

13. (B) $\frac{(18 \times 12)}{3} = 72$ and

$$\frac{(32 \times 16)}{4} = 128$$

Therefore, $\frac{(24 \times 14)}{?} = 112$

$$\left(\frac{336}{?}\right) = 112$$

$$? = \left(\frac{336}{112}\right)$$

$$? = 3$$

14. (C) DARE

15. (A) $361324 \Rightarrow \sqrt{361} = 19$ and $\sqrt{324} = 18$

$$19^2 - 18^2 = (19 + 18) \times (19 - 18) = 37 \times 1 = 37$$

$$484169 \Rightarrow \sqrt{484} = 22$$
 and $\sqrt{169} = 13$

$$22^2 - 13^2 = (22 + 13) \times (22 - 13) = 35 \times 9 = 315$$

$$625196 \Rightarrow \sqrt{625} = 25$$
 and $\sqrt{196} = 14$

$$25^2 - 14^2 = (25 + 14) \times (25 - 14) = 39 \times 11 = \mathbf{429}$$

16. (A) As the colour of the milk is White and it is given that 'White means Purple'.

So, the colour of milk is Purple

17. (D) a/badn/aa/badn/aa/badn/aa/badn/a

18. (A)

L	I	B	E	R	A	T	E
↓	↓	↓	↓	↓	↓	↓	↓
5	6	4	2	3	1	7	2

Therefore,

T	R	I	B	A	L
↓	↓	↓	↓	↓	↓
7	3	6	4	1	5

19. (A) $T = 6 + \left[\frac{2}{11}(6 \times 30 + 0)\right] = 6 + \left[\frac{360}{11}\right]$

$$= 6 \text{ past } 32\frac{8}{11} \text{ min}$$

20. (A) $4 \times 7 - 10 \div 5 + 3 \times 7 = 47$

$$4 \times 7 - 2 + 3 \times 7 = 47$$

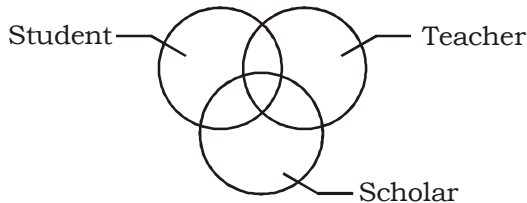
$$28 - 2 + 21 = 47$$

$$28 + 21 - 2 = 47$$

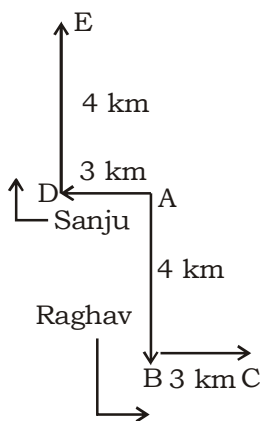
$$49 - 2 = 47$$

$$47 = 47$$

21. (A) Some students may be scholars and vice-versa.
Some students may be teachers and vice-versa.
Some students who are scholars may be teachers.



22. (A)



$$\begin{aligned} \text{Required distance EC} &= \sqrt{AD^2 + DE^2} + \sqrt{AB^2 + BC^2} \\ &= \sqrt{3^2 + 4^2} + \sqrt{4^2 + 3^2} = \sqrt{25} + \sqrt{25} \\ &= 5 + 5 = 10 \text{ km} \end{aligned}$$

23. (B)

24. (A)

25. (D)

27. (D) Balban's original name was 'Ulugh Khan' who belongs to the Ilbari tribe of Turkishtan. He was a slave of Iltutmish.

28. (C) Longitude and Time: When the Prime Meridian of Greenwich has the Sun at the highest point in the sky, all the places along this meridian will have mid-day or noon (12:00 O'clock). As the earth rotates from west-to-east (because Sun appears to move east-to-west), those places east of Greenwich will be ahead of Greenwich time and those to the west will be behind it. The rate of difference can be calculated as follows:

The earth rotates 360° in about 24 hours, which means 15° an hour or 1° in four minutes. Thus, when it is noon (12:00 O'clock) at Greenwich the time at 15° east of Greenwich will be $(15 \times 4 =) 60$ minutes i.e. 1 hour ahead of Greenwich time which means 1 pm (past meridian). But at 15° west of Greenwich, the time will be behind Greenwich time by 1 hour i.e. it will be 11:00 am (anti me-ridian). Similarly, at 180° it will be mid-night when it is 12 noon at Greenwich.

29. (C) Of the following the busiest oceanic trade route is North Atlantic route. It connects the South America to North America(Panama Canal), Africa to Europe and Europe to Asia (through Gibraltar Strait connecting Mediterranean Sea).

