

SSC MOCK TEST - 330 (SOLUTION)

1. (B) As,

$$\begin{array}{cccc} R & T & V & X \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 18 & + & 20 & + & 22 & + & 24 \Rightarrow \frac{84}{2} = 42 \end{array}$$

Similarly,

$$\begin{array}{cccc} M & O & Q & S \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 13 & + & 15 & + & 17 & + & 19 \Rightarrow \frac{64}{2} = 32 \end{array}$$

2. (C) As,

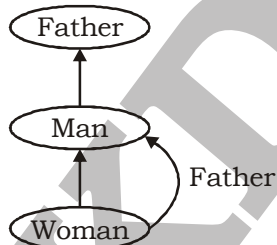
$$\begin{array}{cccc} 36 & 16 & 64 & 4 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 6 & + & 4 & + & 8 & + & 2 = 20 \text{ (Sum of square root of 36, 16, 64 and 4)} \end{array}$$

Similarly,

$$\begin{array}{cccc} 169 & 25 & 144 & 81 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 13 & + & 5 & + & 12 & + & 9 = 39 \text{ (Sum of square root of 169, 25, 144 and 81)} \end{array}$$

3. (B) Oxygen is a waste material of photosynthesis, while garbage is a waste material of house.
 4. (D) China, Brazil and Russia is the name of country, while Addis Ababa is the capital of 'Ethiopia'.
 5. (B) There are 31 days in the month of March, July and August, while the number of days in April is 30 days.
 6. (C) The numbers 93165, 36747 and 76137 are divisible by 3, while 85253 is not divisible by 3.
 7. (A) 5. Shoulder → 6. Elbow → 1. Wrist → 4. Palm → 3. Fingers → 2. Nails

8. (C)



Hence the woman is daughter of that man.

9. (B) As,

$$14 \xrightarrow{\times \frac{14}{2}} 98$$

$$12 \xrightarrow{\times \frac{12}{2}} 72$$

Similarly,

$$8 \xrightarrow{\times \frac{8}{2}} 32$$

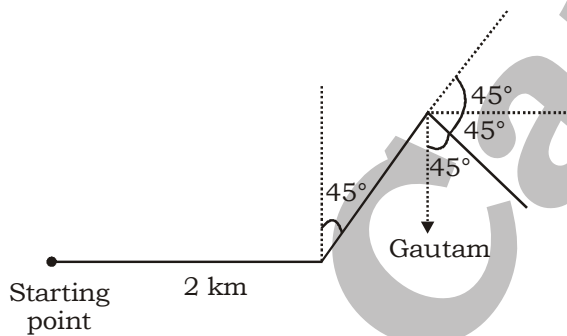
10. (B) $D \xleftrightarrow{\text{opposite}} W, \begin{matrix} A \\ \downarrow -1 \\ Z \\ \downarrow -1 \\ Y \end{matrix}$
 $X \xleftrightarrow{\text{opposite}} C,$
 $P \xleftrightarrow{\text{opposite}} K,$

11. (C) It was Saturday. On 31 December 2005.
 Number of odd days from 2006 to 2010 = $1 + 1 + 2 + 1 + 1 = 6$
 It was Saturday + 6 = Friday on 31 December 2010.
 Hence, it was Sunday on 2 January 2011.

12. (B) As,
 $3 \times 2 \times 2 = 12$
 $5 \times 2 \times 5.5 = 55$
 Similarly,
 $-2 \times 6 \times 2.8 = -33.6$

13. (C) **Ist column,**
 $30 \times 1.5 = 45$
 $45 \times 2 = 90$
IInd column,
 $50 \times 1.5 = 75$
 $75 \times 2 = 150$
IIIrd column,
 $38 \times 1.5 = 57$
 $57 \times 2 = 114$

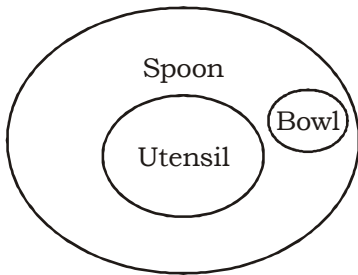
14. (A)



Hence, now he is in South direction.

