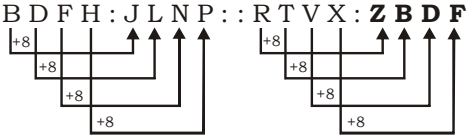
SSC CPO SI MOCK TEST – 04 (SOLUTION)

1. (C) B D F H : J L N P : : R T V X : **Z B D F**



2. (C) 400 : 20 : : 484 : **22**
Square Square

3. (D) 4. (C) 5. (B)

6. (C) S P R I N G And G O N E
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
2 % @ 4 = = 7 4 ©

Similarly, S I G N
↓ ↓ ↓ ↓
 # @ = 4

7. (A) After changing the signs according to the question, the new equation will be
(A) 72 ÷ 6 × 3 + 5 - 3 = 38
12 × 3 + 5 - 3 = 38
36 + 5 - 3 = 38
41 - 3 = 38
38 = 38 (True)

8. (B) STONE ROCK HILL MOUNTAIN RANGE
5 1 2 3 4

9. (B) (A) January ⟶ 31 days
(B) **June ⟶ 30 days**
(C) July ⟶ 31 days
(D) August ⟶ 31 days

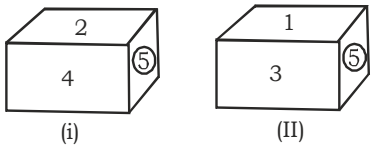
10.(D) (A) D H L P (+4, +4, +4) (B) T X B F (+4, +4, +4)
(C) J N R V (+4, +4, +4) (D) Y B E H (+3, +3, +3)

11.(D) (A) M L N O (-1, +1) (B) K J P Q (-1, +1)
(C) I H R S (-1, +1) (D) **G F T V** (-1, +2)

12. (B) 14 42 (14 is the factor of 42)

13. (C) a b b a /a b b a /a b b a/ a b b a

14. (C) Universal rule = This rule can be applied to any dice (standard or ordinary). It is applicable when we have been given 2,3, or 4 situations of a dice. According to the rule identity any two situation in which we have only one digit common. In the given dice only one digit is common i.e. (5). Now write the numbers as clockwise from the common number.



Here we have $5 \rightarrow 4 \rightarrow 2$ in figure (I) .
Now look at the second figure.
Here we have $5 \rightarrow 3 \rightarrow 1$.
Now write both of them one above the after as.

$5 \rightarrow 4 \rightarrow 2$
↕opp ↕ opp ↕opp
$5 \rightarrow 3 \rightarrow 1$

15. (A)

16. (A) 17 13 20 (-4, +7) (A) **8 12 19** (-4, +7)

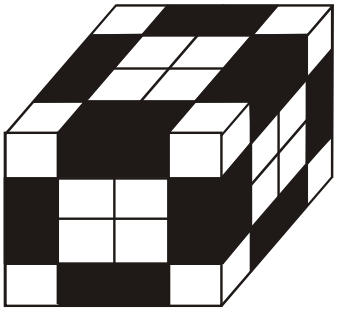
17. (A)

18. (D) D/S G/9 J/14 M/20 **P/27** (+3, +3, +3, +3; +4, +5, +6, +7)

19. (B) 2 15 4 47 7 118 11 252 16 (+2, +3, +4, +5; 4^2-1, 7^2-2, 11^2-3, 16^2-4)

20. (C) 5 × 6 - 7 = 23
4 × 5 - 6 = 14
3 × 4 - 5 = **7**

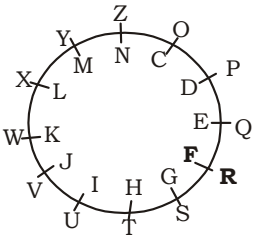
21. (A)



(Here black part is middle cube)
In any cube, middle cube have only two faces colored. Thus we can calculate the number of middle cubes with the following formula:

Numbers of middle cubes = 12 (x - 2)
12 (4- 2)
12 (2)
= 12 × 2 = 24
Thus, number of cubes = 24

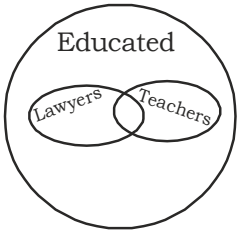
22. (D)



16 hours = **F/R**

23. (B) 33, 86, 88, 41

24. (C)



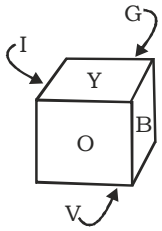
25. (D)

