

CPO MOCK TEST – 19 (SOLUTION)

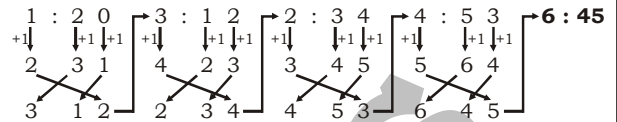
1. (B) Horse is ridden by a jockey, similarly car is driven by a **chauffeur**.
2. (A) Second is the 2-D figure of the first.
3. (B) Fog reduces visibility and AIDS reduces **immunity**.
4. (C) Prime number next to 11 is 13.
11 + 13 = 24.
Prime number next to 37 is 41
and 37 + 41 = **78**.
5. (D) As,

J	N	Q	S
↑	↑	↑	↑
+5	-5	+5	-5
O	I	V	N

Similarly,

E	H	M	Q
↑	↑	↑	↑
+5	-5	+5	-5
J	C	R	L
6. (B) $\sqrt{784} = 28$ and $784 + 28 = 812$ similarly,
 $\sqrt{1024} = 32$ and $1024 + 32 = \mathbf{1056}$.
7. (D) Conscience prevents us from doing immoral activities and police prevents us from doing **crime**.
8. (C) $47 + (\text{Reverse}(47)) = 47 + 74 = 121$
 $89 + (\text{Reverse}(89)) = 89 + 98 = \mathbf{187}$
9. (A) Glucose is rich in carbohydrates and soybean is rich in **proteins**.
10. (C) The 1st is the problem associated with the 2nd.
11. (C) All except **Brother** are relations based on extended family.
12. (A) All except **Goiter** are diseases caused due to deficiency of vitamin, while goiter is caused due to deficiency of iodine.
13. (D) In all other figures, the dot inside the square is attached to one end of the extended side of the square.
14. (B) Except option (B) i.e. **(13-86)**, Second term is divisible by the sum of digits mentioned in the first term.
15. (B) Except the word '**SOCIETY**', rest of the words have all the vowels i.e. A, E, I, O, U.
16. (D) All except **Lucknow** are Union Territories.
17. (C) Using the correct symbols, we have:
Given expression = $(3 \times 15 + 19) \div 8 - 6$
= $(45 + 19) \div 8 - 6 = 64 \div 8 - 6 = 8 - 6 = \mathbf{2}$

18. (D) The order is : Sharp, Shock, Snooker, Socks, Sound. So, **Snooker** is in the middle.
19. (D)

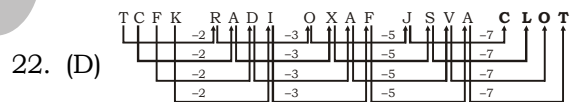


20. (D) The final arrangement is as follows.

	Weight ↑	Height ↑
1.	C	E
2.	D	A
3.	E	C
4.	A	B
5.	B	D

So, D is the second heaviest person.

21. (B) As,
C A T
 $3 \ 1 \ 20 = 3 + 1 + 20 = 24$
⇒ **243** → No. of letters in CAT.
G O
 $7 \ 15 = 7 + 15 = 22$
⇒ **222** → No. of letters in GO.
Similarly,
C L O U D
 $3 \ 12 \ 15 \ 21 \ 4 = 3 + 12 + 15 + 21 + 4 = 55$
⇒ **555** → No. of letters in CLOUD.



22. (D) $77/666/5555/44444/333333/2222222$
↓ ↓ ↓ ↓ ↓ ↓
No. of digits 2 3 4 5 6 7
↓ ↓ ↓ ↓ ↓ ↓
+1 +1 +1 +1 +1 +1
23. (B) (14, 272), (17, 182), __, (23, 56), (26, 20)
The given series is a mixed series. 14^{+3} , 17^{+3} , 20^{+3} , 23^{+3} , 26.
272, 182, __56, 20
⇒ $16^2 + 16$, $13^2 + 13$, $10^2 + 10$, $7^2 + 7$, $4^2 + 4$.
Also, $16 - 3 = 13$, $13 - 3 = 10$, $10 - 3 = 7$, $7 - 3 = 4$
The missing pair is (20, 110)
24. (C) (16, 26, 56), (36, 46, 68), (56, **66, 80**)
+20 +20 +20
+12 +12 +12
25. (B) Every number is the sum of previous two numbers i.e. $17 = 5 + 12$, $29 = 17 + 12$ and so on.

So, the next term in the series is
 $75 + 121 = 196$.

