SSC MOCK TEST – 45 (SOLUTION)

1. (B) Inch is smaller unit than Yard. Similarly, Ounce is smaller unit than Quart.

2. (C) Calorie is a unit of Heat. Similarly, Decibel is a unit of Sound.

3. (B)

G H J M : Q R T W : : C D F I : **M N P S**

4. (C) 17 : 102 : : 23 : **138**
(×6) (×6)

5. (A)
C E I M : D G L Q : : F G I O : **G I L S**

6. (B) 'R' is the middle letter in 'ARE', similarly 'U' is the middle letter in 'IUE'.

7. (A) 23 : 08 27 : : 45 : **64 125**
(2^3 3^3) (4^3 5^3)

8. (B) Carpentry is a skill and it is a skill while singing is a talent.

9. (B) All except (B) are way of seeing life.

10. (B) (A) I K M O (+2 +2 +2) (B) T V W Y (+2 +1 +2)
(C) A C E G (+2 +2 +2) (D) F H J L (+2 +2 +2)

11. (A) After rearranging the letters, all are the name of animals (RAT, CONDOR, ELEPHANT) except FEFEOC (COFFEE).

12. (D) Except PERU, rest of the words have first and last letter as vowels.

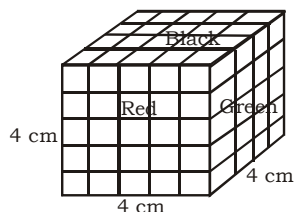13. (C) All except (C) have difference of 17.

14. (A) $30\left(\dfrac{M}{5} - H\right) - \dfrac{M}{2}$

$30\left(\dfrac{25}{5} - 3\right) - \dfrac{25}{2}$

$= 60 - 12.5$

$= 47.5 = 47\dfrac{1}{2}$

15. (B) One side of the big cube = $\sqrt[3]{64}$ = 4 cm

Number of small cubes having three faces coloured = 1 at each corner
= 1 × 8 = 8

16. (D) The year 2006 is an ordinary year. So, it has 1 odd day.
So, the day on 8th Dec, 2007 will be 1 day beyond the day on 8th Dec, 2006.
But, 8th Dec, 2007 is Saturday.
∴ 8th Dec, 2006 is Friday.

17. (A)

18. (C)
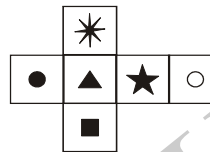
So, ▲/○, ✳/■ and ●/★ are opposite to each other.

19. (D) 4 × 6 ÷ 2 – 4 + 8 = 16
4 × 3 – 4 + 8 = 16
20 – 4 = 16

20. (B) 2, 1, 4, 3

21. (D) D is not present in word GEOSTATIONARY.

22. (A)

8
(×10)   (×10 + 10)
80   90
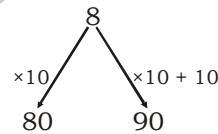
Following the same pattern, we have -

40   30
(×10 + 10)   (×10)
3
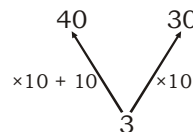
23. (C) 1 + 4 + 7 + 4 = 16 = 4^2 = 4 (mid term)
4 + 1 + 3 + 1 = 9 = 3^2 = 3 (mid term)
5 + 6 + 6 + 8 = 25 = 5^2 = 5 (mid term)

24. (D) 6 × 5 ÷ 3 = 10
2 × 8 ÷ **4** = 4
4 × 6 ÷ 3 = 8
5 × 9 ÷ 15 = 3

25. (C) $5^2 + 9^2 + 4^2 = 18 = [5 + 9 + 4]$
$6^2 + 3^2 + 7^2 = 16 = [6 + 5 + 7]$
$8^2 + 2^2 + 10^2 = 20 = [8 + 2 + 10]$

26. (A) 2 × 3 + 2 = 8
3 × 4 + 3 = 15
4 × 5 + 4 = 24
5 × 6 + 5 = 35

27. (D) L   A   C   K = 396

    $12 \times 1 \times 3 \times 11$

    B   A   C   K = 66

    $2 \times 1 \times 3 \times 11$

28. (C) B + A + T = 23

    2   1   20

    D + O + L + L = 43

    4   15   12   12

29. (A)

