# SSC MTS Non-Technical (Tier-I) Exam. – Practice Set

## Answers with Explanation

1. (c)
2. (c) Remove 'his'
3. (b)
4. (a)
5. (d)
6. (a) Fecund means fertile. Hence its antonym is 'Barren'.
7. (b)
8. (c)
9. (b)
10. (c) In desert drying up is a 'threat' to living creatures.
11. (b)
12. (c) Camel is a masterpiece 'among all creatures'.
13. (d) Cope with means to adopt to a certain situation. Hence 'cope' is the appropriate word.
14. (b) 'The Arabian Nights' is a book. Hence 'has' will go with it instead of 'have'.
15. (c) Simple present tense for it happens often.
16. (d) It is a way to write a sentence especially when there are two incidents done.
17. (b)
18. (d)
19. (c) Third person singular number.
20. (b)
21. (c)
22. (a)
23. (b)
24. (a)
25. (c)
26. (c) Kelvin is the base unit of temperature (SI unit). The Kelvin temperature scale has an absolute zero below which temperatures do not exist.
27. (a) The higher the refractive index of the medium the lower the speed of the light.
28. (a) Generally, strontium carbonate is used for red fireworks.
29. (d) Vitamin K plays the role in blood clotting, promoting bone health.
30. (a) Cloves are the aromatic flower buds of a tree in the family Myrtaceae Syzygium aromaticum.
31. (a) Dhamma Mahamattas were special officers appointed by Asoka to spread the message of Dhamma.
32. (c) Alai Darwaza was built by Sultan Alauddin Khalji, situted in Delhi.
33. (c) Subhash Chandra Bose was re-elected the President of INC at the Triupri Session in 1939 by defeating Gandhiji's candidate Pattabhi Sitaramaiyya.
34. (c) Considered a great scholar and thinker, Henry Vivian Derozio at 17 years of age, drew a group of intelligent boys in Hindu College and formed an intellectual revolution in Bengal. It was called the Young Bengal Movement.
35. (d) Eastern Ghat and Western Ghat meet at Nilgiri Mountains, which has the highest peak, named Doddabetta.
36. (b) This project is a 9000 crore worth project on Cauvery, aims to store and supply water for drinking purposes for Bengaluru.
37. (b) Equinoxes are the days with equal length of day and night. 21st March and 23rd September are those days.
38. (c) West Bengal accounts for about half the total area of India covered by Mangrove.
39. (a) The Vice President of India is the ex-officio chairman of the Rajya Sabha, who presides over the sessions.
40. (b) As per Article 61, the president of India can be impeached on the ground of violation of the constitution.
41. (a) Sikkim became the 22nd state of India on May 16, 1975 (36th Constitutional Amendment).
42. (a) In 1994, in the SR Bommai vs Union of India case, the Supreme Court held this view.
43. (a)
44. (b) This Law states that bad money drives out good. For example, if there are two forms of commodity money in circulation, which are accepted by law as having similar face value, the more valuable commodity will gradually disappear from circulation.
45. (c) Two main objectives of the 5th plan were : Poverty eradication (Garibi Hatao) and attainment of self-reliance.
46. (d) An ecosystem where grasses are the primary form of vegetation is called grassland. In USA & Canada it is called Prairies.
47. (a) Ringgit, Sen are the currencies of Malaysia.
48. (b) On 3rd July, 2021, Mr. Dhami was sworn in as the 10th Chief Minister of Uttarakhand after

the resignation of Tirath Singh Rawat due to political crisis regarding his legitimacy to hold the post.

49. (d) Various Projects under the 'Namami Ganga Yojana' and 'AMRUT' (including sewerage treatment plants, water projects) inaugurated in Bihar.

50. (a) Host City is Paris, France.

51. (c) 33) 231228 (7006
$$\frac{231}{228}$$
$$\frac{198}{30}$$

Now, 33 – 30 = 3

∴ On adding 3 to 231228, it is completely divisible by 33.

52. (c) Let the numbers be 2x and 3x

Now, 6x = 48

$\Rightarrow$ x = 8 ($\because$ LCM = 6x)

∴ Required sum = (2x + 3x) = 5x = 5 × 8 = 40

53. (c) LCM of 4, 5, 10, 20 = 20

$$\sqrt[4]{2} = (2)^{\frac{1}{4}} = \left(2^5\right)^{\frac{1}{20}} = (32)^{\frac{1}{20}}$$

$$\sqrt[5]{3} = (3)^{\frac{1}{5}} = \left(3^4\right)^{\frac{1}{20}} = (81)^{\frac{1}{20}}$$

$$\sqrt[10]{6} = (6)^{\frac{1}{10}} = \left(6^2\right)^{\frac{1}{20}} = (36)^{\frac{1}{20}}$$

$$\sqrt[20]{15} = (15)^{\frac{1}{20}}$$

∴ Greatest number = $(81)^{\frac{1}{20}} = \sqrt[5]{3}$

54. (c) $\left(2-\frac{1}{3}\right)\left(2-\frac{3}{5}\right)\left(2-\frac{5}{7}\right).....\left(2-\frac{997}{999}\right)$

$$= \frac{5}{3} \times \frac{7}{5} \times \frac{9}{7} \times .... \times \frac{1001}{999}$$

$$= \frac{1001}{3}$$

55. (a) Let the number be x.

