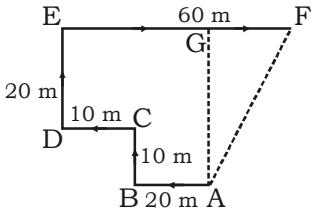
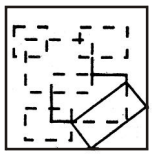
SSC (CPO) MOCK TEST – 04 (SOLUTION)

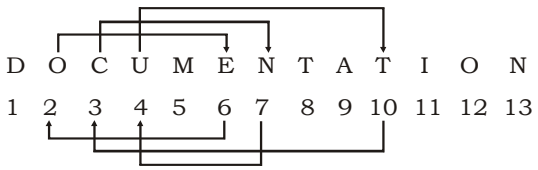
1. (B) The number of players in football is 11 wheares in waterpolo, we have 7 players.
2. (C) Tiger is the national animal of India and snow leopard is the national animal of Afghanistan.
3. (D) Adam Smith is called father of economics where as A. Lavoisier is father of (Modern) Chemistry.
4. (B) 7! = 5040
   8! = 40320
5. (A) 13 1131 (×87) 29 **2523** (×87)
6. (C) A son is a part of nuclear family and a cousin is a part of an extended family.
7. (A) Stars are component of astronomy and battles make up history.
8. (B) A moccasin is a type of shoe and an Aspis is a type of snake.
9. (D) Feta is a Greek cheese and provolone is an Italian cheese.
10. (C) As, C M F R → L G K N (+7, −6, +5, −4)
    So, L G K N → **S A P J** (+7, −6, +5, −4)
11. (C) 11 = **E**l**e**v**e**n = 3 'e'
    17 = S**e**v**e**nt**ee**n = 4 'e'
12. (B) Zail Singh was the President of India whereas rest three were the Prime Ministers of India.
13. (C) Deke is a term used in Hockey, whereas rest are terms used in tennis.
14. (D) Except Ian Chappell, others are Captain of England Test Cricket Team whereas Ian Chappell is an australian captain.
15. (D) Except 1241, rest are the multiple of 13 where 1241, is a multiple of 17.
16. (D) Renin, Pepsin and Trypsin are types of enzyme whereas Lexin is not an enzymes.
17. (D) Chitrakoot is a place in Uttar Pradesh whereas rest of the three are in Gujrat.
18. (D) Except D, the other letter can be drawn with the help of three lines whereas D requires 4 lines.
19. (C) Except Nose, rest are in pairs.
20. (A) In the first and second statements, the common code word is 'nat' and the common word is 'harmful'. So, 'nat' stands for 'harmful'.
    In the second and third statements, the common code word is 'dor' and the common word is 'avoid'. So, 'dor' stands for 'avoid'.
    Thus, in the second statement, 'vog' means 'habit'.
21. (D)



    The movements of the person are from A to F, as shown in figure. Clearly, the final position is F which is to the North-East of the starting point A.
22. (D) On close observation, we find that figure contains figure (D) rotated through an angle of 135° as shown below:



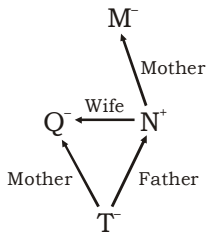
    Hence, the answer is (D).
23. (A) The correct order is : many, me, meeta, meets, mother
24. (C)



    The new letter sequence is DETNMOUTACION.
    The eleventh letter from the right is T.
25. (B) a b **c** d/ a b **b** c d/ a **b** c **c** c d/ **a** b c d **d** d d.
26. (A) Required answer = $\frac{400}{4}$ – 3 = 97 times.
    Here, 3 has been subtracted as 100, 200 and 300 was not a leap year.
27. (C) Clearly, F is the maternal uncle of D means F is the brother of D's mother i.e., F is the brother of C. C is the sister of B. So, F is the brother of B who is A's mother. Thus, F is the maternal uncle of A. So, A

and D are the nephews of F i.e., F has two nephews.

28. (B)



So, B is incorrect.

29. (C) In terms of marks obtained,
Mukesh < Raj, **Raj** < Priya, Gaurav < Priya, Kavita < Priya, Gaurav < Mukesh.
Since Gaurav's marks is not the lowest, so, Kavita's marks is the lowest So, the sequence becomes:
Kavita < Gaurav < Mukesh < Raj < Priya.
Clearly, in the descending order, Raj comes second.