Shena   Meena   Gayatri   Malini   Anjana

Last   First

30. (B)

$$\begin{array}{cccc} & -1 & -2 & -3 \\ EZ & FY & HW & KT \\ & +1 & +2 & +3 \end{array}$$

31. (C) 1   5   13   25   41   61   **85**

    +4   +8   +12   +16   +20   +24

32. (C) 1   5   21   57   **121**   221

    +4   +16   +36   +64   +100

    2^2 $(4)^2$ $(6)^2$ $(8)^2$ $(10)^2$

33. (B)

$$\begin{array}{cccc} & -2 & -2 & -2 \\ +2 & +2 & +2 \\ A Z W D, & C X U F, & \textbf{E V S H,} & G T Q J \end{array}$$

opp. opp. opp. opp. opp. opp. opp. opp.

34. (B) The girl is the daughter of the sister of Rahul's father. Hence, the girl is the cousin or Rahul is the cousin of the girl.

35. (D) R, S, = 8 Km

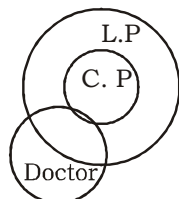Seeta   Ram

→5← →3←

10   10   10

5   5

S₁ →8← R₁
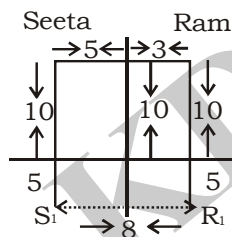
36. (B)

37. (B)

38. (B) Given: A > B, C & D > E

The correct order is D > C > E > A > B.

So, 'B' is the youngest.

39. (C) Both I & II follows

L.P

C. P

Doctor

40. (D)

41. (C) **a**ba/a**b**a/ab**a**/a**b**a

42. (A) s**m**nx/**s**mnx/**s**mn**x** /sm**n**x

43. (B)

←5

5

44. (C)
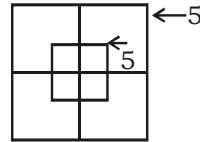
$$\begin{array}{cccccc} G & A & M & B & L & E \\ -1 & +1 & -1 & +1 & -1 & +1 \\ F & B & L & C & K & F \end{array}$$

Similarly,

$$\begin{array}{cccccc} F & L & O & W & E & R \\ -1 & +1 & -1 & +1 & -1 & +1 \\ \textbf{E} & \textbf{M} & \textbf{N} & \textbf{X} & \textbf{D} & \textbf{S} \end{array}$$

45. (A) Present age of Rina = 8 yrs

Present age of his father = 40 yrs

Present age of his mother = 40 – 6 = 34 yrs

46. (C)   47. (B)   48. (B)

49. (A)   50. (B)

51. (C) Island of Corsica is Located in the Western Mediterranean. A region of France, Corsica was ruled over the centuries by the Carthaginians, Romans, Vandals, Goths and Saracens. Napoleon Bonaparte (1769-1821), also known as Napoleon I, a French military leader and emperor who conquered much of Europe in the early 19th century was born on the island of Corsica.

52. (B) Gupta era is known for a large number of pillar inscriptions erected at a number of places. Out of them Prayag Prashasti (Allahabad Pillar Inscription) by Samudragupta was Composed by Harisena in a very simple and refined Sanskrit in Champukavya style.

53. (C) Philadelphia is the largest city in the Commonwealth of Pennsylvania and the fifth most populous in the North-eastern United States. Throughout the 19th century, Philadelphia had a variety of industries and businesses, the largest being textiles. Major corporations in the 19th and in early 20th centuries included the Baldwin Locomotive Works, William Cramp and Sons Ship and Engine Building Company, and the Pennsylvania Railroad Industry.

