{matrix} 6 \text{ units/day} \\ 4 \text{ units/day} \\ 3 \text{ units/day} \end{matrix}$  Total work (in units) = 60

ATQ,

$$(6 + 4 + 3) \text{ units} = ₹ 6500$$

$$1 \text{ unit} = ₹ 500$$

$$\text{Share of B} = 500 \times 4 = ₹ 2000$$

118. (D) Let the cost price of buffalo = ₹ x

$$\text{Profit} = (720 - x)$$

$$\text{Loss} = (x - 510)$$

According to the question,

$$2(720 - x) = (x - 510)$$

$$\Rightarrow 1440 - 2x = x - 510$$

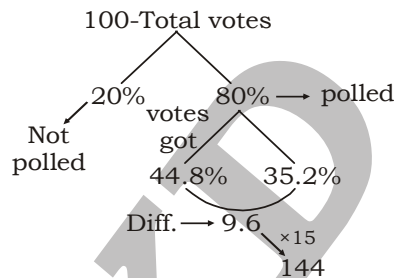
$$\Rightarrow 3x = 1950$$

$$\Rightarrow x = 650$$

$$\therefore \text{CP of the buffalo} = ₹ 650$$

119. (D) Let the no. of voters be 100

ATQ,



$$\therefore \text{Total voters} = 100 \times 15 = 1500$$

120. (C) Let the original fraction be  $\frac{x}{y}$  then,

$$\frac{x \times 132\%}{y \times 175\%} = \frac{12}{25}$$

$$\therefore \frac{x}{y} = \frac{12}{25} \times \frac{175}{132} = \frac{7}{11}$$

121. (A)  $ax + by + c = 0$

$$\text{When } c = 0,$$

$$ax + by = 0$$

$$by = -ax$$

$$\Rightarrow y = -\frac{a}{b}x$$

When  $x = 0, y = 0$  i.e. this line passes through the origin (0, 0).

122. (B)  $\sin 7x = \cos 11x$

$$\Rightarrow \sin 7x = \sin (90^\circ - 11x)$$

$$\Rightarrow 7x = 90^\circ - 11x$$

$$\Rightarrow 18x = 90^\circ$$

$$\Rightarrow x = 5^\circ$$

$$\therefore \tan 9x + \cot 9x$$

$$= \tan 45^\circ + \cot 45^\circ$$

$$= 1 + 1 = 2$$

123. (A) Copper : Zinc  
4 : 3

$$\text{Copper} = \frac{4}{7} \times 63 = 36 \text{ kg}$$

$$\text{Zinc} = \frac{3}{7} \times 63 = 27 \text{ kg}$$

Let x kg copper is extracted

Remaining copper = 36 - x kg

$$\text{New ratio} = \frac{10}{9}$$

$$\Rightarrow \frac{\text{Cu}}{\text{Zn}} = \frac{10}{9}$$

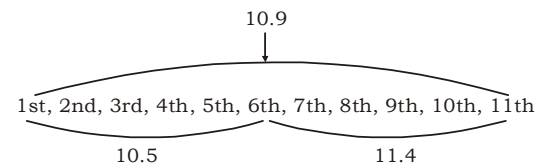
$$\Rightarrow \frac{36 - x}{27} = \frac{10}{9}$$

$$\frac{36 - x}{3} = \frac{10}{1}$$

$$36 - x = 30$$

$$x = 6 \text{ kg}$$

124. (A)



$$\text{Total of 11 no.} = 10.9 \times 11 = 119.9$$

$$\text{Total of first six numbers} = 10.5 \times 6 = 63.0$$

$$\text{Total of last six numbers} = 11.4 \times 6 = 68.4$$

$$\text{Total of 12 numbers} = 63.0 + 68.4 = 131.4$$

$$\therefore \text{6th number} = 131.4 - 119.9 = 11.5$$

125. (C)

$$\text{Ratio of speed} \rightarrow \begin{matrix} A & : & B \\ 6 & : & 5 \end{matrix}$$

$$\therefore \text{Ratio of time} \rightarrow \begin{matrix} 5 & : & 6 \\ \text{after 1 unit} & & \text{of time} \end{matrix}$$

