

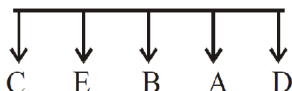
CLASS-XI

TEST DATE : 30 - 12 - 2021

HINT – SHEET

SECTION-A : MENTAL ABILITY

1. (4)



2. (1)

$$(4)^2 + 3 = 19$$

Similarly, $(7)^2 + 3 = 52$

3. (4)

$$\frac{\text{Total no. of alphabets (26)}}{\text{Position value of alphabet}} = \text{Remainder}$$

$$\frac{26}{G(7)} = \text{Remainder is 5}$$

4. (3)

FEED : F-6; E-5; E-5; D-4

$$\Rightarrow 6 \times 1 + 5 \times 2 + 5 \times 3 + 4 \times 4 = 47$$

TREE : T-20; R-18; E-5; E-5

$$\Rightarrow 20 \times 1 + 18 \times 2 + 5 \times 3 + 5 \times 4 = 91$$

MEET : M-13; E-5; E-5; T-20

$$\Rightarrow 13 \times 1 + 5 \times 2 + 5 \times 3 + 20 \times 4 = \underline{118}$$

5. (1)

Sum of age of 6 members = $22 \times 6 = 132$

Sum of age of 5 members excluding younger one = $132 - 7 = 125$

average age of 5 member = $\frac{125}{5} = 25$

average age at the time of birth = $25 - 7 = 18$

6. (3)

Person	B	D	A	F	G	C	H	E
Room	2	4	3	6	1	5	8	7

7. (3)

8. (2)

9. (1)

10. (4)

11. (2)

$$\begin{aligned}
 1^3 + 1 &= 2 \\
 \Rightarrow 2^3 + 2 &= 10 \\
 \Rightarrow 3^3 + 3 &= 30 \\
 \Rightarrow 4^3 + 4 &= 68 \\
 \Rightarrow 5^3 + 5 &= 130
 \end{aligned}$$

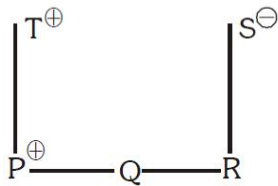
12. (2)

$$\begin{aligned}
 20 \div 5 \times 4 - 6 + 5 \\
 &= 4 \times 4 - 6 + 5 \\
 &= 16 - 6 + 5 \\
 &= 10 + 5 \\
 &= 15
 \end{aligned}$$

13. (1)

$$\begin{aligned}
 CE &\rightarrow 35 \\
 \Rightarrow 35 \times 2 &= 70 \\
 DE &\rightarrow 45 \\
 \Rightarrow 45 \times 2 &= 90
 \end{aligned}$$

14. (4)



15. (3)

$$\begin{array}{l}
 2 - 1 = 1 \\
 6 - 3 = 3 \\
 5 - 4 = 1
 \end{array}
 \left. \vphantom{\begin{array}{l} 2 - 1 = 1 \\ 6 - 3 = 3 \\ 5 - 4 = 1 \end{array}} \right\} \rightarrow 131$$

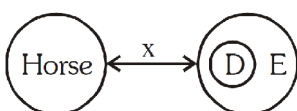
$$\begin{array}{l}
 7 - 5 = 2 \\
 9 - 3 = 6 \\
 3 - 1 = 2
 \end{array}
 \left. \vphantom{\begin{array}{l} 7 - 5 = 2 \\ 9 - 3 = 6 \\ 3 - 1 = 2 \end{array}} \right\} \rightarrow 262$$

16. (1)

17. (3)



18. (2)



19. (2)
20. (1)
21. (4)
22. (2)
By observation
23. (1)
By observation
24. (2)
1st and last day of simple year is same therefore in leap year one day is extra Saturday.
25. (4)
By observation
26. (3)
By observation
27. (2)
QUESTION → EIN O QSTU
 ↓
 FJOPRTUV
28. (4)
26
 $\Rightarrow (5 \times 3) - (2 \times 1) = 13$
 $\Rightarrow (8 \times 7) - (6 \times 5) = 26$
29. (2)
Thursday [by counting number of odd days]
30. (2)
48 {by observation}

SECTION-B : PHYSICS

31. (1)
32. (3)
33. (1)
34. (1)
35. (3)
36. (1)
37. (3)
38. (3)
39. (3)
40. (3)
41. (1)
42. (4)
43. (4)
44. (3)
45. (1)
46. (1)
47. (3)
48. (2)

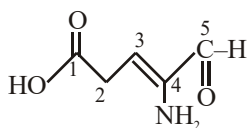
49. (1)
50. (4)
51. (4)
52. (3)
53. (2)
54. (3)
55. (3)
56. (1)
57. (1)
58. (3)
59. (1)
60. (3)

SECTION-C : CHEMISTRY

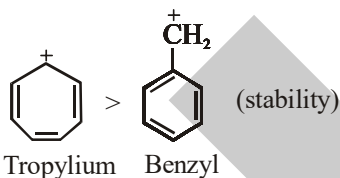
61. (3)
62. (2)
63. (4)

Ionic radii $\propto \frac{-ve \text{ charge}}{+ve \text{ charge}}$

64. (1)
65. (2)

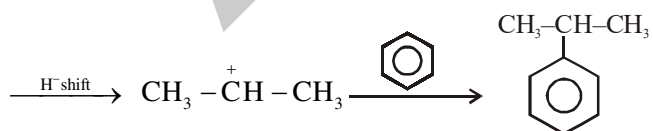


66. (2)



67. (2)
68. (2)
69. (3)
70. (1)
71. (2)

Acidic strength $\propto -M, -I$



72. (2)
73. (2)

1.4gm nitrogen = 0.1 mole N atom
= 6.02×10^{22} N atoms

74. (2)
 Position isomer has different position of substituents.

75. (3)
 In isothermal Expansion $\Delta H = 0$
 $\Delta G = -T\Delta S$

76. (2)

77. (1)

78. (2)

79. (2)

80. (4)

81. (1)

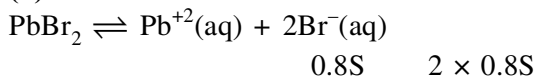
82. (1)

83. (3)

84. (2)

2° amine is most basic.

85. (1)



$$8 \times 10^{-5} = K_{sp} = (0.8S)(1.6S)^2$$

$$S = \left(\frac{10^{-4}}{1.6 \times 1.6} \right)^{1/3}$$

86. (1)

-M group decrease stability of carbocation.

87. (3)

88. (3)

Velocity is proportional to $\frac{Z}{n}$

89. (2)

90. (2)

SECTION-D : BIOLOGY

91. (2)

92. (3)

93. (1)

94. (3)

95. (2)

96. (2)

97. (3)

98. (2)

99. (1)

100. (3)

101. (1)

102. (3)

103. (1)

104. (3)

- 105. (4)
- 106. (1)
- 107. (2)
- 108. (1)
- 109. (3)
- 110. (3)
- 111. (4)
- 112. (2)
- 113. (1)
- 114. (3)
- 115. (3)
- 116. (3)
- 118. (4)
- 119. (1)
- 120. (4)