Now, $5x = 2x^2 - 3$

Or, $2x^2 - 5x - 3 = 0$

Or, $(x - 3)(2x + 1) = 0$

∴ x = 3, –1/2

∴ The required number is 3

56. (d) Runs scored in 21st innings

= 20(34 – 32) + 34

= 20 × 2 + 34

= 74

57. (c) Let the man have ₹ x

Remaining money after 20% loss

= x – 20% of x = $x - \frac{20x}{100} = \frac{4x}{5}$

Remaining money after spending 25% of his remaing money

$$= \frac{4x}{5} - 25\% \text{ of } \left(\frac{4x}{5}\right)$$

$$= \frac{4x}{5} - \left(\frac{4x}{5} \times \frac{25}{100}\right)$$

$$= \frac{4x}{5} - \frac{x}{5} = \frac{3x}{5}$$

Now, $\frac{3x}{5} = 480$

$\Rightarrow x = \frac{480 \times 5}{3} = ₹\ 800$

58. (d) 6 apples are gained over 18 apples.

∴ Gain % $= \left(\frac{6}{18} \times 100\right)\% = 33\frac{1}{3}\%$

59. (a) Let the CP of book be ₹ x

∴ SP of the book $= \frac{112x}{100}$

Now, the printed price be ₹ y

After discount, SP $= \frac{90y}{100}$

$\frac{112x}{100} = \frac{90y}{100} \Rightarrow$ x : y = 45 : 56

60. (b) $R_1 = 5\%$, $R_2 = ?$

$$R_2 = \left(\frac{6-1}{3-1}\right) \times 5$$

$$= \frac{5}{2} \times 5 = \frac{25}{2} = 12.5\%$$

61. (a) $\frac{1}{2}$ of A = $\frac{2}{5}$ of B = $\frac{1}{3}$ of C = K (Let)

$\Rightarrow$ A = 2K, B = $\frac{5K}{2}$, C = 3K

∴ A : B : C = 2K : $\frac{5K}{2}$ : 3K = 4 : 5 : 6

62. (c) Let R's investment be x

Q's investment = $\frac{2x}{3}$

P's investment = 2x

Ratio of capital of P, Q, R

$= 2x : \frac{2x}{3} : x$

= 6 : 2 : 3

63. (d) Let present age of the man x year

Hence, x + 15 = 4(x – 15)

$\Rightarrow x + 15 = 4x - 60$

$\Rightarrow 3x = 75 \Rightarrow x = 25$

64. (a) Required time $= \dfrac{(10+2) \times 20}{30}$ days = 8 days

65. (c) $15 \times 16 \times 1 = 24 \times D \times 1$

$\Rightarrow D = \dfrac{15 \times 16}{24} = 10$

∴ Required days = 10

66. (b) $(6\% - 4\%) = 3$

$\Rightarrow 2\% = 3$

$\Rightarrow (2 \times 50)\% = 3 \times 50$

∴ $100\% = ₹ 150$

67. (b) Required average speed

$= \dfrac{2 \times 6 \times 3}{6+3} = \dfrac{36}{9} = 4 \ km/h$

68. (a) Required rest time

$= \dfrac{54-45}{54} = \dfrac{9}{54} = \dfrac{1}{6}h = \dfrac{1}{6} \times 60 = 10 \ min$

69. (c) Length = $l$, Breadth = b

Diagonal $= 2\sqrt{l^2 + b^2}$

Now, both $l$, b increase by 5%

∴ As per the formula diagonal also increases by 5%.

70. (b) Let the radius be r.

$\dfrac{45°}{360°} \times \pi r^2 = 77$

$\Rightarrow r^2 = \dfrac{77 \times 7 \times 8}{22} \Rightarrow r = 14 \ cm.$

71. (c) Volume $= \dfrac{2}{3} \pi r^3 = \dfrac{2}{3} \times \pi \times 3^3$

$= \dfrac{2}{3} \times \pi \times 27 = 18\pi cm^3$

72. (b) Required number of teachers

$= 1800 \times \dfrac{(23+27+12)}{100} = 1116$

73. (b) Required difference

$= 1800 \times \dfrac{(27+17)}{100} - 1800 \times \dfrac{(13+12)}{100}$

$= 792 - 450 = 342$

74. (a) Required ratio $= \dfrac{1800 \times \dfrac{13}{100}}{1800 \times \dfrac{8}{100}} = 13:8$

75. (c) Required number

$= \left(1800 \times \dfrac{13}{100} \times \dfrac{150}{100}\right) + \left(1800 \times \dfrac{8}{100} \times \dfrac{75}{100}\right)$

$= 351 + 108 = 459$

76. (c) Term = Joining of consecutive odd numbers i.e

$13 = 1 + 3$

$35 = 3 + 5$

$57 = 5 + 7$

Hence missing term = 11 + 13 = 1113

77. (b) $W \xrightarrow{-3} T \xrightarrow{-3} Q \xrightarrow{-3} \boxed{N}$

$F \xrightarrow{+1} G \xrightarrow{+1} H \xrightarrow{+1} \boxed{I}$

$B \xrightarrow{+2} D \xrightarrow{+3} G \xrightarrow{+4} \boxed{K}$

78. (c) Second is the name of specially designed seat to ride the first.

