

SSC MOCK TEST – 53 (SOLUTION)

1. (C) Threat lead to fear and **provocation** lead to anger.
2. (C) Yen is the currency of Japan and **Renminbi** is the currency of china.
3. (C) First is the name given to the meat of second.
4. (C) $1024 \div \sqrt{1024} = 32 \div 32 - 1 = 31$
 $1225 \div \sqrt{1225} = 35 \div 35 - 1 = 34$
5. (C) **749** $\div 74 \div 9 \div$ Remainder = 2
618 $\div 61 \div 8 \div$ Remainder = 5
6. (D) A cup is used to have coffee and a bowl is used to have **soup**.
7. (B) $16 \div 4 \div 2 \div (4 + 2)^2 = 36$
 $64 \div \sqrt{64} = 8 \div 8 + 2 \div (8 + 2)^2 = 100$
8. (B) As,

Word	E	G	I	M
Position	5	7	9	13

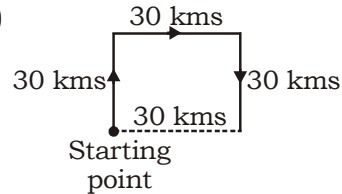
 So,

Word	C	E	H	P
Position	3	5	8	16
9. (D) Ink is used in a pen and petrol is used in a car.
10. (C) As,

M	+3		J	+3	
	A	D		X	A
	-3			-3	

R	+3		O	+3	
	U	X		R	U
	-3			-3	
11. (A) All except **doctor** required raw material to work.
12. (A)
13. (D) $2 \div 2 + 1 \div (2 + 1)^2 = 9 \div 2 - 9$
 $3 \div 3 + 1 \div (3 + 1)^2 = 16 \div 3 - 16$
 $4 \div 4 + 1 \div (4 + 1)^2 = 25 \div 4 - 25$
 $5 \div 5 + 1 \div (5 + 1)^2 \div 36 \div 49 \div 5 - 49$
14. (D) We can't find a vowel in **VNYQ**.
15. (C) All letters are vowel.
16. (A) $1261 = 97 \times 13$ (not a prime no.)
 $1581 = 93 \times 17$ (not a prime no.)
7331 = A prime no.
 $713 = 23 \times 31$ (not a prime no.)
17. (C) Except **80**, rest are multiple of 12.
18. (C) All except **thump** are sound of animals.
19. (C) As, M I L I T A R Y
 1 2 3 2 4 5 6 7
 then, L I M I T
3 2 1 2 4
20. (A) 1 \otimes 6 \otimes 2 \otimes 4 \otimes 5 \otimes 3

21. (D)



So, he is **30 kms east** from starting point.

22. (B) As, S E N S A T I O N A L
 1 2 3 1 4 5 6 7 3 4 8

then, S T A T I O N
1 5 4 5 6 7 3

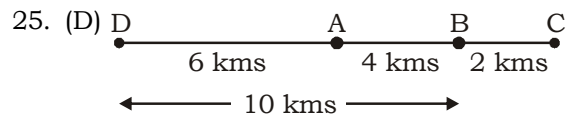
23. (C) $10 + 5 - 5 \div 5 \times 5 = 10$ (given)

As per the given details, replacing the signs-
 LHS = $10 \times 5 \div 5 - 5 + 5$
 = $10 \times 1 - 0$
 = $10 = \text{RHS}$

24. (C) As he failed once in class 1, it means in 2 years after admission, he will pass class 1, after 3 years class 2, after 4 years class 3. Similarly, after 11 years class 10. So, required no. of years to pass class 10 = $2 + 3 + 4 + 5 + \dots + 11$

$$= \frac{11 \times 12}{2} - 1 = 66 - 1 = 65 \text{ yrs}$$

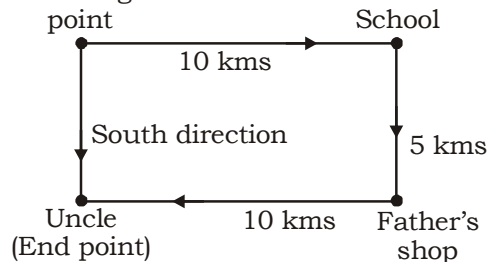
So, at the age of $65 + 4 = 69$ years, he will pass his matriculation.



So, C is **2 kms** away from B.

26. (C) Number of educated poor youth = $11 + 3 = 14$

27. (B) Starting point



So, he is **5 kms** south from his home.

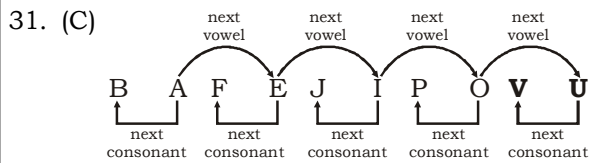
28. (A)

Person	Languages		
A	Tamil	Malyalam	English
B	Tamil	Malyalam	Hindi
C	English	Hindi	Tamil
D	English	Hindi	Malyalam

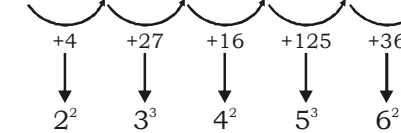
So, the person who can speak english, Hindi and Tamil is **C**.

29. (D) Plough ® Sow ® Irrigate ® Harvest ® Sell.
(3) (2) (1) (5) (4)

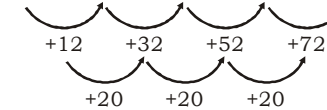
30. (C) **b** cb/ **a** ca/b **c** b/aca/ **b** cb/a **c** a/b.



32. (C) 154 158 185 201 326 **362**



33. (D) 112 124 156 208 **280**



34. (D)
1 5 25 125 **625 3125 15625**



35. (D) As, D O W N B E A T
1 2 3 4 5 6 7 8
and T A B E W N D O
8 7 5 6 3 4 1 2
also, P R O S P E C T
1 2 3 4 5 6 7 8
and **T C P E O S P R**
8 7 5 6 3 4 1 2

36. (B) Let the age of Ranveer Kapoor, Rishi Kapoor and Raj Kapoor be x , y and z respectively.

