SSC CPO MOCK TEST – 02 (SOLUTION)

1. (C) They are antonyms.
2. (B) Umpire is a person who makes decisions during the game and makes sure that the rules are obeyed. Similarly, Moderator is a person who makes sure that participants are represented fairly in debate.
3. (B)
4. (B) $55 \xrightarrow{5\times5+1} 26$: : $13 \xrightarrow{1\times3+1} 4$
5. (A) Fresco is an art of painting that is done on freshly spread moist lime plaster.
6. (D) PARTS : STRAP :: WOLF : FLOW
7. (A) $25 \xrightarrow{25\times25} 625$: : $35 \xrightarrow{35\times25} 875$
8. (B) $5\underbrace{25}_{Same} \xrightarrow{5\times5} 25$: : $3\underbrace{15}_{Same} \xrightarrow{3\times5} 15$
9. (C) $36 \xrightarrow{\times4} 144$: : $576 \xrightarrow{\times4} 2304$
10. (C)

B D G J : O Q T W : : A F I M : N S V Z

(each letter +13)

11. (D)

(A) $\underbrace{7\,4\,9}_{3\ 5} = 35$ (B) $\underbrace{9\,3\,2}_{6\ 1} = 61$

(C) $\underbrace{9\,8\,9}_{1\ 1} = 11$ (B) $\underbrace{5\,3\,9}_{2\ 6} = 29$ wrong

Difference of consecutive digits forms the numbers.

12. (D) Bronze is an alloy and all others are metal.
13. (B) In all others, the numerator is less than the denominator.
14. (C) Except option (C) all are divisible by 3.
15. (A) (A) $N \xrightarrow{-2} L \xrightarrow{+1} M$ (B) $Y \xrightarrow{-1} X \xrightarrow{+2} Z$

(C) $N \xrightarrow{-1} M \xrightarrow{+2} O$ (D) $R \xrightarrow{-1} Q \xrightarrow{+2} S$

16. (C) Remaining are parts of hand.
17. (A) (A) $C \xrightarrow{+2} E \xrightarrow{+9} N \xrightarrow{+6} T$ (B) $J \xrightarrow{+2} L \xrightarrow{+3} O \xrightarrow{+4} S$

(C) $M \xrightarrow{+2} O \xrightarrow{+3} R \xrightarrow{+4} V$ (D) $C \xrightarrow{+2} E \xrightarrow{+3} H \xrightarrow{+4} L$

18. (D) (A) 4 + 6 = 1 + 0

1 0 = 1

1 + 0 = 1

1 = 1 (Correct)

(B) 4 + 2 = 3 + 3

6 = 6 (Correct)

(C) 2 + 0 = 3 + 8

2 = 11

2 = 1 + 1

2 = 2 (Correct)

(D) 9 + 1 = 1 + 2

10 = 3

1 + 0 = 3

1 $\neq$ 3 (False)

19. (C) $A \xrightarrow{+5} V \xrightarrow{+4} R \xrightarrow{+3} O \xrightarrow{+2} M \xrightarrow{+1} L$
20. (C) Sister of my brother = My sister

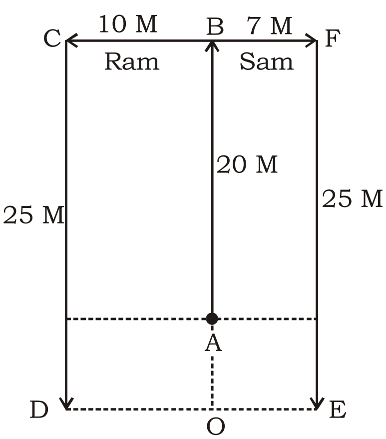
Father of my sister = My father

Daughter of my father = My sister or me

21. (B) Taking the help of common alphabet of both words, we can find the code of

STAGE = ∗ 48%5

22. (A)

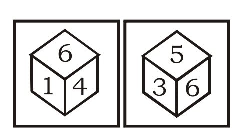


Required distance DE = 10 + 7 Metres

= 17 Metres

Here, (OD = CB and OE = BF)

23. (A) According to the universal rule, identity any two situation in which we have only one digit common. In the given dice only one digit is common i.e. (6). Now write the numbers as clockwise from the common number.