54. (C) Japan is a stratovolcanic archipelago of 6,852 islands. The four largest islands are Honshu, Hokkaido, Kyushu, and Shikoku, which together comprise about 97% of Japan's land area. Zinc, copper, and oil have been found on Honshu.

55. (A) Fibrinogen is a glycoprotein in vertebrates that helps in the formation of blood clots. It consists of a linear array of three nodules held together by a very thin thread which is estimated to have a diameter between 8 and 15 Angstrom (Å). Glycoprotein is converted by thrombin into fibrin during blood clot formation.

57. (A) Fluorosis is a disease caused by water that contains high amount of fluoride particularly in ground water.

59. (B) Kudankulam Nuclear Power Plant station is situated in Kudankulam in Tirunelveli district of Tamil Nadu. This is a joint Russia-India project.

60. (B) Free Press of India was an Indian nationalist-supporting news agency founded in the 1920s(1923-27) by Swaminathan Sadanand, during the period of the British Raj. It was the first news agency owned and managed by Indians.

61. (C) The Central Bank employs a range of both direct and indirect instruments to effect monetary policy. The indirect or market based instruments largely comprise open market operations and the use of a policy interest rate- the 'Repo' rate.

62. (C) Bangladesh has become the first country in the world to receive funds from United Nations for its fast growing Solar Home Systems. In this regard, UN Framework Convention for Climate Change (UNFCCC) has issued carbon credits (CC) worth 3.56 million US dollars to two Bangladeshi organisations.

63. (D) Vitamin C because animal food and product is deficient in vitamin C.

67. (A) The Gandhi-Irwin Pact was a political agreement signed by Mahatma Gandhi and the then Viceroy of India, Lord Irwin on 5 March 1931 before the second Round Table Conference in London

68. (C) The Kannauj assembly (643 AD) was held in the honour of Hieun Tsang (Chinese pilgrim) and to popularise Mahayana sect of Buddhism.Harshavardhana was a Mahayana Buddhist. He organised Kannauj assembly (643 AD). Though, he was a tolerant ruler and supported all Indic faiths viz. Buddhism, Vedism and Jainism. The scholars regarded him as the last great Hindu emperor of India, who ruled over Northern India.

69. (B) Tuvalu, in the South Pacific, is an independent island nation within the British Commonwealth. Its 9 islands comprise small, sparsely populated atolls and reef islands with palm-fringed beaches and WW II sites.

75. (C) Amjad Ali Khan (born 9 October 1945) is an Indian classical musician who plays the Sarod. Khan was born into a musical family and has performed internationally since the 1960s. He was awarded India's second highest civilian honor, the Padma Vibhushan, in 2001.

78. (B) The Great Bath is one of the best-known structures among the ruins of the ancient Indus Valley Civilization at Mohenjodaro in Sindh,Pakistan.

79. (C) Fertilization of Human egg takes place in ampulla of Fallopian tube.

80. (A) The Constituent Assembly adopted the Constitution of India, drafted by a committee headed by Dr. B. R. Ambedkar, on 26 November 1949. India became a sovereign, democratic, republic after its constitution came into effect on 26 January 1950.

81. (B) Ala-ud-din Khilji (died in 1316), born as Juna Muhammad Khilji, was the second ruler of the Khilji dynasty. He is considered the most powerful ruler of the dynasty, He also had his Eunuch consort Malik Kafur who hold the reigns of the empire in his last few years. After conquering Devagiri and Warangal, Ala-ud-din Khilji sent Malik Kafur (1311) against king Vira Ballala III of the Hoyasala Kingdom of Halebidu. Veera Ballala was surprised and forced to pay an indemnity and become a vassal.

82. (B) India's first national park was established in 1936 as Hailey National Park, now known as Jim Corbett National Park, Uttarakhand.