Given: $x + y + z = 140$... (i)

As, the age of Ranveer Kapoor in no. of months = Age of Raj Kapoor in no. of years

∴ $12x = z$ (multiply by 12 to convert year to month)

Also, the age of Ranveer Kapoor in no. of days = Age of Rishi Kapoor in no. of weeks

∴ $365 \times x = 365 \times y/7$

∴ $7x = y$

Putting the value of y and z in equation (i)

$x + 7x + 12x = 140$ ∴ $20x = 140$ ∴ $x = 7$

∴ Ranveer Kapoor's age (x) = **7 yrs**

Rishi Kapoor's age (y) = $7x = 7 \times 7 =$ **49 yrs**

and Raj Kapoor's age (z) = $12x = 12 \times 7 =$ **84 yrs**

37. (A) 0, 4, 48, 100, 180, 296, 448

$0 = 1^3 - 1^2, 4 = 2^3 - 2^2, 18 = 3^3 - 3^2$

$48 = 4^3 - 4^2, 100 = 5^3 - 5^2, 180 = 6^3 - 6^2,$

$296 = 7^3 - 7^2 = 294$

$448 = 8^3 - 8^2$

38. (B) We can't find three S of the word 'SENSES' in the given word 'MISAPPREHENSION'.

39. (D) $6 \times 2 = 12, 12 \times 2 = 24$

$18 \times 2 = 36, 36 \times 2 =$ **72**

$9 \times 2 = 18, 18 \times 2 = 36$

40. (A) $3 \times 5 \times 4 = 60$

$5 \times 7 \times 2 = 70$

$8 \times 6 \times$ **3** = 144

41. (C) As, $(3 \times 5) + (7 + 2) = 15 + 9 = 24$

$(2 \times 4) + (6 + 8) = 8 + 14 = 22$

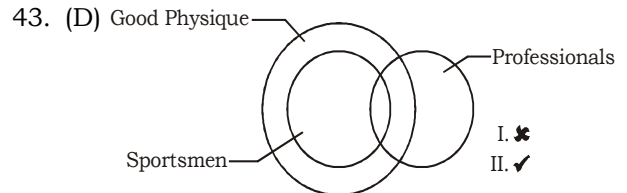
then, $(4 \times 4) + (8 + 9) = 16 + 17 = 33$

42. (A) As, $2 + 6 - 4 = 4$

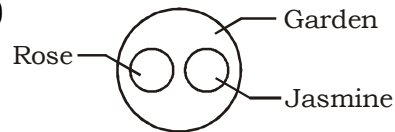
$9 + 7 - 3 = 13$

$4 + 6 - 7 = 3$

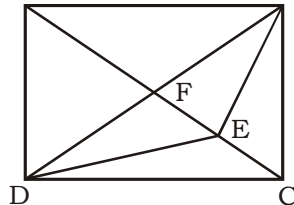
then, $9 + 8 - 7 =$ **10**



44. (C)



45. (D) A B



Simple triangles are AFB, FEB, EBC, DEC, DFE and AFD i.e. 6 in number.

Triangles composed of two components are AEB, FBC, DFC, ADE, DBE and ABD i.e. 6 in number.

Triangles composed of three components are ADC and ABC i.e. 2 in number.

There is only one triangle i.e. DBC which is composed of four components.

Thus, there are $6 + 6 + 2 + 1 = 15$ triangles in the figure.

46. (B) From dice (2) and dice (4), we have

Front face 6 4 2

Opposite face 1 3 **5**

So, **5** is at bottom, when 2 is on top.

47. (A)

48. (B)

49. (D)

50. (C)

