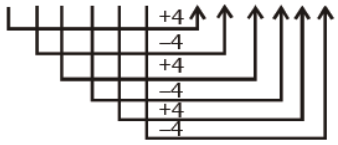
SSC PRE MOCK TEST – 35 (SOLUTION)

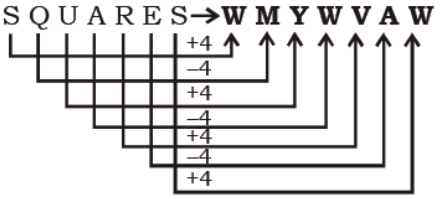
1. (C) TOURNAMENTS

2. (A) P L A N E T → T H E J I P



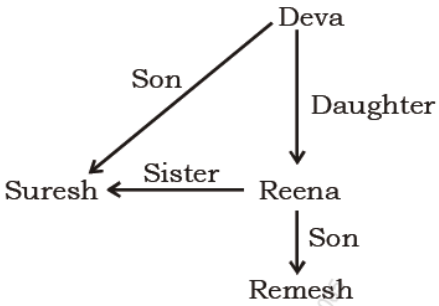
Similarly,

S Q U A R E S → **W M Y W V A W**



3. (B)

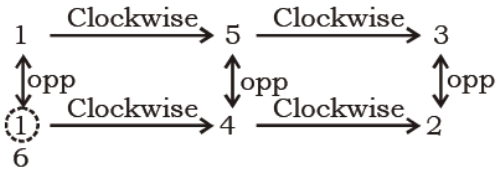
4. (D)



5. (A) Except option (C), all are Kharif crops.

6. (D) (A) 729 ⇓ $9^3 + 0$
(B) 344 ⇓ $7^3 + 1$
(C) 126 ⇓ $5^3 + 1$
(D) **217** ⇓ $6^3 + 1$

7. (D) According to dice I and III

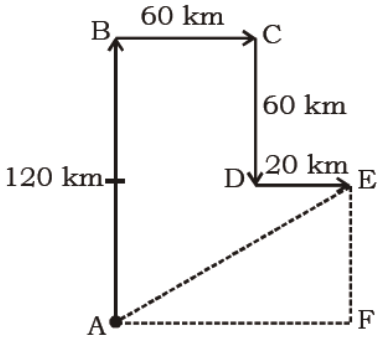


8. (C) **L M** L / L M **L** / L **M** L / **L** M L

9. (D)

10. (D) 30 ÷ 5 × 4 + 3 – 2 = 25
6 × 4 + 3 – 2 = 25
24 + 3 – 2 = 25
27 – 2 = 25
25 = 25

11. (C)



Required distance

AE = $\sqrt{80^2 , 60^2}$

= $\sqrt{6400 , 3600}$

= $\sqrt{10000}$

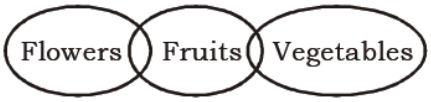
= **100 km**

12. (D) 3 × 5 – 6 = 9
9 × 2 – 1 = 17
Similarly,
7 × 4 – 8 = **20**

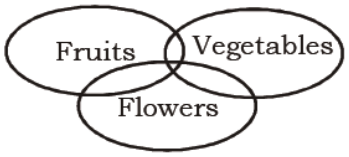
13. (B) (2 + 6) × (6 – 2 × 2) = 16
(1 + 4) × (4 – 1 × 2) = 10
(4 + 9) × (9 – 4 × 2) = 13
Similarly,
(3 + 8) × (8 – 3 × 2) = **22**

14. (C)

15. (D)



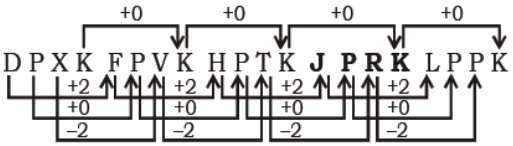
or



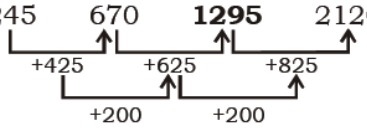
Conclusions - I - ×
II - ×

16. (B)

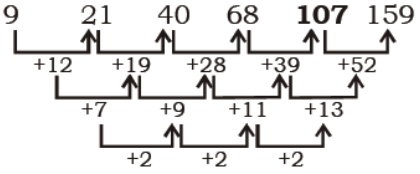
17. (A)



18. (B) 245 670 **1295** 2120



19. (B) 9 21 40 68 **107** 159

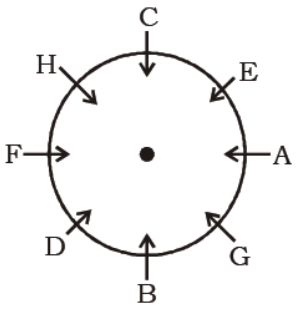


20. (C)

