

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

Answers with Explanation

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| <p>1. (c) Special case of voice, when a sentence has such sort of transitive verb.</p> <p>2. (b)</p> <p>3. (a) Gerund form</p> <p>4. (d) 'Rise' and 'Fall' suggest one idea. শ্রুতিভঙ্গ</p> <p>5. (b)</p> <p>6. (b)</p> <p>7. (d)</p> <p>8. (a)</p> <p>9. (a)</p> <p>10. (c)</p> <p>11. (b)</p> <p>12. (b)</p> <p>13. (b)</p> <p>14. (b)</p> <p>15. (b)</p> <p>16. (a)</p> <p>17. (d)</p> <p>18. (d) Mal de mer is a French word assimilated in English. It means sea-sickness.</p> <p>19. (b)</p> <p>20. (c)</p> <p>21. (c) শ্রুতিভঙ্গ</p> <p>22. (b)</p> <p>23. (b)</p> <p>24. (d)</p> <p>25. (a)</p> <p>26. (c) Kazakhstan a central Asian Country is the world's largest land locked country.</p> <p>27. (b) Treaty of Versailles was signed in 1919 between Germany and the allied powers.</p> <p>28. (c) Harisena the court poet of Samudragupta, composed Prayag Prasasti.</p> <p>29. (a) Baji Rao I is said to have preached the ideal of Hindu Pad-Padshahi. It is the ideal of establishment of an independent Hindu Empire.</p> <p>30. (a) Sind was conquered by the Arab under the leadership of Muhammad Ibn Qasim, in C 711</p> <p>31. (b) Jahangir's tomb, dates from 1637 is situated in Lahore, Punjab, Pakistan.</p> <p>32. (c) Fatehpur Sikri is a town in Agra founded as the capital of Mughal Empire, by the emperor Akbar. শ্রুতিভঙ্গ</p> <p>33. (d) 1st session of INC was held in Bombay presided over by Womesh Chandra Bannerjee.</p> | <p>34. (d) Poona Pact was an agreement between Mahatma Gandhi and Dr. B. R. Ambedkar signed in 1932.</p> <p>35. (b) Kibithu (Arunachal Pradesh) is the easternmost point of India.</p> <p>36. (c)</p> <p>37. (a) 10° channel separates Andaman and Nicobar, in Bay of Bengal.</p> <p>38. (d)</p> <p>39. (c) শ্রুতিভঙ্গ</p> <p>40. (c)</p> <p>41. (a) Speaker can vacate his/her office by addressing a resignation letter to Deputy speaker, Deputy speaker can vacate office by addressing a resignation letter to speaker.</p> <p>42. (b) Article 80 of the Constitution lays down the maximum strength of Rajya Sabha as 250.</p> <p>43. (d) Each kidney has around 1 million Nephrons that work as tiny filtering units which remove the harmful substances from the blood.</p> <p>44. (c)</p> <p>45. (a)</p> <p>46. (c) শ্রুতিভঙ্গ</p> <p>47. (d)</p> <p>48. (b)</p> <p>49. (a)</p> <p>50. (b)</p> <p>51. (c) $2 + 3 + 7 + 0 = 12$ which is divisible by 3, hence 2370 is also divisible by 30.</p> <p>52. (a) Let the fraction be $\frac{x}{y}$</p> $\frac{3}{4} - \frac{x}{y} = \frac{2}{5}$ $\Rightarrow \frac{x}{y} = \frac{3}{4} - \frac{2}{5} = \frac{7}{20}$ <p>53. (c)</p> $\begin{array}{r} 1521 \\ 9 \overline{) 1521} \\ \underline{9} \\ 621 \\ \underline{621} \\ 0 \end{array} \quad 39$ <p style="text-align: center;">×</p> <p style="text-align: center;">Ans. 39 শ্রুতিভঙ্গ</p> <p>54. (d) $7^3 \times (7^2)^2 \div 343 = 7^x$</p> $\Rightarrow \frac{7^3 \times 7^4}{7^3} = 7^x$ |
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$\Rightarrow 7^x = 7^4$
 $\Rightarrow x = 4$

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55. (b) Required Ans = $\frac{\text{LCM of } 3, 8, 3}{\text{HCF of } 4, 9, 5}$
 $= \frac{24}{1} = 24$

56. (a) $\left(\frac{2}{9} + \frac{3}{5}\right) \div \left(\frac{2}{9} + \frac{2}{5}\right)$
 $= \left(\frac{10+27}{45}\right) \div \left(\frac{10+18}{45}\right)$
 $= \frac{37}{45} \times \frac{45}{28} = \frac{37}{28}$

