

SSC MOCK TEST - 363 (SOLUTION)

1. (C) Crowd is group of Man, while Class is group of Students.

2. (A) As, $(23)^2 = 529 + 2 = 531$

Similarly, $(27)^2 = 729 + 2 = 731$

3. (D) All other can be used to answer "where".

4. (A) (A) $5 \times 4 + 4 = 24$

(B) $7 \times 4 + 2 = 30$

(C) $6 \times 4 + 2 = 26$

(D) $8 \times 4 + 2 = 34$

5. (D) The final arrangement is as follows.

	Weight ↑	Height ↑
1.	C	E
2.	D	A
3.	E	C
4.	A	B
5.	B	D

So, D is the second heaviest person.

6. (D) Here two series are included in the series.

$68 \xrightarrow{-5} 63 \xrightarrow{-6} 57 \xrightarrow{-7} 50 \xrightarrow{-8} 42 \xrightarrow{-9} 33$

$3 \times 1 = 3, 3 \times 2 = 6, 6 \times 3 = 18, 18 \times 4 = 72, 72 \times 5 = 360$

7. (D) XXI XX XIX XVIII XVII XVI

↓ ↓ ↓ ↓ ↓ ↓
 21 20 19 18 17 16

8. (B) As,

G R E A T

* ! @ \$

And,

R E D

* ! ^

Similarly,

R E A D

* ! @ ^

9. (B) As, $17 + 8 = 25$

$25 + 16 = 41$

Similarly, $41 + 8 = 49$

$49 + 16 = 65$

10. (B) abadna / abadna / abadna / abadna / abadna

11. (D) **From Figure I and II,**

Letter Q are in both dice.

So, letter M, O, P, L can't be on the opposite face of Q.

i.e., Q \leftarrow Opposite \rightarrow N

From Figure II and III,

Letter L, Q, O, N can't be on the opposite face of P

i.e., P \leftarrow Opposite \rightarrow M

From Figure I and II,

Letter M, Q, N and P can't be on the opposite face of O

i.e. P \leftarrow Opposite \rightarrow N

12. (B) **In the first row,**

$$45 + 15 = 60 \Rightarrow 60 \times 2 = 120$$

In the second row,

$$16 + 17 = 33 \Rightarrow 33 \times 2 = 66$$

In the third row,

$$12 + 18 = 30 \Rightarrow 30 \times 2 = \mathbf{60}$$

13. (D) 121 ? 11 ? 12 ? 48 ? 10

From option (D),

$$121 \div 11 + 12 > 48 + 10$$

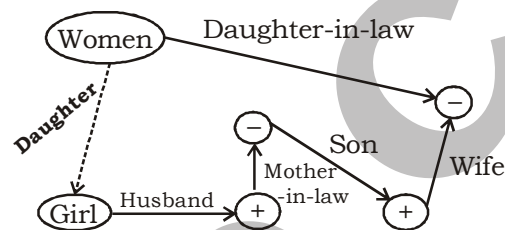
$$11 \times 12 > 48 + 10$$

$$132 > 58$$

14. (C) 2. Hypocrite 1. Hypodermic 5. Hypotenuse 4. Hypothermia 3. Hysterical

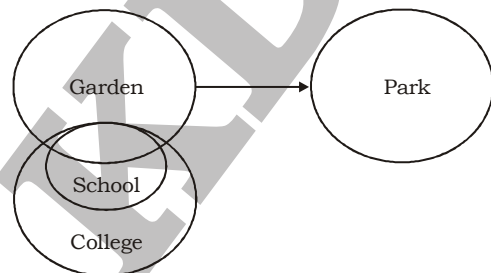
15. (C)

16. (C)



Hence, girl is the daughter of the woman.

17. (A)



I. True II. False III. False

Hence, conclusion I follows.

18. (B) 19. (C)

