

Test Form No. : 016 6 58

Answer with Solution/उत्तर व्याख्या सहित

भाग-I | सामान्य बुद्धिमत्ता एवं तर्कशक्ति

PART-I | General Intelligence and Reasoning

1. (A) Metal is cut by Hacksaw. Similarly, wood is cut by saw.
2. (B) $H \quad T \quad : \quad 26 \quad :: \quad M \quad P \quad A \quad : \quad 27$
 $(8 + 20) - 2 = 26 \quad (13 + 16 + 1) - 3 = 27$
3. (C)
4. (A) All except (A), are forming non-meaningful words.
5. (A)
6. (B) $E > B > D > A > C$
7. (A) $\begin{matrix} 4 & - & 6 & - & 5 \\ \updownarrow^{opp.} & & \updownarrow^{opp.} & & \updownarrow^{opp.} \\ 4 & - & 1 & - & 2 \end{matrix}$
8. (A) $\begin{matrix} 30 & 30 & 45 & 89 & 225 & 675 \\ \times 1 & \times 1.5 & \times 2 & \times 2.25 & \times 3 \end{matrix}$
9. (B) $9 - 6 = (3)^3 \Rightarrow 27 - 1 = 26$
 $12 - 10 = (2)^3 \Rightarrow 8 - 1 = 7$
 $12 - 8 = (4)^3 \Rightarrow 64 - 1 = 63$
 $4 - 3 = (1)^3 \Rightarrow 1 - 1 = 0$
10. (B) $\begin{matrix} & +3 & & +3 & & +3 \\ & \downarrow & & \downarrow & & \downarrow \\ 25 & 27 & 23 & 30 & 21 & 33 & 19 & 36 \\ \uparrow & & \uparrow & & \uparrow & & \uparrow \\ -2 & & -2 & & -2 & & -2 \end{matrix}$
11. (B) $7 + 3 = \frac{4}{(7-3)} \frac{21}{(7 \times 3)}$
 $11 + 7 = \frac{4}{(11-7)} \frac{77}{(11 \times 7)}$
 $9 + 5 = \frac{4}{(9-5)} \frac{45}{(9 \times 5)}$
 $6 + 2 = \frac{4}{(6-2)} \frac{12}{(6 \times 2)}$
12. (D) Day on 8th August 1955 = Tuesday
 Day on 8 August 1993
 = Tuesday + [(1993 - 1955) + 10]
 = Tuesday + [(38 + 10)]
 = Tuesday + 6
 = Sunday
 Number of days between 8th August and 21st August
 = 23 + 30 + 21
 Number of days between 8th August and 21st August

= 23 + 30 + 21

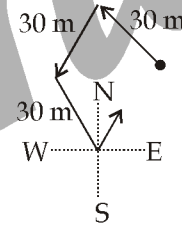
Number of odd days = 2 + 2 + 0 = 4

Then, day on 21st October = Monday + 4 = Friday

13. (B)
14. (C) $a \underline{b} c / \underline{c} a b / b \underline{c} a / \underline{a} b c / \underline{a} b c / \underline{c} a b$
15. (B)
16. (C)
17. (C) $\begin{matrix} \underline{\text{Monsoon}} & \underline{\text{Rain}} & \underline{\text{Flood}} & \underline{\text{Rescue}} & \underline{\text{Shelter}} & \underline{\text{Relief}} \\ 2 & 1 & 4 & 3 & 5 & 6 \end{matrix}$
18. (D) $35 \times 7 + 5 \div 1 - 5 = 245$
19. (D) $\begin{matrix} & +21 & & +21 & & \\ & \downarrow & & \downarrow & & \\ 16 & 15 & 36 & 35 & 56 & 55 \\ \uparrow & & \uparrow & & \uparrow \\ -1 & & -1 & & -1 \end{matrix}$

20. (B)
21. (B)

22. (A)



23. (C) Reflection Time = 4 : 20
 Actual Time = 11 : 60 - 4 : 20 = 7 : 40
24. (D)
25. (C)