- | | |
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| <p>51. (B) The official slogan for the 2016 Rio Olympic and Paralympic Games is "A New World". For Rio 2016, the core values of the slogan and the manifesto are unity, respect for diversity and the will for change. The motto of Rio 2016 is to promote the concepts of transformation through sport and changing the world for the better.</p> <p>52. (D) Red Crescent Society is a worldwide humanitarian organization providing assistance without discrimination as to nationality, race, religious beliefs, class or political opinions. It provided medical help to the Turkish troops in the Balkan War.</p> <p>53. (D) The first session of the Indian National Congress was held from 28-31 December, 1885 at Gokul Das Tejpal Sanskrit College, Bombay and was attended by 72 delegates. Its president was Wyomesh Chandra Banerjee. Indian National Congress was formed during times of Governor General Lord Dufferin.</p> <p>54. (B) Mixed melting point is considered the best criteria for purity of a substance. The purified sample is mixed with a small quantity of pure compound and melting point of mixture is determined. If melting point of mixture is same as that of the pure compound, the sample compound is pure, otherwise it requires further purification.</p> <p>55. (D) Apart from India, Tamil is an official language in Sri Lanka and Singapore. In Malaysia and Mauritius, it is a recognized minority language.</p> <p>56. (D) The Coriolis effect influences the paths of moving objects on Earth and is caused by Earth's rotation. Because Earth's surface rotates at different velocities at different latitudes, objects in motion tend to veer to the right in the Northern Hemisphere and to the left in the Southern Hemisphere. The Coriolis effect is nonexistent at the equator but increases with latitude, reaching maximum at the poles.</p> <p>57. (D) The world's largest wetland is the Pantanal, which covers 200,000 square kilometres (during the wet season) through Brazil, Paraguay and Bolivia, although 80% of it is in Brazil. It is a land of flooded grasslands, savannas and tropical forests.</p> <p>59. (D) Calcium carbide reacts with water to produce acetylene gas.
 $\text{CaC}_2 + 2\text{H}_2\text{O} \rightarrow \text{C}_2\text{H}_2 + \text{Ca(OH)}_2$</p> | <p>60. (A) The current age of retirement for Supreme Court judge is 65 years while High Court Judge is 62 years. There was a bill introduced to raise the age of retirement of high court judges also to 65 years but that bill has never passed.</p> <p>62. (A) L.M.Singhvi Committee was formed by the government to study the Panchayati Raj. The Gram Sabha was considered the base of a decentralized democracy, and PRIs viewed as institutions of self-governance which would actually facilitate the participation of the people in the process of planning and development. Its salient recommendations are as follows: Local self-government should be constitutionally recognized, protected and preserved by the inclusion of new chapter in the Constitutional non-involvement of political parties in Panchayat elections.</p> <p>67. (A) Muhammad Ghori is known to have adopted the seated goddess Lakshmi on the coins of Gahadavalas for circulation in the Gahadavala territories. He got the figure of Goddess Lakshmi stamped on his coins and had his name inscribed in Devnagari Characters.</p> <p>68. (A) The World Blood Donor Day (WBDD) is observed every year on June 14 to raise awareness of the need for safe blood and to thank blood donors for their voluntary, life-saving gifts of blood. The 2016 theme is "Blood connects us all", which aims to motivate more people to donate blood globally.</p> <p>70. (D) The International Seabed Authority (ISA) is an inter-governmental body to organize, regulate and control all mineral-related activities in the international sea-bed area beyond the limits of national jurisdiction, an area underlying most of the world's oceans. The headquarters of ISA is located at Kingston, Jamaica.</p> <p>71. (A) The historic Chandragiri Fort was venue of the 545th birth anniversary of Vijayanagara emperor Sri Krishnadevaraya in February 2016. The fort is under the control of the Archaeological Survey of India (ASI) and is located at Chandragiri, Tirupati in Andhra Pradesh. A fort with same name is also located in Kasaragod District of Kerala.</p> <p>72. (A) "Although aluminum is the most abundant metal in the earth's crust, it is never found free in nature. All of the earth's aluminum</p> |
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- has combined with other elements to form various compounds. Two of the most common compounds are alum, such as potassium aluminum sulphate, and aluminum oxide (Al_2O_3). About 8.2% of the earth's crust is composed of aluminum."
79. (A) The second statement is incorrect. Attorney General holds the office during the pleasure of the president, while solicitor general is appointed and removed by central government.
80. (A) Article 19 is the most important and key article which embodies the "basic freedoms". Article 19 provides that all citizens shall have the right- (originally 7, now 6).
- to freedom of speech and expression;
 - to assemble peacefully and without arms;
 - to form associations or unions;
 - to move freely throughout the territory of India;
 - to reside and settle in any part of the territory of India;
 - omitted by 44th amendment act. (it was right to acquire, hold and dispose of property)
 - to practice any profession, or to carry on any occupation, trade or business.
82. (D) The Reserve Bank of India has four zonal offices at Chennai, Delhi, Kolkata and Mumbai. It has 19 regional offices and 10 sub-offices.
83. (D) There was a series of 4 Russo-Persian wars in 1722-1723, 1796, 1804, 1826-1828 and in all of the wars Russia was victorious.
85. (B) American Doctor Daniel Hale Williams is credited with having performed open heart surgery on July 9, 1893 before such surgeries were established. In 1913, Daniel Hale Williams was the only African-American member of the American College of Surgeons.
87. (A) Xerophthalmia is a more serious eye disease caused by a lack of vitamin A, and can occur if nightblindness is not treated. In xerophthalmia, the tear ducts do not produce enough tears, which lubricate the eye. This leads to the cornea (the clear part of the eye covering the pupil and iris) and conjunctiva (the clear covering to the white of the eye) becoming inflamed.
88. (D) The first evidence of the Stone Age culture in India surfaced in Karnataka as early as in 1842 when Dr. Primrose discovered polished stone knives and arrow heads at Lingsugur in Raichur district of Karnataka.
89. (B) The chairman and members of a SPSC(State Public Service Commission) are appointed by the governor, but they can only be removed by the president (and not by the governor) on the report of Supreme Court.
90. (C) Constitution of India, Article 15: Prohibition of Discrimination on Grounds of Religion, Race, Caste, Sex or Place of Birth
91. (D) Nichrome is an alloy of nickel (80)%+chromium(20)% has very high resistance.
93. (A) Konark Sun Temple is a 13th century temple of Odisha, built by Narasimhadeva I of the Eastern Ganga Dynasty. It is also known as Black Pagoda. It's a World Heritage Site. It is considered architectural marvel for which Odisha is best known worldwide.
94. (B) The Indian Ocean consists of one gyre, the Indian Ocean (Majid) Gyre, which exists mostly in the Southern Hemisphere. It is named after Ahmad Bin Majid, the 15th century Arab mariner.
95. (A) Recently, the Rajasthan government has inaugurated the state's second biological park 'Machia Biological Park' in Jodhpur. The new park will have a food store, cafeteria, interpretation centre, ticket window, visitors and service roads and will be opened for public in March 2016. The park is spread over 41 hectare and is the house of lions, tigers, jackals, hyenas, desert cats and desert foxes, etc.
99. (B) The National Advisory Council was set up on 4th June 2004 by Prime Minister Manmohan Singh, during the tenure of the first UPA government, to implement the National Common Minimum Programme.
101. (A) Marks obtained by the boys in Hindi
 $= (75\% \text{ of } 60) + (65\% \text{ of } 60) + (70\% \text{ of } 60)$
 $= 45 + 39 + 42 = 126$
 Marks obtained by girls in Hindi
 $= (65\% \text{ of } 60) + (75\% \text{ of } 60) + (45\% \text{ of } 60)$
 $= 27 + 39 + 45 = 111$
 Required Difference = $126 - 111 = 15$
102. (B) Total marks obtained by Renuka
 $= (90\% \text{ of } 120 + 48\% \text{ of } 75 + 75\% \text{ of } 60 + 68\% \text{ of } 75 + 76\% \text{ of } 150 + 88\% \text{ of } 50)$
 $= 108 + 36 + 45 + 51 + 114 + 44 = 398$

