

## SSC MTS 2019 Memory Based Paper (Solutions)

**S1. Ans.(c)**

**Sol.**  $6^2 + 8^2 = 100$

$4^2 + 5^2 = 41$

**S2. Ans.(d)**

**Sol.** -3 series

**S3. Ans.(d)**

**Sol.**  $4^2 = 16$

$5^2 = 25$

**S4. Ans.(d)**

**Sol.** Except OSY, in all other (+4, +5 pattern) follow.

**S5. Ans.(b)**

**Sol.**  $234 = 2 + 3 + 4 = 9$

$243 = 2 + 4 + 3 = 9$

$432 = 4 + 3 + 2 = 9$

$345 = 3 + 4 + 5 = 12$

**S6. Ans.(a)**

**Sol.**  $8 - 14 + 7 \times 10 \div 9 = ?$

After changing sign

$8 \times 14 \div 7 - 10 + 9$

$= 16 - 10 + 9 = 15$

**S7. Ans.(a)**

**Sol.** Pair of opposite letters in reverse order.

**S8. Ans.(c)**

**Sol.**  $15 - 12 + 5 \times 9 \div 12$

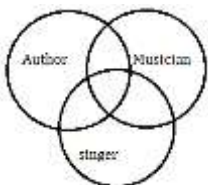
$15 \times 12 \div 5 - 9 + 12$

$36 - 9 + 12$

$48 - 9 = 39$

**S9. Ans.(c)**

**Sol.**



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**S10. Ans.(b)**

**Sol.**

M O C K S  
+1↓ -1↓ +1↓ -1↓ +1↓

N N D J T

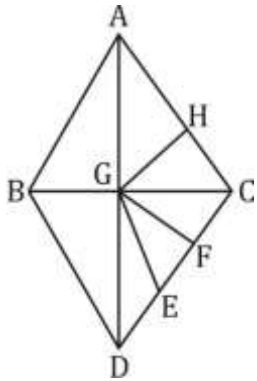
Similarly,

F L A M E  
+1↓ -1↓ +1↓ -1↓ +1↓

G K B L F

**S11. Ans.(b)**

**Sol.**



$\triangle ABD, \triangle ABG, \triangle BGD$

$\triangle DGC, \triangle DGE, \triangle DGF$

$\triangle EGF, \triangle EGC, \triangle FGC$

$\triangle AGC, \triangle AGH, \triangle GCH$

$\triangle ADC, \triangle ABC, \triangle BDC$

$\therefore$  Total  $\Delta$ 's = 15

**S12. Ans.(c)**

**Sol.**



I. ✓

II. ✓

Both conclusion follow.

**S13. Ans.(b)**

**S14. Ans.(b)**

**S15. Ans.(c)**

**Sol.**  $7 \times 6 + 3 = 45$

$4 \times 9 + 8 = 44$

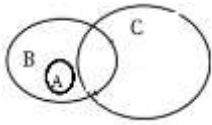
$2 \times 5 + 7 = 17$

**S16. Ans.(a)**

**Sol.** difference of 25.

S17. Ans.(c)

Sol.



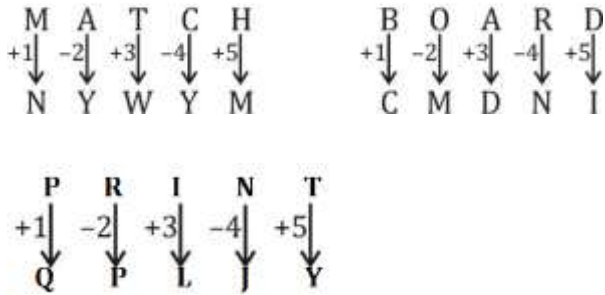
I. ✗

II. ✗

Neither I nor II follows.

S18. Ans.(d)

Sol.



S19. Ans.(c)

Sol.  $18 + 2 = \frac{20}{2} = 10$

$8 + 4 = \frac{12}{2} = 6$

$12 + 18 = \frac{30}{2} = 15$

Similarly,

$7 + 9 = \frac{16}{2} = 8$

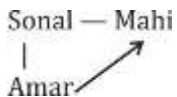
S20. Ans.(b)

Sol. MNNOMNNOMNNO ⇒ MNNO is the repeated word.

⇒ NMON is correct answer.

S21. Ans.(c)

Sol.