(I) (II)

Here, we have 6 $\rightarrow$ 4 $\rightarrow$ 1 in figure (I).
Now, look at the figure (II).
Where We have 6 $\rightarrow$ 3 $\rightarrow$ 5.
Now, write both of them one above the after as.
From given dice I & II

6 - 4 - 1
2 6 3 - 5

Here 4 $\xleftrightarrow{\text{opp}}$ 3

1 $\xleftrightarrow{\text{opp}}$ 5

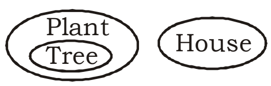
So, 6 will be the opposite of 2.

24. (C)

		Anehu	Banu	Fatima
		x yrs.	$2x$ yrs.	$4x$ yrs.
Diana	Caroline	Anehu		
$\frac{x}{4}$ yrs.	$\frac{x}{2}$ yrs.	x yrs.		

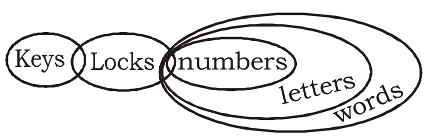
So, the oldest person – Fatima
& the youngest person – Diana

25. (C)



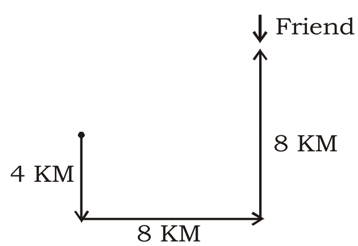
26. (D)

27. (C)



Conclusions - I- ✓
- II- ✓

28. (A)



29. (C) 6 9 7 8 16
$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$
F I G H T

30. (D) I $\begin{cases}\text{Raju}\\\text{Vasant}\\\text{Manohar}\end{cases}$ II $\begin{cases}\text{Manohar}\\\text{Jayant}\\\text{Dutta}\end{cases}$

I + II $\begin{cases}\text{Raju}\\\text{Vasant}\\\text{Manohar}\\\text{Jayant}\\\text{Dutta}\end{cases}$

31. (A) $2 \xrightarrow{\times 2+1} 5 \xrightarrow{\times 2+2} 12 \xrightarrow{\times 2+3} 27 \xrightarrow{\times 2+4} 58 \xrightarrow{\times 2+5} 121 \xrightarrow{\times 2+6} \mathbf{248}$

32. (D) $5 \xrightarrow{5\times 2+1} 11 \xrightarrow{11\times 2+1} 23 \xrightarrow{23\times 2+1} 47 \xrightarrow{47\times 2+1} 95 \xrightarrow{95\times 2+1} \mathbf{191}$

33. (C)

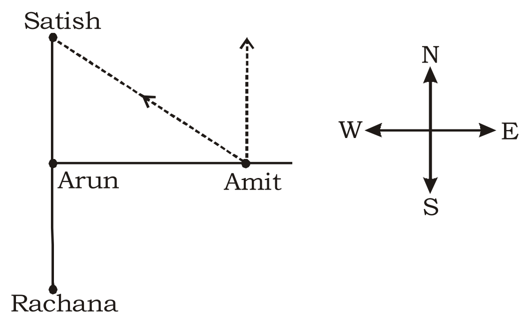
O	6	24	60	120	**210**
$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$	$\downarrow$
1^3-1	2^3-2	3^3-3	4^3-4	5^3-5	$\mathbf{6^3-6}$

34. (D) $68 \xrightarrow{-4} 64 \xrightarrow{\div 2} 32 \xrightarrow{-4} 28 \xrightarrow{\div 2} 14 \xrightarrow{-4} 10 \xrightarrow{\div 2} 5 \xrightarrow{-4} 1$

35. (A)

field	grain	rat	snake	eagle
5	4	1	3	2

36. (C)



37. (A) M U S I C A L $\rightarrow$ K W Q K A C J

M	U	S	I	C	A	L
-2	+2	-2	+2	-2	+2	-2
K	W	Q	K	A	C	J

Similarly,

S P R I N K L E $\rightarrow$ Q R P K L M J G

S	P	R	I	N	K	L	E
-2	+2	-2	+2	-2	+2	-2	+2
Q	R	P	K	L	M	J	G

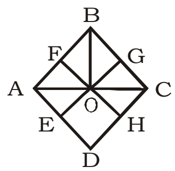
38. (D) $20 + (2)^2 = 24$
$30 + (3)^2 = 39$
Similarly,
$40 + (4)^2 = 56$

39. (C) $2 \times 2 = 4$
$4 \times 2 = 8$
$8 \times 4 = 32$
$32 \times 8 = 256$
1st digit × 2nd digit = 3rd digit

40. (A) $3 \xrightarrow{+2^3} 11 \xrightarrow{+3^3} 38 \xrightarrow{+4^3} 102 \xrightarrow{+5^3} 227 \xrightarrow{+6^3} 443$

41. (C) $(1 \times 6) + (5 \times 5) = 31$
$(1 \times 9) + (1 \times 1) = 10$
$(1 \times 3) + (7 \times 1) = 10$
Similarly,
$(1 \times 0) + (8 \times 8) = 64$

42. (B)



There are 10 triangles in the given figure - AFO, FBO, BGO, GCO, CHO, EAO, ABO, BCO, ABC and ACD.