15. (C)
- | | |
|--------------------------------------------------|--------------------------------------------------|
| $C \xleftrightarrow{+1} D$
Consonant | $P \xleftrightarrow{+1} Q$
Consonant |
| $O \xleftrightarrow{\text{Opposite}} L$
Vowel | $A \xleftrightarrow{\text{Opposite}} Z$
Vowel |
| $U \xleftrightarrow{\text{Opposite}} F$
Vowel | $R \xleftrightarrow{+2} T$
Consonant |
| $R \xleftrightarrow{+2} T$
Consonant | $E \xleftrightarrow{\text{Opposite}} V$
Vowel |
| $I \xleftrightarrow{\text{Opposite}} R$
Vowel | $N \xleftrightarrow{+3} Q$
Consonant |
| $E \xleftrightarrow{\text{Opposite}} V$
Vowel | $T \xleftrightarrow{+4} X$
Consonant |
| $R \xleftrightarrow{+3} U$
Consonant | |

16. (C)



Conclusion:

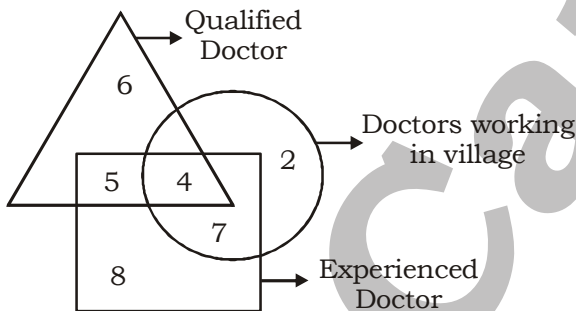
I. False II. Can't say III. Can't say
Hence, either conclusion II or III follows.

17. (C) HEMA/HEMA/HEMA/HEMA

18. (A) As per the given question, we know that the Pope belongs to both Catholics and Christians. So, it is clear that option (A) represent the best relationship between Christians, Catholic and Pope.

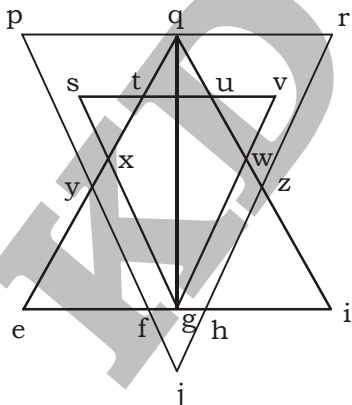
19. (C) $20 + 8 - 2.5 \div 20 \times 16$
After changing the sign:
 $= 20 \times 8 \div 2.5 + 20 - 16$
 $= \frac{160}{2.5} + 20 - 16$
 $= 64 + 20 - 16 = 68$

20. (C)



Hence, Number of qualified and experienced doctor working in villages = 4

21. (C)



There are three triangles in triangle prj, sgv, qtu, eqi, fhj.
Number of triangles in above triangle = $3 \times 5 = 15$ and single triangles are = pqy, qrz, yef, zhi, stx, uvw, exg, wgi, qxg, qwg, qyf, qzj = 12
 \therefore Total triangles = $15 + 12 = 27$

22. (B)

23. (C)

24. (B) From positions X and Y we conclude that 1, 5, 6 and 3 lie adjacent to 4. Therefore, 2 must lie opposite 4. From positions Y and Z we conclude that 4, 3, 2 and 5 lie adjacent to 6. Therefore, 1 must lie opposite 6. Thus, 2 lies opposite 4, 1 lies opposite 6 and consequently 5 lies opposite 3. As analysed above, the number on the face opposite 4 is 2. In position Y, since 4 lies on the top, therefore 2 must lie at the bottom face.
25. (B) $96 \text{ U } 4 \text{ X } 6 \text{ M } 11 \text{ D } 9$
After changing the signs as per the given details,
 $96 \div 4 - 6 + 11 \times 9$
 $= 24 - 6 + 11 \times 9$
 $= 24 - 6 + 99 = \mathbf{117}$
26. (C) Malaviya became the President of the Indian National Congress in 1909 and 1918. He was a moderate leader and opposed the separate electorates for Muslims under the Lucknow Pact of 1916. The "Mahamana" title was conferred to him by Gandhi.
31. (A) A Magnetic quantum number represents the number of orbitals present in the sub-shell magnetic quantum number about the orientation of the orbital.
34. (D) International Day for the Elimination of Violence Against Women is being celebrated under the theme - Orange the World: End Violence against Women Now!
37. (B) Airtel Payments Bank Limited (or Airtel Bank), a subsidiary of Bharti Airtel Limited has launched India's first payment bank with 7.25% interest on savings accounts as a pilot basis of its banking services in Rajasthan.
39. (B) The nearest star system to the Earth is the Alpha Centauri triple-star system which is about 4.37 light-years or 40 trillion Km away from the earth. The Alpha Centauri triple-star system consists of three stars named Alpha Centauri A, Alpha Centauri B, and Proxima Centauri.
41. (D) Victoria Falls, spectacular waterfall located about midway along the course of the Zambezi River, at the border between Zambia to the north and Zimbabwe to the south.
42. (C) The excited mercury atoms produce shortwave ultraviolet light that then causes a phosphor to fluoresce, producing visible light. 6500 K is usually printed on a used fluorescent tubelight.
43. (D) The tribal population in Andaman and Nicobar Islands belongs to the Negroid race. The Andaman Islands are home to four tribes - the Great Andamanese, Onge, Jarawa and Sentinelese.
46. (B) Cripps Mission came to India in the year 1942 (23rd March) with some proposals on framing the Indian Constitution. Lord Linlithgow was the viceroy of India at that time. Sir Stafford Cripps was the head of the mission.
47. (B) January 28, 2022 marks the 157th birth anniversary of the freedom fighter, who is also popularly known as 'Punjab Kesari' or the 'Lion of Punjab'.
48. (A) Bollywood actor Manoj Bajpayee won the Best Performance by an Actor award, narrowly beating Nawazuddin Siddiqui, at the 10th Asia Pacific Screen Awards APSA here on Thursday.
50. (B) "The Chinese PLA handed over the young boy from Arunachal Pradesh Shri Miram Taron to Indian Army at WACHA-DAMAI interaction point in Arunachal Pradesh today.
51. (A) Let the CP = ₹ x
Loss in First case = ₹ (x - 6000)
Profit in Second case = ₹ (8100 - x)
ATQ,
$$(8100 - x) = \frac{3}{4}(x - 6000)$$