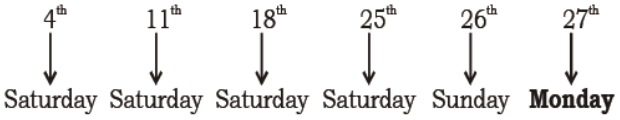
21. (C)

22. (C) 6 : 432 :: **10** : **2000**
$6^3 \times 2$ $10^3 \times 10$

23. (D)



24. (A) 3 days beginning of the month will be = 4 (Saturday)



25. (A)

26. (C) Let the largest odd number = x

ATQ,

$3(x - 8 + x - 6 + x - 4 + x - 2 + x) = 1425$

$5x - 20 = 475$

$5x = 495$

$x = 99$

So, twice the second largest $= 2(99 - 2)$

$= 194$

27. (A) Ratio of angles A, B, C and D = 7 : 6 : 5 : x

$\angle x = 2 \angle B$

So, ratio of angles A, B, C and D = 7 : 6 : 5 : 12

$(7 + 6 + 5 + 12) \times a = 360°$

$30 \times a = 360°$

$a = 12°$

Angle D = $12 \times 12° = 144°$

28. (B) Distance covered = 5 km

Time taken = 3 min 20 sec = 200 sec

So, distance covered in 8 minutes 25 sec (505 sec)

$= 5 \times \frac{505}{200}$

$= 12.625$ km

29. (B) Average marks = 87

ATQ,

After re-evaluation, new average

$= 87 + \frac{138 - 98 + 132 - 108}{8}$

$= 87 + 8$

$= 95$

30. (B) Circumference of the smaller circle = 277.2 cm

Diameter of the bigger circle = 7 × Radius of smaller circle

ATQ,

Circumference of the bigger circle

$= 277.2 \times \frac{7}{2}$

$= 970.2$ cm

31. (A) Rate of interest = 8.4%

Time = 15 years

Simple interest = ₹ 31500

ATQ,

$\text{Simple interest} = \frac{\text{Principal} \times \text{Time} \times \text{Rate}}{100}$

$\text{Principal} = \frac{31500 \times 100}{8.4 \times 5}$

= ₹ 25000

32. (B) $M_1D_1 = M_2D_2$

$4 \times 12 = M_2 \times 6$

$M_2 = 8$ boys

33. (D) Cost of 7 kg of rice = ₹ 476

Cost of 1 kg of rice = $₹ \left(\frac{476}{7}\right)$ = ₹ 68

Cost of 3 kg of rice = ₹ (68 × 3) = ₹ 204

Cost of 5 kg of rice = ₹ (68 × 5) = ₹ 340

So, Cost of 17 kg of potatoes = ₹ 340

Cost of 5 kg of potatoes = $₹ \left(340 \times \frac{5}{17}\right)$ = ₹ 100

So, cost of 3 kg of rice and 5 kg of potatoes

= ₹ (204 + 100) = ₹ 304

34. (B) Area of the square = 1521 cm²

Side of the square = $\sqrt{1521}$ = 39 cm

ATQ,

Length of the rectangle = $\frac{2}{3} \times 39$ = 26 cm

Breadth of the rectangle = $\frac{1}{2} \times 26$ = 13 cm

So, perimeter of the rectangle

= 2 × (26 + 13)

= 78 cm

35. (C) Cost price for hard disk = ₹ 6900

Loss percent = 12%

So, selling price of hard disk

$= ₹\left(6900 \times \frac{88}{100}\right)$

= ₹ 6072

36. (D) Total number of employees = 4800

Total number of male employess

$= 4800 \times \frac{45}{100}$

= 2160

Required number of employees

$= 2160 \times \frac{40}{100}$

= 864

37. (B) Principal = ₹ 22500

Time = 4 years

Simple interest = ₹ 10800

$\text{Rate} = \frac{10800 \times 100}{22500 \times 4}$ = 12%

$\text{C.I. for 2 years} = 22500\left(1 + \frac{12}{100}\right)^2 - 22500$

= ₹ (28224 – 22500)

= ₹ 5724

38. (C) ATQ,

$\text{Total change in area} = +20 - 20 - \frac{20 \times 20}{100}$

= 4% decrease

New area = 192 m²

$\text{So, original area} = \left(192 \times \frac{100}{96}\right) \text{m}^2$

= 200 m²

39. (C) Profit received by an officer = ₹ 25000

So, total profit received by 45 officers

= ₹ (25000 × 45)

= ₹ 1125000

= ₹ 11.25 lakhs

So, profit received by 80 clerks

$= ₹\left(11.25 \times \frac{3}{5}\right)$

= ₹ 6.75 lakhs

So, total profit earned by the organization

= ₹ (11.25 + 6.75)

= ₹ 18 lakhs

40. (A) $x + \frac{1}{x} = \sqrt{3}$

cubing both sides

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

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

$x^6 + 1 = 0$

$x^{18} + x^{12} + x^6 + 1 = x^{12}(x^6 + 1) + x^6 + 1$

= 0

41. (D) $(ad - bc)^2 + (ac + bd)^2$

$= (ad)^2 + (bc)^2 - 2abcd + (ac)^2$

$+ (bd)^2 + 2abcd$

$= (ad)^2 + (bc)^2 + (ac)^2 + (bd)^2$

$= (a^2 + b^2)(c^2 + d^2)$

= 2 × 1 = 2

42. (B) P (↑) 10 ——— +6

Q (↑) 12 — 60 ——— +5

C (↓) 6 ——— $\frac{-10}{+1}$

So, time taken to fill one-fourth of the tank = $\frac{60}{4 \times 1}$ = 15 hours

If all three are opened at 7 am, then one-fourth tank will be filled at 10 pm.