43. (D)

44. (D)

45. (B)

46. (A

47. (B)

48. (A)

49. (A) CRIM**E**

50. (A) The numerical groups of the **PARROT** will be –

P – **56**, 65, 76, 85, 97
A – **00**, 12, 20, 31, 40
R – 58, 69, **77**, 88, 98
R – 58, 69, 77, **88**, 98
O – 55, 66, 75, **86**, 95
T – 59, 67, 79, 89, **99**

101. (B) Required number
= Number of people taking lemon tea – Number of people taking tea with milk
= (33% – 30%) of 1,00,000
= 3% of 1,00,000 = 3,000

102. (A) Number of people taking coffee only
= 5% of 1,00,000 = 5,000

103. (B) Number of people who do not take coffee or lemon juice
= Total people – Number of people who take coffee or lemon juice
= {100% – (5% + 28%)} of 1,00,000
= (100% – 33%) of 1,00,000
= 67% of 1,00,000 = 67,000

104. (C) Required number of people taking any type of tea
= (30% + 33%) of (1,00,000 + 5,000)
= 63% of 1,05,000 = 66,150

105. (C) Required angle = (percentage of people who used to take tea with milk × 3.6)°
= (30 × 3.6)° = 108°

106. (A) LCM of 3, 4, 5, 6 = 60

$$\Rightarrow A:B:C:D = \frac{1}{3}\times 60 : \frac{1}{4}\times 60 : \frac{1}{5}\times 60 : \frac{1}{6}\times 60$$
= 20 : 15 : 12 : 10

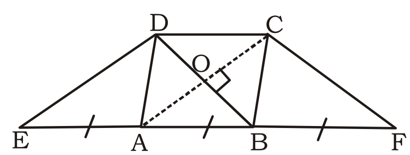
Min. number of pens
= 20 + 15 + 12 + 10
= 57

107. (A) SP = 125% of 900
$$= \frac{125}{100}\times 900 = \text{Rs. } 1125$$
MP = ? % discount = 10%
$$MP = \frac{SP\times 100}{100 - \%\text{ discount}}$$
$$= \frac{1125\times 100}{100-10}$$
= Rs. 1250

108. (D) Let $a + b = \sqrt{33-4\sqrt{35}}$
$$(a+b)^2 = 33-4\sqrt{35}$$
$$= (2\sqrt{7})^2 + (\sqrt{5})^2 - 2.2\sqrt{7}\times\sqrt{5}$$
$$= (2\sqrt{7}-\sqrt{5})^2$$
$$\Rightarrow a+b = \pm(2\sqrt{7}-\sqrt{5})$$

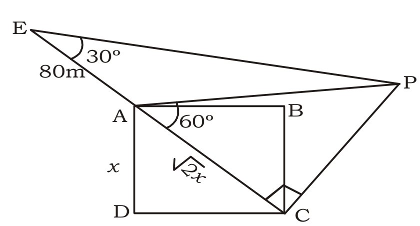
109. (D) Speed of the person = 30 m/min.
$$= \frac{30}{60} = \frac{1}{2}\text{ m/s.}$$
$$\frac{2r}{\frac{1}{2}} + 30 = \frac{2\pi r}{\frac{1}{2}}$$
$$4r + 30 = 4\pi r$$
$$r = \frac{7}{2} = 3.5\text{m.}$$

110. (B)



In ΔBDE,
A & O are midpoint of EB & BD
$\Rightarrow AO \parallel ED \Rightarrow AC \parallel DE$ (by using midpoint theorem)
$\Rightarrow ED \perp BD$ ($\because AC \perp BD$) ---------- (1)
In ΔACF
B & O are midpoint of AF & AC
$\Rightarrow BO \parallel CF \Rightarrow BD \parallel CF$ ------------(2)
then, (1) & (2)
$ED \perp CF$

111. (B) Let x m be the length of the square field.
In ΔAPC



$\frac{PC}{AC}$ = tan 60°

$\frac{PC}{\sqrt{2}x} = \sqrt{3}$

PC = $\sqrt{6}x$ m.