31. (A) The judgement left Parliament with no power to curtail Fundamental Rights. To abrogate the ruling, the government intended to amend article 368 to provide expressly that Parliament has power to amend any provision of the Constitution, thereby bringing Fundamental Rights within the scope of its amending procedure.

32. (B) The pendulum of a wall clock moves at regular intervals is oscillatory motion. The motion of the oscillating body around its rest point, repeated through the equal intervals of the time is called oscillatory motion.
34. (B) According to State Bank of India's research report, 'Ecowrap', the real GDP of India for FY21 will contract by 10.9%.
36. (C) Mostly tea and coffee is grown on slopes of mountains.
37. (C) Super Computer: [Processing speed: 400-1000. Memory capacity: Greater than 256 GB.]
38. (A) The principal languages of Lakshadweep are Malayalam, Jeseri (DweepBhasha) and Mahl. The people of all the northern islands speak a dialect of Malayalam with the influence of Tamil and Arabic similar to Arwi.
40. (A) Of the terrestrial (rocky) planets of the inner solar system, neither Mercury nor Venus have any moons at all, Earth has one and Mars has its two small moons.
41. (B) Madhya Pradesh has very little alluvial soil.
42. (C) The concept of secularism which evolved through India's freedom struggle did not connote any non-religious or anti-religious idea. It meant sarva dharma samabhav, whose substance was harmonious co-existence of various religions. In the framework of India's secularism, devotion to religion never conflicted with one's dedication to nationalism. The history of our freedom struggle bears ample testimony to this inference. Mahatma Gandhi and Swami Vivekananda were devout Hindus. Khan Abdul Ghaffar Khan and Zakir Husain were dedicated followers of Islam. Dadabhai Naoroji was a great Zoroastrian. Dr BR Ambedkar was a staunch Buddhist. Guru Nanak was one of the tallest exponents of Sikhism. Mother Teresa, who has accepted Indian citizenship, is a noble product of Christian religion. And yet, all of them professing different religions had an unflinching loyalty to the Indian Nation. For them, there was no conflict between religion and nationalism.
44. (A) If air contained all oxygen and no nitrogen, everything would have burnt off.
46. (C) Veteran diplomat Vinay Mohan Kwatra has been recently appointed as India's next ambassador to Nepal, as per the recent announcement made by the Ministry of External Affairs.
47. (B) Geosynchronous Satellite is a satellite in geosynchronous orbit, with an orbital period the same as the Earth's rotation period. Geosynchronous satellites have the advantage of remaining permanently in the same area of the sky, as viewed from a particular location on Earth, and therefore permanently within the view of a given ground station. Geostationary satellites have the special property of remaining permanently fixed in exactly the same position in the sky, meaning that ground-based antennas do not need to track them but can remain fixed in one direction.
49. (D) The word "Dioptre" is a British term for "Diopter" which is one of the different measurement units of the curved mirror or the lenses optical power.
50. (B) Anopheles Mosquitoes. Malaria is transmitted to humans by female mosquitoes of the genus Anopheles. Female mosquitoes take blood meals for egg production, and these blood meals are the link between the human and the mosquito hosts in the parasite life cycle.
51. (B) Let the principal be ₹ 100.

$$\text{Amount} = ₹ 180$$

$$\text{SI} = 180 - 100 = ₹ 80$$

$$\text{Rate} = \frac{80 \times 100}{100 \times 8} = 10\%$$

Now,

$$\text{Principal} = ₹ 14000$$

$$\text{Time} = 3 \text{ years}$$

$$\text{Rate} = 10\%$$

$$\text{CI} = ?$$

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

$$= 14000 \left(1 + \frac{10}{100} \right)^3 - 14000$$

$$= \left[14000 \times \frac{11}{10} \times \frac{11}{10} \times \frac{11}{10} \right] - 14000$$

$$= 18634 - 14000 = ₹ 4634$$

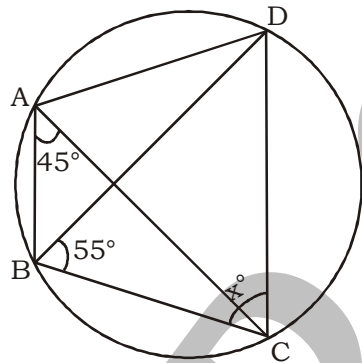
52. (C) Let the cost price be ₹ 100.