So, Mahi is in the north east direction of Amar.

S22. Ans.(c)

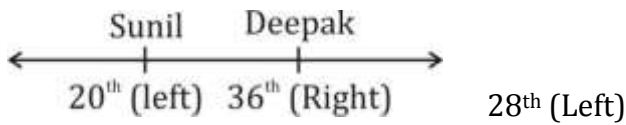
Sol. Anjum Ankit Ram Amit Priya

Priya is sitting at the extreme right end.

S23. Ans.(c)

S24. Ans.(b)

Sol.



(Sunil after interchanging)

∴ Total number of boys in the row

$$= 36 + 28 - 1$$

$$= 63$$

S25. Ans.(c)

Sol. 1. Rangle

2. Regal

5. Rested

4. Room

3. Royal

S26. Ans.(a)

S28. Ans.(a)

S30. Ans.(d)

S32. Ans.(c)

S34. Ans.(c)

S36. Ans.(b)

S38. Ans.(b)

S40. Ans.(b)

S42. Ans.(c)

S44. Ans.(a)

S46. Ans.(b)

S48. Ans.(a)

S50. Ans.(d)

S51. Ans.(d)

$$\text{Sol. } \frac{1}{2} + \frac{1}{\sqrt{2}} = \frac{2+\sqrt{2}}{2\sqrt{2}} = \frac{\sqrt{2}+1}{2}$$

S52. Ans.(a)

$$\text{Sol. } \frac{1}{\sqrt{2}} + \frac{\sqrt{3}}{2} = \frac{2+\sqrt{2}.\sqrt{3}}{2\sqrt{2}} = \frac{\sqrt{2}+\sqrt{3}}{2}$$

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**S53. Ans.(b)**

**Sol.**  $p = x$

Amount =  $4x$

S.I =  $3x$ .

R = 10%

$$\frac{x \times 10 \times T}{100} = 3x$$

T = 30years.

**S54. Ans.(c)**

**Sol.**

$$\begin{array}{l} A \rightarrow 8 \quad \left| \quad \right| \quad 3 \\ \quad \quad \quad \left| 24 \right| \\ B \rightarrow 12 \quad \left| \quad \right| \quad 2 \end{array}$$

A + B = 5 → Two hour's work

$$(A \times B) \times 4 = 20$$

Work Remaining

$$24 - 20 = 4$$

Now A's turn  $4 - 3 = 1$

$$\text{Now B's Turn} = \frac{1}{2} \text{ total time} = 8 + 1 + \frac{1}{2} = 9\frac{1}{2}$$

**S55. Ans.(c)**

**Sol.** (25) CP = (20)SP

$$\frac{CP}{SP} = \frac{20}{25}$$

Profit = 5

$$\text{Profit}\% = \frac{5}{20} \times 100 = 25\%$$

**S56. Ans.(b)**

**Sol.**  $8 \div 2$  (4)

$$8 \div 8 = 1$$

**S57. Ans.(c)**

$$\text{Sol. } 10 + 15 - \frac{10 \times 15}{100}$$

$$25 - 1.5 = 23.5\%$$

**S58. Ans.(d)**

**Sol.**

$$\begin{array}{l} T_1 \quad T_2 \\ 2 \quad : \quad 5 \\ \left| \times 35 \right| \quad \left| \times 35 \right| \\ 70 \quad 175 \quad \frac{350}{5} = 70 \\ \text{Speed } T_2 \rightarrow 175 \text{ km/h.} \end{array}$$

**S59. Ans.(a)**

**Sol.**

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

**S60. Ans.(c)**

**Sol.** Average speed =  $\frac{40}{\frac{15}{10} + \frac{25}{30}} = 120/7 = 17\frac{1}{7}$  km/h

**S61. Ans.(b)**

**Sol.**  $3^{25} (1 + 3 + 9 + 27)$   
 $3^{25} \times 40$

**S62. Ans.(a)**

**Sol.**

$$\frac{2+5+8+11}{4} = \frac{26}{4} = 6.50$$

**S63. Ans.(b)**

**Sol.**

A : B  
2 : 3  
2 + 3 → 5 3500  
700  
A      B  
↓      ↓  
1400   2100

**S64. Ans.(a)**

**Sol.**  $13\% = \frac{13}{100}$   
 $13+13+\frac{13 \times 13}{100}$   
 $= 26+1.69$   
27.69% increase

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**S65. Ans.(a)****Sol.** Sum of expenditure =  $5 \times 3 + 3 \times 2 + 3 \times 5 = 36$ 