27. (A) In each row the average of the first 3 cards from the left equals the value of the fourth card.

$$\frac{2+1+3}{3} = 3 \text{ Here, A represents 1 and also,}$$

there is one card from each suit in every row. So, there will be one ♥ symbol card.

28. (C) Following table depicts the specific code of letters:

Letters	A	D	E	N	R	U	W	Y
Code	7	4	1	9	2	3	5	6

On the basis of the table given above let us check the relationship in each option.

- (A) W A R D E N **Remarks**
5 7 2 4 1 9 Correct
- (B) D E R A N U
4 1 2 7 9 3 Correct
- (C) **N E D A Y U**
9 2 4 7 6 3 **Incorrect**

Here, 2 should be replaced by 1.

- (D) E N D W A R
1 9 4 5 7 2 Correct

29. (C) As it is given that each of them are left with ₹ 32 which means in total they have $32 \times 4 = ₹ 128$ at the end as well as in the beginning of the fourth game.

Amount	Amount In Rupees			
	S	T	U	V
Initial Amount	66	34	18	10
Amount after S lost	4	68	36	20
Amount after T lost	8	8	72	40
Amount after U lost	16	16	16	80
Amount after V lost	32	32	32	32

30. (A) Each time two letters are removed i.e. one from the beginning and one from the end. Therefore, 'PENDICU' will replace the question mark.

PERPENDICULAR/ERPENDICULA/
RPENDICUL/**PENDICU**

31. (D) The number in the second column is three times the difference between the numbers in the third and first columns.

$$\text{So, missing number} = 3 \times (16 - 7) \\ = 3 \times 9 = 27.$$

32. (A) $(3 \times 100) + (5 \times 9) = 345$.

$$(4 \times 100) + (6 \times 10) = 460.$$

$$\text{So, missing number} = (5 \times 100) + (7 \times 11) \\ = 577.$$

33. (B) $11 \times 2 + \frac{6}{2} = 25$.

$$6 \times 2 + \frac{8}{2} = 16.$$

$$\text{So, missing number} = 5 \times 2 + \frac{12}{2} \\ = 10 + 6 = 16.$$

34. (D) C = 3, H = 8, E = 5, A = 1 and R = 18

$$\Rightarrow (3 \times 8) - (5 + 1) = 24 - 6 = 18$$

$$B = 2, O = 15, T = 20, F = 6 \text{ and } D = 4$$

$$\Rightarrow (2 \times 15) - (20 + 6) = 30 - 26 = 4$$

$$D = 4, M = 13, Q = 17, U = 21 \text{ and } N = 14$$

$$\Rightarrow (4 \times 13) - (17 + 21) = 52 - 38 = 14$$

$$G = 7, J = 10, Y = 25, W = 23$$

$$\Rightarrow (7 \times 10) - (25 + 23) = 70 - 48 = 22$$

and the position of **V** = 22

35. (B) It is the sum of the two digits $(9 + 8) = 17$ in the opposite quadrant.

36. (A) As it is given that B can't be at third place which means it will occupy first, second or fourth place.

Also, the condition C and D cannot be together as well as D should neither be at the beginning nor at the end need to be followed.

So, the possible three arrangements are CBDA and CADB, BDAC.

From the above arrangements it is clear that the statement 'A is at the first place' must be false.

37. (A) As, S E C T O R
 $\downarrow -1 \downarrow +0 \downarrow -2 \downarrow +0 \downarrow -3 \downarrow +0$
 R E A T L R

Similarly,

$$F L O W E R \\ \downarrow -1 \downarrow +0 \downarrow -2 \downarrow +0 \downarrow -3 \downarrow +0 \\ \mathbf{E L M W B R}$$

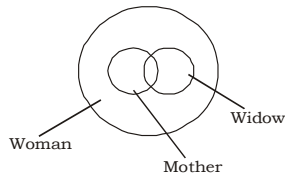
38. (D) $1 \xrightarrow{\times 2} 2 \xrightarrow{\times 4} 8 \xrightarrow{\times 6} 48 \xrightarrow{\times 8} 384 \xrightarrow{\times 10} 3840$

39. (C) The series is W/WY/WYB/WYBG/WYBGR/W/WY/WYB/WYBG.

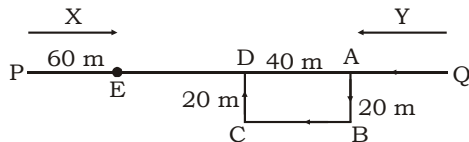
The letter G stands for Green.

40. (B) My grandfather's only son - My father. So, the girl is the daughter of Vipul's father i.e., Vipul is the girl's brother.

