

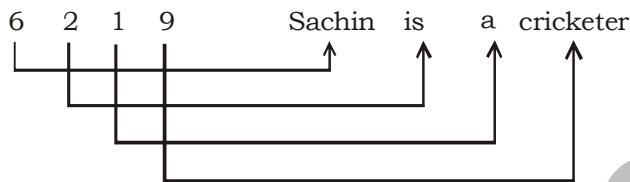


12. (A) **In the first row,**  
 $(16 \times 5) - 3 = 77$   
**In the second row,**  
 $(19 \times 8) - 3 = 149$   
**In the third row,**  
 $(12 \times 13) - 3 = \mathbf{153}$

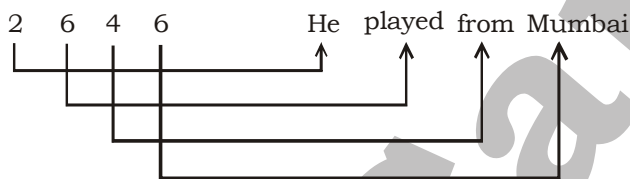
13. (B)  $34 * 17 * 54 * 18 * 6 * 56$   
 Put the sign,  
 $34 \div 17 - 54 + 18 \times 6 = 56$   
 $2 - 54 + 108 = 56$   
 $110 - 54 = 56$   
 $56 = 56$

14. (C) 2. Sketching → 3. Colouring → 4. Framing → 1. Displaying

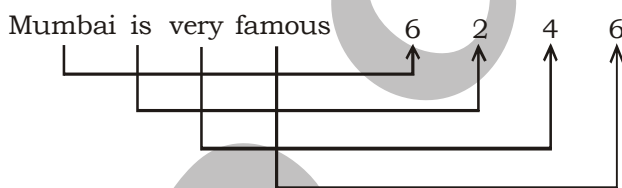
15. (B) As,



And,



Similarly,

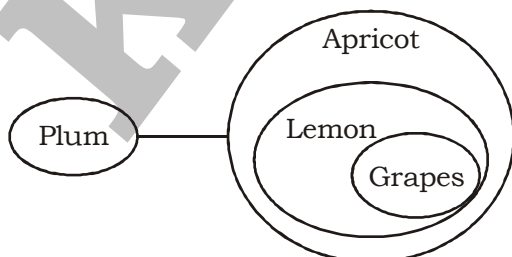


**Note:** Code is the number of letters in the given word.

16. (B) Angle made by hour hand in hours =  $360^\circ$

Angle made by hour hand in 5 hours 10 minutes, i.e.  $\frac{31}{6}$  hours =  $\left(\frac{360}{12} \times \frac{31}{6}\right) = 155^\circ$

17. (C)



I. False    II. True    III. True    IV. False

Hence, only conclusions II and III follow.

18. (B)            19. (B)
20. (B) As,  $4^2 \times 8 = 128$   
       Similarly,  $20^2 \times 24 = 9600$
21. (A)            22. (B)            23. (A)
24. (C) As,  
       K I N G F I S H E R  
       ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
       + \$ @ \* ! \$ > < ^ ?  
       Similarly,  
       **F I N I S H E R**  
       ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
       ! \$ @ \$ > < ^ ?
25. (B)
28. (D) IPS officer Sanjay Arora has been appointed as the Delhi police commissioner. He is a 1988 batch officer of the Tamil Nadu cadre.
29. (A) From the economic point of view equilibrium in the marginal utility derived from the goods consumed and money paid. The consumers would be in equilibrium if the satisfaction derived from each commodity is equal to each other.
31. (D) Nichrome is a non-magnetic alloy of nickel, chromium, and iron, usually used as a resistance wire. A common alloy is 80% nickel and 20% chromium, by mass. This alloying provides nichrome properties like hardness and ductility.
33. (B) Hopman cup is a hard-court tennis tournament held every year in Australia. Teams from different countries participate in the tournament.
34. (A) The world's first-ever digital ambassador has been created by Denmark that will work on building ties with the global tech giants like Google, Apple, IBM and Microsoft. The new appointment will be a tech liaison and reflect a diplomatic power shift between the established nations and privately-owned unions.
35. (D) Party funding in Austria has been subject to public regulation and public subsidies since 1975. Party finance in Germany is the subject of statutory reports, in which up to 35 parties file annually with the administration of the German Parliament.
36. (A) Amir Khusrau (1253 -1325 CE), a Persian poet was associated with the rulers of Delhi Sultanate. He composed poetry in Arabic and Persian besides being the first writer to use Urdu as a medium of poetic expression.
37. (D) Singapore is located near the Equator. It has a tropical climate, where it is hot and wet throughout the year. Latitude of Singapore is  $1^\circ 22''$  North of the Equator.
39. (D) Per capita real income is nothing, but NNP at factor cost. It means national income is sum total of all factor incomes adjusted for increase in prices.
40. (D) When light enters from rarer (air) to denser (glass) medium wavelength and velocity will get affected. The velocity will decrease. Moreover, as the ray bent in passing through different media, it results in decrease of wavelength. As such there is no change in frequency when light enters from air to glass.
41. (B) Compressed natural gas (CNG) is made by compressing natural gas which is composed of Methane (CH<sub>4</sub>), it also contain small amount of ethane. Coal gas typically contains Hydrogen, Methane and Carbon Monoxide. LPG is the abbreviation or short form of Liquefied Petroleum gas. The major constituent of LPG is Propane and Butane. Water gas is a synthesis gas, containing Carbon Monoxide and Hydrogen.
45. (B) Nanda Devi peaks are a part of Kumaon Himalayas located in Chamoli district of Uttaranchal. Nanda Devi is the second highest mountain in India, and the highest one located within the country. (Kangchenjunga, which is higher, is on the border of India and Nepal.) It is the 23rd highest peak in the world.
46. (A) The fundamental object of Panchayati Raj system is to ensure people's participation in development, political accountability and democratic decentralization.