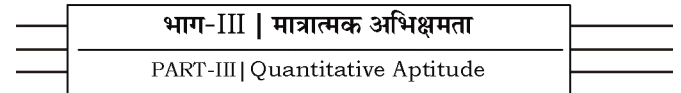
भाग-II | सामान्य ज्ञान एवं जानकारी

PART-II | General Knowledge and Awareness

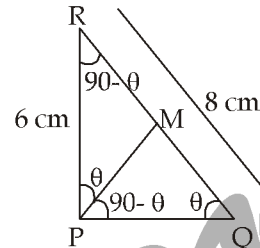
26. (D) Nepal
 The former Prime Minister of Nepal Sushil Koirala (79) passed away in Kathmandu, Nepal. He spent his life in politics fighting for democracy in Nepal and led protests in 2006 that ended a centuries old monarchy system and turned Nepal into a republic country.
27. (A) Stomata are the small pores present on leaves of a plant through which water is evaporated in air.
28. (A) 'Cell wall' is present only in the cell of plants.
29. (C) 'Tendon' are the connective tissues that connect muscles to bones.
30. (A) Plastids are called the kitchen house of cell as the process of making food through photosynthesis in plants takes place here.

31. (B) Cobalt is present in vitamin B12 which is formed by the human body itself.
32. (C) Mohd. Ali Jinnah gave 14 points against the report of Motilal Nehru on the demand of British Parliament for Indians to give their own constitutions.
33. (D) El nino is a Southerly, warm ocean current. It causes climatic changes across the pacific ocean. It gets its name from the spanish word el nino which means 'Boy'.
34. (A) Yusuf Adil Shah was the founder of Bijapur State.
35. (D) Iltutmish, the sultan of Delhi, was contemporary of Mongol leader Chengiz Khan. In 1221 A.D. there was a danger of expected attack of Chengiz Khan on Delhi.
36. (B) August offer (1940), cripples mission 1942 (March), Quit India Movement 1942 (August), Bombay Mutiny 1946.
37. (C)
38. (A) Sodium is a metal which is soft enough to be cut by a knife. Potassium can also be cut.
39. (D)
40. (C) Uranus is the planet which emits green light. This is due to the presence of methane gas in its atmosphere which absorbs red light and helps Uranus emit green light.
41. (A) Rajasthan
The Rajasthan state government has launched an initiative "School on Wheels" in Jaipur. Under the initiative, a van, which houses a library, has been set up by an NGO "Taabar Society". The initiative has been introduced for spreading awareness about education among the tribal and nomadic children. The mobile school will use audio/ video mediums to teach children in Jaipur District.
42. (B)
43. (A) The appointment and confirmation of Justices to the Supreme Court of the United States involves several steps set fourth by the United States Constitution, which have been further refined and developed by decades of tradition. Candidtes are nominated by the President of the United States and must face a series of hearings in which both the nominee and other witnesses make statements and answer questions before the Senate Judiciary Committee, which can vote to send the nomination to the full United States Senate. Confirmation by the Senate allows the President to formally appoint the candidates to the court
44. (C) Hutti Gold mines are located in Karnataka.
45. (A)
46. (A)
47. (A)
48. (B) Pancha Siddantham of Varahamihira deals with Astronomy.

49. (C) Kalikho Pul was the former Chief Minister of Arunachal Pradesh.
50. (C) Kesiraju Srinivas to mark the 70th anniversary of India's Independence from the British Rule. Prime Minister Narendra MOdi has released a theme song "70 Saal Azadi Yaad Karo Kurbani."



51. (C)



In ΔPQR and ΔPMR
 $\angle RPQ = \angle PMR$
 $\angle PQR = \angle RPM$
 $\square \Delta PQR \sim \Delta PMR$

$$\frac{(QR)^2}{(PR)^2} = \frac{\Delta PQR}{\Delta PMR}$$

$$\frac{(8)^2}{(6)^2} = \frac{\Delta PQR}{\Delta PMR}$$

$$\frac{64}{36} = \frac{16}{9} = \frac{\Delta PQR}{\Delta PMR}$$

52. (C) $m + n + p = 3$
 $m^2 + n^2 + p^2 = 6$

and $\frac{1}{m} + \frac{1}{n} + \frac{1}{p} = 1$

$$mn + np + pm = mnp$$

$$m + n + p = 3$$

Squaring both sides

$$m^2 + n^2 + p^2 + 2(mn + np + pm) = 9$$

$$mnp = \frac{3}{2}$$

53. (C) $9 \cot^2\theta - 4 \cos^2\theta + 13$
 $9 (\operatorname{cosec}^2\theta - 1) - 4(1 - \sin^2\theta) + 13$
 $9 \operatorname{cosec}^2\theta - 9 - 4 + 4 \sin^2\theta + 13$