$$\text{Selling price} = 100 \times \frac{119}{100} = ₹ 119$$

$$\text{Marked price} = \frac{119}{85} \times 100 = ₹ 140$$

$$\therefore \text{Required\%} = \left(\frac{140 - 100}{100} \times 100 \right) \% = 40\%$$

53. (B)



$$\angle BAC = \angle BDC = 45^\circ \quad (\because \text{Angles in the same segment of a circle})$$

In $\triangle BCD$,

$$\angle BCD + \angle BDC + \angle CBD = 180^\circ$$

$$\angle BCD + 45^\circ + 55^\circ = 180^\circ$$

$$\angle BCD = 180^\circ - 100^\circ = 80^\circ$$

54. (A) $\frac{a}{3} = \frac{b}{5} = \frac{c}{7} = k$ (let)

$$a = 3k, b = 5k \text{ and } c = 7k$$

$$\therefore \frac{a+b+c}{b} = \frac{3k+5k+7k}{5k} = \frac{15k}{5k} = 3$$

55. (D) P(2, 5) ————— Q(x, -7)

13 units

We know, the distance formula,

$$PQ^2 = (x - 2)^2 + (-7 - 5)^2$$

$$(13)^2 = x^2 + 4 - 4x + 144$$

$$x^2 + 4 - 4x = 169 - 144$$

$$x^2 - 4x - 21 = 0$$

$$x^2 - 7x + 3x - 21 = 0$$

$$x(x - 7) + 3(x - 7) = 0$$

$$(x + 3)(x - 7) = 0$$

$$x = 7, -3$$

The value of x is 7.

56. (D) Let the income be ₹ 100.

$$\text{Expenditure} = 100 \times \frac{75}{100} = ₹ 75$$

$$\text{Saving} = 100 - 75 = ₹ 25$$

Now,

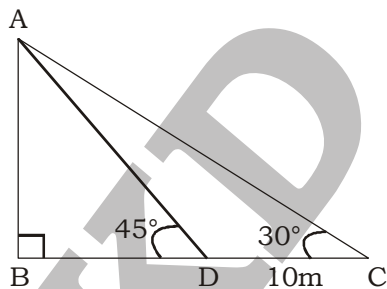
$$\text{New income} = 100 \times \frac{120}{100} = ₹ 120$$

$$\text{New expenditure} = 75 \times \frac{110}{100} = ₹ 82.5$$

$$\text{New saving} = 120 - 82.75 = ₹ 37.25$$

$$\therefore \text{Required\%} = \left(\frac{37.25 - 25}{25} \times 100 \right) \% = 50\%$$

57. (D)



Let AB is the tower.

In $\triangle ABD$,

$$\tan 45^\circ = \frac{AB}{BD}$$

$$1 = \frac{AB}{BD}$$

$$AB = BD \quad \dots(i)$$

In $\triangle ABC$,

$$\tan 30^\circ = \frac{AB}{BC}$$

$$\frac{1}{\sqrt{3}} = \frac{AB}{BD + CD}$$

$$\frac{1}{\sqrt{3}} = \frac{AB}{AB + 10} \quad (\because AB = BD)$$

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

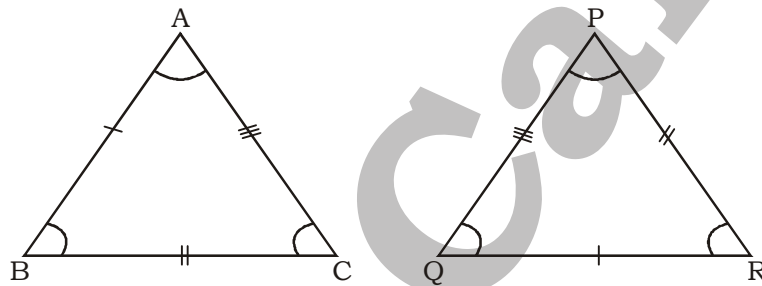
$$AB\sqrt{3} - AB = 10$$

$$AB(\sqrt{3} - 1) = 10$$

$$AB = \frac{10}{\sqrt{3} - 1} \times \frac{\sqrt{3} + 1}{\sqrt{3} + 1}$$

$$= \frac{10(\sqrt{3} + 1)}{2} = 5(\sqrt{3} + 1) \text{ m}$$

58. (A)



Given condition,

$$\frac{AB}{QR} = \frac{BC}{PR} = \frac{CA}{PQ}$$

$\therefore \triangle PQR \sim \triangle CAB$ is true based on the given condition.