$$8100 - x = \frac{3x}{4} - 4500$$

$$\frac{3x}{4} + x = 12600$$

$$\frac{7x}{4} = 12600$$

$$x = \frac{12600 \times 4}{7} = ₹ 7200$$

$$\therefore SP = 7200 \times \frac{110}{100} = ₹ 7920$$

52. (C) Let the speed of cars be x km/hr and y km/hr, such that $x > y$.
When they are moving in the same direction, then relative speed = $(x - y)$ km/h.
When they are moving in opposite direction, then relative speed = $(x + y)$ km/hr
ATQ,

$$\frac{144}{x - y} = 12$$

$$x - y = 12 \quad \dots(i)$$

$$\frac{144}{x + y} = \frac{9}{8}$$

$$x + y = 128 \quad \dots(ii)$$

Adding equation (i) and (ii),

$$2x = 140$$

$$x = 70 \text{ km/hr}$$

53. (D) B is 25% more efficient than A and C is 20% more efficient than B.

Ratio of efficiency of B and A = $125 : 100 = 5 : 4$

Ratio of efficiency of C and B = $6 : 5$

So, efficiency of A, B and C = $4 : 5 : 6$

They worked for 3 days, (A + B + C)'s 3 days work = $(4 + 5 + 6) \times 3 = 45$ units

Now, A can complete the work in 40 days.

Total work = $4 \times 40 = 160$ units

Remaining work = $160 - 45 = 115$ units

$$\therefore \text{Required number of days} = \frac{115}{5} = 23 \text{ days}$$

54. (B) Total of 40 numbers = $85 \times 40 = 3400$

Total of 25 numbers = $25 \times 75 = 1875$

$$\therefore \text{Required average} = \frac{3400 - 1875}{15} = \frac{1525}{15} = 101 \frac{2}{3}$$

55. (A) Metal x in alloy A = $\frac{4}{7}$

$$\text{Metal x in alloy B} = \frac{3}{8}$$

$$\text{Thus, metal x in alloy C} = \frac{4}{7} \times \frac{1}{3} + \frac{3}{8} \times \frac{1}{3} = \frac{4}{21} + \frac{1}{8} = \frac{53}{168}$$

$$\therefore \text{Required \%} = \left(\frac{53}{168} \times 100 \right) \% = 31.54\%$$

56. (C) $P = \frac{7500 \times 100}{10 \times 2} = ₹ 37500$

$$CI = 37500 \left(1 + \frac{15}{100} \right)^2 - 37500$$

$$= 37500 \times \frac{23}{20} \times \frac{23}{20} - 37500$$

$$= 49593.75 - 37500 = ₹ 12093.75$$

57. (B) Required time = LCM of 8, 10, 12 and 16 = 240 seconds = 4 minutes

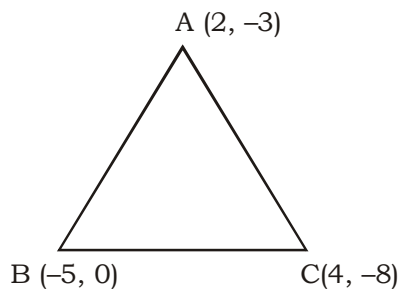
58. (C) When a certain number is divided by 52, the remainder is 49.