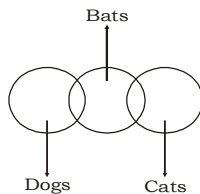
41. (D) All mothers are women. Some mothers and some women can be widows.



42. (A) $(13 + 5) = 18^{\text{th}}$ letter from your left is **U**.
43. (C) Clearly Y moves 60 m from Q upto A, then 20 m upto B, 40 m upto C and then upto D.
So, $AD = BC = 40$ m
 $QD = (60 + 40) \text{ m} = 100$ m
Since A and B travel with the same speed, A will travel the same speed along the horizontal as B travels in the same time i.e. Distance between X and Y = DE
 $= (200 - 100 - 60) \text{ m} = 40$ m



44. (C) 45. (C) 46. (B)
47. (B) 48. (A)
49. (D)



Neither I nor II follows.

50. (C)
51. (B) The most common way to locate points on the surface of the Earth is by standard, geographic coordinates called latitude and longitude. These coordinates values are measured in degrees (of arc, not temperature), and represent angular distances calculated from the center of the Earth.
52. (B) Bhavantar Bharpai Yojana is launched 2018 by Haryana government on 1st January 2018. It is launched by the chief minister of Haryana, Shri Manohar Lal Khattar. It is launched to give right to price of crops to farmers. Bhav means price, Antar means difference, the difference between the current price of crop and base price fixed by the state government and Bharpai means compensation if farmers will sell below base price state government will compensate. The main objective of this scheme is to give real price to farmers for their crops.

53. (B)
54. (A) The distances between molecules in solids are very small, i.e., solids are more dense - as compared to liquids and gases. Because they are so close, so can collide very quickly. Sound is nothing more than a local disturbance, the propagation of which is facilitated by the collisions between particles.
55. (D)
56. (A) Superintendence, direction and control of preparation of electoral rolls for, and conduct of the elections will be under Article 243 K
57. (A) SAARC was circulated by President Ziaur Rahman of Bangladesh in May 1980. He was interested in setting up an ASEAN-like entity for South Asia. **CHECK**
In 1980, Bangladesh President Ziaur Rahman proposed the creation of a trade bloc consisting of South Asian countries. The Bangladeshi proposal was accepted by India, Pakistan and Sri Lanka during a meeting held in Colombo in 1981
58. (B) The Sixth Century BC was a Period of Religious and Economic unrest in India. The 600 BC saw the religious and economic reform movement in the Gangetic basin. Numerous religious sects arose in this area in Sixth Century BC.
59. (B) The pitch of a note depends on the frequency of the source of the sound. Frequency is measured in Hertz (Hz), with one vibration per second being equal to one hertz (1 Hz). A high frequency produces a high pitched note and a low frequency produces a low pitched note.
60. (B) The Wholesale Price Index (WPI) and Consumer Price Index (CPI) are the two techniques used to measure inflation. WPI is calculated by monitoring the prices of certain goods that are traded at wholesale market. While, CPI is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care etc. WPI totally skips the prices of services while calculating the inflation. CPI focuses on the change in the cost of living at the consumer's end, whereas the WPI focuses on the inflation of the economy in the whole.
61. (D) Helge Palmcrantz invented the machine gun around 1914. They could fire 400-600 small-calibre rounds per minute, but there was a problem, the early machine guns would rapidly overheat and become inoperative without the aid of cooling mechanisms; they were consequently fired in short rather than sustained bursts.

