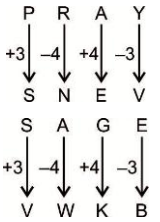
SSC CPO SPEED TEST - 12

1. (B) Business - Profit
Worker - Wage
Both are related to money.

2. (C) Number is related to mathematics
Events is Related to History.

3. (A) N : R : : V :P
+ 4 series

4. (C)



5. (B) $(4 \times 2) + (4 + 2) = 8 + 6 = 14$
$(5 \times 6) + (5 + 6) = 30 + 11 = 41$

6. (C) $(1 + 4 + 2) + (1 \times 4 \times 2) = 15$
$(2 + 3 + 4) + (2 \times 3 \times 4) = 33$

7. (B) except sun all other are planets.

8. (D) Ostrich can't fly

9. (C) + 2 series except HK.

10. (B) +4, –5, +6 sereis

11. (D) $8 - 1 = (7)^2 = 49$
$17 - 1 = (16)^2 = 256$
$14 - 1 = (13)^2 = 169$
$15 - 1 = (14)^2 = 196 \neq 225$

12. (C) $3 + 6 = (9)^3 = 729$
$4 + 8 = (12)^3 = 1728$
$8 + 7 = (15)^3 = 3375 \neq 2744$
$7 + 4 = (11)^3 = 1331$

13. (D) 2 - National
1 - Nature
4 - Niece
5 - Niggle
3 - Nurture

14. (A) 1 - Seven
4 - Store
5- Sting
2-Store
3-Strom

15. (D) Next series is 'YB'

16. (A)

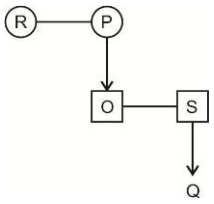
17. (B) $5 \times 2 - 1 = 9$
$9 \times 3 - 1 = 26$
$26 \times 4 - 1 = 103$
$103 \times 5 - 1 = 514$
$514 \times 6 - 1 = 3083$

18. (C) $1065 - (6^3 - 1) = 880$
$850 - (5^3 - 1) = 726$
$726 - (4^3 - 1) = 663$
$663 - (3^3 - 1) = 637$
$637 - (2^3 - 1) = 630$

19. (D) total boys in
a Row = 12 + 42 – 1
= 60 – 1 = 59

20. (A) Let Ram's age = 4
Salman's age = 5
After 5 years Salman = 5 + 5
= 10 years
Karan = 8 years
Difference b/w ages
9 – 8 = 1 years

21. (B)

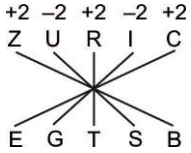


22. (C) 'NATIONAL' is not formed from given word.

23. (B) 'TERAT' is not formed from the given word.

24. (A) Blood colour is Red or Red is coded as 'white'.

25. (B)



26. (B) $18 \div 3 + 9 - 6 \times 3 = 15$

$= 18 \div 3 - 9 + 6 \times 3 = 15$

$= 6 - 9 + 18 = 15$

$= 24 - 9 = 15$

$\Rightarrow 15 = 15$

27. (C) $6 + 7 - 12 \div 6 \times 3$

$13 - 2 \times 3$

$13 - 6 = 7$

$7 = 7$

28. (C)

29. (C) $32 + 21 = (53)^2 = 2809$

$31 + 13 = (44)^2 = 1936$

30. (A) $4 \times 3 - 2 = 10$

$8 \times 6 - 2 = 46$

$9 \times 5 - 2 = 43$

31. (D) $(1 + 1)^2$

$(2 + 1)^2$

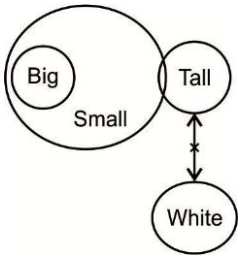
$(3 + 1)^2$

$(6 + 1)^2$

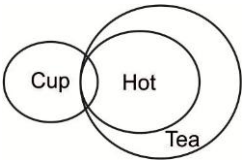
32. (D) there are '15' triangles.

33. (B) 7 triangles.

34. (C)



35. (A)



36. (A)

37. (C) $2 \leftrightarrow 5$

$4 \leftrightarrow 6$

$3 \leftrightarrow 1$

38. (B)

39. (B)

40. (C) $17 + 14 = 31$

41. (A)

42. (D)

43. (D)

44. (D)

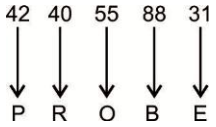
45. (A)

46. (C)

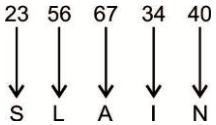
47. (A)

48. (C)

49. (B)



50. (C)



