SSC MOCK TEST - 375 (SOLUTION)

1.   (2) Cure is treatment of Disease in the same way Heal is referred as treatment of an Injury.

2.   (3) Pesticide protects the plants and vaccination protects the babies.

3.   (4) (1) $\underset{4+2=6}{42} \underset{3+3=6}{33}$ (2) $\underset{6+2=8}{62} \underset{4+4=8}{44}$ (3) $\underset{4+6=10}{46} \underset{2+8=10}{28}$ (4) $\underset{7+5=12}{75} \underset{6+5=11}{65}$

4.   (3) (1) S   U   N   U   X   R   (with +2, +3, +4)

         (2) G   O   T   I   R   X   (with +2, +3, +4)

         (3) L   E   T   N   H   X   (with +2, +3, +4)

         (4) M   A   T   O   D   X   (with +2, +3, +4)

5.   (2) As, 12 × 24 = 288

         And, 10 × 20 = 200

         Similarly, 15 × 30 = 450

6.   (4) As,

         T   E   R   M   I   N   A   T   E
         20   5   18   13   9   14   1   20   5

         Similarly,

         P   L   A   T   I   N   U   M
         16   12   1   20   9   14   21   13

7.   (3) 1   9   17   33   49   73   97

         +8   +8   +16   +16   +24   +24

8.   (3) A   N   P   C   P   R   E   R   T   G   T   V   **I   V   X**   (+2 pattern)

9.   (4) As, $121 \Rightarrow (1 + 2 + 1)^2 = 16$

         $16 \Rightarrow (1 + 6)^2 = 49$

         Similarly, $312 \Rightarrow (3 + 1 + 2)^2 = 36$

         $36 \Rightarrow (3 + 6)^2 = 81$

10. (1)

Q ———— P

R ———— S

Hence, S is in the South-East of Q.

11. (2)

12. (3) As,

    T   D

$20 + 4 = 24 \Rightarrow 24 \times 2 = 48$

And,
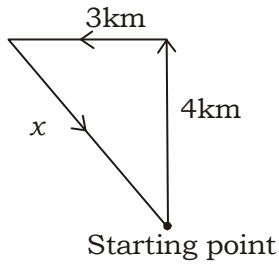
    R   M

$18 + 13 = 31 \Rightarrow 31 \times 2 = 62$

Similarly,

    I   X

$9 + 24 = 33 \Rightarrow 33 \times 2 = \mathbf{66}$

13. (2) 3. Brain $\rightarrow$ 4. Thyroid gland $\rightarrow$ 2. Heart $\rightarrow$ 5. Liver $\rightarrow$ 1. Stomach

14. (3)

3km

4km

x

Starting point

$x^2 = 4^2 + 3^2$

$x^2 = 16 + 9$

$x^2 = 25$

$x = 5$

Total distance covered by her $= 4 + 3 + 5 = 12$ km

15. (4) $120 * 40 * 28 * 16 * 4 * 192$

After changing the sign,

$120 - 40 + 28 \times 16 \div 4 = 192$

$120 - 40 + 28 \times 4 = 192$

$120 - 40 + 112 = 192$

$232 - 40 = 192$

$192 = 192$

16. (2) ENCOUNTER

17. (2)
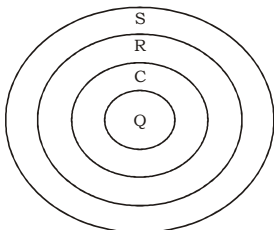
I. True   II. False   III. False   IV. True

Hence, only conclusions I and IV follow.

18. (2)

19. (4) a **a** b c d **d e**/a a b c **d** d e/a **a b** c d **d** e

20. (4) As, 38 + (8 − 3) = 43

   43 + (4 + 3) = 50

   Similarly, 48 + (8 − 4) = 52

   52 + (5 + 2) = 59

21. (1)   22. (1)   23. (2)

24. (4) M > K > L

   And, K > P

   And, Q's income is least

   Hence, M has the maximum income.

25. (1)

26. (4) Graphite is a good conductor of heat of electricity.

28. (3) The age of a tree can be ascertained by its annual rings present. This method is known as Dendrochronology, counts ring to ascertain the age of tree.

29. (4) It is published by Ministry of Statistics and Programme Implementation Central Statistical Organization.

30. (1) Bubbles from a liquid formed when air enters inside the liquid and as a result bubble is formed. This process is called effervescence as effervescence is the escape of gas from an aqueous solution and the foaming or fizzing that results from that release.

31. (1) The terms "Socialist", "Secular", and "Integrity" were added to the Preamble of Indian Constitution in 1976 through the 42nd Constitutional Amendment.