ATQ,

But, given that, B reach after 1 hr 15 min

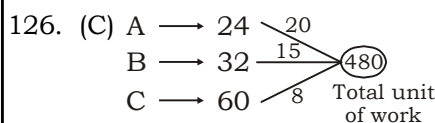
$$= \frac{5}{4} \text{ hrs}$$

i.e. 1 unit  $\longrightarrow \frac{5}{4}$

$$\therefore 6 \text{ unit} \longrightarrow \frac{5}{4} \times 6 = \frac{15}{2}$$

$\therefore$  B reached the destination in  $\frac{15}{2}$  hours

= 7 hours 30 minutes



According to question,

$\frac{A+B+C}{6 \text{ days}}$	+	$\frac{B+C}{2 \text{ days}}$
$\begin{array}{ c} \times 43 \\ \hline 258 \end{array}$		$\begin{array}{ c} \times 23 \\ \hline 46 \end{array}$

Total work done = 258 + 46 = 304 units

Remaining work = 480 - 304 = 176 units

Required time =  $\frac{176}{8} = 22$  days

127. (B) According to the question,

CP	SP	MP
1000	1080	1200

$$\therefore \text{CP} = \frac{1200}{120} \times 100 = ₹ 1000$$

$$\text{SP} = 1200 \times \frac{(100 - 10)}{100} = ₹ 1080$$

$$\text{percentage profit} = \frac{80}{1000} \times 100 = 8\%$$

128. (B) A's single equivalent discount

$$= \left( 25 + 15 - \frac{25 \times 15}{100} \right) \% = (40 - 3.75)\%$$

= 36.25%

B's single equivalent discount

$$= \left( 10 + 30 - \frac{10 \times 30}{100} \right) \% = (40 - 3)\% = 37\%$$

C's discount = 36%

Hence B's scheme is the best for customer.

129. (C)  $x = 0.5$  and  $y = 0.2$  (Given)

$$\therefore \sqrt{0.6} \times (3y)^x$$

$$= \sqrt{0.6} \times (3 \times 0.2)^{0.5}$$

$$= \sqrt{0.6} \times (0.6)^{\frac{1}{2}}$$

$$= \sqrt{0.6 \times 0.6} = 0.6$$

130. (A)  $CD \parallel AB$

$\therefore \angle AED = \angle PDC = 34^\circ$  (corresponding angle)

$\therefore \angle DEF = 180^\circ - 78^\circ - 34^\circ = 68^\circ$

$\therefore QD \parallel EF$

$\therefore \angle PDQ = \angle DEF = 68^\circ$  (corresponding angle)

131. (C) Area of the base =  $\frac{1}{2}$  (sum of parallel sides)  $\times$  perpendicular distance

$$= \frac{1}{2} (14 + 8) \times 8 = 88 \text{ sq. cm}$$

$\therefore$  Volume = Area of the base  $\times$  height

$$\Rightarrow 1056 = 88 \times h$$

$$\therefore h = \frac{1056}{88} = 12 \text{ cm}$$

132. (D)  $x^2 + \frac{1}{x^2} = 2 \sin\left(\frac{\pi x}{2}\right)$

$$\Rightarrow \left(x - \frac{1}{x}\right)^2 + 2 = 2 \sin\left(\frac{\pi x}{2}\right)$$

$$\Rightarrow x - \frac{1}{x} = 0 \quad [\because \sin\theta \leq 1]$$

133. (C)  $a + b + c = 0$

$$\Rightarrow a + b = -c; \quad b + c = -a; \quad c + a = -b$$

$$\therefore \frac{a+b}{c} + \frac{b+c}{a} + \frac{c+a}{b}$$

$$= -1 - 1 - 1 = -3$$

$$\frac{a}{b+c} + \frac{b}{c+a} + \frac{c}{a+b}$$

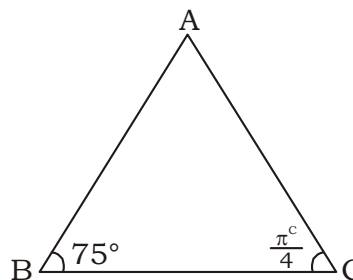
$$= -1 - 1 - 1 = -3$$

$$\therefore \text{Expression} = (-3) \times (-3) = 9$$

134. (C)  $\frac{24600}{\frac{20}{21} + \frac{400}{441}} = \frac{24600 \times 441}{820} = ₹ 13230$