101. (A) $= \frac{141 \times 142 \times 143}{6} = \frac{3+4+5}{6}$

$= \frac{12}{6} = 2$

102. (A) $a + 20 + 12\sqrt{5}$

$= 2a + 12\sqrt{5}$

$= 2a + K\sqrt{5}$

= K = 12

103. (D) $3 + \sqrt{3} + \frac{6}{6} = 4 + \sqrt{3}$

104. (A) $\sqrt{5 + 2\sqrt{6}} = \left(\sqrt{3} + \sqrt{2}\right)$

So,

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

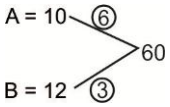
$= 2\sqrt{3}$

105. (D)

106. (A) 24 × 45 = 18 × x

= x = 60

107. (C)



Difference between

their share = $\frac{1}{11} \times 2200$

= 200

108. (A) 20 × MP = 30 × CP

MP = 30

CP = 20

profit = $\frac{10}{20} \times 100 = 50\%$

109. (B) 1 = 25 + 25 – 6.25 = 43.75%

2 = 10 + 40 – 4 = 46%

3 = 20 + 20 – 6 = 44%

110. (B) According to Question

Milk = $\frac{5}{7} \times 126 = 90$

Water = $\frac{2}{7} \times 126 = 36$

$\frac{90 + x}{36} = \frac{2}{3}$

x = 24 litre

111. (D) Alcohol = $\frac{1}{5} \times 40 = 81$ litre

Water = $\frac{4}{5} \times 40 = 32$ litre

Net Quantity of water = 32 + 10

= 42 lt

$\therefore \frac{Alcohol}{water} = \frac{4}{21}$

112. (B) Number are = 25 27 29 31 33 35 37

= a = 31

New average = $\frac{9a}{9} = 31$

113. (A) Σ boys = 24b

Σ boys – 36 + 30 = 23.5 b

24 b – 6 = 23.5 b

b = 12

114. (A) Let CP_1 = 100, SP_1 = 150

CP_2 = 200, SP_2 = 75

Loss % = $\frac{125}{200} \times 100 = 62.5\%$

115. (C) According to Question

70 % — 105

130 % — x

x = 195 Rs.

116. (A) Let present population is x

$x \times \frac{112}{100} \times \frac{112}{100} = 188160$

x = 1,50,000

117. (C) According to Question

$$\frac{72}{36+x} = \frac{1}{1}$$

x = 24 litre.

118. (B) Let the distance x

According to Question

$$\frac{x}{40} - \frac{x}{50} = \frac{1}{2}$$

x = 100

$$\therefore \text{ speed} = \frac{100\times 6}{13} = 46\frac{2}{13}$$

119. (A) Let total distance = 1200 km

400 km at 40 km/hr

300 km at 25 km/hr

500 km at 50 km/hr

$$\text{total} = \frac{400}{40}+\frac{300}{25}+\frac{500}{50}$$

= 10 + 12 + 10 = 32 hrs

$$\text{average speed} = \frac{1200}{32} = 37.5 \text{ km/hr}$$

120. (A) $SI = \frac{1440\times 3\times 8}{100} = 345.6$

121. (A) $\frac{25088}{10} = P\left[1+\frac{12}{100}\right]^2$

= P = 2000

122. (C) $\frac{72}{55}\times 100 = 130.9\%$

123. (B)

124. (C) $\frac{72+79+102+112}{4} = \frac{365}{4}$

$$= \frac{17+35+55+58}{4} = \frac{165}{4}$$

$$\text{Required \%} = \frac{200}{33}\times 100$$

$$= \frac{4000}{33} = 121.2\%$$

125. (A) $17\times\frac{4}{5}\times\frac{4}{5} = 26.56\%$

126. (B) $a^2 = 196$

a = 14

Perimeter = 14 × 4

= 56 cm

127. (C) $\pi r^2.r_2\frac{\pi}{3}r_1^2.r_1 = \frac{2\pi}{3}r_2^3$

$$= 3r^3 = r_1^3 = -2r_2^3$$

$$= \frac{k}{3^3}:\frac{k}{1}:\frac{k}{2^3}$$

$$= 2^{\frac{1}{3}}:6^{\frac{1}{3}}:3^{\frac{1}{3}}$$

128. (D) $2\pi r = 20\pi$

r = 10

CSA = 20π × 12

= 240 π

129. (B) $V = \frac{1}{3}\times Area\,of\,base\times height$

Δ ABE $\cong$ ΔACD

$$\frac{AB}{AC} = \frac{BE}{CP}$$

So, side of 4 upper square = 2cm

V_{upper} Pyramid $= \frac{1}{3}\times 4\times 4$

and V_{lower} part $= \frac{1}{3}\times 64\times 4x\frac{1}{3}\times 4x$

$$= \frac{252}{3}x$$

So, $\frac{252}{4} = \frac{62}{1}$

130. (D) 3 × (160 + 6) × 2 + 3 × (480 + 6) × 2 – 9 × 4

= 6 (166 + 486) – 36

= 6 (652) – 36

= 3912 – 36

= 3876 cm^2

131. (C) $x^2+\left(\frac{1}{5x}\right)^2+\frac{2}{5}=\frac{8}{5}+\frac{2}{5}$

$x+\frac{1}{5x}=\sqrt{2}$

or $x^2+\frac{1}{125x^3}+\frac{3}{5}\times\sqrt{2}$

$=2\sqrt{2}$

$=x^3+\frac{1}{125x^3}=\frac{7\sqrt{2}}{5}$

132. (C) $a+b=\frac{1}{ab}$ ...(i)