$$\text{Minimum Value} = 2\sqrt{9 \times 4} = 12$$

54. (B) Let speed of boat in still water is x km/hr

$$\frac{20}{x+2} + \frac{20}{x-2} = \frac{110}{60}$$

to solve it $x = 22$ km/hr

55. (B) Circumterence of the base of cylinder
 $= 2\pi r = 12$

$$r = \frac{6}{\pi}$$

Here, r = radius of the base of cylinder

56. (C) $\cos\theta = \frac{1}{2} \left(a + \frac{1}{a} \right)$

$$\begin{aligned} 2 \cos^2\theta - 1 &= 2 \left[\frac{1}{2} \left(a + \frac{1}{a} \right) \right]^2 - 1 \\ &= 2 \times \frac{1}{4} \left(a^2 + \frac{1}{a^2} + 2 \right) - 1 \\ &= \frac{1}{2} \left[\left(a^2 + \frac{1}{a^2} \right) + 2 \right] - 1 \\ &= \frac{1}{2} \left(a^2 + \frac{1}{a^2} \right) + 1 - 1 \\ &= \frac{1}{2} \left(a^2 + \frac{1}{a^2} \right) \end{aligned}$$

57. (B)

$$\begin{aligned} x + y &= 720 \\ x \times \frac{85}{100} &= y \times \frac{119}{100} \\ \frac{x}{y} &= \frac{7}{5} \end{aligned}$$

Cost of the wrist watch sold at a loss

$$\Rightarrow \frac{7}{12} \times 720 = ₹ 420$$

58. (A)

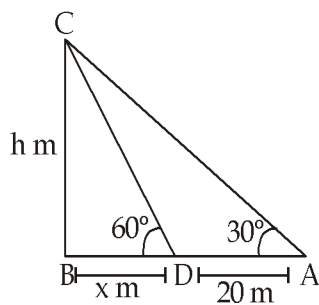
	Bolt	Tayson
Speed	3	4
Time	4	3
Time taken by Bolt	= 120 minute = 2 hr	
Tayson	= 90 minute = $1\frac{1}{2}$ hr	

59. (D)

Virat + Rohit 30 days
 Remaining work after 16 days = $\frac{14}{30}$
 $\frac{14}{30}$ work will be finished by Rohit 28 days

$$\therefore 1 \text{ --- } \frac{28}{14} \times 30 = 60 \text{ days}$$

60. (C)



in ΔCBA

$$\tan 30^\circ = \frac{h}{20+x}$$

$$\frac{1}{\sqrt{3}} = \frac{h}{20+x}$$

$$20+x = \sqrt{3} h \quad \dots (1)$$

in ΔCBD

$$\tan 60^\circ = \frac{h}{x}$$

$$h = \sqrt{3} x \quad \dots (2)$$

from equation (1) and (2)

$$20 + \frac{h}{\sqrt{3}} = \sqrt{3} h$$

$$20\sqrt{3} + h = 3h$$

$$h = 10\sqrt{3} \text{ m}$$

61. (D) $\frac{x+1-x+1}{x^2-1} - \frac{2}{x^2+1} - \frac{4}{x^4+1}$

$$\frac{2}{x^2-1} - \frac{2}{x^2+1} - \frac{4}{x^4+1}$$

$$\frac{2x^2+2-2x^2+2}{x^4-1} - \frac{4}{x^4+1}$$

$$\frac{4}{x^4-1} - \frac{4}{x^4+1}$$

$$\frac{4x^4+4-4x^4+4}{x^8-1} = \frac{8}{x^8-1}$$

62. (A) Let intercepts made by line = a

Equation of line is $\frac{x}{a} + \frac{y}{a} = 1$

$$x + y = a \quad \dots (1)$$

but this line passes through (4, 5)

$$4 + 5 = a$$

$$a = 9$$

\therefore Equation $x + y = 9$

63. (B) $\frac{50 \text{ Paise}}{2x} + \frac{25 \text{ Paise}}{3x} + \frac{10 \text{ Paise}}{5x}$