32. (1) KyzylKum has the highest gold deposit.

33. (4) The Durand Line was established in 1893 as the international border between India and the Emirate of Afghanistan by Mortimer Durand, a British diplomat of the Indian Civil Service, and Abdur Rahman Khan, the Afghan Emir, to fix the limit of their respective spheres of influence and improve diplomatic relations.

34. (3) Energy received by the earth is known as incoming solar radiation which in short is termed insolation. The factor that determines the amount of insolation received is the angle of inclination of the rays. This depends on the latitude of a place.

35. (1) When common salt is mixed with ice, the freezing point is lowered. Salt increases the melting point of ice as well as delays the freezing of water than normal.

36. (3) Indian Bank has received the Reserve Bank of India (RBI) regulatory approval to hold special rupee vostro accounts of three banks from Sri Lanka.

37. (3) Odisha has won the UN-Habitat's World Habitat Awards 2023 for Jaga Mission initiative of the state. Jaga mission is the world's largest land titling and slum upgrading program which aims at empowering the lives of slum dwellers.

39. (2) Persons with the AB blood group are called universal recipients. This is due to the absence of antibodies, anti-A, and anti-B, in plasma.

41. (2) The UN agency, Food and Agricultural Organisation (FAO) has published its latest Food Price Index (FFPI) which tracks the monthly international prices of cereals, vegetable oil, dairy, meat and sugar.

44. (1) The first phase of the caste-based census kicked off in Bihar, in which the number of all households in the state will be counted.

45. (2) Translocation occurs within a series of cells known as the phloem transport system, which is the most important digestive tissue of plants. Nutrients move to phloem as solutes in a solution called phloem liquid.

46. (1) Heavy water is employed in nuclear reactors as a neutron moderator, slowing down neutron production and bringing stability to the fission reaction.

48. (3) Nasiruddin Mahmud was the last ruler of the Tughlaq dynasty who ruled from 1394 to 1412.

50. (2) As the spending increases, the demand also increases which leads to inflation. Hence, Economic growth is usually coupled with inflation.

51. (4) 8(4M + 6F) = 10(3M + 7F)

    32M + 48F = 30M + 70F

    2M = 22F

    M : F = 11 : 1

    D (10F) = 10(3M + 7F)

    D (10 × 1) = 10(3 × 11 + 7 × 1)

    D = 33 + 7 = 40 days

52. (2) Let the principal be ₹ 100.

    Amount = ₹ 180

    SI = 180 – 100 = ₹ 80

    Rate = $\dfrac{80 \times 100}{100 \times 8} = 10\%$

    Now,

    Principal = ₹ 14000

    Time = 3 years

    Rate = 10%

    CI = ?

    $$CI = P\left(1 + \frac{R}{100}\right)^{T} - P$$

    $$= 14000\left(1 + \frac{10}{100}\right)^{3} - 14000$$

    $$= \left[14000 \times \frac{11}{10} \times \frac{11}{10} \times \frac{11}{10}\right] - 14000$$

    = 18634 – 14000 = ₹ 4634

53. (3) Let the cost price be ₹ 100.

    Selling price = $100 \times \dfrac{119}{100}$ = ₹ 119

    Marked price = $\dfrac{119}{85} \times 100$ = ₹ 140

    ∴ Required% = $\left(\dfrac{140 - 100}{100} \times 100\right)\%$ = 40%

54. (1) Speed = 15 km per hour = $15 \times \dfrac{5}{18} = \dfrac{25}{6}$ m / s.

    Water flow out in one second = 0.2 × 0.15 × 25/6 m^3

    Volume of tank = 150 × 100 × 3 m^3

    Time taken = $\dfrac{150 \times 100 \times 3 \times 6}{.2 \times .15 \times 25}$ = 100 hours

55. (3) Speed = $\dfrac{350 \times 60}{1000} = 21 \ km/hr$

Total time taken = $\dfrac{84}{21} + 13 \times 6$

4 hours + 78 minutes = 5 hours 18 minutes

56. (4) $(1 + m^2) x^2 + 2mcx + c^2 - a^2 = 0$

B = 2mc

A = $(1 + m^2)$

C = $c^2 - a^2$

Roots are equal, so D = 0

$B^2 - 4AC = 0$

$(2mc)^2 - 4 (1 + m^2) (c^2 - a^2) = 0$

$4m^2c^2 - 4c^2 + 4a^2 - 4m^2c^2 + 4m^2a^2 = 0$

$- c^2 + a^2 + a^2 m^2 = 0$

$c^2 = a^2 (1 + m^2)$

57. (2) $3x^2 + 2x + 1 = 0$

$\alpha + \beta = \dfrac{-2}{3}$

$\alpha \beta = \dfrac{1}{3}$

Product of roots = $\dfrac{1 - \alpha}{1 + \alpha} \times \dfrac{1 - \beta}{1 + \beta} = 3$

sum of roots = $\dfrac{1 - \alpha}{1 + \alpha} + \dfrac{1 - \beta}{1 + \beta} = 2$