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103. (C) Average marks in Economics by all the students

$$= \frac{(92 + 64 + 80 + 52 + 68 + 88)}{6 \times 100} \text{ of } 75$$

$$= \frac{444}{6 \times 100} \times 75 = 55.50$$

104. (B) $x = 8 + 3\sqrt{7}$

$$\frac{1}{x} = \frac{1}{8 + 3\sqrt{7}} = 8 - 3\sqrt{7}$$

$$x + \frac{1}{x} = 8 + 3\sqrt{7} + 8 - 3\sqrt{7} = 16$$

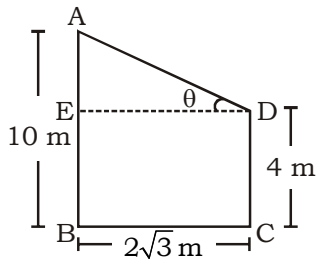
$$x^2 + \frac{1}{x^2} = \frac{x^2}{x} + \frac{1}{x^2} - 2$$

$$= (16)^2 - 2$$

$$= 256 - 2$$

$$= 254$$

105. (B)



$$\begin{aligned} AE &= AB - CD \\ &= 10 - 4 \\ &= 6 \text{ m} \end{aligned}$$

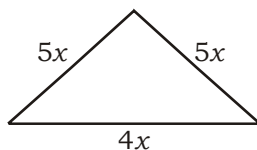
$$\tan \theta = \frac{AE}{ED}$$

$$\therefore \tan \theta = \frac{6}{2\sqrt{3}}$$

$$\therefore \tan \theta = \frac{\sqrt{3}}{1}$$

$$\therefore \theta = 60^\circ$$

106. (D)



$$\begin{array}{l} \text{Lateral side} : \text{Base} \\ 5x : 4x \end{array}$$

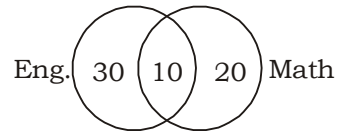
$$P = 10x + 4x = 28 \text{ cm}$$

$$\therefore 14x = 28$$

$$\therefore x = 2$$

$$\begin{aligned} \text{Area of triangle} &= \frac{1}{4} \times 8\sqrt{4 \times 100 - 64} \\ &= 8\sqrt{21} \text{ cm}^2 \end{aligned}$$

107. (B)



$$[(30 + 20) - 10]\% = 160$$

$$40\% = 160$$

$$100\% = \frac{160}{40} \times 100 = 400$$

Total number of students = 400

108. (B) Discount = $300 - 274.50 = ₹ 25.50$

$$\text{Discount \%} = \frac{25.50}{300} \times 100 = 8.5\%$$

109. (A) Distance = $(10 - 2) \times 4 = 32 \text{ km}$

$$\text{Required time} = \frac{32}{10 + 2}$$

$$= \frac{32}{12}$$

$$= 2 \text{ hour } 40 \text{ minutes}$$

110. (A) Let the price of table be t and chair be c .

$$4t + 5c = 1000 \quad \dots(i)$$

$$4 \times \left(t \times \frac{110}{100} \right) + 5 \times \left(c \times \frac{120}{100} \right) - (4t + 5c) = 120$$

$$\frac{44t}{10} - 4t + \frac{30c}{5} - 5c = 120$$

$$\frac{4t}{10} + c = 120$$

$$4t + 10c = 1200 \quad \dots(ii)$$

$$4t + 5c = 1000 \quad \dots(i)$$

$$\begin{array}{r} - \quad - \quad - \\ \hline 5c = 200 \\ c = ₹ 40 \end{array}$$

$$\therefore t = ₹ 200$$

Cost of 1 table = ₹ 200

$$111. (C) \frac{(a-b)^2}{(b-c)(c-a)} + \frac{(b-c)^2}{(a-b)(c-a)} + \frac{(c-a)^2}{(a-b)(b-c)}$$

$$= \frac{(a-b)^3 + (b-c)^3 + (c-a)^3}{(a-b)(b-c)(c-a)}$$

since, $(a-b) + (b-c) + (c-a) = 0$

$$\therefore (a-b)^3 + (b-c)^3 + (c-a)^3 = 3(a-b)(b-c)(c-a)$$

$$= \frac{3(a-b)(b-c)(c-a)}{(a-b)(b-c)(c-a)} = 3$$

112. (B) $\frac{\cos(90^\circ + A) \times \sec(720^\circ - A) \times \tan(180^\circ - A)}{\sec(A - 360^\circ) \times \sin(540^\circ + A) \times \cot(A - 90^\circ)}$

$$= \frac{(-\sin A) \times \sec A \times (-\tan A)}{\sec A (-\sin A) (-\tan A)} = 1$$