Therefore, remainder when the same number is divided by 13 will be same as we divide 49

by 13. (Since 52 is divisible by 13) $= \frac{49}{13} = 10$ remainder

Now, required $\sqrt{5x-1} = \sqrt{5 \times 10 - 1} = \sqrt{50-1} = \sqrt{49} = 7$

59. (C)



$$\therefore \text{Required centroid} = \left(\frac{2 + (-5) + 4}{3}, \frac{-3 + 0 + (-8)}{3} \right) = \left(\frac{1}{3}, \frac{-11}{3} \right) = (1, -11)$$

60. (A) $\frac{2x}{3} - \frac{5 \left(\frac{4x}{5} - \frac{4}{3} \right)}{2} = \frac{1}{3}$

$$\frac{2x}{3} - 2x + \frac{10}{3} = \frac{1}{3}$$

$$-\frac{4x}{3} = \frac{1}{3} - \frac{10}{3}$$

$$-\frac{4x}{3} = -\frac{9}{3}$$

$$\therefore x = \frac{9}{4}$$

61. (A) $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$

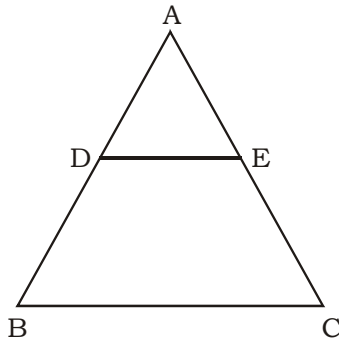
$$(8)^3 = 32 + 3ab(8)$$

$$24ab = 512 - 32$$

$$24ab = 480$$

$$\therefore ab = \frac{480}{24} = 20$$

62. (C)



$$AD : DB = 1 : 4$$

$$AD : AB = 1 : 5$$

$$\text{Area of triangle ADE} = 6 \text{ sq. cm}$$

As DE is parallel to base BC then triangle ABC and triangle ADE are similar.

We know that the area of similar triangle is equal to the square of corresponding side.

$$\text{Hence, } \frac{\text{Area of triangle ADE}}{\text{Area of triangle ABC}} = \left(\frac{AD}{AB}\right)^2$$

$$\frac{6}{\text{Area of triangle ABC}} = \frac{1}{25}$$

$$\text{Area of triangle ABC} = 150$$

$$\text{Area of quadrilateral BDEC} = \text{Area of triangle ABC} - \text{Area of triangle ADE} = 150 - 6 = 144$$

$$\therefore \text{ Required ratio} = 6 : 144 = 1 : 24$$

63. (C) Length = 11 cm

$$\text{Height} = 6 \text{ m}$$

$$\text{Area of four walls} = 114 \text{ m}^2$$

$$2 \times h(1 + b) = 192$$

$$2 \times 6(11 + b) = 192$$

$$132 + 12b = 192$$

$$12b = 60$$

$$\therefore b = 5 \text{ m}$$

64. (A) Let the first term = a

$$\text{Common difference} = d$$

$$4^{\text{th}} \text{ term} = 11 = a + (4 - 1)d \quad \dots\dots\dots(i)$$

$$7^{\text{th}} \text{ term} = -4 = a + (7 - 1)d \quad \dots\dots\dots(ii)$$

Subtract equation (ii) from equation (i),

$$\text{Then, } 15 = -3d$$

$$d = -5$$

Put the value of d in equation (i),

$$11 = a + (4 - 1) \times -5$$

$$a = 11 + 15 = 26$$

$$11^{\text{th}} \text{ term} = 26 + (11 - 1) \times (-5) = 26 - 50 = -24$$

$$\therefore \text{ Required sum} = \frac{11}{2}(26 - 24) = 11$$

65. (C) Since 729 and 16 are co-prime, we will follow the Euler Theorem.

$$16 = 2^4, \text{ So Euler number of 16 is } 16 \times \left(\frac{1}{2}\right) = 8$$

Therefore, we will divide the power of 729 by 8 and remainder will be used.

$$\text{Now, } \frac{729}{8} \text{ leaves remainder as 1.}$$

$$\text{So, } \frac{729^{729}}{16} = \frac{729}{16} \text{ and remainder is 9.}$$

