SSC MOCK TEST - 264 (SOLUTION)

1. (A) The relationship is $(x) : (x^3 + x^2)/4 = 6 : (216 + 36)/4 = 6 : 63$ and $4 : (64 + 16)/2 = 4 : 20$

2. (C) A window has its cover called panes and a book has covers.

3. (A) An optimist expects good things to happen. While a pessimist lacks hope for the future. A pessimist is a person whose outlook is gloomy.

4. (D) All others are currencies, while cortes is the name of the parliament of Spain.

5. (C) Except 119, others are prime numbers.

6. (D) After including the vowels, we can find the name of the months i.e. **A**pri**l**, M**a**y, A**ugu**st. Whereas in J**a**n**ua**ry we have to include some consonant also i.e. 'N'.

7. (D) P**A**ND**A**, T**OA**D and D**O**NK**E**Y are the animals which can be formed after including the vowels. **A**PPL**E** can also be formed after including vowels A & E but Apple is not an animal.

8. (B) $J_o > K_i$ & C_a

    $K_i > S_a$

    $K_i > S_a > \mathbf{N_a}$

    $C_a > S_a$

    So, Nancy is the shortest among all.

9. (C) Here the sequence is :-

    $1049760/58320 = 18$

    $58320/3888 = 15$

    $3888/324 = 12$

    $324/36 = 9$

    $36/6 = 6$

    Then, $6/? = 3$

    $? = 6/3 = \mathbf{2}$

10. (A) Number of letters in the spelling of each digit i.e. Zero = 4, One = 3, Two = 3, Three = 5, Four = 4 and so on.

    So, We have, **Ten = 3**

11. (C) Number 1 will be on the top, if 2 is at the bottom.
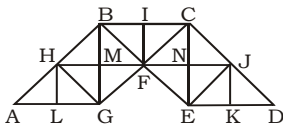
12. (B)

    Similarly,

13. (C)
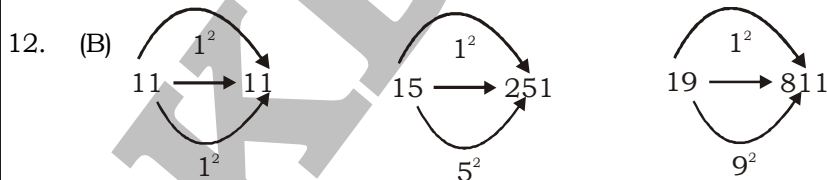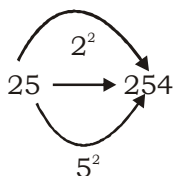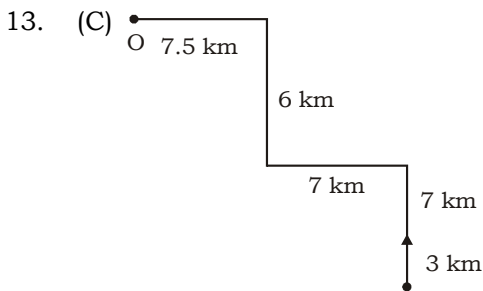
Hence, his face is in north direction.

14. (A) **Given** : S O I L D I S K

$ 4 % 6 5 % $ #

Then, S O L I D

$ 4 6 % 5

15. (C)

16. (C) The figure may be marked as shown.

Simple triangles are AHL, LHG, GHM, HMB, GMF, BMF, BIF, CIF, FNC, CNJ, FNE, NEJ, EKJ and JKD i.e. 14 in number.

Triangles composed of two components are AGH, BHG, HBF, BFG, HFG, BCF, CJF, CJE, JEF, CFE and JED i.e. 11 in number.

Triangles composed of four components are ABG, CBG, BCE and CED i.e. 4 in number.

Total number of triangles in the given figure = 14 + 11 + 4 = 29

17. (C) Clearly, from 1 to 100, there are ten numbers with 3 at the unit's digit (3, 13, 23, 33, 43, 53, 63, 73, 83, 93).

Ten numbers with 3 at the ten's digit (30, 31, 32, 33, 34, 35, 36, 37, 38, 39).

So, required number = 10 + 10 = 20.