79. (b) The series is

abbc/ac/bcca/ba/caab/cb

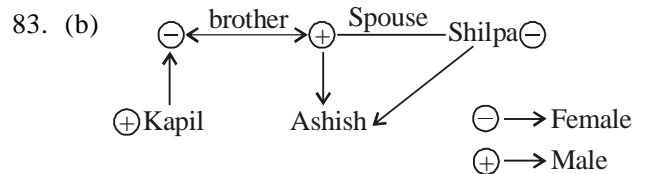80. (a) All are countries.

81. (b)

$\begin{array}{ccccc} G & R & A & S & P \\ \downarrow-6 & \downarrow-6 & \downarrow-6 & \downarrow-6 & \downarrow-6 \\ B & M & V & N & K \end{array}$
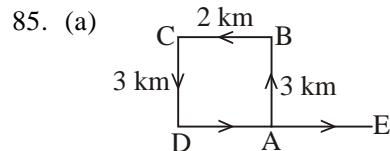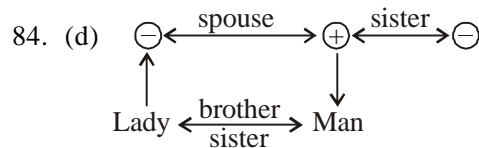
$\begin{array}{ccccc} C & R & A & N & E \\ \downarrow+6 & \downarrow+6 & \downarrow+6 & \downarrow+6 & \downarrow+6 \\ H & W & F & S & J \end{array}$

82. (a) tom kun sud = dogs are barking

kum jo mop = dogs and horses

$\Rightarrow$ kun = dogs

mut tom ko = donkeys are mad

$\Rightarrow$ tom = are

Hence, sud = barking

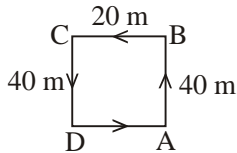83. (b)



∴ Kapil is Shilpa's nephew.

84. (d)



85. (a)



Movements A → B → C → D → E

∴ Required distance = AE

= (DE − AD)

= (3 − 2) = 1 km.

86. (d)



Movements A → B → C → D
∴ D is 20m to the west of A

87. (c) The pattern is
$X_2 + 1, X_3 + 2, X_4 + 3, ....$
∴ Missing term = $95 × 5 + 4 = 479$

88. (a)
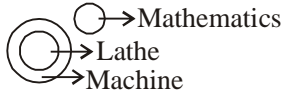


89. (a) Quite clearly it is understood that the lone figure 1 in the rectangle is the required answer.

90. (c) No. of boys = x, no of girls = 2x
$x + 2x = 60 ⇒ x = 20$
∴ The no. of boys = 20 and the no. of girls = 40
No. of students behind Nitin = (60 – 17) = 43
No. of girls ahead of Nitin = 9
No. of girls behind Nitin = (40 – 9) = 31
No. of boys behind Nitin = (43 – 31) = 12

91. (b) Using the symbols
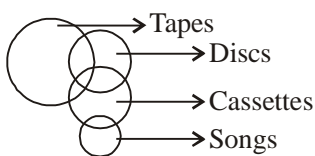$(3 × 15 + 19) ÷ 8 – 6$
$= 64 ÷ 8 – 6 = 8 – 6 = 2$

92. (a) $5 × 2 = 10$
$7 × 2 = 14$
$9 × 2 = 18$

93. (a)



I → May be or may not be
II → May be or may not be
III → May be or may not be
IV → May be or may not be
Here I and IV are complementary pair. Hence answer is (a).

94. (a) Two elements are added in each step, be it two lines, two arcs or one line and one arc.

95. (c)
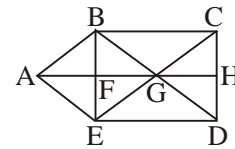


Simplest triangles = ABF, BFG, BCG, CGH, GHD, GED, EFG, AFE = 8
Triangles composed of two components = ABG, BGE, AGE, ABE, GCD = 5
Triangles composed of three components = BCD, CDE, BED, BCE = 4
∴ Total no. of triangles = 8 + 5 + 4 = 17

96. (d)

97. (d)

98. (d)

99. (d) From figures (i) and (iv) we conclude that 6, 5, 2 and 3 lie adjacent to 4. It follow that 1 lies opposite 4.

100. (d) $4 × 2 – 1 = 7, 7 × 2 + 1 = 15, 15 × 2 – 1 = 29$,
$29 × 2 + 1 = 59, 59 × 2 – 1 = 117, 117 × 2 + 1 = 235$
∴ Missing number = $235 × 2 – 1 = 469$

——— ★★★ ———