30. (C)

31. (C) Using the usual notations '×' = '>', 'ϕ' = '=', '<' = '$\not<$', '⊥' = '≠', 'Δ' = '<' and '+' = '$\not>$', we have:
(A) The statement is $a > b < c$
$\Rightarrow a = c < b$, which is false. [$\because c > b$]
(B) The statement is $a > b < c$
$\Rightarrow b \not< a > c$, which is false. [$\because b < a$]
(C) The statement is $a > b < c$
$\Rightarrow a \not< b \not> c$, which is true.
(D) The statement is $a > b < c$
$\Rightarrow b \not< a = c$, which is false. [$\because b < a$]
Hence, the statement (D) is true.

32. (C) As given,
14 + 2 = 7
It means '+' = '÷'
So, $\sqrt{5+5+5+5+5}$
$= \sqrt{5 \div 5 \div 5 \div 5 \div 5}$
$= \sqrt{5 \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5}}$
$= \frac{1}{5} \times \frac{1}{5}\sqrt{5}$
$= \frac{1}{25} \times \sqrt{5} = \frac{2.2360}{25}$
= 0.089

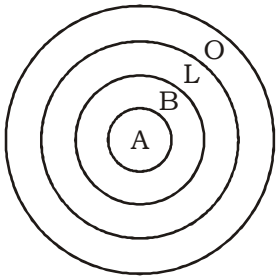
33. (C) 5 × 0.5 + 0.5 = **3**
3 × 1 + 1 = 4
4 × 1.5 + 1.5 = 7.5
7.5 × 2 + 2 = 17
17 × 2.5 + 2.5 = 45

34. (B) 5 × 1 – 2 = 3
3 × 2 – 3 = 3
3 × 3 – 4 = 5
5 × 4 – 5 = 15
15 × 5 – 6 = **69**

35. (C) 4 × 1 – 2 = 2
2 × 2 – 2 = 2
2 × 3 – 2 = 4
4 × 4 – 2 = 14
14 × 5 – 2 = **68**

36. (B) 3 × 2 + 3 = 9
9 × 3 + 2 = 29
29 × 2 + 3 = 61
61 × 3 + 2 = 185
185 × 2 + 3 = **373**

37. (C)



I. ✓
II. ✗
III. ✓
IV. ✗

Only I and III follows.

38. (B) $\sqrt[3]{3 \times 6 \times 12} = 6$
$\sqrt[3]{2 \times 20 \times 25} = 10$
$\sqrt[3]{2 \times 4 \times 64} =$ **8**

39. (C) $15 + 1^3 = 16$
$16 + 2^3 = 24$
$22 + 3^3 =$ **51**

40. (A) $\frac{13+12+17}{7} = 6$, $\frac{6+9+13}{7} = 4$
$\frac{12+14+9}{7} = 5$, $\frac{21+\mathbf{13}+22}{7} = 8$

41. (D)

42. (D) We have 30 rectangles and 5 hexagons in the given figure.

43. (D)

44. (A) Let the distance covered by taxi be x km.
Then, distance covered by car = $(80 - x)$ km
$15x + 5(80 - x) = 500$
or, $15x + 400 - 5x = 500$
or, $10x = 100$
or, $x = 10$
$\therefore$ Distance covered by taxi = 10 km
Hence, the answer is (A).

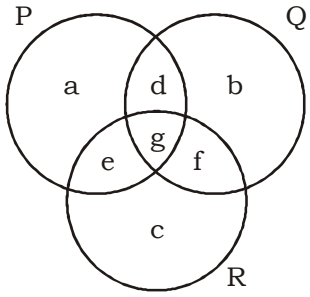
45. (B)

46. (B)

	No. of consonants	No. of vowels	
JITENDRA	5	3	$\Rightarrow 5^2 - 3^2 = 16$
DHARMENDRA	7	3	$\Rightarrow 7^2 - 3^2 = 40$
SHAHRUKH	6	2	$\Rightarrow 6^2 - 2^2 = 32$
SALMAN	4	2	$\Rightarrow 4^2 - 2^2 = 12$

47. (A) As it is clear from the description, 'b' lies opposite 'd', 'c' lies opposite 'a' and 'f' lies opposite 'e'. So, when, 'c' is at the top, 'a' will be at the bottom.

48. (C)



Now, a + b + c + d + e + f + g = 120.
Number of musicians who can play all the three instruments = g = 5% of 120 = 6.
Number of musicians who can play any two and only two of the instruments
= d + e + f = 30
Number of musicians who can play guitar only = a = 40.
∴ Number of musicians who can play violin alone or flute only = b + c
= 120 – (a + d + e + f + g)
= 120 – (40 + 30 + 6) = 44.