47. (B) Participatory Notes (PNs / P-Notes) are instruments used by investors or hedge funds that are not registered with the SEBI (Securities and Exchange Board of India) to invest in Indian securities. Participatory notes are instruments that derive their value from an underlying financial instrument such as an equity share and, hence, the word, 'derivative instruments'. SEBI permitted FIIs to register and participate in the Indian stock market in 1992.
48. (D) The words Satyameva Jayate came from Mundaka Upanishad, meaning 'Truth Alone Triumphs'. The Mundaka Upanishad is an ancient Sanskrit Vedic text, embedded inside Atharva Veda. It is a Mukhya (primary) Upanishad, and is listed at number 5 in the Muktika canon of 108 Upanishads of Hinduism. It is among the most widely translated Upanishads.
49. (A) Process of soil erosion: splash erosion, sheet erosion, rill erosion, and gully erosion.
- In splash erosion, the impact of a falling raindrop creates a small crater in the soil, ejecting soil particles.
  - If the soil is saturated, or if the rainfall rate is greater than the rate at which water can infiltrate into the soil, surface runoff occurs. Sheet erosion is the transport of loosened soil particles by overland flow.
  - Rill erosion refers to the development of small, ephemeral concentrated flow paths which function as both sediment source and sediment delivery systems for erosion on hillslopes.
  - Gully erosion occurs when runoff water accumulates and rapidly flows in narrow channels during or immediately after heavy rains or melting snow, removing soil to a considerable depth.
50. (B) Directive Principles of State Policy (DPSPs) aim to create social and economic conditions under which the citizens can lead a good life. They also aim to establish social and economic democracy through a welfare state. The Directive Principles of State Policy is guidelines/principles given to the central and state governments of India, to be kept in mind while framing laws and policies.
51. (A) Present age of son =  $x$  years  
 Present age of father =  $3x + 3$  years  
 After 3 years, age of son =  $x + 3$  years  
 Age of father =  $3x + 3 + 3 = 3x + 6$  years  
 ATQ,  
 $3x + 6 = 2(x + 3) + 10$   
 $3x + 6 = 2x + 6 + 10$   
 $3x - 2x = 10$   
 $x = 10$   
 Father's present age =  $3 \times 10 + 3 = 33$  years
52. (B) Difference in votes of candidates  
 =  $(100\% - 46\%) - 46\%$  of the total votes polled =  $8\%$  of the total votes polled = 3680 votes  
 So,  
 Total votes polled (i.e. 100%) =  $\frac{3680}{8} \times 100 = 46000$
53. (B) Ratio of the two numbers =  $3 : 4$  [L.C.M. = 12]  
 L.C.M. of the two numbers = 48  $\left\{ \frac{48}{12} = 4 \right\}$   
 So, the two numbers are  $(3 \times 4)$  and  $(4 \times 4)$  ( $\because$  3 & 4 are co-prime numbers)  
 i.e. 12 and 16  
 Sum of the two numbers =  $12 + 16 = 28$

54. (C) As the distance is same,

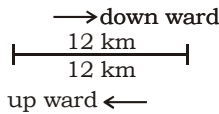
$$\text{So, the required distance (from one side)} = \frac{\text{Average Speed} \times \text{total time}}{2}$$

$$= \frac{\left(\frac{2 \times 25 \times 4}{25 + 4}\right) \text{ km/hr} \times \left(\frac{348}{60}\right) \text{ hr}}{2} = \frac{40}{2} \text{ km} = 20 \text{ km}$$