83. (B) Atomic mass = No. of protons + No. of neutrons.

84. (A) An Ideal voltmeter is one which has infinite resistance. When the resistance is infinite, the voltmeter draws no current and hence, gives accurate readings of voltage.

85. (C) Stomata pores open by endosmosis in which water moves into the guard cell in response of decrease in the potential of guard cell.

86. (B) The refractive index is proportional to the wavelength, so the longer the wavelength the more it refracts. Red has the longest wavelength we can see, so the red letters will appear more raised up than any other colour. Blue/violet have the shortest wavelengths so they will appear lower than any other colour.

99. (B) The first Deputy Prime Minister of India was Sardar Vallabhbhai Patel, who was also home minister in Jawaharlal Nehru's cabinet.

100. (C) An allele is an alternative form of gene not is location at a specific position on a specific chromosome.

101. (D) Let x be the initial amount

Remaining money = $\left(\dfrac{9}{10}\right) \times \left(\dfrac{9}{10}\right) \times \left(\dfrac{9}{10}\right) \times x$

ATQ,

$\dfrac{9}{10} \times \dfrac{9}{10} \times \dfrac{9}{10} \times x = 7290$

$x = 10,000$

102. (C) ATQ,

Total	Boys	Girls
100	12+44	44
12%		
	56 :	44
	14 :	**11**

103. (B) ATQ,
$a^4 + b^4 = 8 - a^2b^2$ ...(i)
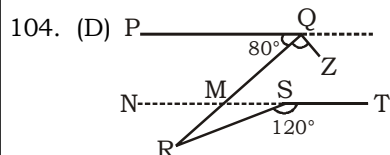and $a^2 + b^2 = 4 - ab$ ...(ii)
Squaring both side of equation (ii)
$a^4 + b^4 + 2a^2b^2 = 16 + a^2b^2 - 8ab$
$\Rightarrow 8 - a^2b^2 + 2a^2b^2 = 16 + a^2b^2 - 8ab$
$\Rightarrow 8 + a^2b^2 = 16 + a^2b^2 - 8ab$
$\Rightarrow 8ab = 16 - 8 = 8$
$ab = 1$

104. (D)

$\angle RMS = \angle QMN = 180° - 80° = 100°$
$\angle RST = \angle RMS + \angle SRM$
$120° = 100° + \angle SRM$
$20° = \angle SRM$

105. (C) Let the amount of Royalty to be paid for these books be ₹ r.
Then, $20 : 15 = 30600 : r$

$\Rightarrow = ₹\left(\dfrac{30600 \times 15}{20}\right) = ₹ 22,950$

106. (C) Central angle corresponding to Royalty
= (15% of 360)°

$= \left(\dfrac{15}{100} \times 360\right)° = 54°$

107. (B) Clearly, marked price of the book
= 120% of C.P.
Also, cost of paper = 25% of C.P.
Let the cost of paper for a single book be ₹ n
Then, $120 : 25 = 180 : n$

$\Rightarrow n = ₹\left(\dfrac{25 \times 180}{120}\right) = ₹ 37.50$

108. (B) Let B = 100

	A	:	B	:	C	:	D
Initial→	150	:	100	:	100	:	160
	+10%		+10%		+10%		+10%
New→	165		110		110		176

Required percentage = $\dfrac{176}{110} \times 100 = 160\%$

109. (A) $(A + B) \times 5 = \left(2A + \dfrac{B}{2}\right) \times 4$

$5A + 5B = 8A + 2B$
$3A = 3B$
$A = B$
Efficiency of A and B is equal we can take any value.
Let A = B = 2
Total work = $(2 + 2) \times 5 = 20$ units

Time taken by A = $\dfrac{20}{2} = 10$ days

110. (C) Marked price = ₹ 180
after 10% discount = ₹ 162

$\therefore$ Required percentage = $\dfrac{24.3}{162} \times 100 = 15\%$

111. (D) Weight→ $3 : 2 : 1 \to 36$
Price→ $9 : 4 : 1 \to 14$ } 22
$\because 22 = 2310$