49. (D) Let the number of bananas in the second bunch be *x*.
Then, number of bananas in the first bunch

$$= x + \frac{1}{4}x = \frac{5}{4}x$$

So, $\frac{5}{4}x - x = 3$

$\Rightarrow 5x - 4x = 12$
$\Rightarrow x = 12$
∴ Number of bananas in first bunch

$$= \left(\frac{5}{4} \times 12\right) = 15$$

50. (B)

52.(D) The Permanent Settlement (also Permanent Settlement of Bengal) was introduced by Lord Cornwallis in 1793. It was an agreement between the British East India Company and the Landlords of Bengal to settle the Land Revenue to be raised. Lord Cornwallis came to India as the Governor General.

53.(B) The impetus towards the founding of a cotton industry came from Indian entrepreneurs. The first Indian cotton mill, "The Bombay Spinning Mill", was opened in 1854 in Bombay by Cowasji Nanabhai Davar.

54.(A) World Autism Awareness Day is observed annually on April 2 to raise awareness about children with autism throughout the world.

55.(A) The temples are famous for their Nagara-style architectural symbolism and their erotic sculptures. Most Khajuraho temples were built between 950 A.D and 1050 A.D by the Chandela dynasty.

56.(A) An Article 32 hearing is a proceeding under the United States Uniform Code of Military Justice, similar to that of a preliminary hearing in civilian law. Its name is derived from UCMJ section VII ("Trial Procedure")Article 32 (10 U.S.C. § 832), which mandates the hearing. Article 32 provides the right to constitutional remedies which means that a person has the right to move to the Supreme Court for getting his fundamental rights protected.

57.(C) Crude oil was discovered here in late 19th century. Digboi is known as the Oil City of Assam where the first oil well in Asia was drilled. The first refinery was started here as early as 1901. Digboi has the oldest oil well in operation.

58.(A) Renowned Iraqi-British Architech Zaha Hadid was the first female winner of the top Pritzker Architecture Prize (2004). She passed away due to heart attack, at the age of 65.

59.(B) Indian states that have the highest number of Lok Sabha seats are -

S.No.	States	Lok Sabha Seats
1.	Uttar Pradesh	80
2.	Maharashtra	48
3.	West Bengal	42
4.	Andhra Pradesh	42
5.	Bihar	40

64.(B) Singhbhum was a district of India during the British Raj, part of the Chota Nagpur Division of the Bengal Presidency. It was located in the present-day Indian state of Jharkhand. Chaibasa was the district headquarters. Noamundi is a census town in Pashchimi Singhbhum district in the

Indian state of Jharkhand. The major produce of this mine is iron ore (including blue dust).

67.(B) SDLC (Synchronous Data Link Control) is a transmission protocol developed by IBM in the 1970s as a replacement for its binary synchronous (BSC) protocol. SDLC is equivalent to layer 2 of the Open Systems Interconnection (OSI) model of network communication. This level of protocol makes sure that data units arrive successfully from one network point to the next and flow at the right pace.

69.(A) Pro-tem Speaker performs the duties of the office of the Speaker from the commencement of the sitting of the new Lok Sabha till the election of the Speaker. Former Parliamentary Affairs Minister and senior Congress leader Kamal Nath has been appointed as the pro-tem Speaker in the new Lok Sabha.

72.(D) New Ireland is a large island in Papua New Guinea, approximately 7,404 km² in area with ca. 120,000 people. It is the largest island of the New Ireland Province, lying northeast of the island of New Britain. Both islands are part of the Bismarck Archipelago, named after Otto von Bismarck, and they are separated by Saint George's Channel. The administrative centre of the island and of New Ireland province is the town of Kavieng located at the northern end of the island. While the island was part of German New Guinea, it was named Neumecklenburg ("New Mecklenburg").

76.(D) Megasporangium is a spore sac that contains megaspores. In flowering plants, this is known as the ovule.

77.(B) The Daranghati Sanctuary is located in Shimla District, Himachal Pradesh, India. It has undisturbed forest areas. Monal, Tragopan, Koklas and Kalij are the pheasants found here. Some of the common animals found here are Musk deer, Goral and Thar. Forest staff posted at Dofda and Sarahan is there for advice and guidance.

78.(C) The Chernobyl disaster (also referred to as the Chernobyl accident or simply Chernobyl) was a catastrophic nuclear accident that occurred on 26th April 1986 at the Chernobyl Nuclear Power Plant in the town of Pripyat, in Ukraine (then officially the Ukrainian SSR), which was under the direct jurisdiction of the central authorities of the Soviet Union. An explosion and fire released large quantities of radioactive particles into the atmosphere, which spread over much of the western USSR and Europe.

84.(C) Transpiration is the process by which moisture is carried through plants from roots to small pores on the underside of leaves, where it changes to vapour and is released to the atmosphere. Transpiration is essentially evaporation of water from plant leaves.