Required equation = $x^2 -$ (sum of the roots) $x +$ product of roots = 0

$x^2 - 2x + 3 = 0$

58. (2) Net discount given by A = $\left(5 + 25 - \dfrac{5 \times 25}{100}\right)\%$ = 28.75%

Net discount given by B = $\left(16 + 12 - \dfrac{16 \times 12}{100}\right)\%$ = 26.08%

A is giving more discount

It is more profitable to purchase the fan from A.

59. (1) $\left(x + \dfrac{1}{x}\right)^2 = 3$

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

On cubing both sides.

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

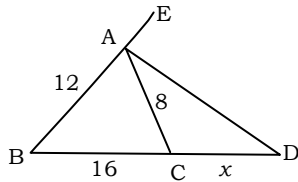$x^3 + \dfrac{1}{x^3} = 3\sqrt{3} - 3\sqrt{3} = 0$

$x^6 + 1 = 0$

$\therefore$ $x^{206} + x^{200} + x^{90} + x^{84} + x^{18} + x^{12} + x^6 + 1$

$= x^{200}(x^6 + 1) + x^{84}(x^6 + 1) + x^{12}(x^6 + 1) + (x^6 + 1) = 0$

60. (1) Required ratio

$$\begin{array}{c c}
\dfrac{4}{7} & \dfrac{2}{5} \\
& \dfrac{1}{2} \\
\dfrac{1}{10} & \dfrac{1}{14}
\end{array}$$

Required ratio = 14 : 10 = 7 : 5

61. (2)

AD is an external bisector.

$\dfrac{BD}{CD} = \dfrac{AB}{AC}$

Let CD = x

$\dfrac{16 + x}{x} = \dfrac{12}{8}$

$\dfrac{16 + x}{x} = \dfrac{3}{2}$

$32 + 2x = 3x$

$x = 32$ cm

62. (2) Length of the wire $= \pi d = \dfrac{22}{7} \times 112 = 352$ cm

Semi perimeter of the rectangle = 176 cm

Smaller side $= \dfrac{7}{16} \times 176 = 77$ cm

63. (1) $7\sin\alpha = 24\cos\alpha$

$\tan\alpha = \dfrac{24}{7}$

$\cos\alpha = \dfrac{7}{25}$, $\sec\alpha = \dfrac{25}{7}$

Now, $14\tan\alpha - 75\cos\alpha - 7\sec\alpha$

$14 \times \dfrac{24}{7} - 75 \times \dfrac{7}{25} - 7 \times \dfrac{25}{7}$

$48 - 21 - 25 = 2$

64. (4) For no Solution condition $\Rightarrow \dfrac{a_1}{a_2} = \dfrac{b_1}{b_2} \neq \dfrac{c_1}{c_2}$

   $= \dfrac{4}{k-1} = \dfrac{3}{k+7} \neq \dfrac{8}{3k+9}$

   $4k + 28 = 3k - 3$

   $4k - 3k = -31$

   $k = -31$

65. (3) Let the number of sides be x.

   Each exterior angle $= \dfrac{360}{x}$

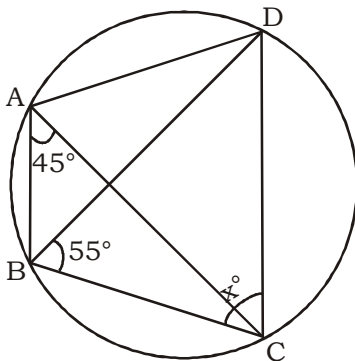   Each Interior angle $= \dfrac{(x-2)180}{x}$

   ATQ,

   $\dfrac{360}{x} = \dfrac{1}{5} \dfrac{(x-2)}{x} \times 180$

   $10 = x - 2$

   $x = 12$

   Number of sides = 12

66. (2)

   $\angle BAC = \angle BDC = 45°$ ($\because$ Angles in the same segment of a circle)

   In $\triangle BCD$,

   $\angle BCD + \angle BDC + \angle CBD = 180°$

   $\angle BCD + 45° + 55° = 180°$

   $\angle BCD = 180° - 100° = 80°$

67. (1) Area of rectangular field $= \dfrac{1000}{\dfrac{1}{4}}$ m² = 4000 m²

   Breadth = 50 m

   Length $= \dfrac{4000}{50} = 80$ m

   New length of field = (80 + 20) m = 100 m

   New area = 100 × 50 = 5000 sq. m

   $\therefore$ Required expenditure $= ₹\left(5000 \times \dfrac{1}{4}\right) = ₹\ 1250$