$\therefore$ Required price = $\dfrac{2310}{22} \times 36 = ₹ 3780$

112. (A) Let the sum given to Prakash be x

$\because\ x \times \dfrac{16}{100} \times 3 - 6300 \times \dfrac{14}{100} \times 3 = 618$

$\Rightarrow \dfrac{x \times 48}{100} - 63 \times 14 \times 3 = 618$

$\Rightarrow \dfrac{48x}{100} = 618 + 2646$

$\therefore\ x = \dfrac{3264 \times 100}{48} = ₹\ 6800$

113. (B) Quotient = 16
Divisor = 25 × 16 = 400
and remainder = 80
Dividend = Divisor × quotient + remainder
= 400 × 16 + 80
= 6480

114. (A) Numbers = $3x$ and $4x$
HCF = x = 4
$\therefore$ LCM = $12x$ = 12 × 4 = 48

115. (A) $\dfrac{1}{12}$ hectare = $\dfrac{1}{12} \times 10000$ sq. metre

$= \dfrac{2500}{3}$ sq. metre

$\therefore\ 3x \times 4x = \dfrac{2500}{3}$

$\Rightarrow x^2 = \dfrac{2500}{3 \times 3 \times 4} \Rightarrow x = \dfrac{50}{6}$

$\Rightarrow$ Width = $3x = 3 \times \dfrac{50}{6} = 25$ metre

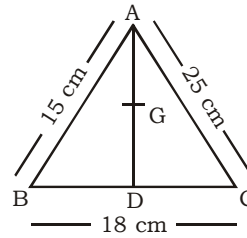116. (A) $\because\ x^4 + \dfrac{1}{x^4} = 47$

$\therefore\qquad x^2 + \dfrac{1}{x^2} = 7$

$x + \dfrac{1}{x} = 3 \qquad + \qquad x - \dfrac{1}{x} = \sqrt{5}$

$2x = 3 + \sqrt{5}$

$x = \dfrac{3 + \sqrt{5}}{2}$

117. (C)

$(AB)^2 + (AC)^2 = 2[(AD)^2 + (BD)^2]$
$225 + 625 = 2[(AD)^2 + 81]$
$(AD)^2 = 344$

$AD = 2\sqrt{86}$ and $GD = \dfrac{1}{3}AD$

$GD = \dfrac{2}{3}\sqrt{86}$

118. (A) Formula = $2\sqrt{ab}$

$= 2\sqrt{4 \times 9} = 12$

119. (C) $\sin\theta = \dfrac{1}{2} = \sin 30° = \sin \dfrac{\pi}{6}$

$\Rightarrow \theta = \dfrac{\pi}{6}$ $\qquad [\because\ 180° = \pi$ radian$]$

$\therefore\ \theta + \phi = \dfrac{\pi}{2} \Rightarrow \dfrac{\pi}{6} + \phi = \dfrac{\pi}{2}$ $\quad [\because\ 90° = \dfrac{\pi}{2}$

radian$]$

$\Rightarrow \phi = \dfrac{\pi}{2} - \dfrac{\pi}{6} = \dfrac{3\pi - \pi}{6}$

$= \dfrac{2\pi}{6} = \dfrac{\pi}{3}$

$\therefore\ \sin\phi = \sin\dfrac{\pi}{3} = \dfrac{\sqrt{3}}{2}$

120. (D) Let the opponent got K votes, then winner got K + 200 votes.
ATQ,
20% voters did not vote
2% of total votes = 200 – 120

$\Rightarrow$ 80% – 120 = K + 200 + K
80% = K + 200 + K + 120
41% 39%
2%
= 80
Total votes = 4,000
Votes for the losing candidate