135. (B)  $\angle ABC = 75^\circ$

$[\because 180^\circ = \pi \text{ radian or } \pi^c]$



$$75^\circ = \frac{\pi}{180} \times 75 = \frac{5\pi}{12} \text{ radian}$$

$$\therefore \angle BAC = \pi - \frac{\pi}{4} - \frac{5\pi}{12}$$

$$= \frac{12\pi - 3\pi - 5\pi}{12} = \frac{4\pi}{12}$$

$$= \frac{\pi}{3} \text{ radian}$$

136. (D)  $x^{\frac{1}{3}} = y^{\frac{1}{4}}$

$$\Rightarrow \left(x^{\frac{1}{3}}\right)^{12} = \left(y^{\frac{1}{4}}\right)^{12}$$

$$\Rightarrow x^4 = y^3$$

$$\Rightarrow (x^4)^5 = (y^3)^5$$

$$\Rightarrow x^{20} = y^{15}$$

137. (A)  $\sec^2\theta - \frac{\sin^2\theta - 2\sin^4\theta}{2\cos^4\theta - \cos^2\theta}$

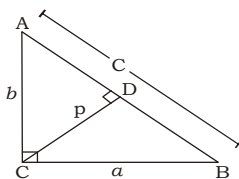
$$= \sec^2\theta - \frac{\sin^2\theta(1 - 2\sin^2\theta)}{\cos^2\theta(2\cos^2\theta - 1)}$$

$$= \sec^2\theta - \frac{\sin^2\theta(1 - 2(1 - \cos^2\theta))}{\cos^2\theta(2\cos^2\theta - 1)}$$

$$= \sec^2\theta - \tan^2\theta \frac{(2\cos^2\theta - 1)}{2\cos^2\theta - 1}$$

$$= \sec^2\theta - \tan^2\theta = 1$$

138. (B)



$$\therefore \triangle BDC \sim \triangle ACB$$

$$\therefore \frac{CD}{AC} = \frac{BC}{AB}$$

$$\Rightarrow \frac{p}{b} = \frac{a}{c}$$

$$\Rightarrow pc = ab$$

$$\Rightarrow p\sqrt{a^2 + b^2} = ab$$

$$\Rightarrow p^2(a^2 + b^2) = a^2b^2$$

$$\Rightarrow \frac{1}{p^2} = \frac{a^2 + b^2}{a^2b^2}$$

$$\Rightarrow \frac{1}{p^2} = \frac{1}{a^2} + \frac{1}{b^2}$$

139. (A) Given,  $x + \frac{2}{x} = 1$

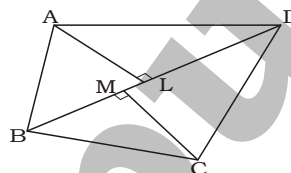
Expression

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

(Dividing numerator and denominator by  $x$ )

$$= \frac{x + \frac{2}{x} + 1}{x(1-x)} = \frac{1+1+\frac{2}{x}}{x \times \frac{2}{x}} = \frac{2}{2} = 1$$

140. (D)



Area of quadrilateral ABCD

$$= \text{Area of } \triangle ABD + \text{Area of } \triangle CBD$$

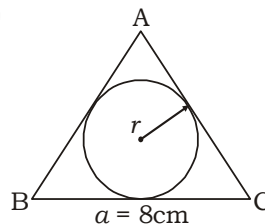
$$= \frac{1}{2} \times BD \times AL + \frac{1}{2} \times BD \times CM$$

$$= \frac{1}{2} \times BD(AL + CM)$$

$$= \frac{1}{2} \times 64(13.2 + 16.8)$$

$$= \frac{1}{2} \times 64 \times 30 = 960 \text{ sq. cm}$$

141. (B)