113. (C) $l + b + h = a$

and, $\sqrt{l^2 + b^2 + h^2} = \text{diagonal} = b$

$$(l + b + h)^2 = a^2$$

$$\Rightarrow \underbrace{l^2 + b^2 + h^2}_{b^2} + 2(lb + bh + hl) = a^2$$

$$\Rightarrow 2(lb + bh + hl) = a^2 - b^2$$

\ surface area = $a^2 - b^2$

114. (B) Original price of rice per kg

$$= \frac{120}{93.75} \times 100 = ₹ 128$$

\ Reduce price = ₹ 128 - ₹ 120 = ₹ 8

115. (C) Let their present age be x and y year

$$\frac{x-4}{y-4} = \frac{2}{3}$$

$$3x - 12 = 2y - 8$$

$$3x - 2y = 4 \quad \dots(i)$$

$$\frac{x+4}{y+4} = \frac{5}{7}$$

$$7x + 28 = 5y + 20$$

$$7x - 5y = -8 \quad \dots(ii)$$

From eq. (i) $\times 5$ & eq. (ii) $\times 2$

$$15x - 10y = 20$$

$$14x - 10y = -16$$

$$\begin{array}{r} - \quad + \quad + \\ \hline \end{array}$$

$$x = 36 \text{ years}$$

And $y = 52$ years

116. (A) Ratio = $\frac{1}{3} : \frac{1}{4} : \frac{1}{12} = 4 : 3 : 1$

$$3 \xrightarrow{\times 22.50} 67.50$$

$$\text{then, } 4 + 3 + 1 \Rightarrow 8 \xrightarrow{\times 22.50} 180$$

So, cost of book = ₹ 180

117. (A) $\sqrt{-\sqrt{3} + \sqrt{3 + 8\sqrt{(2 + \sqrt{3})^2}}}$

$$= \sqrt{-\sqrt{3} + \sqrt{3 + 8(2 + \sqrt{3})}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{3 + 16 + 8\sqrt{3}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{19 + 8\sqrt{3}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{(4 + \sqrt{3})^2}}$$

$$= \sqrt{-\sqrt{3} + (4 + \sqrt{3})}$$

$$= \sqrt{-\sqrt{3} + 4 + \sqrt{3}}$$

$$= \sqrt{4}$$

$$= 2$$

118. (A) $AB = \sqrt{(3-1)^2 + (4+2)^2}$

$$= 2\sqrt{10} \text{ units}$$

$$BC = \sqrt{(4-3)^2 + (7-4)^2}$$

$$= \sqrt{10} \text{ units}$$

$$AC = \sqrt{(4-1)^2 + (7+2)^2}$$

$$= 3\sqrt{10} \text{ units}$$

$$AB + BC = AC$$

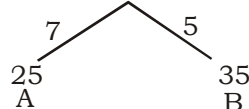
So, A, B and C are points on straight line.

119. (A) Let total population at the beginning of the first year be x .

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

$$x = 10,000$$

120. (D) $5 \times 5 \times 7$



Ratio of wages = 7 : 5

$$A = \frac{7}{12} \times 48132 = ₹ 28077$$

121. (C) Principal $\frac{50000}{75000}$

2 years 2 years

Ratio = 50,000 : 75,000

$$= 2 : 3$$

\. P : IInd year amount must also be in the ratio of 2 : 3.

$$\frac{P}{50000} = \frac{2}{3}$$

$$P = \frac{100000}{3}$$

$$= ₹ 33333.33$$

122. (C) $x + \frac{1}{x} = \sqrt{3}$

$$\begin{aligned} \Rightarrow x^6 &= -1 \\ &= x^{84} + x^{78} + x^{72} + x^{66} + x^{48} - x^{42} + 1 \\ &= (x^6)^{14} + (x^6)^{13} + (x^6)^{12} + (x^6)^{11} + (x^6)^8 - (x^6)^7 + 1 \\ &= (-1)^{14} + (-1)^{13} + (-1)^{12} + (-1)^{11} + (-1)^8 - (-1)^7 + 1 \\ &= 1 - 1 + 1 - 1 + 1 + 1 + 1 \\ &= 5 - 2 \\ &= 3 \end{aligned}$$

123. (D) $\tan(A - 38) \times \tan(2A + 23) = 1$

$$\begin{aligned} \because A + B &= 90^\circ \quad \Rightarrow \\ \tan A \cdot \tan B &= 1 \end{aligned}$$

$$\begin{aligned} \backslash A - 38 + 2A + 23 &= 90^\circ \\ \Rightarrow 3A - 15 &= 90^\circ \\ \Rightarrow 3A &= 105^\circ \\ A &= 35^\circ \end{aligned}$$

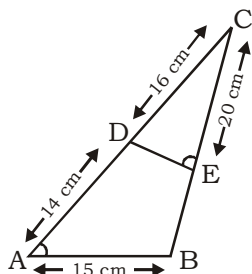
124. (C) Side = 10

$$\begin{aligned} \text{Area} &= 100 \\ &= 224\% \\ &= 324 \end{aligned}$$

$$\backslash \text{New side} = \sqrt{324} = 18$$

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

125. (D)



$$\Delta A \sim \Delta CED$$

$$\Delta C \text{ common}$$

$$\backslash \Delta ABC \sim \Delta DEC$$

$$\backslash \frac{AB}{DE} = \frac{AC}{EC}$$

$$\Rightarrow \frac{15}{DE} = \frac{14+16}{20} \Rightarrow DE = 10 \text{ cm}$$

126. (A)

	Article	Price	
CP	22	1 = 25 (25×1)	
SP	25	3 = 66 (22×3)	

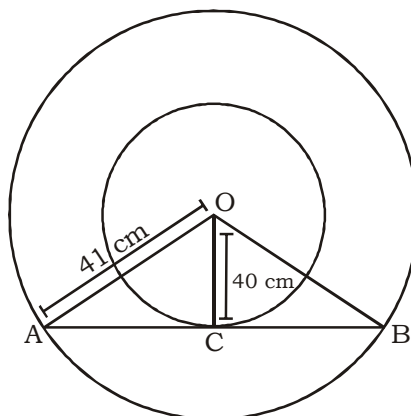
$$\begin{aligned} \text{Profit \%} &= \frac{66 - 25}{25} \times 100 = \frac{41}{25} \times 100 \\ &= 164\% \end{aligned}$$