68. (3) Age of the captain = $(11 \times 30) - \{(5 \times 29) + (5 \times 27)\}$
     = $(330 - 280)$ years = 50 years

69. (2) $(2m + 4b) \times 10 = (4m + 5b) \times 6$
     $20m + 40b = 24m + 30b$
     $4m = 10b$
     $2m = 5b$
     So, $5b = 2 \times 40$
     $b = \dfrac{2 \times 40}{5} = 16$
     ∴ Required ratio = 40 : 16 = 5 : 2

70. (4) Let the income be ₹ 100.

     Expenditure = $100 \times \dfrac{75}{100}$ = ₹ 75

     Saving = 100 – 75 = ₹ 25
     Now,

     New income = $100 \times \dfrac{120}{100}$ = ₹ 120

     New expenditure = $75 \times \dfrac{110}{100}$ = ₹ 82.5

     New saving = 120 – 82.75 = ₹ 37.25

     ∴ Required% = $\left(\dfrac{37.25 - 25}{25} \times 100 \right)$% = 50%

71. (1) Number of employees working in legal department = 48 + 54 + 36 + 30 + 53 = 221
     Number of employees working in H.R. department = 1050 + 1015 + 976 + 888 + 1004 = 4933

     Required % = $\dfrac{221 \times 100}{4933}$ = 4% (Approx)

72. (2) Average number of people working in marketing department = 1326.2
     Average number of people working in production department = 1557.4
     Required Difference = 1557.4 – 1326.2 = 231 (Approx)

73. (4) Number of employees working in organisation A = 1050 +1017+1382 + 1542 + 786 + 48
     = 5825
     Number of employees working in organization E = 1004 + 963 +1290 + 1580 + 735 + 53
     = 5625
     Required ratio = 5825 : 5625 = 233 : 225

74. (3) Total number of employees from all the departments together = 5825 + 5703 + 5424 + 5613 + 5625 = 28190

75. (4) Required% = $\dfrac{960 \times 100}{5703}$ = 17% (Approx)

MEANINGS IN ALPHABETICAL ORDER

Extravagant	lacking restraint in spending money or using resources	फिजूलखर्ची
Frugal	sparing or economical with regard to money or food	मितव्ययी
Gluttonous	excessively greedy	भक्षक
Marxism	the political and economic theories of Karl Marx and Friedrich Engels, later developed by their followers to form the basis for the theory and practice of communism	मार्क्सवाद
Maxim	a short, pithy statement expressing a general truth or rule of conduct	कहावत
Neologism	a newly coined word or expression	निओलगिज्म
Platonism	the philosophy of Plato or his followers	प्लेटो का दर्शन-सिद्धांत
Plunder	steal goods from (a place or person), typically using force and in a time of war or civil disorder	लूट
Poach	cook (an egg) without its shell in or over boiling water	भोंकना
Possession	the state of having, owning, or controlling something	कब्ज़ा
Preach	deliver a sermon or religious address to an assembled group of people, typically in church	धर्म का उपदेश देना
Preface	an introduction to a book, typically stating its subject, scope, or aims	प्रस्तावना
Prognosis	the likely course of a disease or ailment	रोग का निदान
Retrenchment	the reduction of costs or spending in response to economic difficulty	छटनी
Stampede	a sudden panicked rush of a number of horses, cattle, or other animals	भगदड़
Susceptible	likely or liable to be influenced or harmed by a particular thing	अतिसंवेदनशील

SSC MOCK TEST - 375 (ANSWER KEY)

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

76. (4) The correct answer is (4). The sentence is in passive voice.

Active voice: Subject + was/were + V1+ing + object

Passive voice: Object+ was/were + being + V3 + (by + subject)

Correct sentence: Bags and purses were thoroughly checked at the entrance to the theatre.

77. (3) The correct answer is (3). The sentence talks about a past event. Use 'parted' instead of 'part.'

Correct sentence: He parted the grass at the place where he had seen the deer.

86. (3) The correct answer is (3). The sentence is talking about past. Use of 'hasn't been use' is wrong.

Correct sentence: It was a second hand car but it hadn't been used much.

87. (3) The correct answer is (3). In this sentence the question tag is wrong. With 'have,' 'haven't they' will be right.

Correct sentence: The medicines have arrived, haven't they?

90. (2) The correct spelling of 'Diarrheoa' is 'Diarrhoea'.

91. (4) The correct spelling of 'Occassion' is 'Occasion'.