87.(D) The SI derived unit of electric charge is the coulomb (C). In electrical engineering, it is also common to use the ampere-hour (Ah), and, in chemistry, it is common to use the elementary charge (e) as a unit. The symbol Q often denotes charge.

91.(A) The Global Automotive Research Center (GARC) is situated in the SIPCOT Industrial Growth Center at Orgadam near Chennai in the close proximity of manufacturing facility of Indian and Global automotive giants.

92.(A) DNA is replicated during Interphase. Interphase involves the cell cycle G1, S, G2. The cell grows during G1, replicates its DNA during S, and then prepares for mitosis during G2 (the second growth period). Note that DNA replication actually takes place before mitosis

93.(C) 'Hickey's Bengal Gazette was an English newspaper published from Kolkata (then Calcutta), India. It was the first major newspaper in India, started in 1780. It was published for two years and was founded by James Augustus Hickey, a highly eccentric Irishman who had previously spent two years in Jail for debt.

95.(C) Jean-Jacques Rousseau (28 June 1712 – 2 July 1778) was a Francophone Genevan philosopher, writer, and composer of the 18th century. His political philosophy influenced the Enlightenment in France and across Europe, as well as aspects of the French Revolution and the overall development of modern political and educational thought.

96.(A) The law of diminishing marginal utility is a law of economics stating that as a person increases consumption of a

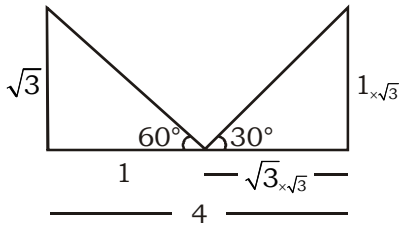
product, while keeping consumption of other products constant, there is a decline in the marginal utility that person derives from consuming each additional unit of that product.

97.(D) Rajatarangini ("The River of Kings") is a metrical legendary and historical chronicle of the north-western Indian subcontinent, particularly the kings of Kashmir. It was written in Sanskrit by Kashmiri Brahman Kalhana in 12th century CE. The work consists of 7826 verses, which are divided into eight books called Taranga's ("waves"). The Rajatarangini provides the earliest source on Kashmir that can be labelled as a "historical" text on this region. Although inaccurate in its chronology, the book still provides an invaluable source of information about early Kashmir and its neighbours in the north western parts of the Indian subcontinent, and has been widely referenced by later historians and ethnographers.

98.(C) Eutrophication is the ecosystem's response to the addition of artificial or natural nutrients, mainly phosphates, through detergents, fertilizers, or sewage, to an aquatic system

101.(C) Area of four wall = $2 \times h(l + b)$
$= 2 \times 5 (16 + 11) = 270\ m^2$
Total area of gate and windows
$= 2 \times 1 + 1 \times 0.75 \times 4$
$= 2 + 3 = 5\ m^2$
Area to be painted = $270 - 5 = 265\ m^2$
$\therefore$ Required cost = $265 \times 2.50 = ₹\ 662.5$

102.(C)



ATQ,

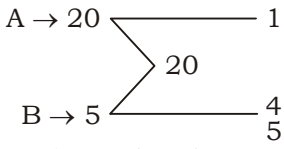
$\because \sqrt{3}$ = 288 m (given)

and, eagle flies for 24 seconds

$\therefore$ speed of eagle = $\frac{288 \times 4}{\sqrt{3} \times 24}$

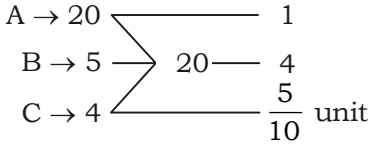
$= 16\sqrt{3}$ m/sec

103.(A)



$\therefore$ Time taken by C = 4 days

$\therefore$ Required days to complete the work by A, B and C together



$\Rightarrow \frac{20}{10}$ = 2 days

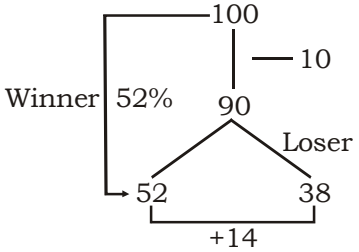
104.(D) 10% = $\frac{1}{10}$, 25% = $\frac{1}{4}$, 20% = $\frac{1}{5}$

A	:	B	:	C	:	D
9		10				
		$5_{\times 2}$		$4_{\times 2}$		
				$4_{\times 2}$		$5_{\times 2}$
9	:	10		8	:	10
		$\downarrow_{\times 80}$				$\downarrow_{\times 80}$
		720				800

