

13. (C) **In the first figure,**

$$(4 \times 7) \div 4 = 7$$

In the second figure,

$$(6 \times 2) \div 3 = 4$$

In the third figure,

$$(6 \times 2) \div 2 = 6$$

14. (C) As,

R	A	I	L	W	A	Y			
↓			↓	↓		↓			
18	+		12	+	23	+	25	=	78

(Sum of only consonant letter's place value)

Similarly,

P	L	A	T	F	O	R	M					
↓	↓		↓	↓		↓	↓					
16	+	12	+	20	+	6	+	18	+	13	=	85

(Sum of only consonant letter's place value)

15. (C)

16. (C) Total number of triangles = 20

17. (B) moq/oq s/qsu/su

18. (A) The day of before 3 days from 10th January is Thursday, i.e. on 7th January.

7 January = Thursday

14 January = Thursday

21 January = Thursday

∴ 26 January = Thursday + 5 day = Tuesday

19. (B) $98 \xrightarrow{-11} 87 \xrightarrow{-13} 74 \xrightarrow{-11} 63 \xrightarrow{-13} 50 \xrightarrow{-11} 39 \xrightarrow{-13} 26$

20. (C) $45 \times 3 + 46 \div 2.5 - 8 = 122$

After changing the signs, we have

$$45 \div 3 + 46 \times 2.5 - 8 = 122$$

$$\frac{45}{3} + 46 \times \frac{25}{10} - 8 = 122$$

$$15 + 23 \times 5 - 8 = 122$$

$$15 + 115 - 8 = 122$$

$$15 + 107 = 122$$

$$112 = 122$$

21. (C) As,

$$\begin{array}{ccccc}
 C & O & R & O & N & A \\
 \downarrow & & & \downarrow & & \downarrow \\
 15 & & & 15 & & 01 \\
 1+5 = 6 & & & 1+5 = 6 & & 0+1 = 1
 \end{array}$$

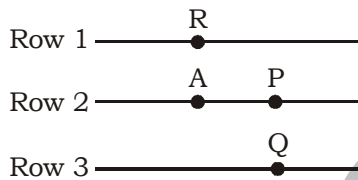
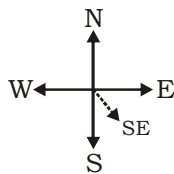
$\therefore 6 + 6 + 1 = 13$

Similarly,

$$\begin{array}{ccccc}
 T & A & J & A & S & U \\
 \downarrow & & & \downarrow & & \downarrow \\
 01 & & & 01 & & 21 \\
 0+1 = 1 & & & 0+1 = 1 & & 2+1 = 3
 \end{array}$$

$\therefore 1 + 1 + 3 = 5$

22. (D)



Hence, Q is in South-East of R.

23. (C)

24. (A)

25. (B)

27. (A) Lala Hardayal was the moving spirit behind the organization of the Ghadar Party.

28. (C) Tanks were first used on 15 September 1916 during the Battle of Flers-Courcelette, part of the Somme offensive on the Western Front.

29. (B) The sea water contains 18.98 parts per thousand of chlorine, 10.56 parts per thousand of sodium and 1.27 parts per thousand of magnesium.

30. (A) In the absence of moisture and vegetation, the action of wind is most pronounced.

32. (D) As frequency remains the same, when velocity changes, naturally wavelength will also change as $v = n\lambda$

33. (B) Carbon dioxide (CO₂) which is a gas at ordinary temperatures can be easily liquefied and also solidified by cooling and compressing. Solid CO₂, known as dry ice, is a soft, white snow-like substance. It is used as a refrigerant under the trade name Drikold. It is highly suitable for this purpose as it leaves no residue, being converted into the gaseous state directly.

34. (D) Mustapha Adib has been nominated for the position of Lebanon's Prime Minister. He has been Lebanon's ambassador to Germany, since 2013.