43. (C) Minimum value of $2\sin^2\theta + 3\cos^2\theta = 2$

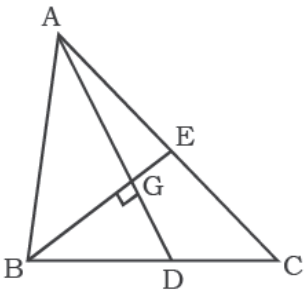
44. (B) $x^2 = y + z, y^2 = x + z$ and $z^2 = x + y$

let $x = y = z = 2$ which satisfies the above equation.

$$\frac{1}{x+1}+\frac{1}{y+1}+\frac{1}{z+1}=\frac{1}{2+1}+\frac{1}{2+1}+\frac{1}{2+1}$$

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

45. (C)



AD = 9 cm

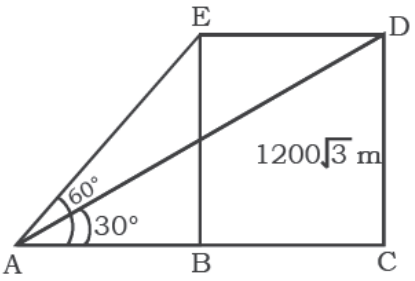
GD = $\frac{1}{3}\times 9$ = 3 cm

BE = 6 cm

BG = $\frac{2}{3}\times 6$ = 4 cm

So, BD = $\sqrt{4^2+3^2}$ = 5 cm

46. (D)



BE = CD = $1200\sqrt{3}$ m

AB = BE cot60°

= $1200\sqrt{3} \times \frac{1}{\sqrt{3}}$ = 1200 m

AC = CD cot30° = $1200\sqrt{3} \times \sqrt{3}$ = 3600 m

So, distance covered by the aeroplane in 15 seconds

= (3600 – 1200)m

= 2400 m

So, speed of the aeroplane = $\frac{2400}{15}$ m/sec

= 160 m/sec

47. (D) $\cos(40°-\theta)-\sin(50°+\theta)+\frac{\cos^2 40°+\cos^2 50°}{\sin^2 40°+\sin^2 50°}$

= $\cos(40° - \theta) - \cos(90° - 50° - \theta) + \frac{1}{1}$

= 0 + 1 = 1

48. (A) Required ratio

$$= \left(34560\times\frac{55}{100}\right):\left(45640\times\frac{45}{100}\right)$$

= 1056 : 1141

49. (D) Number of men visiting super market

$$D = 55500 \times \frac{41}{100}$$

= 22755

Total number of people visiting all the super market together = 303600

Required percentage = $\frac{22755}{303600}\times 100$

= 7.5%

50. (C) Required number of children

$$= \left(65900\times\frac{20}{100}+55500\times\frac{33}{100}\right)$$

= 13180 + 18315

= 31495

SSC PRE MOCK TEST – 35 (ANSWER)

1. (C)	26. (C)	51. (B)	76. (A)
2. (A)	27. (A)	52. (D)	77. (A)
3. (B)	28. (B)	53. (D)	78. (A)
4. (D)	29. (B)	54. (B)	79. (D)
5. (A)	30. (B)	55. (B)	80. (D)
6. (A)	31. (A)	56. (A)	81. (B)
7. (D)	32. (B)	57. (A)	82. (B)
8. (C)	33. (D)	58. (D)	83. (A)
9. (D)	34. (B)	59. (C)	84. (B)
10. (D)	35. (C)	60. (B)	85. (D)
11. (C)	36. (D)	61. (A)	86. (A)
12. (D)	37. (B)	62. (A)	87. (A)
13. (B)	38. (C)	63. (B)	88. (D)
14. (C)	39. (C)	64. (B)	89. (A)
15. (D)	40. (A)	65. (D)	90. (D)
16. (B)	41. (D)	66. (A)	91. (A)
17. (A)	42. (B)	67. (C)	92. (C)
18. (B)	43. (C)	68. (C)	93. (C)
19. (B)	44. (B)	69. (D)	94. (D)
20. (C)	45. (C)	70. (D)	95. (B)
21. (C)	46. (D)	71. (C)	96. (A)
22. (C)	47. (D)	72. (D)	97. (B)
23. (D)	48. (A)	73. (C)	98. (A)
24. (A)	49. (D)	74. (A)	99. (B)
25. (A)	50. (C)	75. (B)	100. (C)