18. (D)
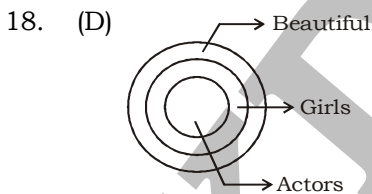
1. True   2. True

Both (1) and (2) follows

19. (C) $20 + 8 - 2.5 \div 20 \times 16$

After changing the sign:

$= 20 \times 8 \div 2.5 + 20 - 16$

$= \dfrac{160}{2.5} + 20 - 16$

$= 64 + 20 - 16 = 68$

20. (C)

21. (C) As,
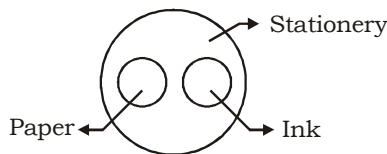
$$4 \xrightarrow{\times 4} 16 + 4 = 20$$

$$6 \xrightarrow{\times 6} 36 + 6 = 42$$

Similarly,

$$8 \xrightarrow{\times 8} 64 + 8 = 72$$

22. (B)

23. (A)

24. (C) SOUL

25. (A) 00, 55, 22, 11, 96

   (P   E   A   R   L)

26. (D) An ancient city situated on the eastern bank of the Kshipra River, Ujjain was the most prominent city on the Malwa plateau of central India for much of its history.

28. (B) Girna Dam, is an earthfill dam on Girna river near Malegaon, Nashik district in state of Maharashtra in India. The height of the dam above lowest foundation is 54.56 m (179.0 ft) while the length is 963.17 m (3,160 ft).

29. (B) The preamble to the Indian constitution was amended by the 42nd Amendment Act, 1976 whereby the words Socialist, Secular, and Integrity were added to the preamble by the 42nd Amendment Act, 1976, to ensure the economic justice and elimination of inequality in income and standard of life.

32. (D) Steel Authority of India Limited is one of the largest state-owned steel-making company based in New Delhi, India and one of the top steel makers in World. Major plants owned by SAIL are located at Bhilai, Bokaro, Durgapur, Rourkela, Burnpur (near Asansol) and Salem.

33. (B) A money bill can only be introduced in parliament with prior permission of the President of India. Finance bill is supposed to be enacted within 75 days (including the Parliament voting and the President assenting).

34. (B) The World Health Organization has announced that the body along with its leading partners to make available 120 million rapid-diagnostic tests for Covid-19.

36. (C) Operation Flood is the program that led to "The White Revolution."

38. (D) Open market operations or OMOs are conducted by the Reserve Bank of India (RBI) by way of sale and purchase of G-Secs (government securities) to and from the market with an objective to adjust the rupee liquidity conditions in the market on a durable basis.

40. (A) Mumbai receives more rainfall than Pune because it is located on the coast and Pune is in the interior. Mumbai lies on the windward side of Western Ghats while Pune is located on the leeward side. Windward refers to the direction from which the rain-bearing south west monsoon winds approach the land from sea.

41. (D) Almost all familiar weather phenomena occur in the troposphere (the lower part of the atmosphere).

43. (C) The cotton incorporated the cry1Ac gene from the soil bacterium Bacillus thuringiensis (Bt), making the cotton toxic to bollworms. It is a cheaper alternative to Bt cotton hybrid seed.

44. (A) The Indian gooseberry, or aamla from Sanskrit amalika, is a deciduous tree of the family Phyllanthaceae. It is known for its edible fruit of the same name.

47. (A) The thyroid gland is one of the largest endocrine glands in the body.

48. (B) World Health Day was first established in 1999 by the World Heart Federation (WHF) in collaboration with the World Health Organisation (WHO).

49. (B) The largest whale (and largest mammal, as well as the largest animal known ever to have existed) is the blue whale.

50. (C) The second incisors of the elephant are modified into the huge tusks of an elephant.

51. (A) $100 \times 35 = 3500$

$200 \times 5 = 1000$

Total work = 4500

$200 \times 5 = 100 \times x$

10 days = x

Total days = 35 + 10 = 45 days

Extra days = 45 – 40 = 5 days

52. (D) Interest after 10 years at the rate of 5% = ₹ 500

$\therefore$ Time = $\dfrac{\text{Interest} \times 100}{\text{Principal} \times \text{Rate}}$

$= \dfrac{500 \times 100}{1500 \times 5} = 6\dfrac{2}{3}$ years

$\therefore$ Required time = $\left(10 + 6\dfrac{2}{3}\right)$ years = $16\dfrac{2}{3}$ years

53. (B) Let the minimum score be x.