59. (D)
$$\frac{(x^2 - y^2)^3 + (y^2 - z^2)^3 + (z^2 - x^2)^3}{(x - y)^3 + (y - z)^3 + (z - x)^3}$$

Let $(x^2 - y^2) = a$, $(y^2 - z^2) = b$ and $(z^2 - x^2) = c$

$(x - y) = p$, $(y - z) = q$ and $(z - x) = r$

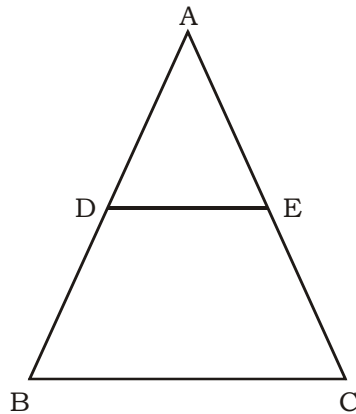
Now,
$$\frac{a^3 + b^3 + c^3}{p^3 + q^3 + r^3}$$

if $a + b + c = 0$, then $a^3 + b^3 + c^3 = 3abc$

and $p + q + r = 0$, then $p^3 + q^3 + r^3 = 3pqr$

$$\begin{aligned} \therefore & \frac{(x^2 - y^2)^3 + (y^2 - z^2)^3 + (z^2 - x^2)^3}{(x - y)^3 + (y - z)^3 + (z - x)^3} \\ &= \frac{3(x^2 - y^2)(y^2 - z^2)(z^2 - x^2)}{3(x - y)(y - z)(z - x)} \\ &= \frac{3(x + y)(x - y)(y + z)(y - z)(z + x)(z - x)}{3(x - y)(y - z)(z - x)} \\ &= (x + y)(y + z)(z + x) \end{aligned}$$

60. (C)



BC \parallel DE (Given)

DE = 5 cm

BC = 10 cm

$\triangle ABC \sim \triangle ADE$ (\because BC \parallel DE)

$$\left(\frac{AB}{AD}\right)^2 = \left(\frac{AC}{AE}\right)^2 = \left(\frac{BC}{DE}\right)^2 = \frac{\text{Area of } \triangle ABC}{\text{Area of } \triangle ADE}$$

$$\left(\frac{10}{5}\right)^2 = \frac{120}{\text{Area of } \triangle ADE}$$

$$\therefore \text{Area of } \triangle ADE = \frac{120}{4} = 30 \text{ cm}^2$$

61. (A) Quantity of milk = $\frac{30}{5} \times 4 = 24$ liters

Quantity of water = $30 - 24 = 6$ liters

Ratio of milk and water in the new mixture = $\left(24 - \frac{10}{5} \times 4\right) : \left(6 - \frac{10}{5} \times 1 + 4\right)$

= 16 : 8 = 2 : 1

62. (A) Let the number of student in each row be x and the number of rows be y .

ATQ,

$$xy = (x + 1) \times (y - 2)$$

$$xy = xy - 2x + y - 2$$

$$2x - y = -2 \quad \dots\dots(i)$$

and

$$xy = (x - 1) (y + 3)$$

$$xy = xy + 3x - y - 3$$

$$3x - y = 3 \quad \dots\dots(ii)$$

Solving equation (i) and (ii),

$$\begin{array}{r} 2x - y = -2 \\ -3x - y = -3 \\ \hline x = 5 \end{array}$$

Put the value of x in equation (i),

$$2x - y = -2$$

$$2 \times 5 - y = -2$$

$$y = 12$$

\therefore Number of students in class = $xy = 5 \times 12 = 60$

63. (A) Ratio of investment of A, B and C = 4 : 6 : 5

Ratio of profit of A, B and C at the end of 3 years

$$= (4 \times 12 + 6 \times 24 : (6 \times 12 + 6 \times \frac{4}{3} \times 24) : (5 \times 36)$$

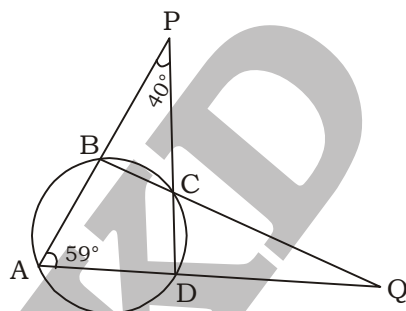
$$= 192 : (72 + 192) : 180$$

$$= 192 : 264 : 180$$

$$= 16 : 22 : 15$$

$$\text{Now, share of A} = \frac{94817}{53} \times 16 = ₹ 28624$$

64. (A)



$$\angle CDQ = 99^\circ [40^\circ + 59^\circ]$$

$$\angle DCQ = 59^\circ$$

$$\angle AQB = 180^\circ - 99 - 59 = 22^\circ$$

65. (B) Let $p = 6, q = 5, r = 7$

LCM of (6, 5, 7) = 210 and HCF = 1

$$mn = 210 \times 1 = 210$$

$$\text{and } pqr = 6 \times 5 \times 7 = 210$$

66. (D) Following are the numbers between – 11 and 11 which are multiples of 2 or 3.
-10, -9, -8, -6, -4, -3, -2, 0, 2, 3, 4, 6, 8, 9, 10