20. (B) As, $7 \times 9 \times 4 = 252$

Similarly, $8 \times 11 \times 4 = 352$

21. (C) W → E
A → R
R → X
M → S
O → T
T → W
E → A
22. (A) 23. (C) 24. (B) 25. (C)
28. (D) According to Article-54, Lok Sabha, Rajya Sabha and State Assemblies constitute together the electoral college to elect the President. But only Lok Sabha and Rajya Sabha are involved in impeachment (Article-61).
29. (D) The states have common boundary with Bangladesh are West Bengal, Assam, Meghalaya and Tripura.
30. (B) Dr Edward Jenner created the world's first successful vaccine. He found out that people infected with cowpox were immune to smallpox. In May 1796, English physician Edward Jenner expands on this discovery and inoculates 8-year-old James Phipps with matter collected from a cowpox sore on the hand of a milkmaid.
31. (D) The system later came to be known as Panchayati Raj, which was inaugurated by the then Prime Minister Pandit Jawaharlal Nehru on 2 October 1959 at Nagour in Rajasthan.
32. (B) The International Astronomical Union has named an asteroid after Indian classical singer Pandit Jasraj, the first Indian musician to have minor planet named after him, which is located between Mars and Jupiter.
33. (B) This is due to the greater centrifugal force resulting from the higher speed.
34. (B) Thiokol is a variety of synthetic rubber, Drikold is the trade name of dry ice, Perhydrol is the trade name of hydrogen peroxide and Mannitol is hexahydric alcohol.
36. (B) The Saha Institute of Nuclear Physics is an institution of basic research and training in physical and biophysical sciences located in Bidhannagar, Kolkata.
37. (D) COBOL is suited for Business applications.
38. (B) The North Atlantic Treaty Organisation (NATO), also called the (North) Atlantic Alliance, is an inter-governmental military alliance based on the North Atlantic Treaty.
41. (C) Satyameva Jayate is a part of a mantra from the Hindu scripture Mundaka Upanishad.
42. (A) Saint Kabir Das was a Nirguna saint and reformer. He was one of the main leaders of the Bhakti movement. Nirguna means formless.
43. (A) Sandstone and shale are the two sedimentary rocks which form quartzite and schists respectively after undergoing metamorphism. Gneiss is a metamorphic rock formed from granite, an igneous rock.
44. (D) The velocity of sound in air increases with temperature.
45. (B) The highest mountain peak of Europe is Mount Elbrus in the Caucasus. Mount Blanc is the highest peak of Alps, located in France. Mount Everest is the world's highest peak, lies in Nepal. The highest point of the African continent, Mount Kilimanjaro, lies in Tanzania. The highest point of the Europe is Moun Mckinley, lies in Alaska.
48. (D) Copper was the first metal to be used by the Indus people. Bronze, an alloy of copper and tin, was used by the Indus people. Importance of bronze can be ascertained from the fact that the Harappan civilization is called as Bronze-Age civilization. Silver was used by the Indus people and Gold was also known to them. But Iron was unknown to Indus people.
49. (A) Units of Measurement of Distance Between Celestial Bodies is light year. It is the distance covered by light in one year in vacuum travelling at a speed of 3×10^5 km/sec.

50. (C) A chemical change is a permanent change which is irreversible and there is change in composition of the reactants i.e. new substances are always formed. Sublimation of iodine is only a physical change.

51. (C) S.I = 956 - 800 = ₹ 156

$$\text{Rate} = \frac{\text{SI} \times 100}{\text{P} \times \text{T}} = \frac{156 \times 100}{800 \times 3} = 6.5\%$$

New rate = 10.5%

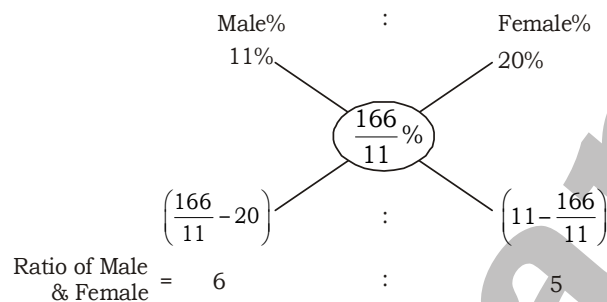
$$\text{SI} = \frac{\text{P} \times \text{T} \times \text{R}}{100} = \frac{800 \times 3 \times 10.5}{100} = ₹ 252$$

∴ Amount = 800 + 252 = ₹ 1052

52. (A) Population of the village = 5500

After increment new population of the village = 6330

$$\text{Percentage increment} = \frac{(6330 - 5500)}{5500} \times 100 = \frac{166}{11}\%$$



According to the question,

11 units = 5500

1 unit = 500

∴ Number of females = 500 × 5 = 2500

53. (C) 4% = $\frac{1}{25}$, 5% = $\frac{1}{20}$, 6% = $\frac{3}{50}$

25	—	26
20	—	21
50	—	53

25,000	—	28938
↓ ×2		↓ ×2
50,000		57876

∴ CI = 57876 - 50000 = ₹ 7876

54. (A)

C.P	S.P	
100	110	
5% less → 95	20% Profit → 114) 4 more
		↓
		7 (given)

∴ C.P of suitcase = $\frac{7}{4} \times 100 = ₹ 175$

55. (D) The remainder will be same.

On dividing 9 by 6, remainder = 3

On dividing 81 by 6, remainder = 3

56. (B) Let the average of runs made by other 6 batsman be x .