D got = 800 marks

$\therefore$ Required % = $\frac{800}{1000} \times 100 = 80\%$

105.(C) Let the total votes be 100
ATQ,



14 unit = (13200 – 2000) = $\frac{11200}{14}$ = 800

Votes polled for losing candidate
= 800 × 38 – 2000 (invalid votes)
= 28400 votes

106.(A) Simple interest for 3 years
= 76.51 – 1.51 = ₹ 75

$\therefore$ Rate % = $\frac{75 \times 100}{1250 \times 3}$ = 2%

107.(C) $1 : \frac{2}{2} : \frac{3}{4}$

4 : 4 : 3
11 = 55
1 = 5

4 = 20
20 × 2 = 40

108.(B) $4\sin^2\theta + 6(1 - \sin^2\theta)$
$4\sin^2\theta + 6 - 6\sin^2\theta$
$6 - 2\sin^2\theta$
Now, put the value of $\theta = 90°$
$\therefore 6 - 2 = 4$

109.(C) Dist. travelled by bullet in 30 sec
= distance travelled by train in 12 min 30 sec
30 × 330 = train in 12 min 30 sec

$$\text{speed of train} = \frac{D}{T} = \frac{9900}{750\ \text{sec}}$$

$$= \frac{990}{75}\ \text{m/sec} = \frac{990}{75} \times \frac{18}{5}\ \text{kms/hr}$$

$$= 47\frac{13}{25}\ \text{kms/hr}$$

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

C.P		S.P
10	—	11
↓×40.5		↓
405		445.5

∵ 1 kg potato rotten
∴ S.P of remaining potato

$$= \frac{445.5}{9} = ₹\ 49.5/\text{kg}$$

111.(D) $5x \times 8 : 6x \times y$

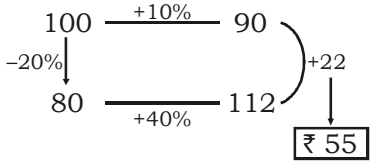
$$\frac{5x \times 8}{6x \times y} = \frac{5}{9}$$

$$\frac{8}{2y} = \frac{1}{3}$$

y = 12 months

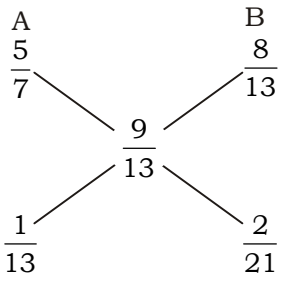
112.(A) C.P. of 30 kg = 30 × 9.50 = ₹ 285
C.P. of 40 kg = 40 × 8.50 = ₹ 340
Total C.P. of 70 kg = 285 + 340 = ₹ 625
S.P. of 70 kg = 70 × 8.90 = ₹ 623
Loss = ₹ 625 – ₹ 623 = ₹ 2

113.(A) Let the price of article be 100
ATQ,



$$\therefore \text{cost price of article} = \frac{55 \times 100}{22} = ₹\ 250$$

114.(A) From alligation-



Ratio of quantity taken from vessel

A and vessel B = $\frac{1}{13} : \frac{2}{91} = 7 : 2$

115.(D) Difference of correct and incorrect marks = 64 – 46 = 18
∴ Correct mean

$$= 52 + \frac{18}{36} = 52.5$$

116.(A) Let Vimal's age and Arun's age be $3x$ years & $5x$ years respectively.
ATQ,
$3x + 5x = 80$
$8x = 80$
$x = 10$
Vimal's age = $3x = 3 \times 10 = 30$ years
Arun's age = $5x = 5 \times 10 = 50$ years
After 10 years
Vimal's age = 30 + 10 = 40 years
Arun's age = 50 + 10 = 60 years
∴ Ratio of their ages after 10 years
40 : 60 = 2 : 3.

117.(A) ∵ $4x = \sec\theta$ $\quad \therefore x = \frac{\sec\theta}{4}$

and, $\frac{4}{x} = \tan\theta$ $\quad \therefore x = \frac{4}{\tan\theta}$

$$8\left(x^2 - \frac{1}{x^2}\right) = 8\left(\frac{\sec^2\theta}{16} - \frac{1}{\frac{16}{\tan^2\theta}}\right)$$

$$= 8\left(\frac{\sec^2\theta}{16} - \frac{\tan^2\theta}{16}\right)$$

$$= 8 \times \frac{1}{16} = \frac{1}{2}$$

118.(B) A → 10 — 3
B → 15 — 30 — 2
C → 5 — 6
Total work by A + B & C in 1 min = – 1

$\therefore$ Total time taken by C to empty the tank

$= \frac{20}{1} = 20$ minutes

119.(D) $15\% = \frac{3}{20}$, $10\% = \frac{1}{10}$, $5\% = \frac{1}{20}$

Income	Remain
20	17
10	9
20	19
4000	2907
↓×5	↓×5
20,000	**14535**

120.(A) $x + y = 500$ ...(i)