In ΔPCE

tan 30° = $\frac{PC}{CE}$

$\frac{1}{\sqrt{3}} = \frac{\sqrt{6}x}{\sqrt{2}x+80}$

$\sqrt{18}x = \sqrt{2}x + 80$

$3\sqrt{2}\ x - \sqrt{2}x = 80$

$x = \frac{80}{2\sqrt{2}} = \frac{20\times\sqrt{2}\times\sqrt{2}}{\sqrt{2}} = 20\sqrt{2}$ m

length of the field = $20\sqrt{2}$ m.

112. (C) $\cos x = 1 - \cos^2 x = \sin^2 x$
$= \sin^{12}x + 3\sin^{10}x + 3\sin^8 x + \sin^6 x - 1$
$= \cos^6 x + 3\cos^5 x + 3\cos^4 x + \cos^3 x - 1$
$= (\cos^2 x)^3 + 3(\cos^2 x)^2\cos x + 3(\cos^2 x)^2 + \cos^2 x.\cos x - 1$
$= (1 - \cos x)^3 + 3(1 - \cos x)^2 \cos x + 3(1 - \cos x)^2 + \cos x(1 - \cos x) - 1$
$= 1 - \cos^3 x - 3\cos x + 3\cos^2 x + 3(1 + \cos^2 x - 2\cos x)\cos x + 3(1 + \cos^2 x - 2\cos x) + \cos x - \cos^2 x - 1$
$= 1 - \cos^3 x - 3\cos x + 3\cos^2 x + 3\cos x + 3\cos^3 x - 6\cos^2 x + 3 + 3\cos^2 x - 6\cos x + \cos x - \cos^2 x - 1$
$= 2\cos^3 x - \cos x^2 - 5\cos x + 3$
$= 2\cos^2 x.\cos x - \cos^2 x - 5\cos x + 3$
$= 2(1 - \cos x)\cos x - \cos^2 x - 5\cos x + 3$
$= 2\cos x - 2\cos^2 x - \cos^2 x - 5\cos x + 3$
$= -3\cos x - 3\cos^2 x + 3$
$= -3(\cos x + \cos^2 x) + 3$
$= -3(1) + 3 = 0$

113. (B) Part of the work completed after 64 days
$= \frac{2}{3}$

Remaining work = $1 - \frac{2}{3} - \frac{1}{3}$

$\because \frac{2}{3}$ work is done by 120 men in 64 days

$\therefore$ 1 work is done by 120 men in $64\times\frac{2}{3}$ = 96 day

$\therefore$ In 32 days, $\frac{1}{3}$ work is done by 120 men

In 1 day, $\frac{1}{3}$ work is done by 120 ×32

In 60 days, $\frac{1}{3}$ work is done by $\frac{120\times32}{60}$
= 64 men.

No. of men discharged = 120 - 64 = 56 men.

114. (B) $x^2 + y^2 + z^2 - 2(x - y - z) + 3 = 0$
$(x^2 - 2x + 1) + (y^2 + 2y + 1) + (z^2 + 2z + 1) = 0$
$\Rightarrow (x - 1)^2 + (y + 1)^2 + (z + 1)^2 = 0$
It is possible only when $x - 1 = 0$, $y + 1 = 0$ & $z + 1 = 0$
$\Rightarrow x, y, z = 1, -1, -1$
Now,
$2x - 3y + 4z$
$= 2\times1 - 3(-1) + 4(-1)$
$\underline{2 + 3 - 4 = 1}$

115. (B) Put a = $\cos x$ & b = $\sin x$
Now, $\cos x\sin\theta + \sin x\cos\theta = c$
[$\because$ $a^2 + b^2 = 1$]
$\sin(x+\theta) = c$
consider $a\cos\theta - b\sin\theta$
$= \cos x\cos\theta - \sin x\sin\theta$
$= \cos(x+\theta)$
$= \sqrt{1-\sin^2(x+\theta)}$
$= \sqrt{1-c^2}$
$= \sqrt{a^2+b^2-c^2}$

Hence, $a\cos\theta - b\sin\theta = \sqrt{a^2+b^2-c^2}$

116. (B) Speed of policeman = $\frac{1}{8}$ km/minute
$= \frac{1000}{8}$ m/minute

Speed of thief = $\frac{1}{10}$ km/minute
$= \frac{1000}{10}$ m/minute
= 100 m/minute