55. (C) Percentage (Fail in Hindi U Fail in English) = Percentage (Fail in Hindi + Percentage (Fail in English - Percentage (Fail in both Hindi & English) = 52% + 42% - 17% = 77%

$$\text{So, Percentage (Passed in both the subjects)} = 100\% - 77\% = 23\%$$

56. (B) Total distance covered  
 = 12 km + 12 km  
 = 24 km



$$\text{Total time taken} = 3 \text{ hours}$$

$$\text{Average Speed} = \frac{24}{3} = 8 \text{ km/hr}$$

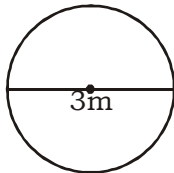
$$\text{Now, } \frac{2 \times S_{\text{down}} \times S_{\text{up}}}{S_{\text{down}} + S_{\text{up}}} = \frac{2 \times (S_B + 3)(S_B - 3)}{(S_B + 3) + (S_B - 3)}$$

$$S_B = 9 \text{ km/hr} \quad (\text{We can find it out from options also})$$

57. (D) Total S.I. = (3 × 12)% of the principal amount = 36% of the principal amount = ₹ 5400

$$\text{So, The principle amount (i.e. 100\%)} = ₹ \frac{5400}{36} \times 100 = ₹ 15000$$

58. (B)



$$\text{Circumference of wheel} = \pi d = \left(\frac{22}{7} \times 3\right) \text{ m}$$

$$\text{Distance covered in 1 minute} = 28 \times \frac{22}{7} \times 3 = 264 \text{ m}$$

So, Time taken by wheel to cover a distance of 5.280 km (or, 5280 m)

$$= \frac{5280}{264} \text{ minute} = 20 \text{ minutes}$$

59. (C)  $\frac{2\frac{3}{4}}{1\frac{5}{6}} \div \frac{7}{8} \times \left(\frac{1}{3} + \frac{1}{4}\right) + \frac{5}{7} \div \frac{3}{4}$  of  $\frac{3}{4}$

$$= \frac{11}{4} \div \frac{7}{8} \times \frac{7}{12} + \frac{5}{7} \div \frac{9}{16} = \frac{6}{4} \times \frac{8}{7} \times \frac{7}{12} + \frac{5}{7} \times \frac{16}{9} = 1 + \frac{80}{63} = \frac{143}{63}$$

60. (C)  $2\pi r_1 - 2\pi r_2 = 132$

$$(r_1 - r_2) = \frac{132}{2\pi} = \frac{132 \times 7}{2 \times 22} = 21 \text{ m}$$

Width of the path =  $(r_1 - r_2) = 21 \text{ m}$

61. (C)  $x - y = w + z + 6$   
 $x + y = w - z - 3$   
 $\frac{2x = 2w + 3}{2x - 2w = 3}$

$$2x - 2w = 3$$

$$x - w = \frac{3}{2} = 1.5$$

62. (D)  $\frac{\text{Perimeter}(\Delta ABC)}{\text{Per}(\Delta DEF)} = \frac{AB}{DE}$

$$\frac{\text{Perimeter}(\Delta ABC)}{25} = \frac{9.1}{6.5}$$

Perimeter ( $\Delta ABC$ ) = 35 cm

63. (D)  $\sin \theta + \sin^2 \theta + \sin^3 \theta = 1$

$$\sin \theta + \sin^3 \theta = \cos^2 \theta$$

$$\sin \theta (1 + \sin^2) = \cos^2 \theta$$

$$\sin \theta (2 - \cos^2 \theta) = \cos^2 \theta$$

$$\sqrt{1 - \cos^2 \theta} (2 - \cos^2 \theta) = \cos^2 \theta$$

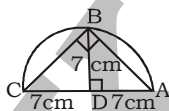
$$(1 - \cos^2 \theta) [4 + \cos^2 \theta - 4 \cos^2 \theta] = \cos^4 \theta$$

$$4 + \cos^4 \theta - 4 \cos^2 \theta - 4 \cos^2 \theta - \cos^6 \theta + \cos^4 \theta = \cos^4 \theta$$

$$- \cos^6 + 4 \cos^4 \theta - 8 \cos^2 \theta + 4 = 0$$

$$- \cos^6 + 4 \cos^4 \theta + 8 \cos^2 \theta = 4$$

64. (B)



In right angled isosceles ABC,

$$AB = BC$$

Also,

$$AD = CD = BD = 7 \text{ cm} = \text{circumradius (where } BD \perp AC)$$

Now, Required area = Area of semicircle - Area of  $\Delta ABC$

$$= \left( \frac{22 \times 7 \times 7}{7 \times 2} - \frac{1}{2} \times 14 \times 7 \right) \text{ cm}^2 = (77 - 49) \text{ cm}^2 = 28 \text{ cm}^2$$

65. (D) Each three distance is same.