57. (a) $3A = 5B$
 $\Rightarrow \frac{A}{B} = \frac{5}{3}$
 $\Rightarrow \frac{A+B}{B} = \frac{5+3}{3}$ [Componendo]
 $= \frac{8}{3}$

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58. (c) Sum of first five prime numbers
 $= 2 + 3 + 5 + 7 + 11 = 28$
 \therefore Required average = $\frac{28}{5} = 5.6$

59. (d) 10% of 150% of 400
 $= \frac{10}{100} \times \frac{150}{100} \times 400$
 $= 15 \times 4 = 60$

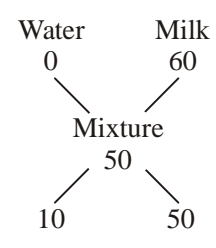
60. (c) CP = 100, SP = 105
 Ratio = $\frac{105}{100} = \frac{21}{20} = 21:20$

61. (c) CP = 250/kg
 SP = ₹ 10 per 50 gm
 $= ₹ 10 \times 20/kg$
 $= ₹ 200/kg$
 \therefore Loss% = $\frac{250-200}{250} \times 100$
 $= \frac{100}{250} = 20\%$

62. (b) SI = $\frac{5000 \times 5 \times 5}{100}$
 $= ₹ 1250$

63. (a) CP of water = 0

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Ratio of water and milk in mixture = $\frac{10}{50} = 1:5$
 \therefore Quantity of water to be added in 30L of milk
 $= \frac{1}{(1+5)} \times 30 = 5L$

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64. (c) M's one days's work = $\frac{1}{8} - \frac{1}{12} = \frac{1}{24}$
 \therefore M alone can do the same work in 24 days.
 65. (d) Person covers the distance in 6 hrs.
 $= (40 \times 6) = 240$ km
 Now, to cover 240 km in 4 hrs.

Speed = $\frac{240}{4} = 60$ km/h

66. (b) Volume of rod = Volume of wire
 $\Rightarrow \pi \times (1)^2 \times 30 = \pi \times r^2 \times 300$
 $\Rightarrow r^2 = \frac{30}{300} \Rightarrow r = \frac{1}{\sqrt{10}}$
 \therefore Diameter = $\frac{2}{\sqrt{10}}$ cm

67. (b) $\frac{0}{360^\circ} \times \pi r^2 = 77 \Rightarrow \frac{45}{360} \times \pi r^2 = 77$
 $\Rightarrow r^2 = \frac{77 \times 7 \times 8}{22}$
 $\Rightarrow r = 14$ cm

68. (c) Money spent on non-plan
 $= \frac{36^\circ}{360^\circ} \times 100 = 10\%$
 Money spent on defence = 15%
 \therefore Required difference = 15% - 10% = 5%

69. (b) Money spent on sports
 $= \frac{18^\circ}{360^\circ} \times 100 = 5\%$
 Money spent on others = 30%
 \therefore Required difference = 30% - 5% = 25%

70. (c) Money spent on defence and education together
 $= 100000 \times \frac{10+15}{100}$
 $= 25 \times 1000$
 $= ₹ 25000$ crore

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71. (c) Earnings of Ram and Shyam are ₹ $\frac{125}{8}$ and

₹ $\frac{140}{10}$ per day.

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$$\begin{aligned} \text{Then, required ratio} &= \frac{125}{8} : \frac{140}{10} \\ &= \frac{125 \times 10}{8 \times 140} = 125 : 112 \end{aligned}$$

72. (c) Let another number be x

$$\begin{aligned} 2(15 - x) &= 15 + x \\ \Rightarrow x + 2x &= 30 - 15 \\ \Rightarrow 3x &= 15 \\ \Rightarrow x &= 5 \end{aligned}$$

73. (a) $9x \times 4x = 144$

$$\begin{aligned} \Rightarrow x^2 &= 4 \\ \Rightarrow x &= 2 \end{aligned}$$

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$$\begin{aligned} \therefore \text{Length} &= 18, \text{ Breadth} = 8 \\ \therefore \text{Perimeter} &= 2(18 + 8) = 52 \text{ cm} \end{aligned}$$