Runs made by the captain = $x + 30$

Now according to the question,

$$x + 30 + 6x = 310$$

$$7x = 280$$

$$x = 40$$

$$\therefore \text{Number of runs scored by the captain} = 40 + 30 = 70$$

57. (D) Let the length of train be L m.

When it crosses 300 m long platform,

$$\frac{L + 300}{x \times \frac{5}{18}} = 20$$

$$L + 300 = \frac{100x}{18}$$

$$L = \frac{100x}{18} - 300 \quad \dots\dots(i)$$

When it crosses the man, then relation speed = $(x - 8)$ km/hr

$$\frac{L}{x - 8} = \frac{50}{18}$$

$$L = \frac{50(x - 8)}{18}$$

$$\frac{100x}{18} - 300 = \frac{50(x - 8)}{18} \quad \dots\dots(\text{From (i)})$$

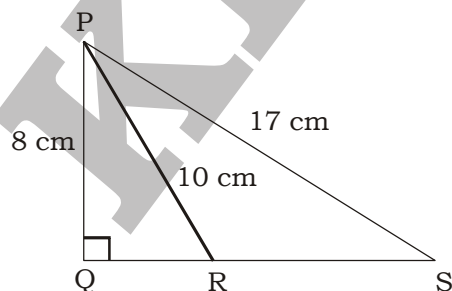
$$100x - 5400 = 50x - 400$$

$$10x - 50x = 5400 - 400$$

$$50x = 5000$$

$$\therefore x = \frac{5000}{50} = 100 \text{ km/hr}$$

58. (D)



In right ΔPQR ,

$$QR = \sqrt{PR^2 - PQ^2} \quad (\text{By Pythagoras theorem})$$

$$= \sqrt{10^2 - 8^2} = \sqrt{100 - 64} = \sqrt{36} = 6 \text{ cm}$$

Now, In right ΔPQS ,

$$QS = \sqrt{PS^2 - PQ^2}$$

$$= \sqrt{17^2 - 8^2} = \sqrt{289 - 64} = \sqrt{225} = 15 \text{ cm}$$

$$\therefore RS = QS - QR = 15 - 6 = 9 \text{ cm}$$

59. (C) $\sin^2 60^\circ \cos^2 45^\circ + 4 \tan^2 30^\circ + \frac{1}{2} \sin^2 30^\circ + 2 \cos 90^\circ$

$$= \left(\frac{\sqrt{3}}{2}\right)^2 \cdot \left(\frac{1}{\sqrt{2}}\right)^2 + 4 \times \left(\frac{1}{\sqrt{3}}\right)^2 + \frac{1}{2} \times \left(\frac{1}{2}\right)^2 + 2 \times 0$$

$$= \frac{3}{4} \times \frac{1}{2} + 4 \times \frac{1}{3} + \frac{1}{2} \times \frac{1}{4} + 0$$

$$= \frac{3}{8} + \frac{4}{3} + \frac{1}{8} = \frac{9 + 32 + 3}{24} = \frac{44}{24} = \frac{11}{6}$$

60. (D) Amount of milk in vessel A = $16 \times \frac{3}{4} = 12$ litres

Amount of milk in vessel B = $25 \times \frac{80}{100} = 20$ litres

Total amount of milk in vessel C = $12 + 20 = 32$ litres

$$\therefore \text{Concentration of milk in vessel C} = \left(\frac{32}{50} \times 100\right)\% = 64\%$$

61. (D) A can complete a work in 60 days.

B can complete a work in $\frac{60}{125} \times 100 = 48$ days

Let total work = 240 units

A's 1 day work = $\frac{240}{60} = 4$ units

B's 1 day work = $\frac{240}{48} = 5$ units

(A + B)'s 15 days work = $(4 + 5) \times 15 = 135$ units

Remaining work = $240 - 135 = 105$ units

C's 1 day work = $\frac{105}{14} = 7.5$ units

(B + C)'s 1 day work = $5 + 7.5 = 12.5$ unit

$$\therefore \text{B and C together complete } \frac{5}{8} \text{ part fo work in } = 240 \times \frac{5}{8} \times \frac{1}{12.5} = 12 \text{ days}$$

62. (B) $6 \div 4 \text{ of } 3 - 4 \div 6 \times (13 - 10) - 2 \times 15 \div 6 \times 6$

$$= 6 \div 12 - 4 \div 6 \times 3 - 2 \times 15 = \frac{1}{2} - \frac{2}{3} \times 3 - 30$$

$$= \frac{1}{2} - 2 - 30 = \frac{1 - 4 - 60}{2}$$

$$= -\frac{63}{2} = -31\frac{1}{2}$$

63. (B) Let the radius of the circle and the height of the right angled triangle be r and h respectively.