127. (D) $\frac{7 \times 12}{1} = \frac{8 \times M_2}{2}$

$$M_2 = 21$$

$$\text{Number of additional men} = 21 - 7 = 14$$

128. (C)



$$\begin{aligned} \backslash AC &= \sqrt{41^2 - 40^2} \\ &= \sqrt{81} = 9 \text{ cm} \end{aligned}$$

$$\backslash \text{Chord } AB = 2 \times 9 = 18 \text{ cm}$$

129. (B) Let the number of solid spheres be n

$$n \times \frac{4}{3} \pi \times (6)^3 = \pi r^2 h$$

$$\Rightarrow n \times \frac{4}{3} \pi \times 216 = \pi \times (4)^2 \times 90$$

$$\Rightarrow n \times 4 \times 72 = 16 \times 90$$

$$\Rightarrow n = 5$$

130. (A) $A = 30^\circ$

$$3 \sec A - 2 \cos B = \sqrt{3}$$

$$\Rightarrow 3 \times \sec 30^\circ - 2 \cos B = \sqrt{3}$$

$$\Rightarrow 3 \times \frac{2}{\sqrt{3}} - 2 \cos B = \sqrt{3}$$

$$\Rightarrow 2 \cos B = 2\sqrt{3} - \sqrt{3}$$

$$\Rightarrow 2 \cos B = \sqrt{3}$$

$$\Rightarrow \cos B = \frac{\sqrt{3}}{2}$$

$$\Rightarrow B = 30^\circ$$

$$\cos(A - B) = \cos(30 - 30) = \cos 0^\circ = 1$$



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$$131. (B) x = 1 + \frac{2}{1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{3}}}}$$

$$= 1 + \frac{2}{1 + \frac{1}{1 + \frac{3}{4}}}$$

$$= 1 + \frac{2}{1 + \frac{4}{7}} = 1 + \frac{14}{11} = \frac{25}{11}$$

$$\backslash 11x - 12 = 11 \times \frac{25}{11} - 12 = 13$$

132. (B) Length = 8 m

Breadth : Height
2x : x

$$\text{Area of 4 walls} = 2(8 \times x + 2x \times x) = 84 \times 1 \text{ m}^2$$

$$\text{E } 8x + 2x^2 = 42$$

$$\text{E } x^2 + 4x = 21$$

$$\text{E } x^2 + 7x - 3x - 21 = 0$$

$$\text{E } (x + 7)(x - 3) = 0$$

$$\backslash x = 3 \quad (\text{ignore -ve of } x = -7)$$

$$\backslash \text{Area of floor} = l \times b$$

$$= 8 \times 2x$$

$$= 8 \times 6 \text{ m}^2$$

$$= 48 \text{ m}^2$$

133. (A) $a + b = 4, b + c = 3, c + a = 7$

$$\backslash a + b + c = \frac{1}{2}(4 + 3 + 7) = 7$$

$$(a + b + c)^3 = a^3 + b^3 + c^3 + 3(a + b)(b + c)(c + a)$$

$$\text{E } (7)^3 = a^3 + b^3 + c^3 + 3 \times 4 \times 3 \times 7$$

$$\text{E } a^3 + b^3 + c^3 = 343 - 252$$

$$\text{E } a^3 + b^3 + c^3 = 91$$

134. (B) $\sin^2 a + \sin^2 b = 2$

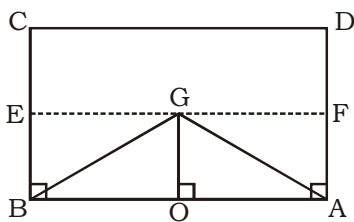
$$\text{E } \sin^2 a = \sin^2 b = 1$$

$$\sin a = \sin b = 1$$

$$a = b = 90^\circ$$

$$\sin \frac{a + b}{2} = \sin \frac{90^\circ + 90^\circ}{2} = \sin 90^\circ = 1$$

135. (B)



$$DGAB = \frac{1}{2} \times OB \times OG + \frac{1}{2} \times OA \times OG$$

$$= \frac{1}{2} OG (OA + OB)$$

$$= \frac{1}{2} \times OG \times AB = \frac{1}{2} (BE \times AB)$$

$$= \frac{1}{2} (\text{Rectangle BEFA})$$

$$= \frac{1}{2} \left(\frac{1}{2} \text{ Rectangle ABCD} \right)$$

(\because E & F are midpoint of BC & AD)

$$= \frac{1}{4} (\text{Rectangle ABCD})$$

136. (B) Ratio of internal angle to its exterior angle of regular polygon = 4 : 1

$$\text{E } \frac{(n-2) \cdot \frac{180}{n}}{\frac{360}{n}} = \frac{4}{1}$$

$$\text{E } \frac{180(n-2)}{360} = \frac{4}{1}$$

$$\text{E } n - 2 = 8$$

$$\text{E } n = 10$$

$$\backslash \text{Number of sides} = 10$$

$$137. (C) A = P \left[1 + \frac{r}{100} \right]^n$$

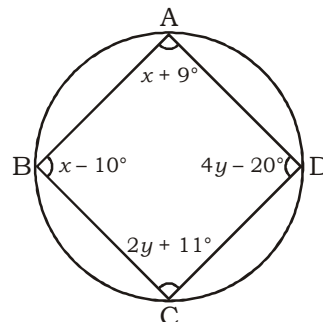
$$2P = P \left(1 + \frac{r}{100} \right)^6$$

$$2 = \left[1 + \frac{r}{100} \right]^6$$

$$(2)^3 = 8 = \left(1 + \frac{r}{100} \right)^{6 \times 3}$$

$$\text{i.e., } n = 18 \text{ years}$$

138. (A)