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

$$= \frac{\sqrt{3}}{4} \times 8 \times 8 = 16\sqrt{3} \text{ cm}^2$$

$$\text{radius of in circle} = r = \frac{a}{2\sqrt{3}} = \frac{8}{2\sqrt{3}} = \frac{4}{\sqrt{3}}$$

$$\text{Area of inscribed circle} = \pi r^2$$

$$= \pi \left(\frac{4}{\sqrt{3}}\right)^2 = \frac{22}{7} \times \frac{16}{3}$$



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$$\therefore \text{Required area} = \left( 16\sqrt{3} - \frac{22 \times 16}{21} \right)$$

$$= \frac{16}{21} (21 \times 1.732 - 22)$$

$$= \frac{16}{21} (17.372) = 10.95 \text{ cm}^2$$

142. (C)  $\angle A + \angle B + \angle C = 180^\circ$   
 $\Rightarrow \angle C = 180^\circ - (\angle A + \angle B)$   
 $\Rightarrow \angle C = 180^\circ - (80^\circ + 60^\circ) = 40^\circ$   
 $\Rightarrow 2x = 40^\circ$   
 $\Rightarrow x = 20^\circ$  ( $\because C = 2x$ )

$$\therefore y = 90^\circ + \frac{1}{2} \angle A$$

$$= 90^\circ + \frac{1}{2} (80) = 130^\circ$$

143. (C)  $\angle BAC = \angle BDC = 30^\circ$   
 ( $\because$  made by same arc BC)

In  $\triangle ABC$ ,  
 $\angle x = 180^\circ - (100 + 30^\circ) = 50^\circ$

144. (B)

	<b>Bigger cone</b>	<b>Smaller cone</b>
Ratio of volume	64	1
Ratio of (height / radius/slant height)	$\sqrt[3]{64} = 4$	$\sqrt[3]{1} = 1$
i.e. 4 unit represent = 40		
$\Rightarrow$ 4 unit = 40 cm		

$$\therefore 1 \text{ unit} = \frac{40}{4} = 10 \text{ cm}$$

$$\therefore \text{Required height} = h = 40 - 10 = 30 \text{ cm}$$

145. (B)  $\left[ \sqrt[3]{\sqrt[6]{5^9}} \right]^4 \left[ \sqrt[6]{\sqrt[3]{5^9}} \right]^4$

$$= \left[ 5^{9 \times \frac{1}{6} \times \frac{1}{3}} \right]^4 \left[ 5^{9 \times \frac{1}{6} \times \frac{1}{3}} \right]^4$$

$$= \left[ 5^{\frac{1}{2} \times 4} \right] \left[ 5^{\frac{1}{2} \times 4} \right]$$