62. (A) Ketone are metabolic end product of fatty acid metabolism. In health individual ketones are formed in liver and are completely metabolised therefore negligible amount appear in urine. However when carbohydrate are unavailable to be used as energy, our body used fat which then get metabolised to ketone as by product.
63. (A)
64. (C) The third 1 mmtpa distillation unit was commissioned in September 1967 to process Ankleshwar, kalol and North Gujarat crudes. In December 1968, Udex plant was commissioned for production of benzene and toluene using feedstock from CRU.
65. (C) The Karnataka government has launched Mathru Poorna scheme meant to meet the nutritional needs of pregnant and lactating women in rural areas. Under the programme, pregnant and lactating poor women in rural areas will get one nutritious meal daily for 25 days in a month.
66. (D) Dayananda Saraswati was born on 12 February in 1824 in a Hindu family in Tankara, near Morbi in the Kathiawad region (now Rajkot district of Gujarat). His original name was Mool Shankar because he was born in Dhanu Rashi and Mool Nakshatra.
67. (A) El Nino is a climate cycle in the Pacific Ocean with a global impact on weather patterns. The cycle begins when warm water in the western tropical Pacific Ocean shifts eastward along the equator toward the coast of South America.
68. (A) 69. (B)
70. (A) Abscisic acid also known as abscisin II or Dormin is responsible for seed dormancy by inhibiting cell growth.
71. (A) World Environment Day is being observed every year on 5th June. India is the global host of 2018 World Environment Day with "Beat Plastic Pollution" as the theme for this year's edition, to combat single-use plastic pollution.
72. (C) The Shanghai Cooperation Organisation (SCO) or Shanghai Pact is a Eurasian political, economic and security organisation, the creation of which was announced on 15th June 2001 in Shanghai, China by the leaders of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan. The Shanghai Cooperation Organisation Charter, formally establishing the organisation, was signed in June 2002 and entered into force on 19th September 2003. India and Pakistan joined SCO as full members on 9th June 2017 at a summit in Astana, Kazakhstan.
73. (A) 74. (B)
75. (D) Bacteria and Fungi are decomposer that digest their food outside their body and feed on dead and decay substance i.e organic substance to derive their energy.
76. (C) Klinefelter syndrome is also called xxy syndrome in which primary feature is sterility. Secondary features are poor sexual growth of male features i.e less body hair, small genitals, breast growth, weak muscles etc. Extra chromosome is retained because of nondisjunction event during paternal or maternal meiosis I (gametogenesis)
77. (A) PM Narendra Modi has launched 'Pradhan Mantri Sahaj Bijli Har Ghar Yojana' - "Saubhagya" Scheme to ensure electrification of all willing households in the country in rural as well as urban areas. The Government of India will provide largely funds for the scheme to all States/UTs. The States and Union Territories are required to complete the works of household electrification by the 31st of December 2018.
78. (A)
79. (C) The collecting or study of money is called numismatics.
80. (A)
81. (D) India's first ever National Police Museum is going to open in New Delhi, as the Union government has decided to establish the museum - depicting the history, artefacts, uniforms and gears of central and state police forces .
82. (D) 83. (B)
84. (D) The Union government has recently constituted the Financial Sector Search and Recruitment Committee headed by cabinet secretary PK Sinha to decide on members and heads of financial regulatory agencies. The head of the regulatory body, whose members are to be selected, will be a special invitee to the panel.
85. (B) The Haryana government has recently launched Asia's first 'Gyps Vulture Reintroduction Programme' at Jatayu Conservation Breeding Centre, Pinjore.
86. (C)
87. (B) Near Wildlife Sanctuary is situated in Rewari district of Haryana State, India. It is 36.9 km from Rewari. It is spread over an area of 211.35 hectares. It is 5 km away from Kosali on the Kosali-Mahendragarh road. It is named Nahar because it comes under Nahar Village. Forest Department, Government of Haryana officially notified this as Wildlife Sanctuary on 30th January 1987.

88. (D) The Pandyan empire was home to temples including Meenakshi Amman Temple in Madurai. The Pandya kings were called either Jatavarman or Maravarman Pandyan.
89. (C) Banga Bibhushan Samman (highest civilian award of the state) is a title instituted by the West Bengal Government (since 2011) to honour the services of personalities in various fields. For the year 2018, veteran singer Asha Bhosle has been honoured by this award.
90. (B) Two scientist contribute to discovery of first virus i.e Tobacco mosaic virus Invanoshy reported in 1892 that extract form infected leaf. Beijerinck's in 1898, was the first to call virus the incitant of tobacco mosaic.
91. (D) The Caspian Sea is a landlocked sea between Asia and Europe (European Russia). It is the world's largest inland body of water, with a surface area of 371,000 km² (143,000 sq. mi.), and therefore has characteristics common to both seas and lakes. It is often listed as the world's largest lake, though it is not a freshwater one.
92. (D) Blubber is thick layer of fat also called adipose tissue directly under skin of all marine mammals.
93. (B)
94. (B) An amicus curiae (literally, friend of the court) is someone who is not a party to a case and offers information that bears on the case, but who has not been solicited by any of the parties to assist a court.
95. (A) Phytoplankton are microscopic marine plant is the base of several food web. In balanced ecosystem they provide food for variety of sea creatures including whale, snail, jellyfish etc.
96. (C)
97. (A) India will host first military exercise of the BIMSTEC Countries in September 2018 in Pune. The theme of the exercise includes counter-terrorism in semi-urban terrain and cordon and search. Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation was established on 6 June 1997 through Bangkok Declaration.
98. (D) Linked gene are also called genetic linkage is the tendency of alleles that are close together on same chromosome to be inherited together during meiosis I.
99. (D) 100. (D)
101. (B) No. of students in law faculty in 2013-14 = 250
Total students = 250 + 250 + 600 + 500 = 1600

$$\begin{aligned} \text{\% of students in law faculty} &= \frac{250}{1600} \times 100 \\ &= 15.6\% \end{aligned}$$