$\frac{1}{a^3b^3}-a^3-b^3=(a+b)^3-a^3-b^3$

$=a^3+b^3+3ab(a+b)-a^3-b^3$

$=3ab\times\frac{1}{ab}=3$

133. (A) $y^4+\frac{1}{y^4}+2=225$

$y^2+\frac{1}{y^2}=15$

134. (B) c – d = k

c + d = 5k

∴ c = 3k

d = 2k

But $\frac{cd}{3}$ = k

or $\frac{6k^2}{3}$ = k

k = $\frac{1}{2}$, cd = $\frac{3}{2}$

135. (B) $x=y^4$ (Making power same both sides)

136. (D) TCT = $\sqrt{289-225}$

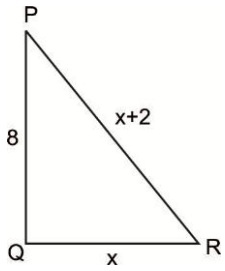
= $\sqrt{64}$ = 8 cm

137. (B) DCT = $\sqrt{d^2-25}$

$=144+25=d^2$

or d = 13 cm

138. (A)

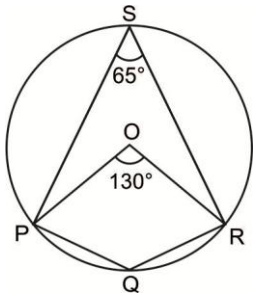


So, $64+x^2=x^2+4+4x$

or $\frac{60}{4}$ = x = 15 cm

∴ PR = 17cm

139. (A)

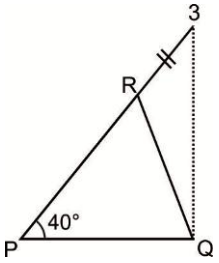


Clearly ∠S = $\frac{130}{2}$ = 65°

and ∠Q = 180 – 65

= 115°

140. (B)



$\angle PQR = 40°$

So, $\angle SRQ = 80°$

$\angle SQR = \angle QSR$

$= \frac{180-80}{2} = \frac{100}{2}$

$= 50°$

141. (C) $\frac{\frac{1}{\cos\theta}}{\frac{\sin^2\theta+\cos^2\theta}{\sin\theta\cos\theta}} = \sin\theta$

142.(B) $2\sin\left(\frac{8\theta+6\theta}{2}\right)\cos\left(\frac{8\theta-6\theta}{2}\right)$

$= 2 \sin 7\theta \cos\theta$

143. (B) Let $\theta = 30°$

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

$= \frac{3\sqrt{3}-1}{3-\sqrt{3}}$

$= \frac{9\sqrt{3}-3+9-\sqrt{3}}{6}$

$= \frac{8\sqrt{3}+6}{6} = \frac{4\sqrt{3}+3}{3}$

$\Rightarrow \frac{4}{\sqrt{3}}+1 = 0$

144. (C) $\frac{\cot A}{\cot A+\tan A} = \frac{\cot A/\sin A}{\frac{1}{\cos A \sin A}}$

$= \cos^2 A$

145. (C) $\sin x = \frac{4}{5}$

$= \left(\frac{\frac{4}{3}-\frac{3}{4}}{\frac{5}{3}-\frac{4}{3}}\right)\left(\frac{\left(\frac{3}{5}\right)^4-\left(\frac{4}{5}\right)^4}{2\times\left(\frac{3}{5}\right)^2-1}\right)$

$= \frac{7}{4}$

146. (B) $= \frac{5400}{720000}\times 100 = 0.75\%$

147. (C) $\frac{Arts}{commerce} = \frac{180}{108} = \frac{10}{6}$

$= 5 : 3$

148. (C) $\frac{54}{360}\times 100 = 15\%$

149. (D) $\frac{342}{360}\times 720,0000$

$= 684000$

$= \frac{684000}{3} = 228000$

150. (D) $\frac{72}{360}\times\frac{1.3}{100}\times 720000$

$= 1872$

so, commerce + Arts

$= 5400 - 1872$

$= 3528$

SSC CPO (TIER - I) MOCK TEST –12

ANSWER KEY

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