Cyclic quadrilateral

$$\backslash x + 9^\circ + 2y + 11^\circ = 180^\circ$$

$$\text{E } x + 2y = 160^\circ \quad \dots(i)$$

$$x - 10^\circ + 4y - 20^\circ = 180^\circ$$

$$x + 4y = 210^\circ \quad \dots(ii)$$

Subtracting equation (i) from (ii)

$$2y = 50^\circ \Rightarrow y = 25^\circ$$

$$\therefore x + 50^\circ = 160^\circ \text{ (In equation (i))}$$

$$\Rightarrow x = 110^\circ$$

$$\therefore x + y = 110^\circ + 25^\circ = 135^\circ$$

139. (B)

$$\frac{192}{12} \times \frac{194.40}{120} \times 100 = \frac{150}{30}$$

Required ratio = 12 : 30
= 2 : 5

140. (B) Discount = $32 \times \frac{25}{100} = ₹ 8$

₹ 8 discount on 1 shirt

So, number of shirt = $\frac{40}{8} = 5$

141. (B) Oil taken out = $\frac{3}{4} - \frac{1}{2} = \frac{3-2}{4} = \frac{1}{4}$ part

$\frac{1}{4}$ part = 48 litres

1 part = $48 \times 4 = 192$ litres

142. (B) Ashu : Lucky : Priti
= $12 \times 2000 : 4 \times 2500 : 8 \times 1500$

Share of Ashu : Lucky : Priti

= $12 : 5 : 6 \Rightarrow 23 \times 100 \rightarrow 2300$

Priti's share = $6 \times 100 = ₹ 600$

143. (B) Annual payment = $\frac{100P}{100T + \frac{RT(T-1)}{2}}$

$$= \frac{100 \times 848}{100 \times 8 + \frac{8 \times 8(7)}{2}}$$

$$= \frac{84800}{800 + 32 \times 7}$$

=

$$= \frac{84800}{1024}$$

$$= ₹ 82.8125$$

144. (D) Total number of vote = $1136 + 7636 + 11628$
= 20400

Required percentage = $\frac{11628}{20400} \times 100$

= 57%

145. (B) Let number of boys = B and Girls = G

$$B = G - 2$$

$$\therefore B + G = 52$$

$$\therefore G - 2 + G = 52 \quad [\because B = G - 2]$$

$$G = 27, B = 25$$

Total weight = $52 \times 52 = 2704$ kg

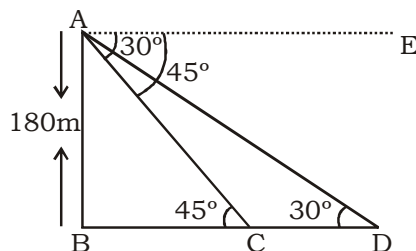
Total weight of boys = $25 \times 60 = 1500$ kg

Total weight of girls = $2704 - 1500$

$$= 1204$$
 kg

\ Average weight of girls = $\frac{1204}{27} = 44.59$ kg

146. (B)



Let AB be the tower.

$$\angle EAD = \angle ADB \text{ [Alternate angle]}$$

$$\angle EAC = \angle ACB \text{ [Alternate angle]}$$

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

$$\Rightarrow 1 = \frac{180}{BC}$$

$$\Rightarrow BC = 180 \text{ m}$$

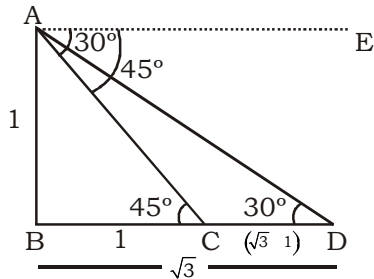
$$\Rightarrow \tan 30^\circ = \frac{AB}{BD}$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{180}{180 + CD}$$

$$\Rightarrow 180 + CD = 180\sqrt{3}$$

$$\therefore CD = 180(\sqrt{3} - 1) \text{ m}$$

Short tricks:-



Let AB be height of tower.

AB = 180 m (given)

$$\therefore CD = 180(\sqrt{3} - 1)m$$

[\therefore Distance CD = height ($\cot \alpha_2 - \cot \alpha_1$)]

147. (C) Let total income of Prakash be ₹ x.

$$\text{saving} = x \times \frac{75}{100} \times \frac{80}{100} \times \frac{60}{100}$$

$$8640 = x \times \frac{75}{100} \times \frac{80}{100} \times \frac{60}{100}$$

$$x = ₹ 24000$$

148. (B) Required % = $\frac{(70 - 64)}{70} \times 100$

$$= \frac{60}{7} = 8\frac{4}{7}\%$$

149. (C) Average production

$$= \frac{(70 + 64 + 45 + 60 + 60 + 73)}{6}$$

$$= \frac{372}{6} = 62$$

Maximum production = 73

Required ratio = 73 : 62

150. (B)

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Bestow	confer or present (an honor, right, or gift).	प्रदान करना
Blatant	(of bad behavior) done openly and unashamedly.	स्पष्ट रूप से निन्दनीय
Capacious	Having a lot of space inside; roomy.	लम्बा चौड़ा, विशाल
Clandestine	done secretly or kept secret	गुप्त
Clemency	kindness shown to somebody when they are being punished	दया/ क्षमादान
Confer	to discuss something important in order to make a decision	निर्णय लेने हेतु विचार विमर्श करना
Cryogenics	the scientific study of the production and effects of very low temperatures	अत्यंत कम तापमान के प्रभाव का वैज्ञानिक अध्ययन
Curator	a keeper or custodian of a museum or other collection.	संग्रहाध्यक्ष
Dismount	alight from a horse, bicycle, or other thing that one is riding.	(घोड़े, साईकिल आदि) से उतरना
Ecology	the branch of biology that deals with the relations of organisms to one another and to their physical surroundings.	परिस्थितिकी विज्ञान
Endow	give or bequeath an income or property to (a person or institution).	देना/नवाजना
Entrust	assign the responsibility for doing something to (someone)	कोई काम सौंपना, सुपुर्द करना
Expedition	an organized journey with a particular purpose	विशेष अभियान
Grotesque	comically or repulsively ugly or distorted.	विचित्र, असंगत
Ignominious	deserving or causing public disgrace or shame.	घृणित, अपमानजनक
Immaculate	(especially of a person or their clothes) perfectly clean, neat, or tidy.	साफ-सुथरा
Indolent	wanting to avoid activity or exertion; lazy	आलसी, काम से जी चुराने वाला
Intractable	hard to control or deal with.	अनियंत्रित, बेकाबू
Leniency	the fact or quality of being merciful or tolerant	उदारता
Perceive	interpret or look on (someone or something) in a particular way	समझना, विचार करना
Plague	cause continual trouble or distress to.	त्रस्त करना
Proscribe	forbid, especially by law.	बहिष्कार करना
Reprimand	Rebuke (someone), Scold	फटकारना
Shoal	a large number of fish swimming together	मछलियों की भीड़
Subjective	based on or influenced by personal feelings, tastes, or opinions.	व्यक्तिगत भावनाओं अथवा विचारों से प्रभावित
Surmount	stand or be placed on top of	चढ़ना, ऊपर जाना
Tantalise	to make someone want something that he cannot have or do	तरसाना
Troupe	a group of dancers, actors, or other entertainers who tour to different venues.	नर्तक मंडली
Vilify	Speak or write about in an abusively disparaging manner	बदनाम करना