So,
Time taken by policeman to over-power the thief
$= \frac{\text{Initial distance between them}}{\text{Speed of (Policeman - thief)}}$
$= \frac{100\text{m}}{(125 - 100)\text{ m/minute}}$
= 4 minutes

So,
the distance covered by the thief before he is over-powered
= (100 m/minute) × 4 minutes
= 400 meter

117. (D) Total age of Ram and his two children
= (17 × 3) yrs.
= 51 yrs.
& Total age of Ram's wife & the two children
= (16 × 3) yrs.
= 48 yrs.
So, Difference between the age of Ram and his wife = (51 – 48) yrs.
= 3 yrs.
So,
Age of Ram's wife = Ram's age – 3 yrs.
= 33 yrs – 3 yrs
= 30 yrs.

118. (A)

Discount	No. of kites sold	No. of free kites
5%	19	1
⇒ 10%	19	2
⇒ 10%	27	$\frac{2}{19} \times 27$ $\cong 3$

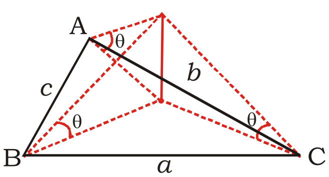
119. (A) 8 men = 12 boys
⇒ 6 boys = 4 men
So,
20 men + 6 boys = 20 men + 4 men
= 24 men
Now,
$\because$ 8 men $\xrightarrow{\text{complete the work in}}$ 16 days
$\therefore$ 1 man $\xrightarrow{\text{completes the work in}}$ (16 × 8) days
$\therefore$ 24 men $\xrightarrow{\text{do complete work in}}$ $\frac{16 \times 8}{24}$ days
$= 5\frac{1}{3}$ days

120. (B) Part of the trip travelled by train
$$= 1 - \left(\frac{2}{5} + \frac{1}{3}\right)$$
$$= 1 - \frac{11}{15} = \frac{4}{15} \text{ part}$$
Now, $\frac{2}{5}$ of the total distance = 1200 km
So, $\frac{4}{15}$ of the total distance
$$= \left(1200 \times \frac{5}{2} \times \frac{4}{15}\right) \text{km} = 800 \text{ kms}$$

121. (D) $\frac{a}{b} = \frac{4}{5}$ and $\frac{b}{c} = \frac{15}{16}$
⇒ a : b : c = 12 : 15 : 16
⇒ a : c = 12 : 16
= 3 : 4
So,
$$\frac{18c^2 - 7a^2}{45c^2 + 20a^2} = \frac{18 \times (4)^2 - 7 \times (3)^2}{45 \times (4)^2 + 20 \times (3)^2}$$
$$= \frac{288 - 63}{720 + 180} = \frac{225}{900} = \frac{1}{4}$$

122. (B) $x^2 + x + 1$ .... (i)
Also, $\left(x + \frac{1}{2}\right)^2 + q^2 = x^2 + x + \frac{1}{4} + q^2$
$= x^2 + x + \frac{1}{4} + q^2$ .... (ii)
On comparing (i) and (ii),
We get,
$$\frac{1}{4} + q^2 = 1$$
$$\Rightarrow \quad q^2 = 1 - \frac{1}{4} = \frac{3}{4}$$
$$\Rightarrow \quad q = \pm\frac{\sqrt{3}}{2}$$

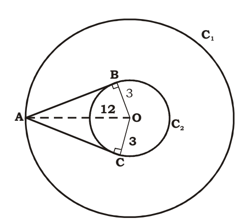
123. (B)



ΔABC is a scalene triangle.
⇒ a ≠ b ≠ c
and
P → position of vertical pole.
ATQ,
angle of elevation of the top of the pole from each corner of the park (A, B & C) is same.
The above condition is only possible when AP = BP = CP
⇒ P must be circumcentre.

124. (A) Let x = CP of each cow
So,
$(20x \times 0.15) + (40x \times 0.19) + (16x \times 0.25)$ = Rs. 6570
or, $x\{(20 \times 0.15) + (40 \times 0.19) + (16 \times 0.25)\}$ = Rs. 6570
or, $x(3 + 7.6 + 4)$ = Rs. 6570
$\Rightarrow x = \text{Rs. } \frac{6570}{14.6} = \text{Rs. } 450$

125. (C)



[$\angle ABO = \angle ACO = 90°$ $\because$ Angle between tangent and radius = 90°]

AB = AC = $\sqrt{12^2 - 3^2}$

= $\sqrt{144-9}$ = $\sqrt{135}$

= $3\sqrt{15}$

Now,

Area of quadrilateral ABOC

= Area of $(\Delta ABO + \Delta ACO)$

= $\left(\frac{1}{2} \times 3\sqrt{15} \times 3\right) \times 2$

= $9\sqrt{15}$ sq. cm.