$$\text{Now, } r = \frac{(100 + 20)}{100} h$$

$$\text{And, area of triangle} = \frac{1}{2} \times h \times 36 = 18h$$

$$\text{Area of the circle} = 18h$$

$$\pi r^2 = 18h$$

$$\frac{22}{7} r^2 = \frac{18 \times 100 \times r}{120}$$

$$r = \frac{18 \times 100 \times 7}{120 \times 22} = 4.77 \text{ cm}$$

$$\therefore \text{Area of circle} = \frac{22}{7} r^2$$

$$= \frac{22}{7} \times 4.77 \times 4.77 \approx 72 \text{ sq cm}$$

64. (D) $x + y + z = 0$

$$2(x + y + z) = 0$$

$$(x + y) + (y + z) + (z + x) = 0$$

So,

$$(x + y)^3 + (y + z)^3 + (z + x)^3 = 3(x + y)(y + z)(z + x)$$

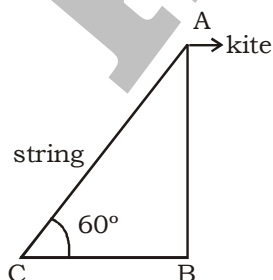
$$\text{Also, } \left[\begin{array}{l} x + y + z = 0 \\ x + y = -z, y + z = -x, z + x = -y \end{array} \right]$$

$$= -3xyz$$

ATQ,

$$\frac{-3xyz - 17xyz}{10(-xyz)} = \frac{-20xyz}{-10xyz} = 2$$

65. (A)



Height of the kite (AB) = 75 m

$$\frac{AB}{AC} = \sin 60^\circ$$

$$AC = 75 \times \frac{2}{\sqrt{3}} = 50\sqrt{3} \text{ m}$$

66. (A) Ratio of profit of Ram and Rahim = 25000 : 35000 = 5 : 7

ATQ,

75% of profit is divided equally.

So, the difference between 25% of their profit is ₹ 130.

ATQ,

$$7 \times \frac{25}{100} - 5 \times \frac{25}{100} \rightarrow ₹ 130$$

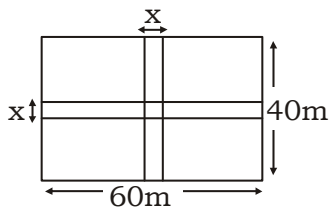
$$\frac{7}{4} - \frac{5}{4} \rightarrow ₹ 130$$

$$\frac{1}{2} \rightarrow ₹ 130$$

$$1 \rightarrow ₹ 260$$

$$\therefore \text{Total profit} = (7 + 5) \times 260 = 12 \times 260 = ₹ 3120$$

67. (A)



Total area of park = $60 \times 40 = 2400 \text{ m}^2$

Area of lawn = 2109 m^2 (Given)

Area of the cross roads = $2400 - 2109 = 291 \text{ m}^2$

ATQ,

$$x(60 + 40 - x) = 291$$

$$x^2 - 100x + 291 = 0$$

$$(x - 97)(x - 3) = 0$$

$$x = 3 \text{ or } 97$$

$$x = 3 \quad [x = 97 \text{ is not possible}]$$

\therefore Width of the roads = 3 m

68. (A) A : B

Efficiency $\rightarrow 2 : 1$

ATQ,

Both A and B take 4 days to complete the work

Then, total work = $(2 + 1) \times 4 = 12$ units

$$\therefore \text{Time taken by B} = \frac{12}{1} = 12 \text{ days}$$

69. (B) $\cot \theta = \frac{1}{\sqrt{3}}$

$\cot \theta = \cot 60^\circ$

$\theta = 60^\circ$

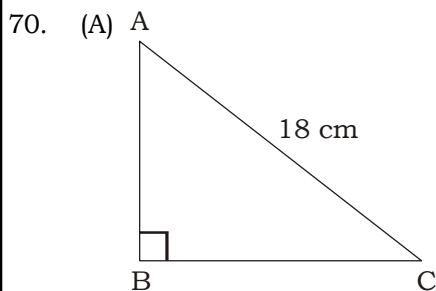
Now,

$$\frac{2 - \sin^2 \theta}{1 - \cos^2 \theta} + (\operatorname{cosec}^2 \theta - \sec \theta)$$

$$\frac{2 - \sin^2 60^\circ}{1 - \cos^2 60^\circ} + (\operatorname{cosec}^2 60^\circ - \sec 60^\circ)$$