36. (C) Noise (sound) is measured on a scale known as decibel (dB) scale. One decibel is equivalent to the faintest sound that can be heard by the human ear. Some people feel discomfort with a sound of 85 dB. Sound becomes painful at around 100-120 dB and can even kill if increased to 180 dB.
39. (D) Santosh Trophy is an Indian football tournament in which the states of the country along with some government institutions participate. This is held annually since 1941.
42. (C) Jupiter is made up predominantly of hydrogen. The simple, basic gas, a prime ingredient on the sun, accounts for 90 percent of the atmosphere. Nearly 10 percent is composed of helium. A very small fraction of the atmosphere is made up of compounds such as ammonia, sulfur, methane, and water vapor.
45. (B) Rajendra Prasad, the first president of India, is the only person to have held office for two terms.
46. (C) In Football, Liverpool FC won the Champions League for the sixth time at Madrid on 1 June 2019.
47. (B) This is the astronomical unit of distance. It is the distance travelled by light in one year. In 1 sec; it travels 3×10^8 m.
49. (B) Hydrogen does not occur in free air. Nitrogen constitutes 78%, Oxygen 21%, Argon 0.9% by volume of air and the rest Carbon dioxide, Ozone and noble gases like Helium, Neon, Krypton and Xenon.
51. (B) Ratio of profit between Priti and Raghav = $5000 \times 12 : 8000 \times 5$
= $60 : 40 = 3 : 2$

$$\therefore \text{Share of Raghav in profit} = \frac{1500}{5} \times 2 = ₹ 600$$

52. (C) Let the maximum marks be x.
ATQ,

$$x \times \frac{20}{100} + 10 = x \times \frac{42}{100} - x \times \frac{12}{100}$$

$$\frac{20x}{100} + 10 = \frac{30x}{100}$$

$$\frac{30x}{100} - \frac{20x}{100} = 10$$

$$\frac{10x}{100} = 10$$

$$\therefore x = 100$$

53. (C) Let the quantity of first, second and third variety be $2x$, $4x$ and $3x$ kg respectively.
Total cost price = $50 \times 2x + 20 \times 4x + 30 \times 3x$
= $100x + 80x + 90x = ₹ 270x$
Total selling price = $33 \times (2x + 4x + 3x)$
= $33 \times 9x = ₹ 297x$

$$\therefore \text{Profit\%} = \left(\frac{297x - 270x}{270x} \times 100 \right) \% = 10\%$$

54. (B) $P = ₹ 15625$

$$R = 4\%$$

$$A = ₹ 17576$$

$$T = ?$$

We know that,

$$A = P \left(1 + \frac{R}{100} \right)^T$$

$$17576 = 15625 \left(1 + \frac{4}{100} \right)^T$$

$$\frac{17576}{15625} = \left(1 + \frac{4}{100} \right)^T$$

$$\left(\frac{26}{25} \right)^3 = \left(\frac{26}{25} \right)^T$$

$$\therefore T = 3 \text{ years}$$

55. (B) 50% of $(x - y) = 30\%$ of $(x + y)$

$$\frac{50}{100}(x - y) = \frac{30}{100}(x + y)$$

$$\frac{x - y}{2} = \frac{3x + 3y}{10}$$

$$10x - 10y = 6x + 6y$$

$$4x = 16y$$

$$\frac{x}{y} = \frac{16}{4}$$

$$\therefore \text{Required\%} = \left(\frac{4}{16} \times 100 \right)\% = 25\%$$

56. (C) $\left(1 - \frac{1}{3} \right) \left(1 - \frac{1}{4} \right) \left(1 - \frac{1}{5} \right) \dots \dots \left(1 - \frac{1}{99} \right) \left(1 - \frac{1}{100} \right)$

$$= \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \dots \dots \times \frac{98}{99} \times \frac{99}{100}$$

$$= 2 \times \frac{1}{100} = \frac{1}{50}$$

57. (D) Let the M.P be ₹ 100.

$$\therefore \text{Cost price} = 100 \times \frac{3}{4} = ₹ 75$$

$$\text{Selling price} = 100 \times \frac{120}{100} = ₹ 120$$

$$\text{Profit\%} = \left(\frac{120 - 75}{75} \times 100 \right) \%$$

$$= \left(\frac{45}{75} \times 100 \right) \% = 60\%$$

58. (A) Let the original speed of the aircraft be x km/hr.

Then new speed = $(x - 200)$ km/hr

$$\text{Duration of flight at original speed} = \left(\frac{600}{x} \right) \text{ hour}$$

$$\text{Duration of flight at reduced speed} = \left(\frac{600}{x - 200} \right) \text{ hour}$$

ATQ,

$$\frac{600}{x - 200} - \frac{600}{x} = \frac{1}{2}$$

$$\frac{600x - 600(x - 200)}{x(x - 200)} = \frac{1}{2}$$

$$\frac{120000}{x^2 - 200x} = \frac{1}{2}$$

$$x^2 - 200x - 240000 = 0$$

$$x^2 - 600x + 400x - 240000 = 0$$

$$(x - 600)(x + 400) = 0 \quad (\text{Ignore the -ve value of } x)$$

$$x = 600 \text{ or } x = -400$$

$$\therefore x = 600$$

So, the original speed of the aircraft was 600 km/hr.