Value of 50 paise coins = $\frac{2x}{2} = ₹ x$

25 paise coins = $₹ \frac{3x}{4}$

10 paise coins = $₹ \frac{x}{2}$

$$x + \frac{3x}{4} + \frac{x}{2} = 90$$

$$x = 40$$

$$3x = 120$$

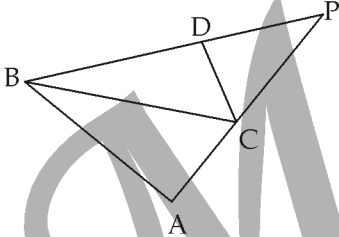
भाग - घ | अंग्रेजी भाषा
PART- D | English Language

64. (B) $\text{Rate} = \frac{100 \times \text{Interest}}{P \times \text{Time}}$
 $\frac{220}{220} = \frac{22}{22}$
 $\text{Rate} = \frac{100 \times 22}{220 \times 1} = 10\%$
65. (B) Let the width of a wall = x m
 the height of a wall = 6x m
 length of a wall = 42 x m
 Volume of a wall = 42x × 6x × x = 16128
 x = 4m

66. (B) Area of triangle = $\frac{1}{2} \times 25 \times 312$
 $= 25 \times 156$
 $= 3900 \text{ cm}^2 = 39 \text{ dm}^2$

67. (A) $100 \xrightarrow[\text{Rent}]{30\%} 70 \xrightarrow[\text{Food}]{25\%} 45 \xrightarrow[\text{Education}]{20\%} 25 \xrightarrow[\text{Electricity}]{12\%}$
 Monthly Salary = $\frac{1040}{13} \times 100 = ₹ 8000$

68. (C)
 69. (D) LCM of 3, 5, 8, 12 = 120
 The greatest number of five digit which is divisible by 120 is 99960.
 Hence, required number = 99962

70. (D)
- 

In $\triangle ABP$ and $\triangle DCP$
 $\angle P$ is common
 $\angle BAC = \angle CDP = 90^\circ$
 $\triangle BAP \sim \triangle CDP$

$$\frac{AP}{PB} = \frac{DP}{PC}$$

71. (C) Percentage of total failed students
 $= (34 + 42 - 20)$
 $= 56\%$
 Percentage of passed student = $(100 - 56)$
 $= 44\%$
72. (A) Capital = $\frac{55.50}{1.5} \times 100 = ₹ 3700$
73. (A) State Government Securities (%)
 $= \frac{110}{1539} \times 100 \approx 7.14\%$
74. (B) Required Difference = $565 - 564 = 1$ crore
75. (A) Required % = $\frac{73}{110} \times 100 \approx 66.36\%$

76. (B)
 77. (A)
 78. (D)
 79. (C) 'among' instead of 'between'
 80. (B) Remove 'that'
 81. (B) 'escaped' instead of 'escapes'
 82. (B) 'recycled'
 83. (D) **Predominant(adj)**-having power, authority/
 मुख्य
Insignificant(adj)-too small to be important/
 नगण्य
 84. (A) **Fit(adj)**-suited or appropriate/ **दुरूस्त**
Delicate(adj)-easily injured, hurt/ **कोमल**
 85. (B) **Brought up**- प्रस्तुत करना
 86. (A) **Donkey's year**- लम्बे समय में
 87. (B) **Flip-Flop**-unexpected reversal as of direction
Flippant-frivolously disrespectful/ **बातूनी**
 88. (C) **Closet**-a small room storing food etc./ **कमरा**
 89. (C) **Satirist**-one who indulges in satire/ **व्यंगकार**
Slanderer-to utter defame against/ **निंदक**
 90. (B) **Befogged(v)**-becloud, render unclear/ **भ्रमित**
Panicky(n)-a sudden overwhelming fear/ **हलचल**
 91. (A) **Proselytise(v)**-to attempt to convert/ **बदलाव**
Hypnotise(v)-to influence/ **सम्मोहित**
 92. (D) **Accommodative**- अनुग्राही
 93. (C)
 94. (C)
 95. (A)
 96. (A)
 97. (C)
 98. (C)
 99. (C)
 100. (A)

Throw	=	फेंकना
Shared	=	साझा करना
Escape	=	निकलना
Prisoner	=	कैदी
Membership	=	सदस्यता
Scientist	=	वैज्ञानिक
Aspect	=	पहलू
Situation	=	परिस्थिति
Flea	=	देहिका
Feast	=	भोज
Squish	=	तोड़ना
Intimidating	=	धमकाना
Infestation	=	प्रकोप