66. (B) $x - \frac{1}{x} = 9$

Squaring both sides,

$$x^2 + \frac{1}{x^2} - 2 \times x \times \frac{1}{x} = 81$$

$$x^2 + \frac{1}{x^2} = 83$$

$$x^2 + \frac{1}{x^2} + 2 \times x \times \frac{1}{x} = 83 + 2$$

$$\left(x + \frac{1}{x}\right)^2 = 85$$

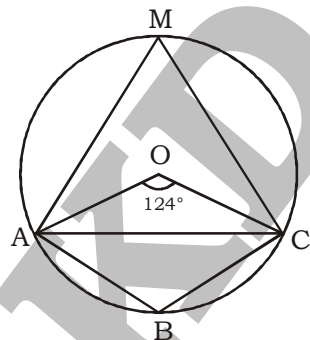
$$\therefore x + \frac{1}{x} = \sqrt{85}$$

67. (D) $\frac{CP}{MP} = \left(\frac{100 - d\%}{100 + P\%}\right)$

$$\frac{CP}{2760} = \frac{100 - 30}{100 + 15}$$

$$\therefore CP = \frac{2760 \times 70}{115} = ₹ 1680$$

68. (B)



$$\angle AOC = 124^\circ$$

$$\angle AMC = \frac{124^\circ}{2} = 62^\circ$$

(The angle subtended by an arc at the centre is double the angle subtended by it at any point on the remaining part of circle.)

$$\angle ABC = 180^\circ - 62^\circ = 118^\circ$$

$$\therefore \angle CBP = 180^\circ - 118^\circ = 62^\circ$$

69. (D) $P = ₹ 13000$

$$R = 15\% \text{ p.a. or } 15\% \times \frac{8}{12} = 10\%$$

$$T = 2 \text{ years or } \frac{2 \times 12}{8} = 3 \text{ eight-monthly periods.}$$

$$CI = 13000 \times \left(1 + \frac{10}{100}\right)^3 - 13000$$

$$= 13000 \times \left(\frac{110}{100}\right)^3 - 13000$$

$$= 13000 \times 1.331 - 13000$$

$$= 17303 - 13000 = ₹ 4303$$

70. (B) $\tan 2A = \cot (A - 18^\circ)$

As we know by trigonometric identities,

$$\tan 2A = \cot (90^\circ - 2A)$$

Substituting the above equation in the given equation, we get

$$\cot (90^\circ - 2A) = \cot (A - 18^\circ)$$

$$90^\circ - 2A = A - 18^\circ$$

$$108^\circ = 3A$$

$$\therefore A = \frac{108^\circ}{3} = 36^\circ$$

71. (B) B is the state which is the largest producer of rice.

72. (B) The average of production of rice = $\frac{8+10+4+4+2}{5} = 5.6$ lakh tonnes

73. (C) The total production of rice and wheat in state B = $10 + 2 = 12$ lakh tonnes

The total production of rice and wheat in state C = $4 + 4 = 8$ lakh tonnes

The total production of rice and wheat in state D = $4 + 2 = 6$ lakh tonnes

The total production of rice and wheat in state E = $2 + 6 = 8$ lakh tonnes

\therefore The minimum production of rice and wheat is in the state D.

74. (D) Total production of rice = $8 + 10 + 4 + 4 + 2 = 28$

Total production of wheat = $16 + 2 + 4 + 2 + 6 = 30$

\therefore Required ratio = $28 : 30 = 14 : 15$

75. (D) The difference between the production of rice and wheat in the state A

= $16 - 8 = 8$ lakh tonnes

The difference between the production of rice and wheat in the state B

= $10 - 2 = 8$ lakh tonnes

The difference between the production of rice and wheat in the state E

= $6 - 2 = 4$ lakh tonnes

\therefore The difference is maximum in A and B both

MEANINGS IN ALPHABETICAL ORDER

Acumen	the ability to make good judgments and quick decisions, typically in a particular domain	कुशाग्रता
Affectionate	readily feeling or showing fondness or tenderness	प्रेमी
Alien	belonging to a foreign country or nation	विदेशी
Benevolent	well meaning and kindly	परोपकारी
Charitable	relating to the assistance of those in need	दानशील
Emigrant	a person who leaves their own country in order to settle permanently in another	उत्प्रवासी
Immigrant	a person who comes to live permanently in a foreign country	आप्रवासी
Misanthrope	a person who dislikes humankind and avoids human society	मानवद्वेषी
Misogynist	a person who dislikes, despises, or is strongly prejudiced against women	नारीद्वेषी
Philanthropist	a person who seeks to promote the welfare of others, especially by the generous donation of money to good causes	लाकोपकारक
Radiant	sending out light; shining or glowing brightly	दीप्तिमान
Segregate	set apart from the rest or from each other; isolate or divide	अलग

SSC MOCK TEST - 330 (ANSWER KEY)

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