126. (B) tan 21° tan 47° tan 43° tan 69°

= $\tan 21° \tan 47° \frac{1}{\cot 43°} \times \frac{1}{\cot 69°}$

= $\frac{\tan 21° \tan 47°}{\cot 43° \cot 69°}$

= $\frac{\tan(90-69°)\tan(90°-43°)}{\cot 43° \cot 69°}$

= $\frac{\cot 69° \cot 43°}{\cot 43° \cot 69°}$ = 1

127. (A) Anil's profit i.e. difference of C.I. & S.I.

in 2 years = $\frac{PR^2}{100^2}$

{Where
P⟶ Principal
R⟶ Common Rate of Interest p.a.}

= $\frac{30000 \times 25}{100 \times 100}$ = ₹ 75

128. (B) A : B and B : C
4 : 5 2 : 3

⇒ A : B : C
4 × 2 : 5 × 2 : 5 × 3
8 : 10 : 15

Now, A has ₹ 800

⇒ 8 ≡ ₹ 800

So, (A + B + C) i.e. (8 + 10 + 15)
i.e. 33 ≡ ₹ 3300

129. (D) Speed = $\frac{\text{Distance}}{\text{Time}}$

So, here,

Speed of train = $\frac{\text{Length of train}}{\text{Time to cross the tree}}$

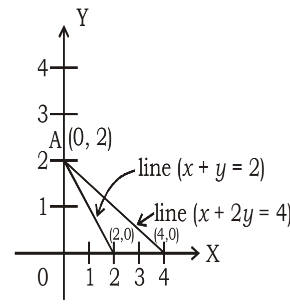
= $\frac{75 \text{ m}}{20 \text{ seconds}}$ = $\left(\frac{15}{4}\right)$ m/second

= $\left(\frac{15}{4} \times \frac{18}{5}\right)$ km/hour = 13.5 km/hour

130. (A)

Line: $x + y = 2$
at $x = 0$, $y = 2$ i.e. (0, 2)
at $y = 0$, $x = 2$ i.e. (2, 0)

Line: $x + 2y = 4$
at $x = 0$, $y = 2$ i.e. (0, 2)
at $y = 0$, $x = 4$ i.e. (4, 0)



So, Required area of ΔABC

= $\frac{1}{2} \times$ base × perpendicular height

= $\frac{1}{2} \times (4-2) \times 2$ = 2 sq. unit

131. (D) A : B and B : C
5 : 3 4 : 5

So, A : B : C
5 × 4 : 3 × 4 : 3 × 5
20 : 12 : 15

So, Runs scored by B

= $\frac{12}{(20+12+15)} \times 564 = 144$

132. (A) 125% of x = 100

⇒ $\frac{125}{100} \times x = 100$

⇒ $x = \frac{100 \times 100}{125} = 80$

133. (D) Required percentage increase

= $\left(100 \times \frac{130}{100} \times \frac{120}{100} - 100\right)\%$

= (156 – 100)% = 56%

134. (C) Area swept by the 7 cm long minute hand in 30 minutes.

= $\frac{\pi \times (7)^2}{2}$ cm²

= $\frac{22 \times 7 \times 7}{7 \times 2}$ cm²

= 77 cm²

135. (D) Let x = true discount

So, 216 = x + 8% of x
= $x + 0.08x$
= $1.08x$

$x = \frac{216}{1.08}$
= Rs. 200

136. (B) Time difference between 9 : 00 AM & 2 : 00 PM = 5 hours

Temperature difference between

21°C & 36°C
= 36°C – 21°C
= 15°C
Now,
Time difference between 9 : 00 AM & 12 : 00 Noon = 3 hours
Now,

In 5 hours $\xrightarrow{\text{temperature difference}}$ 15°C

So, In 3 hours $\xrightarrow{\text{temperature difference}} \left(\frac{15}{5}\times 3\right)^{o}C$

= 9°C

So, Temperature at noon = 21°C + 9°C
= 30°C

137. (D) Let the two numbers are a and b, where a > b.