102. (A) No. of science students in 2011-12 = 400

No. of science students in 2013-14 = 600

% increase in science students

$$= \frac{600 - 400}{400} \times 100 = 50\%$$

103. (C) No. of students in science faculty in 2011-12 = 400

Total students = 150 + 200 + 400 + 600 = 1350

% of students in science faculty

$$= \frac{400}{1350} \times 100 = 29.6\%$$

104. (C) Net C.P. = 4700 + 800 = 5500

$$\therefore \text{Required \%} = \frac{300}{5500} \times 100 = 5\frac{5}{11}\%$$

105. (B) $\therefore \cos 43^\circ = \frac{x}{\sqrt{x^2 + y^2}}$

$$\Rightarrow \cos(90^\circ - 47^\circ) = \frac{x}{\sqrt{x^2 + y^2}}$$

$$\Rightarrow \sin 47^\circ = \frac{x}{\sqrt{x^2 + y^2}}$$

$$\Rightarrow \cos 47^\circ = \sqrt{1 - \sin^2 47^\circ}$$

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

$$= \sqrt{\frac{x^2 + y^2 - x^2}{x^2 + y^2}} = \sqrt{\frac{y^2}{x^2 + y^2}}$$

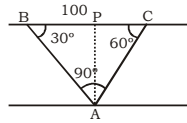
$$= \frac{y}{\sqrt{x^2 + y^2}}$$

$$\therefore \cos 47^\circ = \frac{y}{\sqrt{x^2 + y^2}}$$

$$\text{So, } \tan 47^\circ = \frac{\sin 47^\circ}{\cos 47^\circ} = \frac{\frac{x}{\sqrt{x^2 + y^2}}}{\frac{y}{\sqrt{x^2 + y^2}}}$$

$$= \frac{x}{\sqrt{x^2 + y^2}} \times \frac{\sqrt{x^2 + y^2}}{y} = \frac{x}{y}$$

106. (B)



$$\angle BAC = 90^\circ$$

$$\Rightarrow \sin 30^\circ = \frac{AC}{100}$$

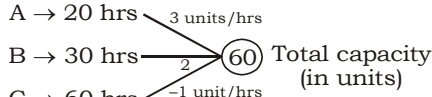
$$\Rightarrow \frac{1}{2} = \frac{AC}{100} ; AC = 50 \text{ m,}$$

$$\Rightarrow \sin 60^\circ = \frac{AP}{AC}$$

$$\Rightarrow \frac{\sqrt{3}}{2} = \frac{AP}{50}$$

$$AP = 25\sqrt{3} \text{ m}$$

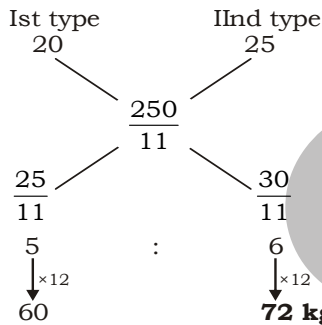
107. (B)



In first hour A + C will fill = 3 - 1 = 2 units
In second hour B + C will fill = 2 - 1 = 1 unit
Hence, 2 + 1 = 3 units will be filled in 2 hours
So, 3 × 20 = 60 units will be filled in
= 20 × 2 = 40 hours

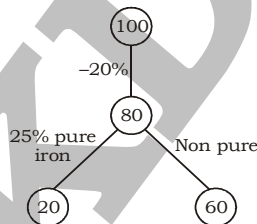
108. (C) 10% = $\frac{1}{10}$

$$\text{Cost price of mixture} = \frac{250}{11}$$



109. (B) Let the total quantity of hematite mined = 100 kg.

ATQ,



$$\therefore 20 \text{ units} = 80,000 \text{ kg}$$

$$1 \text{ unit} = 4,000 \text{ kg}$$

$$\text{Total hematite} = 100 \times 4000 = 4,00,000 \text{ kg}$$

110. (B) Here, first divisor (175) is a multiple of second divisor (25).