26. (D) 4 minutes difference = 1 day

$$\therefore \text{ 12 hours } = \frac{1}{4}\times 12\times 60 \text{ days}$$

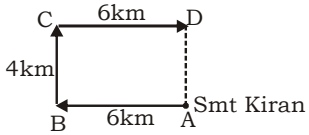
$$= 180 \text{ days}$$

27. (C)



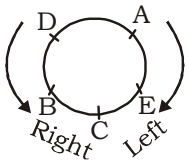
28. (A)

29. (C)



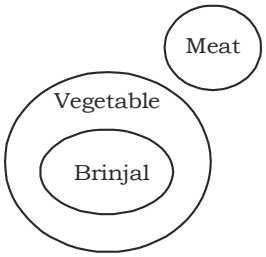
AD = 4 km

30. (C)



31. (C)

32. (C)



33. (D) 6 is common to all the three geometrical figures

34. (B) 35. (C)

36. (B) I {Dinesh, Arun, Elias} II {Kiran, Dinesh, Chandar}

from I & II {Bikram, Dinesh, Arun, Elias}

Position of Chandar is below Dinesh but not confirmed in relation to Arun & Elias

37. (D) C R U M B S

38. (D) Z E A L

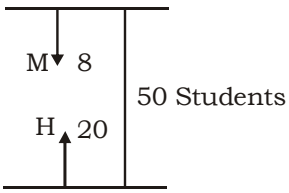
39. (C) how old [are you] → Ko [to po] ha .....

[you are] very beautiful → na [po] da [to]

∴ how = ko or ha

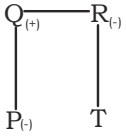
40. (D) Here total numbers of children are not given. So given data is inadequate.

41. (A)



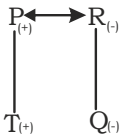
50 - (8 + 20)
= 50 - 28 = 22

42. (D)

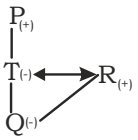


Obviously, T is the cousin of P.

43. (D) Reject the expressions (A), (B) and (C) because in all the three expression R is represented a male
Now make a family tree for the expression (D).



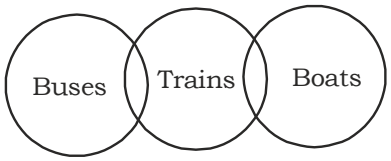
Obviously, R is the wife of P.

44. (C) 

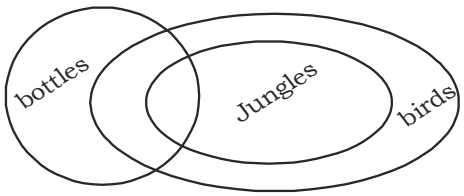
Obviously, R is the son-in-law of P.

45. (C)

46. (C) The hands of a clock are opposite to each other 11 times in every 12 hours .

47. (A) 

Conclusion I - ✓
II - ✗

48. (A) 

Conclusion I - ✓
II - ✗

49. (A)

50. (B)

101. (D) $a + b + c + d = 1$

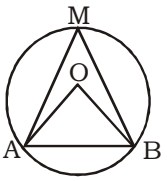
Then value of $(1 + a)(1 + b)(1 + c)(1 + d)$ will be maximum if $a = b = c = d = \frac{1}{4}$

$\therefore$ Required value

$$= \left(1+\frac{1}{4}\right)\left(1+\frac{1}{4}\right)\left(1+\frac{1}{4}\right)\left(1+\frac{1}{4}\right)$$

$$= \left(\frac{5}{4}\right)^4$$

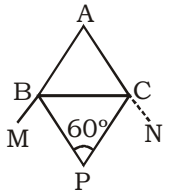
102. (D) $\therefore$ Chord AB = radius of the circle.
$\therefore$ ΔAOB is equilateral or equiangular.
$\therefore$ $\angle AOB = 60^\circ$



Again, $\angle AOB = 2\angle AMB$
$60^\circ = 2\angle AMB$
$\Rightarrow \angle AMB = 30^\circ$

[Angle made by an arc at the centre is double the angle made by it in the remaining part of the circle.]

103. (C) ABC is a Δ and BP and CP are bisectors of the exterior angles $\angle MBC$ & $\angle NCB$ respectively.