So, ATQ, $a - b = 3$ ..... (i)
and $a^2 - b^2 = 39$
Now, $a^2 - b^2 = (a - b)(a + b)$
i.e. 39 = 3 × (a + b)

$$\Rightarrow \quad a + b = \frac{39}{3} = 13 \quad ..... \text{(ii)}$$

Now, (i) + (ii) ⇒

$$\begin{array}{r} a - b = 3 \\ a + b = 13 \\ \hline 2a = 16 \\ \Rightarrow a = 8 \end{array}$$

⇒ The larger number = 8

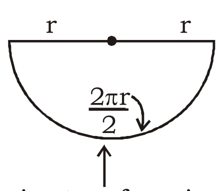
138. (D)

$$\text{Cost to A} \xrightarrow{10\%\uparrow} \text{Cost to B} \xrightarrow{5\%\uparrow} \text{Cost to C}$$

$$\Rightarrow \text{cost to A} \times \frac{110}{100}\times\frac{105}{100} = \text{Rs. } 462$$

$$\Rightarrow \text{cost to A} = \text{Rs. } \frac{462\times 100\times 100}{110\times 105} = \text{Rs. } 400$$

139. (B) Perimeter of a semi-circular area =18cm



perimeter of semi-circular area = 18 cm

$$\Rightarrow \frac{2\pi r}{2} + 2r = 18 \text{ cm}$$

$$\Rightarrow r(\pi + 2) = 18 \text{ cm}$$

$$\Rightarrow r = \frac{18}{\pi + 2}\text{ cm} = \frac{18}{\frac{22}{7}+2}\text{ cm} = \frac{18\times 7}{22+14}\text{ cm}$$

$$= \frac{18\times 7}{36}\text{ cm} = 3\frac{1}{2}\text{ cm}$$

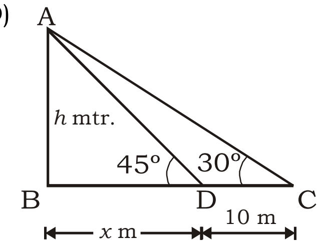
140. (B) Length of edge of a cube

$$= \sqrt[3]{\text{volume of cube}}$$

$$= \sqrt[3]{3.375 m^3}$$

= 1.5 m

141. (D)



Let AB be a pillar of height 'h' mtr.
In ΔABC,

$$\tan 30^o = \frac{h}{x+10}$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{h}{x+10} \quad \text{--- ----- (i)}$$

In ΔABD, $\tan 45^o = \frac{h}{x}$

$$\Rightarrow 1 = \frac{h}{x} \Rightarrow h = x \quad \text{--------- (ii)}$$

From (i) & (ii)

$$\frac{1}{\sqrt{3}} = \frac{h}{h+10}$$

or, $\sqrt{3}h = h + 10$

or, $h(\sqrt{3} - 1) = 10$

$$\Rightarrow h = \frac{10}{\sqrt{3}-1}$$

$$= \frac{10}{\sqrt{3}-1}\times\frac{\sqrt{3}+1}{\sqrt{3}+1}$$

$$= \frac{10(\sqrt{3}+1)}{2} = 5(\sqrt{3}+1)\text{ mtr.}$$

142. (C) Given, speed of boat (S_B) = 5 km/hr
Let speed of current $(S_C) = x$ km/hr
Now, As distance is same,

$$\Rightarrow \frac{\text{speed in still water}}{\text{upstream speed}} = \frac{\text{upstream time}}{\text{time in still water}}$$

ie. $\frac{S_B}{S_B - S_C} = 3$

ie. $\frac{5}{5 - x} = 3$

ie. $5 = 15 - 3x$

$\Rightarrow 3x = 10$

$\Rightarrow x = 3.33$ km/hr

143. (D) Percentage of candidates failed in at least one subject = 45% + 54% - 18% = 81 %

$\Rightarrow$ Percentage of candidates who passed in both the subjects = 100% - 81% = 19%

144. (B) Filling tap $\longrightarrow$ 6 hrs.

Empty tap $\longrightarrow$ 15 hrs.