$$\text{Hence, duration of flight} = \left(\frac{600}{x} \right) \text{ hour} = \left(\frac{600}{600} \right) \text{ hour} = 1 \text{ hour}$$

59. (B) Volume of the sphere = Volume of the cylinder

$$\frac{4}{3} \pi r^3 = \pi r^2 h \quad [\because \text{Their radii are equal}]$$

$$\frac{r}{h} = \frac{3}{4}$$

$$r : h = 3 : 4$$

60. (D) $l = 28$ cm

$r = 14$ cm

$$l = \frac{\pi r \theta}{180}$$

$$28 = \frac{22}{7} \times \frac{14 \times \theta}{180}$$

$$\theta = \frac{28 \times 180 \times 7}{22 \times 14} = \frac{7 \times 180}{11}$$

$$\text{Sector area} = \frac{\pi r^2 \theta}{360} = \frac{22}{7} \times \frac{14 \times 14}{360} \times \frac{7 \times 180}{11} = 196 \text{ cm}^2$$

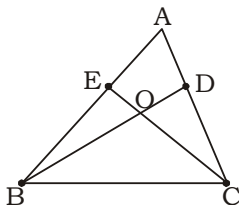
61. (A) Area of the paper = Surface area of the cylinder

$$22 \times 10 = 2 \times \frac{22}{7} \times r \times 10$$

$$r = \frac{7}{2} \text{ cm}$$

$$\text{Volume of the cylinder} = \pi r^2 h = \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times 10 = 385 \text{ cm}^3$$

62. (D)



\therefore Median BD = median CE (given)

$$\frac{2}{3} BD = \frac{2}{3} CE$$

$$BO = CO$$

$$\angle OBC = \angle OCB \text{ (Angles opposite to equal sides of a } \Delta \text{ are equal)}$$

In ΔBCD and ΔCBE ,

$$BD = CE \text{ (given)}$$

$$BO = CO \text{ (Common)}$$

$$\angle DBC = \angle ECB \text{ (proved above)}$$

$$\Delta BCD \cong \Delta CBE$$

$$DC = BE \text{ (by CPCT)}$$

$$2DC = 2BE$$

$$(AC = AB = 4 \text{ cm})$$

63. (B) $\sin \theta + \cos \theta = \sqrt{2} \sin (90^\circ - \theta)$

$$\sin \theta = \sqrt{2} \cos \theta - \cos \theta$$

$$\frac{\sin \theta}{\cos \theta} = \sqrt{2} - 1$$

$$\frac{\cos \theta}{\sin \theta} = \frac{1}{\sqrt{2} - 1}$$

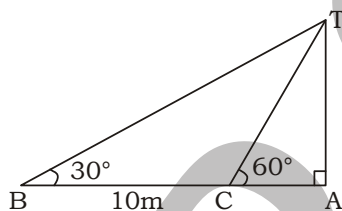
$$\cos \theta = \frac{1}{\sqrt{2} - 1} = \frac{\sqrt{2} + 1}{(\sqrt{2} - 1)(\sqrt{2} + 1)} = \sqrt{2} + 1$$

64. (B) $\frac{x^4 + 1}{x^5 - \frac{1}{x}} = \frac{\frac{x^4 + 1}{x^2}}{\frac{x^5 + \frac{1}{x}}{x^2}}$

$$= \frac{x^2 - \frac{1}{x^2}}{x^3 - \frac{1}{x^3}} = \frac{\left(x - \frac{1}{x}\right)^3 + 2}{\left(x - \frac{1}{x}\right)^3 + \left(x - \frac{1}{x}\right)}$$

$$= \frac{3^2 + 2}{3^3 + 9} = \frac{11}{36}$$

65. (B)



Speed of the train = 60 km/h

$$BC = 60 \times \frac{10}{60} = 10 \text{ km}$$

In $\triangle TAC$,

$$\tan 60^\circ = \frac{TA}{CA}$$

$$\sqrt{3} = \frac{TA}{CA}$$

$$CA = \frac{TA}{\sqrt{3}} \text{ km}$$

In $\triangle TAB$,

$$\tan 30^\circ = \frac{TA}{BA}$$

$$\frac{1}{\sqrt{3}} = \frac{TA}{BC + CA}$$

$$\frac{1}{\sqrt{3}} = \frac{TA}{\frac{TA}{\sqrt{3}} + 10}$$

$$3TA = TA + 10\sqrt{3}$$

$$TA = 5\sqrt{3} \text{ km}$$

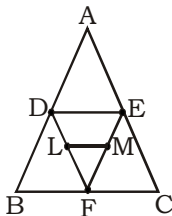
66. (A) $\frac{a + 2\sqrt{ab} + b}{\sqrt{a} + \sqrt{b}} + \frac{a - 2\sqrt{ab} + b}{\sqrt{a} - \sqrt{b}}$