$\angle BPC = 60^\circ$ (given)

$\therefore$ $\angle A + \angle B + \angle C = 180^\circ$

[Angle sum property of a Δ]

$\Rightarrow$ $\angle B + \angle C = 180^\circ - \angle A$

$\Rightarrow$ $(180^\circ - \angle MBC) + (180^\circ - \angle NCB)$
$= 180^\circ - \angle A$

[$\because$ $\angle B + \angle MBC = \angle C + \angle NCB = 180^\circ$, linear pairs]

$\Rightarrow$ $360^\circ + \angle A = \angle MBC + \angle NCB + 180^\circ$

$$\frac{1}{2}[360^\circ+\angle A] = \frac{1}{2}[\angle MBC + \angle NCB + 180]$$

$$180 + \frac{1}{2}\angle A = \frac{1}{2}\angle MBC + \frac{1}{2}\angle NCB + 90^\circ$$

$$\Rightarrow 90^\circ + \frac{1}{2}\angle A = \angle PBC + \angle PCB$$

[$\because$ BP & CP bisect $\angle MBC$ & $\angle NCB$ respectively]

$$90^\circ + \frac{1}{2}\angle A = 180^\circ - \angle BPC$$

$$90^\circ + \frac{1}{2}\angle A = 180^\circ - 60^\circ$$

$$\frac{1}{2}\angle A = 120^\circ - 90^\circ$$

$$\frac{1}{2}\angle A = 30^\circ$$

$$\angle A = 60^\circ$$

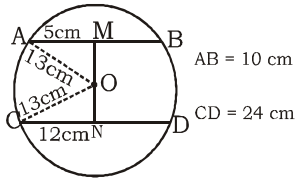
104. (A)

$\because$ $OM \perp AB$

$\Rightarrow AM = MB = \frac{1}{2}AB$

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

$= 5$ cm



[perpendicular from centre to any chord bisects the chord]

Similarly, $CN = ND = \frac{1}{2}CD = 12$ cm

In ΔAMO,

$OM^2 = OA^2 - AM^2$

$= 13^2 - 5^2$

$= 169 - 25 = 144$

$OM = 12$ cm

In ΔCNO,

$ON^2 = OC^2 - CN^2$

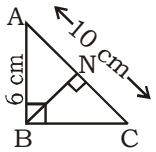
$= 13^2 - 12^2$

$ON = 5$ cm

$\therefore$ The distance between the two parallel chords = MN = MO + ON

$= 12 + 5 = 17$ cm

105. (B) $\because \Delta ANB \sim \Delta ABC$ (by AA Similarity)



$$\frac{AB}{AC}=\frac{BN}{BC}=\frac{AN}{AB}$$

From 1st and last ratio

$$\Rightarrow \frac{6}{10} = \frac{AN}{6}$$

$$AN = \frac{36}{10} = 3.6 \text{ cm}$$

$\Rightarrow NC = AC - AN = 10 - 3.6 = 6.4$ cm

Now, $\frac{AN}{NC} = \frac{3.6}{6.4} = \frac{9}{16}$

AN : NC = 9 : 16

106. (B) $x^3+\frac{1}{x^3} = \left(x+\frac{1}{x}\right)^3 - 3x.\frac{1}{x}\left(x+\frac{1}{x}\right)$

$0 = \left(x+\frac{1}{x}\right)^3 - 3\left(x+\frac{1}{x}\right)$

$\Rightarrow \left(x+\frac{1}{x}\right)\left[\left(x+\frac{1}{x}\right)^2 - 3\right] = 0$

$\Rightarrow \left(x+\frac{1}{x}\right)^2 - 3 = 0$

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

$\therefore x+\frac{1}{x} = \sqrt{3}$

Now, $\left(x+\frac{1}{x}\right)^4 = (\sqrt{3})^4 = 9$

107. (C) $x+\frac{1}{x} = 3 \Rightarrow \left(x+\frac{1}{x}\right)^3 = 3^3$

$\Rightarrow x^3+\frac{1}{x^3}+3.x.\frac{1}{x}\left(x+\frac{1}{x}\right) = 27$

$\Rightarrow x^3+\frac{1}{x^3}+3(3) = 27$

$\Rightarrow x^3+\frac{1}{x^3} = 27 - 9$ ..... (1)

$\therefore x^3+\frac{1}{x^3} = 18$

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

$\Rightarrow x^2+\frac{1}{x^2}+2.x.\frac{1}{x} = 9$

$\therefore x^2+\frac{1}{x^2} = 7$ ..... (2)

Multiply (1) & (2)