$$= 5^2 \times 5^2 = 5^4$$

146. (C) Percentage decrease =  $\left( \frac{6-5}{6} \times 100 \right) \%$

$$= \frac{50}{3} \% = 16 \frac{2}{3} \%$$

147. (B) Required ratio =  $2 : 6 = 1 : 3$

148. (A) Required Average sell

$$= \left( \frac{3 + 4 + 10 + 6 + 6}{5} \right) \text{ crore}$$

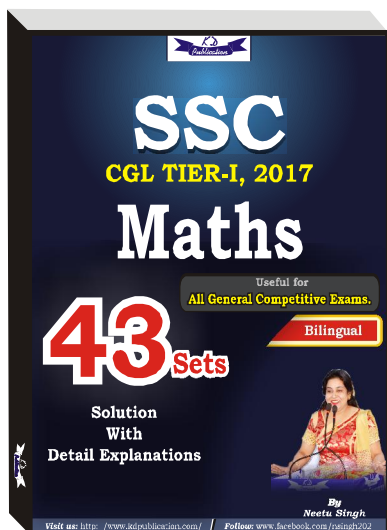
$$= \frac{29}{5} = 5.8 \text{ crore}$$

149. (D) Percentage increase

$$= \frac{10-4}{4} \times 100 = 150\%$$

150. (B) Required total sell

$$= (10 + 6 + 6 + 5) \text{ crore} = 27 \text{ crore}$$



**MEANINGS IN ALPHABETICAL ORDER**

<b>Word</b>	<b>Meaning in English</b>	<b>Meaning in Hindi</b>
Ablution	Ritual washing	धार्मिक स्नान
Aborigines	People who were the original people living in a country	आदिवासी जातियाँ
Befuddled	Perplexed by many conflicting situations or statements	भ्रमित
Bevy	A group of girls (especially when gathered close together on the ground)	लड़कियों का झुंड
Boughs	Any of the larger branches of a tree	पेड़ की टहनी
Caricatures	A funny drawing or picture of somebody that exaggerates some of his features	हास्य चित्र
Codify	Organize into a code or system, such as a body of law	विधिबद्ध करना
Communique	An official report (usually sent in haste)	अधिकारिक, निवेदिका
Crestfallen	Sad and disappointed because of failure	निराश, हतोत्साहित
Defiance	Intentionally contemptuous behavior or attitude	अनादर
Desertion	Withdrawing support or help despite allegiance or responsibility	परित्याग
Emboss	To put a raised design or piece of writing on paper, leather, etc.	नक्काशी करना
Excursion	A short journey made for pleasure, especially one that has been organized for a group of people	पर्यटन, सैर
Exodus	A situation in which many people leave a place at the same time	लोगों की एक बड़ी संख्या को किसी विषम परिस्थिति से कूच करना
Expedition	A journey organized for a particular purpose	अभियान
Incessant	Never stopping	लगातार
Indignant	Angered at something unjust or wrong	क्रोधित
Inebriated	Stupefied or excited by a chemical substance (especially alcohol)	मदोन्मत्त
Insatiable	Impossible to satisfy	जो तृप्त न हो, अतिलोभी
Intoxicated	As if under the influence of alcohol	नशे में धुत्त या नशे में मस्त
Irreconcilable	So different that agreement is not possible	बेमेल
Knell	The sound of a bell rung slowly to announce a death or a funeral or the end of something	शोक सूचक घंटे की ध्वनि
Mud-slinging	The act of criticizing somebody and accusing them of something in order to damage their reputation	निंदा
Oblation	The act of contributing or offering funds	भिक्षा, धर्मदान
Omnibus	Providing for many things at once	बहुप्रयोजन
Parasol	A large umbrella that is used for example on beaches or outside restaurants to protect people from hot sun	बड़ी छतरी
Parochial	Narrowly restricted in outlook or scope	संकुचित, सीमित
Parvenu	A person from a low social or economic position who has suddenly become rich or powerful	नवधनाह्वय
Pernicious	Exceedingly harmful	हानिकारक
Personnel	The people who work for an organization or one of the armed forces	कर्मचारी वर्ग
Persuaded	To make somebody do something by giving them good reasons for doing it	मनाना, समझाना
Pragmatic	Concerned with practical matters	व्यावहारिक
Preconceive	Conceive beforehand	पहले से राय बना लेना
Premonition	An early warning about a future event, a feeling of evil to come	पूर्वाभास
Reveille	Signal to wake up	जगाने का बिगुल
Riddle	A difficult problem	पहेली
Righteousness	Adhering to moral principles	सच्चाई, नेकी
Serenity	The absence of mental stress or anxiety	शान्ति
Slander	An abusive attack on a person's character or good name	बदनामी
Soprano	Having or denoting a high range in singing	उच्चतम स्वर में गायन
Stroll	Walk leisurely and with no apparent aim	चहल कदमी
Triumphant	Joyful and proud especially because of triumph or success	प्रफुल्लित
Vainglorious	Too proud of your own abilities or achievements	घमंडी
Wear out	Exhaust or get tired through overuse or great strain or stress	थकना
Wriggle	To twist and turn your body or part of it with quick short movements	शरीर को टेढ़ा मेढ़ा मोड़ना



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## CPO MOCK TEST - 28 (ANSWER KEY)

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

151. (B) 'Hung' is the correct word, which means 'to bend or let something bend downwards'.
152. (C) Add 'the' before 'Deadline' which means 'a definite point in time by which something must be done'.
153. (C)
154. (C) Change part (C) into 'he now dreams of visiting the moon'. Here, we must address a noun to become subject of the first part otherwise, the sentence will give a wrong meaning.
155. (B) Change 'he would have been surprised' into 'he would be surprised'.  
The formula is- Sub + were + obj, sub + would + V<sub>1</sub> + obj.



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