Maximum score = $x + 100$

ATQ,

$28 \times 38 + x + x + 100 = 30 \times 40$

$1064 + 2x + 100 = 1200$

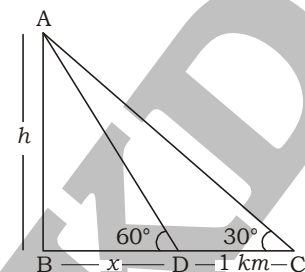$2x = 1200 - 1164 = 36$

$x = 18$

54. (D) Required no. of students

L.C.M of 6, 8, 12 and 16 = 96

55. (A)

Height of balloon = AB = h km

BD = x km, CD = 1 km

From $\triangle$ABD,

$\tan60° = \dfrac{AB}{BD}$

$\sqrt{3} = \dfrac{h}{x}$

$x = \dfrac{h}{\sqrt{3}}$ km   ...(i)

From $\triangle ABC$,

$\tan 30° = \dfrac{AB}{BC}$

$\dfrac{1}{\sqrt{3}} = \dfrac{h}{\dfrac{h}{\sqrt{3}} + 1}$
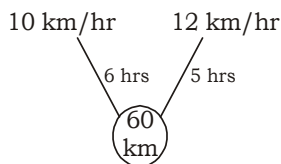
$\sqrt{3}h = \dfrac{h}{\sqrt{3}} + 1$

$\sqrt{3}h - \dfrac{h}{\sqrt{3}} = 1$

$\dfrac{3h - h}{\sqrt{3}} = 1$

$2h = \sqrt{3}$

$h = \dfrac{\sqrt{3}}{2}$ km

56. (C) Let the required distance = LCM of (10, 12) = 60 km

∴ Difference in time = 6 – 5 = 1 hour = 60 minutes
given difference in time = 6 + 6 = 12 minutes
∴ 60 → 12
Hence, the required distance = 12 km

57. (A) $a = \dfrac{xy}{x + y}$, $b = \dfrac{xz}{x + z}$ and $c = \dfrac{yz}{y + z}$

∴ $\dfrac{x + y}{xy} = \dfrac{1}{a}$, $\dfrac{x + z}{xz} = \dfrac{1}{b}$, $\dfrac{y + z}{yz} = \dfrac{1}{c}$

$\dfrac{1}{y} + \dfrac{1}{x} = \dfrac{1}{a}$, $\dfrac{1}{z} + \dfrac{1}{x} = \dfrac{1}{b}$, $\dfrac{1}{z} + \dfrac{1}{y} = \dfrac{1}{c}$

$\left(\dfrac{1}{y} + \dfrac{1}{x}\right) + \left(\dfrac{1}{z} + \dfrac{1}{x}\right) - \left(\dfrac{1}{z} + \dfrac{1}{y}\right) = \dfrac{1}{a} + \dfrac{1}{b} - \dfrac{1}{c}$

$\dfrac{2}{x} = \dfrac{bc + ca - ab}{abc}$

$x = \dfrac{2abc}{bc + ca - ab}$

58. (A) $2x - \dfrac{1}{2x} = 6$

$2\left(x - \dfrac{1}{4x}\right) = 6$

$x - \dfrac{1}{4x} = 3$

on Squaring, $x^2 + \dfrac{1}{16x^2} - 2 \cdot x \cdot \dfrac{1}{4x} = 9$

$x^2 + \dfrac{1}{16x^2} = 9 + \dfrac{1}{2} = \dfrac{19}{2}$

59. (C) Here, area (DAMN) = $\dfrac{1}{2}$ (area DABC)

$\dfrac{\text{area of } \Delta AMN}{\text{area of } \Delta ABC} = \dfrac{1}{2}$

$\left(\dfrac{AM}{AB}\right)^2 = \dfrac{1}{2}$
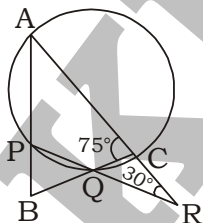
$\sqrt{2} \ AM = AB$