Let,  $S_1$ ,  $S_2$  and  $S_3$  respectively are the speeds with which three distances have been covered.

$$\text{So, Average Speed} = \frac{3S_1S_2S_3}{S_1S_2 + S_2S_3 + S_3S_1} = \frac{3 \times 15 \times 30 \times 40}{15 \times 30 + 30 \times 40 + 40 \times 15}$$

$$= \frac{3 \times 15 \times 30 \times 40}{450 + 1200 + 600} = \frac{54000}{2250} = 24 \text{ km/hr}$$

66. (B)  $\frac{(a+b)^2 - (a-b)^2}{a \times b}$

$$= \frac{(a^2 + b^2 + 2ab) - (a^2 + b^2 - 2ab)}{ab} = \frac{4ab}{ab} = 4$$

$$\text{So, } \frac{(0.147 + 0.289)^2 - (0.147 - 0.289)^2}{0.147 \times 0.289}$$

$$= \frac{4 \times (0.147 \times 0.289)}{(0.147 \times 0.289)} = 4$$

67. (A) Let the number be  $x$

$$\text{Percentage change} = \left( \frac{\text{original result} - \text{changed result}}{\text{original result}} \times 100 \right) \%$$

$$= \left( \frac{5x - \frac{x}{5}}{5x} \times 100 \right) \% = \left( \frac{25x - x}{25x} \times 100 \right) \% = \left( \frac{24x}{25x} \times 100 \right) \% = 96\%$$

68. (D) Let  $x$  be the required annual payment.

So, also,  $r = 10\%$  p.a. and  $t = 3$  years

$$\left[ 1 \xrightarrow{+10\%} 1.1 \right]$$

ATQ,

$$(1 + 1.1 + 1.21)x = 3310 \times (1.1)^3$$

$$3.31x = 3310 \times 1.331$$

$$x = \frac{3310 \times 1.331}{3.31} = ₹ 1331$$

69. (C) Let the number of days taken by A to do the whole work =  $x$  days

So, the number of taken by B to do the whole work =  $(x - 5)$  days

Number days taken by C to do the whole work =  $(x - 9)$  days

ATQ,

Number of days taken by (A + B) together to do the whole work = Number of days taken by C alone to do the whole work

$$\frac{x(x-5)}{x+(x-5)} = x-9$$

$$x^2 - 5x = (x-9)(2x-5)$$

$$x^2 - 5x = 2x^2 - 5x - 18x + 45$$

$$x^2 - 18x + 45 = 0$$

$$x^2 - 15x - 3x + 45 = 0$$

$$x(x - 15) - 3(x - 15) = 0$$

$$(x - 3)(x - 15) = 0$$

$$x = 3 \text{ or } 15$$

but  $x = 3$  is not possible as  $x - 5$  or  $x - 9$  will become negative.

So,  $x = 15$  days

70. (A) Let  $x$  unit be the side of the square.

Its diagonal =  $\sqrt{2} x$  unit

$A_1$  : Area of the square =  $x^2$  sq. unit

$A_2$  : Area of the equilateral  $\Delta$  described on the diagonal of the square.

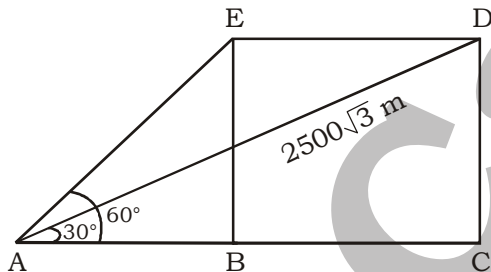
$$= \frac{\sqrt{3}}{4} \times (\sqrt{2}x)^2 \text{ sq. unit}$$

$$= \frac{\sqrt{3}}{4} \times 2x^2 \text{ sq. unit}$$

$$\frac{A_2}{A_1} = \frac{\frac{\sqrt{3}}{4} \times 2x^2}{x^2} = \frac{\sqrt{3}}{2}$$

$$A_2 : A_1 = \sqrt{3} : 2$$

71. (D)



E and D are positions of the plane.