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SSC MOCK TEST - 53 (ANSWER KEY)

- | | | | | | | | |
|---------|---------|---------|----------|----------|----------|----------|----------|
| 1. (C) | 26. (C) | 51. (B) | 76. (A) | 101. (A) | 126. (A) | 151. (A) | 176. (C) |
| 2. (C) | 27. (B) | 52. (D) | 77. (B) | 102. (B) | 127. (D) | 152. (D) | 177. (D) |
| 3. (C) | 28. (A) | 53. (D) | 78. (C) | 103. (C) | 128. (C) | 153. (C) | 178. (B) |
| 4. (C) | 29. (D) | 54. (B) | 79. (A) | 104. (B) | 129. (B) | 154. (C) | 179. (C) |
| 5. (C) | 30. (C) | 55. (D) | 80. (A) | 105. (B) | 130. (A) | 155. (A) | 180. (B) |
| 6. (D) | 31. (C) | 56. (D) | 81. (B) | 106. (D) | 131. (B) | 156. (B) | 181. (B) |
| 7. (B) | 32. (C) | 57. (D) | 82. (D) | 107. (B) | 132. (B) | 157. (D) | 182. (A) |
| 8. (B) | 33. (D) | 58. (A) | 83. (D) | 108. (B) | 133. (A) | 158. (D) | 183. (B) |
| 9. (D) | 34. (D) | 59. (D) | 84. (B) | 109. (A) | 134. (B) | 159. (C) | 184. (C) |
| 10. (C) | 35. (D) | 60. (A) | 85. (B) | 110. (A) | 135. (B) | 160. (A) | 185. (B) |
| 11. (A) | 36. (B) | 61. (B) | 86. (A) | 111. (C) | 136. (B) | 161. (C) | 186. (D) |
| 12. (D) | 37. (A) | 62. (A) | 87. (A) | 112. (B) | 137. (C) | 162. (A) | 187. (C) |
| 13. (D) | 38. (B) | 63. (C) | 88. (D) | 113. (C) | 138. (A) | 163. (D) | 188. (C) |
| 14. (D) | 39. (D) | 64. (D) | 89. (B) | 114. (B) | 139. (B) | 164. (A) | 189. (A) |
| 15. (C) | 40. (A) | 65. (C) | 90. (C) | 115. (C) | 140. (B) | 165. (D) | 190. (B) |
| 16. (A) | 41. (C) | 66. (A) | 91. (D) | 116. (A) | 141. (B) | 166. (D) | 191. (C) |
| 17. (C) | 42. (A) | 67. (A) | 92. (B) | 117. (A) | 142. (B) | 167. (B) | 192. (D) |
| 18. (C) | 43. (D) | 68. (A) | 93. (A) | 118. (A) | 143. (B) | 168. (A) | 193. (C) |
| 19. (C) | 44. (C) | 69. (B) | 94. (B) | 119. (A) | 144. (D) | 169. (C) | 194. (B) |
| 20. (A) | 45. (D) | 70. (D) | 95. (A) | 120. (D) | 145. (B) | 170. (C) | 195. (B) |
| 21. (D) | 46. (B) | 71. (A) | 96. (A) | 121. (C) | 146. (B) | 171. (A) | 196. (D) |
| 22. (B) | 47. (A) | 72. (A) | 97. (A) | 122. (C) | 147. (C) | 172. (A) | 197. (C) |
| 23. (C) | 48. (B) | 73. (A) | 98. (D) | 123. (D) | 148. (B) | 173. (D) | 198. (B) |
| 24. (C) | 49. (D) | 74. (C) | 99. (B) | 124. (C) | 149. (C) | 174. (B) | 199. (D) |
| 25. (D) | 50. (C) | 75. (B) | 100. (C) | 125. (D) | 150. (B) | 175. (B) | 200. (D) |

151. (C) Replace 'is' by 'has been', as an action (writing novels) which already started has been denoted by a point of time (since having been a graduate), and still going on, comes under present perfect continuous tense.
152. (D)
153. (C) Replace 'with' by 'against'.
154. (C) Replace 'was' by 'had'. If two actions happened in past one after another, the first action comes under past perfect tense and the second in simple past tense.
155. (A) interchange 'enough kind' to 'kind enough'. Enough follows an adjective.
157. (D) Correction - 'they were addressed' must be read as 'they addressed'.

174. (B) 'Must have' expresses an opinion, in fact, a conclusion based on an earlier (past) situation.
176. (C) 'Many a' takes a singular noun followed by a singular verb.
178. (B) 'Opinion' will take 'about' as it is followed by a statement.
179. (C) 'Having been' is the past participle form and is used to emphasize that the action has been already been completed while saying that particular statement, whereas 'being' is a present participle.
181. (B) Since the subject is plural (my sister and her daughter), it will take plural verb.

Note:- If you face any problem regarding result or marks scored, please contact 9313111777

Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003