Loss % $= \frac{(20)^2}{100} = 4\%$

Total loss $= \frac{500}{100} \times 4 = ₹\ 20$

$\therefore$ Selling price $= 500 - 20 = ₹\ 480$

121.(B) Daily income of A + B + C $= \frac{1500}{10} = ₹\ 150$

Daily income of A + C $= \frac{800}{8} = ₹\ 100$

Daily income of B + C $= \frac{900}{9} = ₹\ 100$

$\therefore$ Total income of B = (A + B + C) – (A + C)
$= (150) - (100) = ₹\ 50$

122.(D) $\tan(4\theta - 50°) = \cot(50° - \theta)$
$\tan(4\theta - 50°) = \tan(90° - (50° - \theta))$
$\therefore 4\theta - 50° = 90° - (50° - \theta)$
$3\theta = 90$
$\therefore \theta = 30$

123.(B) Circumference of pulley

$= \pi d = \frac{22}{7} \times 10.5 = 33$ cm

$\therefore$ No. of rotation $= \frac{4950}{33} = 150$

124.(A) Speed downstream = (9 + 3) km/hr
Speed upstream = (9 – 3) km/hr
ATQ,

$\frac{d}{x-y} - \frac{d}{x+y} = 3$

$\Rightarrow \frac{d}{9-3} - \frac{d}{9+3} = 3$

$\Rightarrow \frac{d}{6} - \frac{d}{12} = 3$

$\Rightarrow \frac{2d - d}{12} = 3$

$\Rightarrow d = 36$ kms

125.(B) Amount deposited = 31,100

1% of 10,000 $= \frac{100}{31,200}$

96% of total sale = 31,200

$100\% = 31,200 \times \frac{100}{96} = ₹\ 32,500$

126.(B) Value of 1 radian $= \frac{180°}{\pi}$

$\therefore \left(\frac{1}{2} + \frac{1}{3}\right)$ radian $= \frac{180°}{\frac{22}{7}} \times \frac{5}{6}$

$= \frac{180°}{22} \times 7 \times \frac{5}{6} = \left(\frac{525}{11}\right)°$

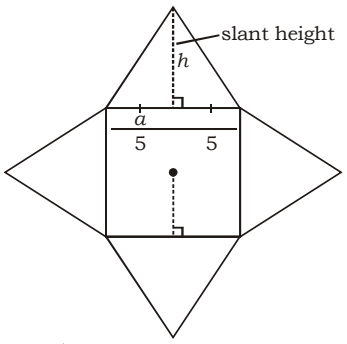
$\therefore$ Value of 3rd angle $= 180° - \frac{525°}{11}$

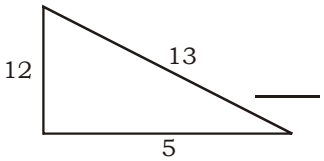
$= \frac{1455}{11} = 132\frac{3°}{11}$

127.(B) $(x + 5)° + (2x - 3)° + (3x + 4)° = 180°$
$(6x + 6)° = 180°$

$x = \frac{180° - 6°}{6} = 29°$

128.(B)





From Triplet

$\therefore$ S.A $= \frac{1}{2} \times 40 \times 12 = 240$ cm^2

129.(B) $\because x + \frac{1}{x} = 4$

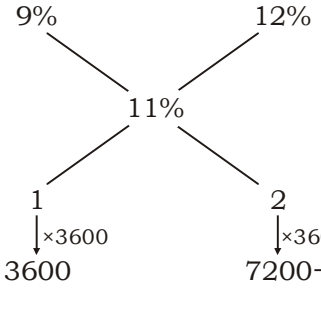
$\Rightarrow x^2 + \frac{1}{x^2} = 14$ & $x^3 + \frac{1}{x^3} = 52$

$\therefore$ The value of $x^5 + \frac{1}{x^5} = 14 \times 52 - 4 = 724$

130.(C) Distance travelled by A = 2 × distance b/w two points × $\left(\frac{a}{a+b}\right)$

$= 2 \times 21 \times \frac{3}{7} = 18$ kms

131.(A) By alligation:



∴ total principal = 7200 + 3600 = ₹ 10,800

132.(C) Total expenditure of man in a year
= ₹ (4 × 1800 + 8 × 2000)
= ₹ (7200 + 16000)
= ₹ 23200
Total annual income
= (23200 + 5600)
= ₹ 28800
∴ Average monthly income