Time taken by both the taps (when open simultaneously) to fill the $\frac{4}{5}$th part of cistern $= \frac{4}{5}\left(\frac{6\times15}{15-6}\right)$ hrs $= \frac{4}{5}\times\frac{90}{9}$ = 8 hrs

145. (D) Let, the length of the bus = x metre

Condition I (when moving in opposite directions)

We have, $\frac{L_T + L_B}{S_T + S_B}$ = 4 seconds

ie. $\frac{180\text{ m} + x\text{ m}}{135\text{ km/hr} + 45\text{ km/hr}}$ = 4 seconds

or, $\frac{(180+x)\text{ m}}{180\text{ km/hr}}$ = 4 seconds

or, (180 + x) m = (180 km/hr) × 4 seconds

$= \left(180\times\frac{5}{18}\right)$ m/second × 4 seconds

= 50 m/second × 4 second

= 200 m

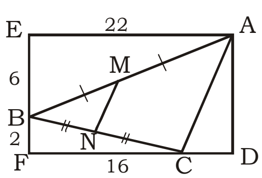
$\Rightarrow$ x = 200 m - 180 m

= 20 m

$\Rightarrow$ Length of bus = 20 m

{This value of length of the bus also satisfied the 2nd condition (of 8 seconds)}

146. (D)



[M $\rightarrow$ Mid-point of line AB
N $\rightarrow$ Mid-point of line BC]

CD = 22 cm -16 cm

= 6 cm

AD = 6 cm + 2 cm

= 8 cm

So,

$$AC = \sqrt{(CD)^2 + (AD)^2}$$

$$= \sqrt{6^2 + 8^2}$$

$$= \sqrt{36+64} = 10 \text{ cm}$$

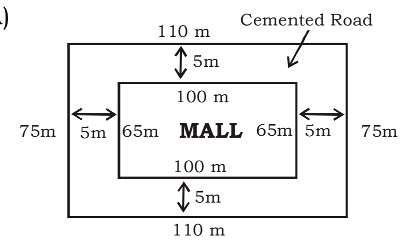
So, from the Mid-point theorem

Length of line segment MN

$= \frac{1}{2}\times$ length of line AC

$= \frac{1}{2}\times$ 10 cm = 5 cm

147.(A)



Total Area of the road = {(110×75)-(100×65)}m^2

= 8250-6500m^2 = 1750m^2

So, Required cost

= 1750 ×17.50 = Rs. 30625

148. (D) There is maximum gap between 1998 and 2000 for state U. And maximum percentage increase is also for state U.

149. (B) Required less %

$$= \frac{105-70}{105}\times 100 = 33\frac{1}{3}\%$$

150. (C) Avg. production

$$= \frac{80+60+25+50+50+80+80}{7}$$

= 60.72

MEANING IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Amnesty	Deciding not to punish someone	क्षमादान
Cannibal	One who eats its own kind	अपने ही नस्ल का भक्षण करने वाला
Carnivore	A Meat eater	नरभक्षी
Misanthrope	humankind	मानव जाति से घृणा करने वाला
Misogamist	One who hates marriage	विवाह से घृणा करने वाला
Misogynist	One who hates women	औरतों से घृणा करने वाला
Homage	Respect or honour	श्रद्धांजलि
Mortuary	Where dead bodies are kept before they are handed to the relatives	मुर्दाघर
Obituary	A notice of a person's death/ An article in a newspaper about the life of a person who is no more alive	निधन सूचना/शोक संदेश
Oblique	Not direct	तिरछा
Obtuse	Stupid	मूर्ख
Opaque	Through which one cannot see	अपारदर्शी
Palpitation	To beat rapidly or strongly	धड़कन
Stimulation	That makes one excited or active	उत्तेजक/स्फूर्ति लाने वाला
Tribulation	Unhappiness	पीड़ा
Docile	Obedient	आज्ञाकारी
Manuscript	A book written by hand	हस्तलिपि
Oration	A formal speech	भाषण
Anglophile	A person who greatly admires things English	जो अंग्रेजी याा उससे संबंधित वस्तुओं को पसंद करें
Pernicious	Causing great harm often in a way that is not easily seen or noticed	हानिकारक
Ruinous	To cause damage	नाशक
Tribulations	Unhappiness, pain or suffering	पीड़ा

SSC CPO MOCK TEST - 02 (ANSWER KEY)

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

151.(B); When the reported speech is a question of 'wh family',no conjuction is used. Hence remove 'that'.

152.(C); Prevented takes preposition 'from'. 'from' will come in place of 'against'.

153.(B); 'That' is used in place of 'as'. Because here so...... that is the correct correlative that must be used.

154.(B); When two subjects are joined by 'along with' the verb agrees with the 1st subject. Hence 'wife' (singular subject) will take 'goes' (singular verb)

155.(C); Generally when a sentence starts with past, it ends in past. So 'does' will change into 'did'

Note:- If you face any problem regarding result or marks scored, please contact 9313111777

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003