74. (c) Let A's monthly income be x

$$x(100 - 20\%) = 6000$$

$$\Rightarrow x \times \frac{80}{100} = 6000$$

$$\Rightarrow x = \frac{6000 \times 100}{80} = 7500$$

\therefore Monthly savings = 20% of 7500

$$\begin{aligned} &= \frac{7500 \times 20}{100} \\ &= ₹ 1500 \end{aligned}$$

75. (c) Speed of the bus = 72 km/h

$$= 72 \times \frac{5}{18} \text{ m/s}$$

$$= 20 \text{ m/s}$$

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\therefore Distance travelled in 5 s = $5 \times 20 = 100 \text{ m}$

76. (b) The terms of the given series

$$(2^2 - 1), (4^2 - 1), \dots, (8^2 - 1), (10^2 - 1), (12^2 - 1)$$

$$\therefore \text{Missing term} = (6^2 - 1) = 36 - 1 = 35$$

77. (b) 1st letter U $\xrightarrow{-2}$ S $\xrightarrow{-4}$ O $\xrightarrow{-2}$ M $\xrightarrow{-4}$ I

2nd letter P $\xrightarrow{-8}$ H $\xrightarrow{-4}$ D $\xrightarrow{-2}$ B $\xrightarrow{-1}$ A

3rd letter I $\xrightarrow{+1}$ J $\xrightarrow{+6}$ P $\xrightarrow{+1}$ Q $\xrightarrow{+6}$ W

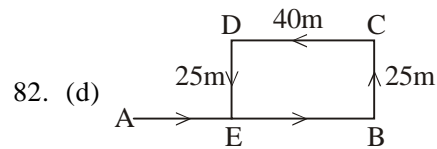
78. (b) 2nd denotes the action of the first.

79. (a) 1st has a good taste for the second.

80. (c) In the second and third statements, the common code words are 'pe', 'mink' and 'may' and the common words are 'are', 'not' and 'ripe'. Hence, in the third statement, 'nue' means 'mangoes'

81. (c) Only son of Amar's mother's father – Amar's maternal uncle.

So, the girl's maternal uncle is Amar's maternal uncle. Thus the girl's mother is Amar's aunt.



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Deepak's distance from the starting point A = (AB - EB) = (75 - 40)m = 35m

83. (a) Island is a part of sea. Mountain is entirely different.



All the three items are partly related to one another.

85. (a)

86. (d)

87. (b) Number of students between Kunal and Sonali = $35 - (7 + 9) = 19$

Clearly, there are 9 students between Kunal and Pulkit, as well as Pulkit and Sonali. So Kunal is 10th from Pulkit.

88. (b) Using the correct symbols

$$\begin{aligned} &= 8 + 7 \times 8 \div 40 - 2 = 8 + 7 \times \frac{1}{5} - 2 \\ &= 6 + \frac{7}{5} = 7\frac{2}{5} \end{aligned}$$

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89. (c) Clearly, from 1 to 100, there are ten numbers with 3 as the unit's digit – 3, 13, 23, 33, 43, 53, 63, 73, 83, 93 and ten numbers with 3 as the ten's digit – 30, 31, 32, 33, 34, 35, 36, 37, 38, 39.

$$\therefore \text{Required number} = 10 + 10 = 20$$

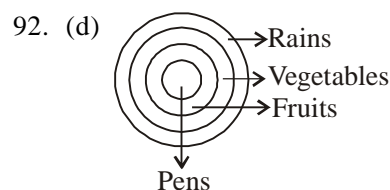
90. (a) $\frac{12 \times 14}{2} = 84, \frac{9 \times 18}{2} = 81$

$$\text{Then, } \frac{11 \times ?}{2} = 88$$

$$\Rightarrow ? = 16$$

91. (c) $5 \times 3 + 4 = 19, 6 \times 4 + 5 = 29$

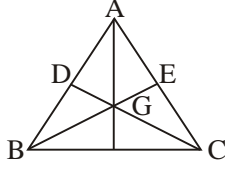
$$\text{Missing number} = 7 \times 5 + 6 = 41$$



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93. (c) Similar figure repeats in every second step.
Each time a particular figure reappears, it gets rotated through 180° .

94. (a)



The simplest triangles = AGE, EGC, GFC, BGF, DGB and ADG.

The triangles composed of two components each are AGE, BGC and ABG.

The triangles composed of three components each are AFC, BEC, BDC, ABF, ABE, DAC.

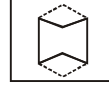
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ABC composed of six components.

$$\therefore \text{Total number of triangles} = 6 + 3 + 6 + 1 = 16$$

95. (c)

96. (b)



97. (c)

98. (d)

99. (b) Thieves belong to the category of criminals.
Judge is a separate entity.

100. (b) F opposite to B

E opposite to C

A opposite to D

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