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

$$= \sqrt{a} + \sqrt{b} + \sqrt{a} - \sqrt{b}$$

$$= 2\sqrt{a} = 2\sqrt{9} = 6$$

67. (A)



$$\frac{AB}{AD} = \frac{BC}{DE}$$

[By Similar triangles]

$$\frac{2}{1} = \frac{BC}{DE}$$

$$BC = 2DE$$

$$\frac{LM}{DE} = \frac{LF}{DF}$$

[By Similar triangles]

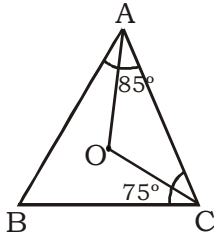
$$\frac{LM}{DE} = \frac{1}{2}$$

$$DE = 2LM$$

$$2 \times 2 LM = BC$$

$$LM : BC = 1 : 4$$

68. (D)



In $\triangle ABC$,

$$\angle ABC = 180^\circ - 85^\circ - 75^\circ = 20^\circ$$

$$\angle AOC = 2 \times \angle ABC = 2 \times 20^\circ = 40^\circ$$

$$\angle OAC = \frac{1}{2}(180^\circ - \angle AOC)$$

$$= \frac{1}{2}(180^\circ - 40^\circ) = 70^\circ$$

69. (C) Length of tree having 80 m shadow = $\frac{24}{18} \times 60 = 80$ m

70. (A) Fourth proportional = $\frac{9}{16} \times 8 = 4.5$

71. (A) Let selling price of a chair = ₹ x

$$\text{So total selling price} = 30x + 20x \times \frac{3}{4} = ₹ 45x$$

$$\text{Selling price} = 5000 + \frac{35}{100} \times 5000 = ₹ 6750$$

$$\text{Selling price of each a chair} = \frac{6750}{45} = ₹ 150$$

72. (B) Required students = $30 + 30 + 20 + 40 = 120$

73. (C) Required ratio = $60 : 50 = 6 : 5$

74. (D) Required difference = $(60 + 40) - (40 + 50) = 10$

75. (A) Required ratio = $40 : 50 : 50 = 4 : 5 : 5$

MEANINGS IN ALPHABETICAL ORDER

Altruist	a person unselfishly concerned for or devoted to the welfare of others	परोपकारी
Autonomy	the right or condition of self-government	स्वयं शासन
Commemorate	recall and show respect for someone or something	पुण्यस्मरण करना
Drastic	likely to have a strong or far-reaching effect	कठोर
Fatigue	extreme tiredness	थकान
Harmonize	add notes to a melody to produce harmony	स्वर योजन करना
Hinder	create difficulties for someone or something resulting in delay or obstruction	अड़चन करना
Indifference	lack of interest, concern, or sympathy	उदासीनता
Intervention	the action of preventing or altering a result or course of events	हस्तक्षेप
Noticeable	easily seen or noticed	उल्लेखनीय
Optimum	most conducive to a favorable outcome	इष्टतम
Perspective	a point of view	दृष्टिकोण
Priest	one who performs certain rites and administer certain sacraments in church	पादरी
Selflessness	concern more with the needs and wishes of others than with one's own	निस्वार्थता
Sovereignty	supreme power or authority	संप्रभुता
Vocalist	a singer	गायक

SSC MOCK TEST - 260 (ANSWER KEY)

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

76. (A) Instead of 'What is needed is', it should be 'what is needed are', as the subject of the sentence is 'proper guidelines' which is plural and it will take 'are' instead of 'is'.
77. (B) Change 'accepts', into 'accept', it comes for 'those people', and hence should be followed by a plural verb.
78. (A) 'To steal somebody's thunder' means 'to do what someone else was going to do before they do it, especially if this takes success or praise away from them.'
90. (D) The correct spelling of 'Noticeble' is 'Noticeable', 'Perspactive' is 'Perspective' and 'Indifferance' is 'Indifference'.
91. (D) The correct spelling is 'Accelaretor' is 'Accelerator'.