∴ Total numbers are 15

67. (C) $\frac{x^2 + y^2}{x^2 - y^2}$

$$= \frac{\frac{36}{25} + 1}{\frac{36}{25} - 1} = \frac{61}{11}$$

68. (A) Let CP of article = x
ATQ,

$$x + x \times \frac{x}{100} = 144$$

$$100x + x^2 = 14400$$

$$x^2 + 180x - 80x - 14400 = 0$$

$$x(x + 180) - 80(x + 180) = 0$$

$$(x + 180)(x - 80) = 0$$

$$x = ₹ 80$$

69. (A) Let total population at the beginning of the first year = x
ATQ,

$$9975 = x \times \frac{105}{100} \times \frac{95}{100}$$

$$x = 10,000$$

70. (C) LCM of 7, 9 and 12 = 252

∴ Required number = 252 + 1 = 253

71. (D) $8(4M + 6F) = 10(3M + 7F)$

$$32M + 48F = 30M + 70F$$

$$2M = 22F$$

$$M : F = 11 : 1$$

$$D(10F) = 10(3M + 7F)$$

$$D(10 \times 1) = 10(3 \times 11 + 7 \times 1)$$

$$D = 33 + 7 = 40 \text{ days}$$

72. (A) Required ratio = $(70 + 80 + 40) : (20 + 60 + 20) = 190 : 100 = 19 : 10$

73. (B) Total production in all the years together = $(60 + 70 + 80 + 80 + 40)$ lakh = 330 lakh

Total export in all the years together = $(20 + 30 + 60 + 70 + 20)$ lakh = 200 lakh

∴ Required difference = $(330 - 200)$ lakh = 110 lakh

74. (D) Difference of production and import in the year 2001 = $(70 - 30)$ lakh = 40 lakh

Difference of production and export in the year 2004 = $(40 - 20)$ lakh = 20 lakh

$$\therefore \text{Required more\%} = \left(\frac{40 - 20}{20} \times 100 \right) \% = 100\%$$

75. (D) On seeing the graph, we can easily say.

∴ Required year is 2000, 2001, 2002 and 2004.

MEANINGS IN ALPHABETICAL ORDER

Acquainted	make someone aware of or familiar with	परिचित
Anthropology	the study of human societies and cultures and their development	मनुष्य जाति का विज्ञान
Commemorate	recall and show respect for (someone or something)	स्मरण करना
Condense	make (something) denser or more concentrated	गाढ़ा करना
Confined	(of a space) restricted in area or volume	सीमित
Congest	crowd a place so as to hinder or prevent freedom of movement	भर देना
Corrigible	capable of being corrected	संशोधनीय
Covert	not openly acknowledged or displayed	गुप्त
Enormous	very large in size, quantity, or extent	विशाल
Etymology	the study of the origin of words	शब्द-व्युत्पत्ति
Expand	become or make larger or more extensive	बढ़ाना
Impertinent	not showing proper respect	अशिष्ट
Laconic	(of a person, speech, or style of writing) using very few words	संक्षिप्त
Manly	having those good qualities traditionally associated with men	मर्दाना
Misfortunes	bad luck	दुर्भाग्य
Perspective	a point of view	दृष्टिकोण
Pompous	affectedly and irritatingly grand, solemn, or self-important	आडम्बरपूर्ण
Pursuits	the action of following or pursuing someone or something	लक्ष्य
Revere	feel deep respect or admiration for (something)	आदर करना
Tyrants	a cruel and oppressive ruler	तानाशाह

SSC MOCK TEST - 261 (ANSWER KEY)

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

76. (D) Replace 'manly' by 'manfully', as we need an adverb here, not an adjective.
77. (A) Replace 'youths' by 'youth', as it refers to the young people of a society
86. (A) 'Advice' means 'guidance or recommendations (सलाह)', whereas 'Advise' means 'offer suggestions (सलाह देना)
87. (C) The verb 'absent' takes a reflexive pronoun.
90. (C) The correct spelling is 'Definite'.
91. (A) The correct spelling is 'Commemorate'.