$\left(x^3+\frac{1}{x^3}\right)\left(x^2+\frac{1}{x^2}\right) = 18 \times 7$

$\Rightarrow x^5+\frac{x^3}{x^2}+\frac{x^2}{x^3}+\frac{1}{x^5} = 126$

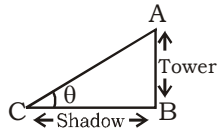
$\Rightarrow x^5+\frac{1}{x^5}+\left(x+\frac{1}{x}\right) = 126$

$\Rightarrow x^5+\frac{1}{x^5} = 126 - 3$

$\therefore x^5+\frac{1}{x^5} = 123$

108. (B) $\because BC = \sqrt{3}\,AB$

$\Rightarrow \frac{AB}{BC}=\frac{1}{\sqrt{3}}$



$\Rightarrow \tan\theta = \tan 30^\circ$

$\therefore \theta = 30^\circ$

The angle of elevation of the top of the tower = 30°

109. (C) $\tan 7\theta \,.\, \tan 2\theta = 1$

$\Rightarrow \frac{\sin 7\theta.\sin 2\theta}{\cos 7\theta.\cos 2\theta} = 1$

$\Rightarrow \frac{\cos(7\theta-2\theta)-\cos(7\theta+2\theta)}{\cos(7\theta+2\theta)+\cos(7\theta-2\theta)} = 1$

$\Rightarrow \cos 5\theta - \cos 9\theta = \cos 9\theta + \cos 5\theta$

$\Rightarrow 2\cos 9\theta = 0$

$\Rightarrow \cos 9\theta = 0$

$\Rightarrow 9\theta = (2n + 1)\frac{\pi}{2}$ [if $\cos\theta = 0$, then $\theta = (2n+1)\frac{\pi}{2}$, where n is an integer]

$\theta = (2n + 1)\frac{\pi}{18}$

Now, when $n = 0$

$\theta = (2 \times 0 + 1)\frac{\pi}{18}$

$= \frac{180}{18} = 10^\circ$ [$\because \pi$ radius $= 180^\circ$]

Now $\tan 3\theta = \tan 3 \times 10 = \tan 30^\circ = \frac{1}{\sqrt{3}}$

110. (A) $\tan\theta = 2$

Now, $\frac{8\sin\theta + 5\cos\theta}{\sin^3\theta + 2\cos^3\theta + 3\cos\theta}$

$= \frac{\cos\theta(8\tan\theta + 5)}{\cos^3\theta \times \left(\tan^3\theta + 2 + \frac{3}{\cos^2\theta}\right)}$

$= \frac{\sec^2\theta(8\tan\theta + 5)}{\tan^3\theta + 2 + 3\sec^2\theta}$

$= \frac{(1 + \tan^2\theta)(8\tan\theta + 5)}{\tan^3\theta + 2 + 3(1 + \tan^2\theta)}$

$= \frac{(1 + 2^2)(8.2 + 5)}{2^3 + 2 + 3(1 + 2^2)} = \frac{5 \times 21}{10 + 15} = \frac{5 \times 21}{25} = \frac{21}{5}$

111. (C) $7\sin^2\theta + 3\cos^2\theta = 4$

$7(1 - \cos^2\theta) + 3\cos^2\theta = 4$

$7 - 7\cos^2\theta + 3\cos^2\theta = 4$

$7 - 4 = 4\cos^2\theta$

$3 = 4\cos^2\theta$

$\Rightarrow \cos\theta = \frac{\sqrt{3}}{2}$

$\cos\theta = \cos 30^\circ$

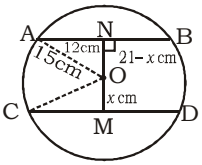
$\theta = 30^\circ = \frac{\pi}{6}$

112. (B)

$\because$ AB = 24 cm

$\Rightarrow$ AN = NB = 12 cm

Let OM = x cm, then ON = $(21 - x)$ cm



In ΔANO,

$OA^2 = AN^2 + NO^2$

$\Rightarrow 15^2 = 12^2 + (21 - x)^2$

$\Rightarrow 225 - 144 = (21 - x)^2$

$81 = (21 - x)^2$

$\Rightarrow 21 - x = 9$

$\therefore x = 21 - 9 = 12$

Again $CM^2 = CO^2 - OM^2$

$= 15^2 - 12^2$

$= 225 - 144 = 81$

$CM = 9$ cm

$\therefore$ The length of the 2nd chord CD

$= 2CM = 2 \times 9 = 18$ cm

113. (B) In ΔABC,

$\angle ABC = 75^\circ$, $\angle ACB = \left(\frac{\pi}{4}\right)^\circ$

$= \left(\frac{180}{4}\right)^\circ = 45^\circ$

$\because \angle ABC + \angle ACB + \angle BAC = 180^\circ$

[Angle sum property of a Δ]