$\sqrt{2} \ AM = (AM + MB)$

$(\sqrt{2} - 1) AM = MB$

$\dfrac{AM}{BM} = \dfrac{1}{\sqrt{2} - 1}$

$\dfrac{AM}{BM} = \dfrac{1}{\sqrt{2} - 1} \times \dfrac{\sqrt{2} + 1}{\sqrt{2} + 1} = \sqrt{2} + 1 : 1$

60. (D) Sum of opposite angles of a cyclic quadrilateral are Supplementary

∴ ∠ACQ + ∠APQ = 180°

75° + ∠APQ = 180°

∠APQ = 105°

∠APQ + ∠BPQ = 180°

105° + ∠BPQ = 180°

∠BPQ = 180° − 105° = 75°

∠ACQ is an exterior angle of ΔRCQ

∠ACQ = ∠CRQ + ∠COR

75° = 30° + ∠COR

∠COR = 45°

In ΔBPQ,

∠B = 180° – 75° – 45° = 60°

61. (C) Volume of solid cylinder = $\pi r^2 h$

Volume of cone = $\frac{1}{3} \pi r^2 h$

Difference = $\pi r^2 h - \frac{1}{3} \pi r^2 h$

$= \frac{2}{3} \pi r^2 h = \frac{2}{3} \times \frac{22}{7} \times 5 \times 5 \times 12$

= 628.57 cu.cm.

62. (D) $l + b + h = 24$ [given]

$l^2 + b^2 + h^2 = 225$ [given]

∴ $(l + b + h)^2$

$= l^2 + b^2 + h^2 + 2(lb + bh + hl)$

$(24)^2 = 225 + 2(lb + bh + hl)$

$2(lb + bh + hl) = 576 - 225 = 351$ sq. cm.

63. (A) Sales tax = $\frac{120}{5}$ = ₹ 24

Remaining amount = (120 – 24) = ₹ 96

Profit = $96 \times \frac{1}{3}$ = ₹ 32

Cost price = (96 – 32) = ₹ 64

64. (B) A does $\frac{1}{3}$ work in 20 days

So, A does the whole work in 20 × 3 days

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            60
        2 /    \ 1
        30      60
       A + B     A
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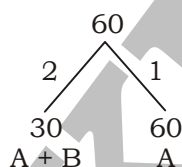
A = $\frac{60}{2 - 1}$ days = 60 days

65. (C) Let the original fraction be $\frac{a}{b}$.

$\dfrac{a^2 \times \dfrac{5}{4}}{b^2 \times \dfrac{4}{5}} = \dfrac{5}{8} \times \dfrac{a}{b}$

$$\left(\frac{a}{b}\right)^2 \times \frac{25}{16} = \frac{5}{8} \times \left(\frac{a}{b}\right)$$

$$\left(\frac{a}{b}\right) = \frac{2}{5}$$

$$a \times b = 2 \times 5 = 10$$

66. (D) Let the opponent got x votes then winner got $x + 200$ votes.

ATQ,

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80% – 120 = x + 200 + x
80%       = x + 200    +   x + 120
              |              |
             41%            39%
                   2%
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2% of total votes = 200 – 120 = 80

Total votes = 4,000

Votes, for the losing candidate = $\frac{39}{100} \times 4000 - 120 = 1440$

Total votes cast = $\frac{4}{5} \times 4,000 = 3,200$

Required % = $\frac{1440}{3200} \times 100 = 45\%$

67. (B) Equation = $\left[(7^{-1}-8^{-1})^{-1}-(3^{-1}-4^{-1})^{-1}\right]$

$= \left[\left(\frac{1}{7}-\frac{1}{8}\right)^{-1}-\left(\frac{1}{3}-\frac{1}{4}\right)^{-1}\right] = \left[\left(\frac{8-7}{56}\right)^{-1}-\left(\frac{4-3}{12}\right)^{-1}\right]$

$= \left[\left(\frac{1}{56}\right)^{-1}-\left(\frac{1}{12}\right)^{-1}\right] = 56 - 12 = 44$

68. (B) Cost price of the watch = ₹ 250

Cost price after 10% custom duty = ₹ 275

CP	MP
(100 – 25)	(100 + 20)
75	120
5	8
↓×55	↓×55
275	440

Marked price = ₹ 440

69. (B) Let the length of each of the equal side of the ground be x metre

Base of the play ground = 24 m

Area of ground = $\frac{15}{25} \times 100 = 60$ m²

But the ground has isosceles shape

Area of ground = $\dfrac{a}{4} \sqrt{4x^2 - a^2}$ [where a = base, x = each of the equal sides]