\therefore Required remainder = Remainder obtained on dividing 132 by 25 = 7

111. (B) $pq + rp = -qr$... (i)

$$pq + qr = -rp$$
 ... (ii)

$$qr + rp = -pq$$
 ... (iii)

Now,

$$\frac{p^2}{p^2 + pq + rp} + \frac{q^2}{q^2 + rp + qr} + \frac{r^2}{r^2 + qr + rp}$$

$$= \frac{p^2}{p(p+q+r)} + \frac{q^2}{q(p+q+r)} + \frac{r^2}{r(r+q+p)}$$

$$= \frac{(p+q+r)}{(p+q+r)} = 1$$

112. (D) Required average weight

$$\frac{(50 \times 6 + 51 \times 2 + 55 \times 2)}{10} = \frac{300 + 102 + 110}{10}$$

$$= \frac{512}{10} = 51.2 \text{ kg}$$

113. (C) $2\pi R_1 (R_1 + h) = \pi(12^2 - 8^2)$

$$R_1 + h = \frac{80}{2R_1} = \frac{40}{R_1}$$

$$h = \frac{40}{R_1} - R_1 = \frac{40 - R_1^2}{R_1}$$

114. (C) First of all, we find the HCF of 945 and 2475.

So, HCF = 45

\therefore Maximum number of animals in each flock = 45

Required total number of flocks

$$= \frac{945}{45} + \frac{2475}{45} = 21 + 55 = 76$$

115. (A) $\frac{60+x}{180} = \frac{2}{3}$

$$180 + 3x = 360$$

$$3x = 180$$

$$x = 60$$

116. (C) $a = \frac{1+x}{2-x}$

$$\Rightarrow \frac{1}{a+1} + \frac{2a+1}{a^2-1} = \frac{3a}{a^2-1}$$

$$\frac{3\left(\frac{1+x}{2-x}\right)}{\left(\frac{1+x}{2-x}\right)^2 - 1} = \frac{3(1+x)(2-x)}{1+x^2+2x-(4+x^2-4x)}$$

$$= \frac{3(1+x)(2-x)}{6x-3} = \frac{3(1+x)(2-x)}{3(2x-1)}$$

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

117. (B) Suppose Sreea joins for x months.

Then,

$$\frac{450 \times 12}{300 \times x} = \frac{2}{1}$$

$$\Rightarrow x = \frac{450 \times 6}{300} = 9 \text{ months}$$

\therefore sreea joins after $(12 - 9) = 3$ months.

118. (D) $\because \angle SPQ = 90^\circ$

$$\therefore \angle PSQ = 180^\circ - 90^\circ - 35^\circ \Rightarrow 55^\circ$$

$$\therefore \angle PSQ = \angle PRQ = x^\circ = 55^\circ$$

119. (D) $a^2 + b^2 + c^2 = 2a - 2b - 2c - 1 - 1 - 1$

$$\Rightarrow a^2 - 2a + 1 + b^2 + 2b + 1 + c^2 + 2c + 1 = 0$$

$$\Rightarrow (a - 1)^2 + (b + 1)^2 + (c + 1)^2 = 0$$

$$\therefore (a - 1)^2 = 0 \Rightarrow a = 1$$

$$(b + 1)^2 = 0 \Rightarrow b = -1$$

$$(c + 1)^2 = 0 \Rightarrow c = -1$$

$$\therefore a + b + c \Rightarrow 1 + (-1) + (-1)$$

$$\Rightarrow -1$$

120. (C) $\left[\frac{11}{2} \times \text{min hand} - 30 \times \text{hour hand} \right]^\circ$

$$\left[\frac{11}{2} \times 20 - 30 \times 3 \right]^\circ$$

$$[110 - 90]^\circ = 20^\circ$$

121. (D) $25\% = \frac{1}{4}$

	Alcohol	Water
Quantity \rightarrow	4	1
Price \rightarrow	2	1
	8	1
	8	9

Total quantity of petrol = $(4 + 1) = 5$

Total price = $5 \times 2 = ₹ 10$

$$\therefore \text{Profit} = \frac{1}{9} = 11\frac{1}{9}\%$$

122. (A) Let speed of cyclist = x kmph & Time = t hours

Then distance covered by jogger = $\frac{xt}{2}$

and time = $2t$

$$\Rightarrow \text{Required ratio} = \frac{xt}{2 \times 2t} : x$$

$$= 1 : 4$$

123. (A) $\frac{\tan^2 \theta}{\sec \theta + 1} - \sec \theta$

$$\Rightarrow \frac{\tan^2 \theta (\sec \theta - 1)}{(\sec \theta + 1)(\sec \theta - 1)} - \sec \theta$$