$= \frac{28800}{12} =$ ₹ 2400

133.(C) Take the value of θ = 45°
∴ x = cosec θ – sin θ

$= \sqrt{2} - \frac{1}{\sqrt{2}}$

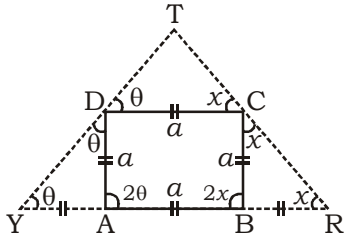
$x^2 = \frac{1}{2}$ similarly = $y^2 = \frac{1}{2}$

$\therefore x^2y^2(x^2 + y^2 + 3) = \frac{1}{2} \times \frac{1}{2}\left(\frac{1}{2} + \frac{1}{2} + 3\right) = 1$

134.(C) $2x + y = 15$
$y = 15 - 2x$
similarly, $x = 26 - 2z$
$\therefore 2y + z = 25$
$30 - 4x + z = 25$
$30 - 4(26 - 2z) + z = 25$
$9z - 74 = 25$

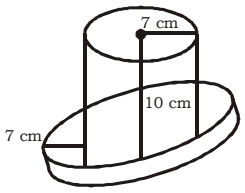
$z = \frac{74 + 25}{9} = 11$

135.(C)



∵ $2\theta + 2x = 180°$
∴ $\theta + x = 90°$
The value of ∠T will be
∠T + θ + x = 180°
∠T + 90 = 180°
∠T = 90°

136.(C)



Area of the plateform
$= \pi(r_0^2 - r_i^2)$
$\pi r^2 h = \pi(r_0^2 - r_i^2) \times H$
$7^2 \times 10 = (14^2 - 7^2) \times H$

$\frac{49 \times 10}{21 \times 7} = H$

$H = \frac{10}{3}$ m

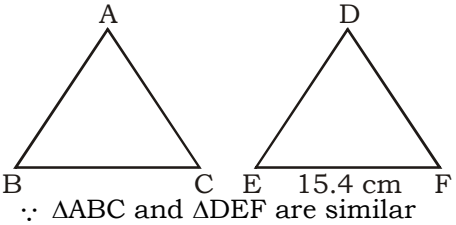
137.(D) If the quotient in the first case be x.
Then, number = $5x + 3$
On squaring the number,
$(5x + 3)^2 = 25x^2 + 30x + 9$
On dividing by 5, remainder = 9 – 5 = 4

138.(D) $\frac{x}{a} = (b - c), \frac{y}{b} = (c - a), \frac{z}{c} = (a - b)$
if $a + b + c = 0$ then $a^3 + b^3 + c^3 = 3abc$

$\therefore \frac{x}{a} + \frac{y}{b} + \frac{z}{c} = b - c + c - a + a - b = 0$

& $\left(\frac{x}{a}\right)^3 + \left(\frac{y}{b}\right)^3 + \left(\frac{z}{c}\right)^3 = \frac{3xyz}{abc}$

139.(D)



∵ ΔABC and ΔDEF are similar

then $\frac{ar(ABC)}{ar(DEF)} = \frac{BC^2}{EF^2}$

$\sqrt{\frac{64}{121}} = \frac{BC}{15.4}$

$\therefore BC = \frac{8 \times 15.4}{11} = 11.2$ cm

140.(B) When 36798 is divided by 78.
remainder = 60

$\therefore$ The least number to be subracted = 60

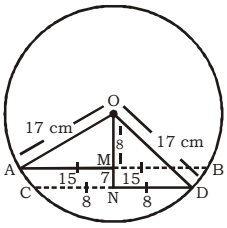
141.(D) $A = \tan 11° \tan 29°$
$= \tan(90° - 79°) \cdot \tan(90° - 61°)$
$= \cot 79° \cdot \cot 61°$
$B = 2 \cot 61° \cdot \cot 79°$
$\therefore B = 2A$

142.(C) $$\frac{\frac{1}{2}(a+b+c)[(a-b)^2+(b-c)^2+(c-a)^2]}{(a+b+c)}$$

$$= \frac{1}{2}[(-4)^2 + (-3)^2 + (7)^2]$$

$$= \frac{1}{2} \times 74 = 37$$

143.(D)



Length of = OM = 8 cm (By Triplet)
$\because$ Length of ON = 15 cm (By Triplet)
$\therefore$ Length of MN = 15 – OM = 7 cm

144.(A) ATQ,
$x^2 + 1 + 2x + y^2 + 1 - 2y + z^2 = 0$
$(x+1)^2 + (y-1)^2 + z^2 = 0$
$\therefore x = -1, y = 1, z = 0$
Put the above value in equation-
$3x + 5y + 6z$
$= 3 \times -1 + 5 \times 1 + 6 \times 0$
$= -3 + 5 = 2$