$\therefore \quad \dfrac{24}{4} \sqrt{4x^2 - (24)^2} = 60$

$4x - (24)^2 = (10)^2$

$4x^2 - 576 = 100$

$4x^2 - 676$

$x^2 = \dfrac{676}{4} = 169$

$x = 13$

$\therefore$ Length of each of the equal side

$x = 13$ m

70. **(D)** Let the rate of interest = R% /annum

    Formula,

$A = P\left(1 + \dfrac{R}{100}\right)^T$

$2420 = P\left(1 + \dfrac{R}{100}\right)^2$ ...(i)

$2662 = P\left(1 + \dfrac{R}{100}\right)^3$ ...(ii)

Equation (ii) divided by (i)

$1 + \dfrac{R}{100} = \dfrac{2662}{2420}$

$\dfrac{R}{100} = \dfrac{2662}{2420} - 1$

$\dfrac{R}{100} = \dfrac{2662 - 2420}{2420} = \dfrac{242}{2420} = \dfrac{1}{10}$

$R = \dfrac{1}{10} \times 100 = 10\%$

71. **(D)** Squaring both the sides:

$\left(\sqrt{\dfrac{x}{y}} + \sqrt{\dfrac{y}{x}}\right)^2 = \left(\dfrac{10}{3}\right)^2$

$\left(\dfrac{x + y}{\sqrt{xy}}\right)^2 = \left(\dfrac{10}{3}\right)^2$

$$(x + y)^2 = \frac{100}{9}\, xy$$

$$(10)^2 = \frac{100}{9}\, xy$$

$$xy = 9$$

72. (A) $\dfrac{1}{3} + \dfrac{1}{10} + \dfrac{1}{6} = \dfrac{10 + 3 + 5}{30} = \dfrac{18}{30}$

$1 - \dfrac{18}{30} = \dfrac{12}{30}$

Required% = $\dfrac{12}{30} \times 100 = 40\%$

73. (C) Required ratio = $\dfrac{1}{3} \times 16\% : \dfrac{1}{6} \times 16\% = 2 : 1$

74. (B) Required answer = $50 \times \dfrac{70}{100} = 35$ kg.

75. (B) Required% = $\dfrac{10}{100} \times 100 = 10\%$

MEANINGS IN ALPHABETICAL ORDER

Adulterat	make impure by adding a foreign or inferior substance	मिलावट करना
Apostate	a person who renounces a religious or political belief or principle	स्वधर्मत्यागी
Copious	abundant in supply or quantity	प्रचुर
Crude	conspicuously and tastelessly indecent	अशिष्ट
Essential	absolutely necessary	आवश्यक
Feebleness	the quality of lacking intensity or substance	क्षीणता
Gauntlet	a stout glove with a long loose wrist	लोहे का दस्ताना
Hardship	severe suffering or privation	कठिनाई
Hindrance	a thing that provides resistance, delay, or obstruction to something or someone	अवरोध
Imbecility	a stupid mistake	मूर्खता
Laconic	(of a person, speech, or style of writing) using very few words	संक्षेप
Lingering	lasting for a long time or slow to end	सुस्त
Omit	leave out or exclude (someone or something)	छोड़ देना
Prolific	bearing in abundance especially offspring	उर्वर
Resolution	a firm decision to do or not to do something	संकल्प
Stoic	a person who can endure pain or hardship without showing their feelings or complaining	उदासीन
Terse	sparing in the use of words	संक्षिप्त

SSC MOCK TEST - 264 (ANSWER KEY)

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

76. (B) If two events happen to be in past one after another, the first action is written in Past Perfect Tense. Change 'have' into 'had'.

77. (B) Replace 'so' by 'as'. 'As ...... as' is a correct phrase.

78. (C) 'As gentle as a lomb' is a correct idiom.

86. (D) The subject of the sentence, a highly improved variety is singular.

87. (A) 'Ask' is used to took for an answer, explanations, etc.

90. (D) The correct spelling is 'Hindrance'.

91. (C) The correct spelling are 'Obeisance' and 'Gauntlet'.