$75^\circ + 45^\circ + \angle BAC = 180^\circ$

$\angle BAC = 180^\circ - 120^\circ$

$= 60^\circ$

$= \frac{\pi}{3}$ radius

114. (B) $(1101)^2 = 1212201$

Now, $\sqrt{121.2201} = \sqrt{\frac{1212201}{10000}}$

$= \frac{\sqrt{1212201}}{\sqrt{10000}}$

$= \frac{1101}{100} = 11.01$

115. (C) $\because$ p, q, r are in GP.

$\Rightarrow \frac{q}{p} = \frac{r}{q}$ ($\because$ The common ratio in a GP is always same)

$\Rightarrow q^2 = pr$

$\Rightarrow q = \sqrt{pr}$

116. (D) HCF a & b = 12

⇒ a and b must be multiplies of 12 (e.g. 12, 24, 36, 48, ...)

Also, a > b > 12

So, the smallest possible values of a & b will be as follows :-

b = 2 × 12 = 24

a = 3 × 12 = 36

So, Answer is 36, 24.

117. (D) Work done by A & B in 1 day

$$=\frac{1}{6}+\frac{1}{12}=\frac{2+1}{12}=\frac{1}{4}\text{ work}$$

$\frac{1}{4}$ work is completed by A & B in 1 day

1 work is completed by A & B in $\frac{1}{\frac{1}{4}}$

= 4 days

118. (B) $100 \times 10 - 100 + 2000 \div 100$

$= 100(10 - 1) + 20$

$= 100 \times 9 + 20 = 920$

119. (B) Total property given by the person

$$= \frac{1}{4}+\frac{1}{2}+\frac{1}{5}=\frac{5+10+4}{20}=\frac{19}{20}$$

120. (D) Marked price = 120% of 1500

$$= \frac{120}{100}\times 1500 = \text{Rs. } 1800$$

SP = 108% of 1500

$$= \frac{108}{100}\times 1500 = \text{Rs. } 1620$$

$$\% \text{ Discount} = \frac{1800-1620}{1800}\times 100$$

$$= \frac{180}{1800}\times 100 = 10\%$$

121. (C) $\frac{\text{Length}}{\text{Perimeter}} = \frac{5}{18}$

$$\Rightarrow \frac{l}{2(l+b)} = \frac{5}{18}$$

$$\Rightarrow 10l + 10b = 18l$$

$$\Rightarrow 10b = 8l$$

$$\Rightarrow \frac{l}{b} = \frac{10}{8}$$

$$\therefore l : b = 5 : 4$$

122. (C) Let x be added to each of the number 7, 16, 43, 79

Then, $\frac{16+x}{7+x} = \frac{79+x}{43+x}$

$\Rightarrow (79 + x)(7 + x) = (16 + x)(43 + x)$

$\Rightarrow 553 + 86x + x^2 = 688 + 59x + x^2$

$\Rightarrow 86x - 59x = 688 - 553$

$27x = 135$

$x = 5$

123. (C) Total expenditure during the year

$= 2200 \times 3 + 2550 \times 4 + 3120 \times 5$

= Rs. 32400

Total saving = Rs. 1260

Total income = Rs. 32400 + 1260 = 33660

$$\text{Average monthly income} = \frac{33660}{12}$$

= Rs. 2805

124. (A) Suppose 'm' stand for man and 'b' stand for boy

ATQ,

$12(3m + 4b) = 10(4m + 3b)$

$36m + 48b = 40m + 30b$

$18b = 4m$

Now, 36m + 48b

$= 36 \times \frac{18}{4}b + 48b$

$= 162b + 48b$

$= 210b$

$\because$ 210 boys complete the work in 1 day

$\therefore$ 1 boy complete the work in 210 days

$$\therefore 2m + 3b = \left(2\times\frac{18}{4}b + 3b\right)$$

12 boys complete the work = $\frac{210}{12}$ days