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

$$[\because \sec^2 \theta - 1 = \tan^2 \theta]$$

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

124. (B)

	A	B
Eff.	1	2
	\times	
	15 days	

$$\text{Total work} = 1 \times 15 \text{ unit} = 15x$$

$$11 \text{ days work of A} = 11 \times 1x = 11x$$

$$\text{Left work} = (15 - 11)x = 4x$$

$$\text{one day work of B} = 2x$$

$$\text{No. of B days} = \frac{4x}{2} = 2 \text{ days}$$

125. (B) Required Bricks

$$= \frac{20 \times 100 \times 100 \times 100 \text{ cm}^3}{25 \times 12.5 \times 8 \text{ cm}^3} = 8000$$

126. (C) $\frac{a}{1} = \frac{\sqrt{x+2} + \sqrt{x-2}}{\sqrt{x+2} - \sqrt{x-2}}$

[By componendo dividendo]

$$\Rightarrow \frac{a+1}{a-1} = \frac{2\sqrt{x+2}}{2\sqrt{x-2}} = \frac{\sqrt{x+2}}{\sqrt{x-2}}$$

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

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

$$\Rightarrow \frac{a^2 + 1}{2a} = \frac{x}{2} \quad [\text{by C \& D}]$$

$$\Rightarrow 2a^2 + 2 = 2ax$$

$$\Rightarrow 2a^2 - 2ax = -2$$

$$\Rightarrow a^2 - ax = -2/2$$

$$= -1$$

127. (A) Length of hypotenuse = $\sqrt{24^2 + 7^2} = 25$

$$\therefore \frac{1}{2} \times 25 \times h = \frac{1}{2} \times 7 \times 24$$

$$h = \frac{7 \times 24}{25} = 6.72 \text{ cm}$$

128. (B) A \rightarrow 10 days $\xrightarrow{6 \text{ units/day}}$

B \rightarrow 12 days $\xrightarrow{5 \text{ units/day}}$ **(60)** Total work units

C \rightarrow 15 days $\xrightarrow{4 \text{ units/day}}$

work done by A in 2 days = $6 \times 2 = 12$ units

work done by B in 3 days = $5 \times 3 = 15$ units

$$\therefore \text{Required time} = \frac{63}{9} = 7 \text{ days}$$

129. (C) Marks in Physics = 80 out of 100

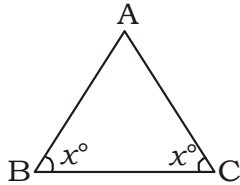
Marks in Chemistry = 66 out of 100

Marks obtained in all subject

$$= \frac{80}{100} \times 400 = 320$$

So, marks obtained in maths

141. (D)



ABC is an isosceles triangle in which
 $AB = AC$
 $\therefore \angle B = \angle C = x^\circ$
 $\angle A = 2 \times 2x^\circ = 4x^\circ$
 $\therefore \angle A + \angle B + \angle C = 180^\circ$
 $\Rightarrow 4x^\circ + x^\circ + x^\circ = 180^\circ$
 $\Rightarrow 6x^\circ = 180^\circ$
 $\Rightarrow x^\circ = 30^\circ$

$$\therefore \text{Required angle} = \frac{4x^\circ}{2} = \frac{4 \times 30}{2} = 60^\circ$$

142. (A)

143. (C) Length of direct common tangent

$$= \sqrt{(C_1 C_2)^2 - (r_1 - r_2)^2} = \sqrt{(13)^2 - (8 - 3)^2}$$

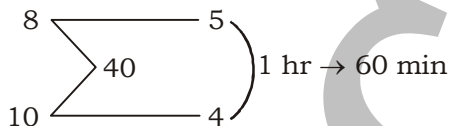
$$= \sqrt{169 - 25} = \sqrt{144} = 12 \text{ cm}$$

144. (B) Let the pocket money be P rupees then

$$P \times \left(\frac{4}{5} \times \frac{3}{4} \times \frac{9}{10} \right) = 13.50$$

$$P = ₹ 25$$

145. (C)



$$\therefore \text{Required distance} = \frac{7.5}{60} \times 40 = 5 \text{ km}$$

146. (D) Volume of hollow cylinder = $\pi(R^2 - r^2)h$

$$\therefore \pi(9^2 - r^2) \times 14 = 748$$

$$81 - r^2 = \frac{748}{14} \times \frac{7}{22}$$

$$r^2 = 81 - 17 = 64$$

$$r = 8$$

So, thickness = $9 - 8 = 1 \text{ cm}$

147. (D) Let the sum lent in each case be x.