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

$$= \frac{\frac{5}{4}}{\frac{3}{4}} + \left(\frac{4-6}{3}\right) = \frac{5}{3} - \frac{2}{3} = \frac{3}{3} = 1$$



Given that :

$AB + BC + AC = 40 \text{ cm}$

$AC = 18 \text{ cm}$

Now, $AB + BC = 40 - 18 = 22 \text{ cm}$

In right $\triangle ABC$,

$AB^2 + BC^2 = AC^2$

$AB^2 + BC^2 = 18^2$

$AB^2 + BC^2 = 324 \text{ cm}$

Now,

$(AB + BC)^2 = AB^2 + BC^2 + 2AB \cdot BC$

$(22)^2 = 324 + 2AB \cdot BC$

$484 = 324 + 2AB \cdot BC$

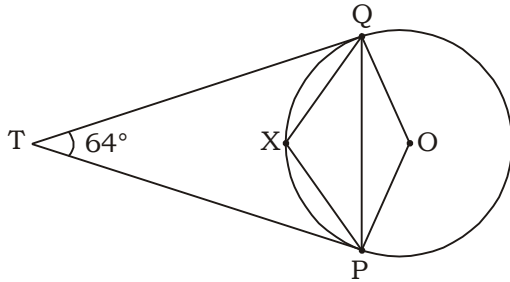
$2AB \cdot BC = 484 - 324$

$AB \times BC = \frac{160}{2} = 80 \text{ cm}$

$\therefore \text{Area of } \triangle ABC = \frac{1}{2} \times AB \times BC$

$= \frac{1}{2} \times 80 = 40 \text{ cm}^2$

71. (A)



$$\angle PTQ + \angle POQ = 180^\circ$$

$$\angle POQ = 180 - 64 = 116^\circ$$

$$\therefore \angle PXQ = 180^\circ - \frac{1}{2} \angle POQ$$

$$= 180^\circ - \frac{1}{2} \times 116^\circ = 122^\circ$$

72. (C) Required answer = $\frac{35 \times 30}{100} + \frac{35 \times 15}{100} + \frac{35 \times 15}{100}$

$$= \frac{35}{100} (30 + 15 + 15) = \frac{35 \times 60}{100} = 21 \text{ lakhs}$$

73. (A) Required difference = $\frac{44 \times 20}{100} - \frac{35 \times 15}{100}$

$$= \frac{880 - 525}{100} = \frac{355}{100} \text{ lakhs} = 355000$$

74. (B) Required production = $\frac{44 \times 30}{100}$ lakhs = 1320000

75. (C) Required difference = $35 \times \frac{10}{100} \times \frac{15}{100} + 44 \times \frac{10}{100} \times \frac{15}{100}$

$$= (0.525 + 0.66) \text{ lakhs} = 1.185 \text{ lakhs} = 118500$$

MEANINGS IN ALPHABETICAL ORDER

Adversary	one's opponent in a contest, conflict, or dispute	विरोधी
Antagonistic	showing or feeling active opposition or hostility toward someone or something	विरोधी
Contestant	a person who takes part in a contest or competition	प्रतियोगी
Convoy	a group of ships or vehicles traveling together, typically accompanied by armed troops, warships, or other vehicles for protection	काफिले
Cuddles	hold close in one's arms as a way of showing love or affection	गले लगना
Delirious	in an acutely disturbed state of mind resulting from illness or intoxication and characterized by restlessness, illusions, and incoherence of thought and speech	भ्रान्तचित्त
Desirous	having or characterized by desire	इच्छुक
Emancipation	the fact or process of being set free from legal, social, or political restrictions; liberation	मुक्ति
Fleet	a group of ships sailing together, engaged in the same activity, or under the same ownership	बेड़ा
Novice	a person new to or inexperienced in a field or situation	नौसिखिए
Pensive	engaged in, involving, or reflecting deep or serious thought	चिंताग्रस्त
Perseverance	persistence in doing something despite difficulty or delay in achieving success	दृढ़ता
Pervasive	(especially of an unwelcome influence or physical effect) spreading widely throughout an area or a group of people	व्यापक
Prejudice	preconceived opinion that is not based on reason or actual experience	पक्षपात
Repulsive	arousing intense distaste or disgust	प्रतिकारक
Retinue	a group of advisers, assistants, or others accompanying an important person	परिचारक वर्ग
Virtuous	having or showing high moral standards	धार्मिक

SSC MOCK TEST - 363 (ANSWER KEY)

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

76. (C) was के स्थान पर were होगा क्योंकि इसका subject 'you' है।

77. (D) will be expired के स्थान पर will expire होगा।