145.(A) Each internal angle = $\frac{(2n-4)90°}{n}$

$$\therefore \frac{(2n-4)90°}{n} = 144°$$

$180°n - 360° = 144°n$
$36n = 360°$
$n = 10$

146.(D) Number of students enrolled in College A in the year 2009 = 1000
$\therefore$ Number of students passed

$$= 1000 \times \frac{80}{100} \times \frac{60}{100} = 480$$

147.(C) Required number of students

$$= 2290 \times \frac{70}{100} = 1603$$

148.(C) Average number of students enrolled in all colleges together in the year 2010

$$= \frac{3770}{5} = 754$$

Average number of students enrolled in all colleges together in the year 2010

$$= \frac{3090}{5} = 618$$

$$\therefore \text{Req. ratio} = \frac{754}{618} = \frac{377}{309} = 377 : 309$$

149.(D) Number of students enrolled in College A in the year 2009 = 1000
Number of students enrolled in College B in the year 2011 = 650

$$\therefore \text{Reqd. \%} = \frac{350}{650} \times 100 = 53.84\% \approx 54$$

150.(D) Total number of students in the year 2010 from all the colleges = 3090
$\therefore$ Reqd. number of students
= 10% of 3090 = 309

151.(B) Since the noun 'The stories of maddening crowd' appears plural but is in fact singular in nature. Replace 'have' by 'has'.

152.(C) Verb such as 'see, smell, feel etc. are followed by 'V_1+ ing'.
Hence, this sentence should be as 'several people saw the thief **snatching** my purse'.

153.(A) 'Suppose' and 'if' cannot come together. Use either of the two.

154.(B) Since the sentence shows some usual or regular action hence use simple present tense. Change 'met' into 'meet'. Here pronoun 'they' must be used.

155.(A) 'Pass' will not take 'in' after it. Thus, remove 'in'.

157.(B) If a noun (here 'a topic') is followed by an infinitive (here 'to write'), the infinitive is followed by a suitable preposition.

158.(D) If there is a choice to be made between two or more things, **'which'** is used.

160.(C) The part of the sentence which consists of 'until/unless' does not have 'will or would'.

175.(A) 'Send word' means 'to send someone to give another person a message'.

177.(B) 'one of the' always takes a plural noun

after it.

179.(A) Since the action is still going on and not completed, present tense must come.

180.(B) 'Bring something about' means 'to cause something' to take place.

181.(C) Sentence starting with 'No sooner' should be in inverse form i.e. 'No sooner + did + sub + verb + ...'.

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Affability	The quality of being pleasant, friendly and easy to talk to	मिलनसार
Affectation	Behaviour, speech, or writing that is artificial and designed to impress.	स्वांग, दिखावा
Almanac	A book that is published every year giving information for that year about a particular subject or activity	डायरी
Averse	Having a strong dislike of or opposition to something	विरूद्ध, प्रतिकूल
Conducive	favourable	सहायक, हितकर
Culpable	Responsible and deserving blame for having done something wrong	गुनहगार
Equanimity	Calm emotions when dealing with problems or pressure	धीरज, धैर्य
Euphemism	A mild or pleasant word or phrase that is used instead of one that is unpleasant or offensive	कठोर शब्दों के स्थान पर मधुर शब्दों का प्रयोग
Facsimile	An exact copy of something	प्रतिरूप, प्रतिलिपि
Flora	The vegetation of a particular area or time	किसी देश या काल की वनस्पति
Hazardous	Involving risk or danger	जोखिम-भरा
Infructuous	Unprofitable and fruitless	निष्फल
Lair/Den	A place where a wild animal lives	माँद, गुफा
Lustre	A quality that outshines the usual	आभा, चमक
Mollifying	Making somebody feel less angry or upset	शांत करने वाला
Mutiny	Refuse to obey the orders of a person in authority	बगावत करना
Parricide	Killing of one's parents	माता-पिता की हत्या
Pedantry	Too much attention to small details or rules	पांडित्य प्रदर्शन
Perforce	By necessity, by force of circumstance	मजबूरन, जबरदस्ती
Platonic	Of, relating to, or having a close relationship or something spiritual and in which there is no sex	निष्काम, आध्यात्मिक
Salvation	The state of being saved from the power of evil	मोक्ष, मुक्ति
Sororicide	Killing of one's sister	बहन की हत्या
Temerity	Extremely confident behaviour that people are likely to consider rude	धृष्टता, गुस्ताखी
Tentative	Not definite, still able to be changed	अनिश्चित
Utmost	Of the greatest possible degree or extent or intensity	परम, अधिकतम

SSC (CPO) MOCK TEST - 04 (ANSWER KEY)

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