$$= \frac{70}{4} = \frac{35}{2}\text{ days}$$

$$= 17\frac{1}{2}\text{ days}$$

125. (C) $$\% \text{ Discount} = \frac{6000-5500}{6000}\times 100$$

$$= \frac{500}{6000}\times 100$$

$$= \frac{25}{3}\% = 8\frac{1}{3}\%$$

126. (D) CP of 10 cycles = 10 × 500

= Rs. 5000

Repairing charge = Rs. 2000

Net CP = Rs. 7000

SP = Rs. 750 × 5 + 550 × 5
= 3750 + 2750
= 6500
∵ SP < CP

$\therefore$ % loss $= \frac{7000-6500}{7000} \times 100$

$= \frac{500}{7000} \times 100$

$= 7\frac{1}{7}\%$

127. (D) Required % $= \frac{72}{3600} \times 100$
$= 2\%$

128. (C) Let the total number of students be x
No. of students passed in Eng.
$= 90\%$ of $x = \frac{90x}{100}$

$n(E) = \frac{90x}{100}$

$n(M) = \frac{85x}{100}$

$n(E \cap M) = 150$

$\because$ $n(E \cup M) = n(E) + n(M) - m(E \cap M)$

$x = \frac{90x}{100} + \frac{85x}{100} - 150$

$150 = \frac{90x+85x}{100} - x$

$150 = \frac{175x-100x}{100}$

$75x = 150 \times 100$

$x = \frac{150 \times 100}{75}$

$x = 200$

129. (D) Speed $= 3\frac{1}{3} = \frac{10}{3}$ m/s

$= \frac{10}{3} \times \frac{18}{5}$

= 12 km/hr

130. (C) Let P = Rs. 100
CI for Ist year = 5% of 100 = Rs. 5
CI for the 2nd year = 5 + 5% of 5
= Rs. 5.25
When CI is Rs. 5.25, P = Rs. 100

When CI is Re. 1 P = Rs. $\frac{100}{5.25}$

When CI is Rs. 420 P = $\frac{100}{5.25} \times 420$
= Rs. 8000

131. (C) r = 11 cm

CSA of hemisphere = $2\pi r^2$

$= 2 \times \frac{22}{7} \times 11 \times 11$

= 760.57 cm^2

132. (C) 5 years ago sum of ages of P & Q = 30 yrs
Total age of P, Q & R at present
= 20 × 3 = 60 yrs.
Age of R at present = 60 – (30 + 10)
= 60 – 40 = 20 yrs.
Age of R 10 years later = 20 + 10 = 30 yrs.

133. (A) Let the CP of the goods = Rs. x
SP of the goods = 132% of x

$= \frac{132x}{100}$

Now, 88% of MP $= \frac{132x}{100}$

MP $= \frac{132x}{100} \times \frac{100}{88}$

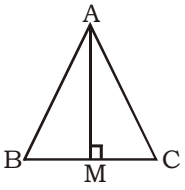
$= \frac{3x}{2}$

Required % $= \frac{\frac{3x}{2} - x}{x} \times 100$

$= \frac{\frac{x}{2}}{x} \times 100$

$= \frac{1}{2} \times 100 = 50\%$

134. (C) Let ABC is an equilateral Δ of side 'a' unit. then median AM



$= \sqrt{AB^2 - BM^2}$

$= \sqrt{a^2 - \frac{a^2}{4}}$

$= \frac{\sqrt{3}}{2}a$

Now, $\frac{\sqrt{3}}{2}a = 6\sqrt{3}$

$a = 12$ cm

Perimeter of $\Delta ABC = 3 \times 12 = 36$ cm

135. (C) Area of verandah
= Area of the hall including verandah – Area of the hall only
= $(25 + 3.5 + 3.5) \times (15 + 3.5 + 3.5) - 25 \times 15$
= $32 \times 22 - 25 \times 15$
= $704 - 375 = 329$ m^2
Cost @ of Rs.27.50 per m^2
= 329×27.50
= Rs. 9047.50

136. (A) Let 'r' be the base radius & 'h' is the height of the cone.