Average exp. =  $\frac{36}{11} = 3.27$

**S66. Ans.(a)****Sol.** Let CP of the article = 100

Mark price = 130

Profit = 13.75

Discount =  $30 - 13.75 = 16.25$ 

Discount % =  $\frac{16.25}{130} \times 100 = 12.5\%$

**S67. Ans.(a)****Sol.** Let the numbers are  $3x$  &  $7x$ 

ATQ,

$3x \times 7x = 1344$

$x^2 = 64$

$x = 8$

Numbers = 24 &amp; 56

Sum of numbers =  $24 + 56 = 80$

**S68. Ans.(b)****Sol.**

$\frac{8}{100} \times 5000$

= 400 ml

**S69. Ans.(a)****Sol.**

$(-4) \times (-8) \div (-2) + 3 \times 5$

$-16 + 15$

= -1

**S70. Ans.(a)****Sol.**

$\frac{60.48}{5.4} \times 22 = 246.4$

**S71. Ans.(d)**

**Sol.**  $\sqrt[3]{3375} = 15$

**S72. Ans.(b)****Sol.** Energy drink C was consumed by least (120) people.**S73. Ans.(b)****Sol.** Required ratio = 120: 280

= 3: 7

**S74. Ans.(b)**

**Sol.** Required % =  $\frac{280-140}{140} \times 100 = 100\%$

**S75. Ans.(a)**

**Sol.** 40% of consumers of drink C =  $\frac{120 \times 40}{100} = 48$

Required % =  $\frac{48}{240} \times 100 = 20\%$

**S76. Ans.(c)**

**Sol. Hypocritical:** behaving in a way that suggests one has higher standards or more noble beliefs than is the case.

**S77. Ans.(d)**

**Sol. Impostor** is a person who pretends to be someone else in order to deceive others, especially for fraudulent gain.

**S78. Ans.(a)**

**Sol. Acute** means (of an unpleasant or unwelcome situation or phenomenon) present or experienced to a severe or intense degree.

**S79. Ans.(a)**

**Sol. Pinnacle** means a high, pointed piece of rock.

**S80. Ans.(c)**

**Sol. Comic** means causing or meant to cause laughter.

**S81. Ans.(b)**

**Sol. Humility** means the quality of having a modest or low view of one's importance.

**S82. Ans.(a)**

**Sol. Fortunate** means favoured by or involving good luck; lucky.

**S83. Ans.(d)**

**S84. Ans.(d)**

**S85. Ans.(b)**

**Sol. Financially** means pertaining to monetary receipts and expenditures; pertaining or relating to money matters

**S86. Ans.(c)**

**Sol. Enthusiasm** means intense and eager enjoyment, interest, or approval.

**S87. Ans.(b)**

**Sol. 'Subvert'** means undermine the power and authority of (an established system or institution).



**S88. Ans.(a)**

**Sol.** 'The' will be used before **poor** because – **the (Def. Art.)** is used with Adjectives to refer to a thing or a group of people described by the Adj.

**S89. Ans.(c)**

**Sol.** 'Union' is a collective noun which is singular in nature and hence the correct pronoun to be used with it is 'its' and not 'his'.

**S90. Ans.(b)**

**Sol.** 'The' will replace 'a' because – here, we are talking about a particular/definite/specific engineer.

**S91. Ans.(d)**

**Sol.** 'To end in a smoke' means producing no concrete or positive result. Hence option (d) is apt.

**S92. Ans.(a)**

**Sol.** 'A man of letters' means a learned man.

**S93. Ans.(c)**

**Sol.** **On the alert** (Idiom) : on guard against danger, attack, etc.; watchful ; ready. **The** will be used. Hence, **was on the alert** is the right usage.

**S94. Ans.(d)**

**Sol.** To (Prep.) : used for showing a relationship between one person/thing and another

**S95. Ans.(a)**

**Sol.** Here, Either of these is the right usage as we have to choose a pan out of two.

**S96. Ans.(b)**

**S97. Ans.(c)**

**S98. Ans.(a)**

**S99. Ans.(d)**

**S100. Ans.(b)**



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