$$\angle EAB = 60^\circ \text{ and } \angle DAC = 30^\circ$$

$$EB = 2500\sqrt{3} \text{ m}$$

In  $\Delta EAB$ ,

$$\tan 60^\circ = \frac{BE}{AB}$$

$$\sqrt{3} = \frac{2500\sqrt{3}}{AB} = 2500 \text{ m}$$

In  $\Delta DAC$ ,

$$\tan 30^\circ = \frac{CD}{AC}$$

$$\frac{1}{\sqrt{3}} = \frac{2500\sqrt{3}}{AC}$$



$$AC = 2500 \times 3 = 7500 \text{ m}$$

$$DE = BC = AC - AB = 7500 - 2500 = 5000 \text{ m}$$

$$\therefore \text{Speed of plane} = \frac{5000}{25} = 200 \text{ m/s}$$

72. (D) Total number of late arrivals of trains =  $114 + 31 + 5 = 150$

73. (C) Total number of late departures of trains =  $82 + 5 + 3 = 90$

74. (C) Required % =  $\left[ \frac{(114+31+5)}{1400} \times 100 \right] \% = \left( \frac{150}{1400} \times 100 \right) \% = 10.7\%$

75. (B) Required punctuality% =  $\left( \frac{1250+1400}{1400+1490} \times 100 \right) \% = \left( \frac{2650}{2890} \times 100 \right) \% = 91.7\%$

**MEANINGS IN ALPHABETICAL ORDER**

Acquainted	make someone aware of or familiar with	परिचित
Acquitted	free from a criminal charge by a verdict of not guilty affairs of state or diplomatic occasions	बरी, दोषमुक्त
Affluent	wealthy against surprise attack	धनी
Circuitous	longer than the most direct way	घुमावदार
Congenial	pleasant because of similar to one's interest faults or weaknesses from the main force, used especially as a guard	अनुकूल, सौहार्दपूर्ण
Gradual	taking place or progressing slowly	क्रमिक
Indulge	allow oneself to enjoy the pleasure of something institution in which you use humour to show their	लिप्त होना
Mechanism	a natural or established process by which something	तंत्र
Mellow	pleasantly smooth or soft; free from harshness	कोमल
Monotonous	dull, tedious, and repetitious	नीरस, उबाऊ
Outpost	a small military camp or position at some distance	चौकी
Plaintive	sounding sad and mournful	शोक भरा, विलापी
Protocol	the official procedure or system of rules governing	अनुशासन तंत्र की क्रियाविधि
Sap	gradually weaken or destroy	कमजोर करना
Satire	a way of criticizing a person, an idea or an takes place or is brought about	व्यंग्य

**SSC MOCK TEST - 365 (ANSWER KEY)**

- |         |         |         |          |
|---------|---------|---------|----------|
| 1. (D)  | 26. (C) | 51. (A) | 76. (B)  |
| 2. (A)  | 27. (C) | 52. (B) | 77. (C)  |
| 3. (B)  | 28. (D) | 53. (B) | 78. (C)  |
| 4. (B)  | 29. (A) | 54. (C) | 79. (A)  |
| 5. (A)  | 30. (B) | 55. (C) | 80. (D)  |
| 6. (A)  | 31. (D) | 56. (B) | 81. (B)  |
| 7. (B)  | 32. (D) | 57. (D) | 82. (C)  |
| 8. (C)  | 33. (B) | 58. (B) | 83. (B)  |
| 9. (D)  | 34. (A) | 59. (C) | 84. (C)  |
| 10. (B) | 35. (D) | 60. (C) | 85. (C)  |
| 11. (B) | 36. (A) | 61. (C) | 86. (C)  |
| 12. (A) | 37. (D) | 62. (D) | 87. (C)  |
| 13. (B) | 38. (A) | 63. (D) | 88. (B)  |
| 14. (C) | 39. (D) | 64. (B) | 89. (B)  |
| 15. (B) | 40. (D) | 65. (D) | 90. (B)  |
| 16. (B) | 41. (B) | 66. (B) | 91. (A)  |
| 17. (C) | 42. (B) | 67. (A) | 92. (B)  |
| 18. (B) | 43. (A) | 68. (D) | 93. (B)  |
| 19. (B) | 44. (C) | 69. (C) | 94. (B)  |
| 20. (B) | 45. (B) | 70. (A) | 95. (A)  |
| 21. (A) | 46. (A) | 71. (D) | 96. (C)  |
| 22. (B) | 47. (B) | 72. (D) | 97. (B)  |
| 23. (A) | 48. (D) | 73. (C) | 98. (A)  |
| 24. (C) | 49. (A) | 74. (C) | 99. (C)  |
| 25. (B) | 50. (B) | 75. (B) | 100. (A) |