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

TSA of cone = $\pi rl + \pi r^2$

$= \pi r.\sqrt{h^2 + r^2} + \pi r^2$

$= \pi r[\sqrt{h^2 + r^2} + r]$

$= \pi r [\sqrt{r^2 + r^2} + r]$ [$\because h = r$]

$= \pi r (\sqrt{2}r + r)$

$= \pi r^2 (\sqrt{2} + 1)$

TSA of the hemisphere = $3\pi r^2$

Required ratio = $\frac{\pi r^2(\sqrt{2}+1)}{3\pi r^2}$

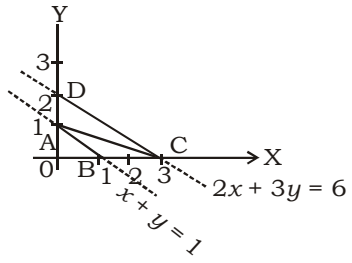
$= \frac{\sqrt{2}+1}{3}$

$= \sqrt{2}+1 : 3$

137. (B) Length of the parallelopiped 'l' = 6 + 6 = 12 cm
b = 6 cm
h = 6 cm
TSA of the rectangular parallelopiped
= $2(lb + bh + lh)$
= $2[12 \times 6 + 6 \times 6 + 12 \times 6]$
= $2[72 + 36 + 72]$
= 360 cm^2

138. (B) The expression
= $x^4 - 2x^2 + k$ is a perfect square.
If its discriminant = 0
$\Rightarrow b^2 - 4ac = 0$
$\Rightarrow (-2)^2 - 4 \times 1 \times k = 0$
$\Rightarrow 4 - 4k = 0$
$\therefore k = 1$

139. (C)



Co-ordinates of points A = (0, 1)
B = (1, 0)
C = (3, 0)
D = (0, 2)

Area of quad. ABCD = ar(ΔABC) + ar(ΔACD)

[$\because$ Area of a $\Delta = \frac{1}{2}[x_1(y_2 - y_3) + x_2(y_3 - y_1) + x_3(y_1 - y_2)]$

$= \frac{1}{2}[0(0-0) + 1(0-1) + 3(1-0)] +$

$\frac{1}{2}[0(0-2) + 3(2-1) + 0(1-0)]$

$= \frac{1}{2}[0 - 1 + 3] + \frac{1}{2}[0 + 3 + 0]$

$= 1 + \frac{3}{2} = \frac{5}{2}$ sq. unit

$= 2\frac{1}{2}$ sq. unit

Shortcut method:-
Required area
= ar(ΔOCD) – ar(ΔOBA)
$= \frac{1}{2} \times 2 \times 3 - \frac{1}{2} \times 1 \times 1$
$= \frac{6}{2} - \frac{1}{2} = \frac{5}{2} = 2\frac{1}{2}$ sq. unit

140. (D) Each exterior angle of a regular polygon
$= \frac{360^\circ}{x}$

$72 = \frac{360^\circ}{x}$

$x = 5$

Sum of all interior angles of the polygon of 5 sides $= (2 \times 5 - 4) \times 90$

$= 6 \times 90$

$= 540°$

141. (B) $r_1 \rightarrow$ radius of cylinder

$r_2 \rightarrow$ radius of cone

$h_1 \rightarrow$ height of cylinder

$h_2 \rightarrow$ height of cone

$\because$ $r_1 : r_2 = \sqrt{3} : \sqrt{2}$ & $h_1 : h_2 = \sqrt{2} : \sqrt{3}$

$$\frac{\text{Volume of Cylinder}}{\text{Volume of Cone}} = \frac{\pi r_1^2 h_1}{\frac{1}{3}\pi r_2^2 h_2}$$

$$= 3\left(\frac{r_1}{r_2}\right)^2 \times \left(\frac{h_1}{h_2}\right)$$

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

$$= \frac{3 \times \sqrt{3} \times \sqrt{3}}{\sqrt{2} \times \sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{3}}$$

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

$\therefore$ Required Ratio $= 3\sqrt{3} : \sqrt{2}$

142. (C) The production of wheat reached maximum in 1999.

143. (A) % increase in production of wheat from 1997–1998 $= \frac{1000 - 500}{500} \times 100 = 100\%$

144. (C) % decrease in production from 1996-97

$$= \frac{600 - 500}{600} \times 100$$

$$= \frac{100}{600} \times 100 = \frac{50}{3}\%$$

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

% decrease in production in 1995-96

$$= \frac{1200 - 600}{1200} \times 100 = 50\%$$

% decrease in production in 1999-2000

$$= \frac{1500 - 1300}{1500} \times 100$$

$$= \frac{200}{1500} \times 100 = 13\frac{1}{3}\%$$

145. (D) Total production from 1995 to 1998

$= 1200 + 600 + 500 + 1000$

$= 3300$ quintals

146. (C) $\frac{\text{Amount spent for food}}{\text{Amount spent for medicine}} = \frac{30}{12\frac{1}{2}}$

$$= \frac{30 \times 2}{25} = \frac{12}{5}$$

$\therefore$ Reqd. Ratio = 12 : 5.