Then,

$$\frac{x \times 9 \times 2}{100} + \frac{x \times 10 \times 2}{100} = 760$$

$$\frac{x \times 2}{100} (9 + 10) = 760$$

$$\Rightarrow \frac{2 \times 19x}{100} = 760$$

$$\Rightarrow x = \frac{760 \times 100}{2 \times 19} = ₹ 2000$$

148. (D) Difference of marks between Physics & Chemistry = $191.25 - 157.5 = 33.75$

Difference of marks between Social Science & Chemistry = $157.5 - 123.75 = 33.75$

149. (C) Marks obtained in (Maths & Chemistry) = 360

Marks obtained in (Physics & Social Science) = 315

Difference = 45

150. (D) Marks obtained in English = 135

151. (C) Replace 'is' by 'has been', as an action (writing novels) which already started has been denoted by a point of time (since having been a graduate), and still going on, comes under present perfect continuous tense.

152. (D)

153. (C) Replace 'with' by 'against'.

154. (C) Replace 'was' by 'had'. If two actions happened in past one after another, the first action comes under past perfect tense and the second in simple past tense.

155. (A) interchange 'enough kind' to 'kind enough'. Enough follows an adjective.

157. (D) Correction - 'they were addressed' must be read as 'they addressed'.

174. (B) 'Must have' expresses an opinion, in fact, a conclusion based on an earlier (past) situation.

176. (C) 'Many a' takes a singular noun followed by a singular verb.

178. (B) 'Opinion' will take 'about' as it is followed by a statement.

179. (C) 'Having been' is the past participle form and is used to emphasize that the action has been already completed while saying that particular statement, whereas 'being' is a present participle.

181. (B) Since the subject is plural (my sister and her daughter), it will take plural verb.

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Bestow	confer or present (an honor, right, or gift).	प्रदान करना
Blatant	(of bad behavior) done openly and unashamedly.	स्पष्ट रूप से निन्दनीय
Capacious	Having a lot of space inside; roomy.	लम्बा चौड़ा, विशाल
Clandestine	done secretly or kept secret	गुप्त
Clemency	kindness shown to somebody when they are being punished	दया/ क्षमादान
Confer	to discuss something important in order to make a decision	निर्णय लेने हेतु विचार विमर्श करना
Cryogenics	the scientific study of the production and effects of very low temperatures	अत्यंत कम तापमान के प्रभाव का वैज्ञानिक अध्ययन
Curator	a keeper or custodian of a museum or other collection.	संग्रहाध्यक्ष
Dismount	alight from a horse, bicycle, or other thing that one is riding.	(घोड़े, साईकिल आदि) से उतरना
Ecology	the branch of biology that deals with the relations of organisms to one another and to their physical surroundings.	परिस्थितिकी विज्ञान
Endow	give or bequeath an income or property to (a person or institution).	देना/नवाजना
Entrust	assign the responsibility for doing something to (someone)	कोई काम सौंपना, सुपुर्द करना
Expedition	an organized journey with a particular purpose	विशेष अभियान
Grotesque	comically or repulsively ugly or distorted.	विचित्र, असंगत
Ignominious	deserving or causing public disgrace or shame.	घृणित, अपमानजनक
Immaculate	(especially of a person or their clothes) perfectly clean, neat, or tidy.	साफ-सुथरा
Indolent	wanting to avoid activity or exertion; lazy	आलसी, काम से जी चुराने वाला
Intractable	hard to control or deal with.	अनियंत्रित, बेकाबू
Leniency	the fact or quality of being merciful or tolerant	उदारता
Perceive	interpret or look on (someone or something) in a particular way	समझना, विचार करना
Plague	cause continual trouble or distress to.	त्रस्त करना
Proscribe	forbid, especially by law.	बहिष्कार करना
Reprimand	Rebuke (someone), Scold	फटकारना
Shoal	a large number of fish swimming together	मछलियों की भीड़
Subjective	based on or influenced by personal feelings, tastes, or opinions.	व्यक्तिगत भावनाओं अथवा विचारों से प्रभावित
Surmount	stand or be placed on top of	चढ़ना, ऊपर जाना
Tantalise	to make someone want something that he cannot have or do	तरसाना
Troupe	a group of dancers, actors, or other entertainers who tour to different venues.	नर्तक मंडली
Vilify	Speak or write about in an abusively disparaging manner	बदनाम करना

CPO MOCK TEST - 19 (ANSWER KEY)

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

For all general competitive exams