147. (A) Amount spent on buying clothes

$$= 12\frac{1}{2}\% \text{ of } 50{,}000$$

$$= \frac{25}{200} \times 50000$$

= Rs. 6250

148. (A) Amount spent for study of children & food together.

$= 55\%$ of 35000

$= 0.55 \times 35000$

= Rs. 19250

149. (C) Angle of pie chart representing the expenditure on entertainment

$$= \frac{10}{100} \times 360 = 36°$$

150. (B) Let the total amount spent on buying clothes & house maintenance = Rs. x

Then,

$(12.5 - 10)\%$ of $x = 1500$

$$x = \frac{1500 \times 100}{2.5}$$

= Rs. 60000

Amount spent for House maintenance

= 10% of 60000 = Rs. 6000

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Acrobat	One who perform gymnastic feats	कलाबाज
Allure	Attract/entice	आकर्षित करना
Ample	Plentiful	प्रचुर
Appetite	A feeling of craving something	इच्छा/भूख
Asylum	Shelter	शरण
Backlist	List of older books still available from a publisher distinguished from books newly published	प्रकाशित हो रही पुस्तकों की सूची
Baneful	Deadly	घातक
Benign	Kindness, beneficial	कृपालु
Bibliography	List of books on a particular subject	पुस्तक सूची
Confided	Entrust	राजदार बनाना
Conjuror	One who shows tricks	करतब दिखाने वाला
Crooked	Corrupt/not straight	भ्रष्ट/टेढ़ा
Curb	Control/Restrict	अंकुश लगाना
Devious	Not straight/deceptive	टेढ़ा/भटका हुआ
Disintegrate	Decay, decompose	विघटित हो जाना
Economical	Avoiding wasting money	किफायती
Emerge	To become known	उभरना, प्रकट होना
Extravagant	Very expensive/wasteful	खर्चीला
Gnaw	Bite or chew by teeth	कुतरना
Juggler	One who performs tricks/one who manipulates	करतबबाज/धोखेबाज
Lavish	Having rich and expensive quality	विलासितापूर्ण
Malevolent	wish evil for other	बुरा चाहने वाला
Malicious	Vicious/desirous of causing harm to others	नुकसान पहुँचाने की इच्छा रखनेवाला
Mania	Obsession	सनक
Meagre	Insufficient	थोड़ा/अपर्याप्त
Optional	Available as a choice	विकल्प
Ornate	Decorated	विभूषित, सुशोभित
Pedantic	One who shows off his knowledge	ज्ञान प्रदर्शन करनेवाला
Perish	Die/disappear	मर जाना/गायब हो जाना
Restrain	Control/hold	दबाना/अंकुश लगाना
Retreat	Withdraw	पीछे हटना
Sanatorium	Hospital for treatment of chronic disease	आरोग्यशाला
Scarce	Very little	दुलर्भ/कम
Spiteful	Showing evil ill will	ईर्ष्यालु
Stingy	Unwilling to spend money	कंजूस
Superficial	Affecting only the outer part	सिर्फ बाहरी भाग से संबंधित
Tempt	Entice/Attract	ललचाना
Thrifty	Unwilling to spend money	कंजूस
Vanish	Disappear	नष्ट होना, ओझल हो जाना

SSC CPO SI MOCK TEST – 04 (ANSWER KEY)

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

Explanation

151. (C); Change 'passing marks' into 'pass marks' which is a better choice. 'Pass marks' means the minimum marks needed to pass an exam.

152. (A); Add 'at' after 'knocked'. Preposition 'at' is fixed with 'knock', if it means 'to tap the door'.

153. (B); Change 'will' into 'would'. 'Said' the reporting verb is in past so 'reporting speech' is also in 'past'.

154. (C); Change 'much' into 'many'. 'Much' is used for uncountable nouns, 'Many' is used for countable nouns.

155. (C); Change 'of' into 'from'.

Explanation of Questions 171–175

171.	Under a cloud	In disgrace कलंकित होना
172.	In a pickle	In a serious position गंभीर हालत में होना
173.	Get on well	Have a friendly relationship मित्रता वाले संबंध होना
174.	Slip off	Leave quietly चुपचाप छोड़ देना
175.	Looking forward to	Expecting with pleasure खुशी के साथ इंतजार करना

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

Note:- Whatsapp with Mock Test No. and Question No. at 7053606571 for any of the doubts. Join the group and you may also share your suggestions and experience of Sunday Mock Test.

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