$= \dfrac{39}{100} \times 4000 - 120 = 1440$

Total votes casted $= \dfrac{4}{5} \times 4000 = 3200$

Required percentage $= \dfrac{1440}{3200} \times 100 = 45\%$

121. (B) C.P of 100 eggs = ₹ 120
S.P. of 96 eggs (8 dozen) = 15 × 8
₹= 120
∴ No profit no loss

122. (A)

A → 32 ⎤
B → 48 ⎬ 96 – 2
C → 24 ⎦ ... 3 ... 4

(A + B + C)'s 4 days work = 9 × 4 = 36 unit
Now, (B + C)'s 2 day work = 6 × 2 = 12 unit
Remaining work = 96 – (36 + 12) = 48 unit

∴ C complete the remaining work in $= \dfrac{48}{4}$

= 12 days
Now, efficiency of A : B and C

$= \dfrac{4}{32} : \dfrac{6}{48} : \dfrac{18}{24}$

= 1 : 1 : 6

∴ Share of A $= \dfrac{6480}{8} \times 1 = ₹ 810$

Share of B $= \dfrac{6480}{8} \times 1 = ₹ 810$

and Share of C $= \dfrac{6480}{8} \times 6 = ₹ 4860$

123. (B) A = 3 units = ₹ 8550

A + B = 5 units $= \dfrac{5 \times 8550}{3} = ₹ 14250$

Total profit $= \dfrac{14250}{95} \times 100 = ₹ 15000$

124. (D) One way walking + one way riding time

$= 4$ hrs 30 min $= \dfrac{9}{2}$ hrs   …(i)

and two ways riding time = 3 hrs

∴ one way riding time $= \dfrac{3}{2}$ hrs

∴ From (i), one way walking time

$= \dfrac{9}{2} - \dfrac{3}{2} = \dfrac{6}{2} = 3$ hrs

∴ Two ways walking time = 2 × 3 = 6 hrs

125. (B)
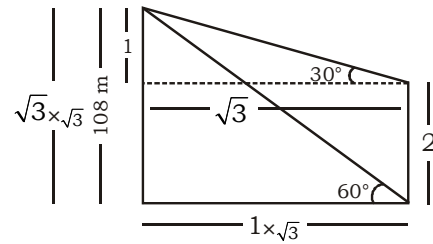
∵ 3 unit = 108 m

∴ Required length $= \dfrac{108}{3} \times 2 = 72$ m

126. (C) Let the no. be x and y
ATQ,
$xy = 120$
$x^2 + y^2 = 289$
$(x - y)^2 = x^2 + y^2 - 2xy$
$289 - 2 \times 120 = 289 - 240 \Rightarrow 49$
∴ $x - y = 7$

127. (B) Volume of cylinder $= \pi r^2 h$

∵ $50\% = \dfrac{1}{2}$ & $60\% = \dfrac{3}{5}$

∴ Radius → 4 — 1

Height → 5 — 8

Volume → 20 — 8
⌣ 12

∴ Required% $= \dfrac{12}{20} \times 100 = 60\%$

128. (C) ∵ $x + \dfrac{a}{x} = 1$

∴ $x^2 + a = x$
$x^2 - x = -a$ …(i)
ATQ,

$\dfrac{x^2 + x + a}{x^3 - x^2}$

Dividing both N_r & D_r by x

$\dfrac{x + \dfrac{a}{x} + 1}{x^2 - x} = \dfrac{1+1}{-a} \Rightarrow -\dfrac{2}{a}$

129. (C) Each interior angle of a regular polygon

$= 180 \times \dfrac{3}{5} = 108°$

∴ Each exterior angle = 180° – 108° = 72°

∴ No. of sides $= \dfrac{360}{72} = 5$

130. (B) $\because a^3 + b^3 + c^3 - 3abc$

$\therefore \dfrac{1}{2}(a + b + c)[(a - b)^2 + (b + c)^2 + (c - a)^2]$

$\Rightarrow \dfrac{1}{2}(999 + 996 + 998)[(3)^2 + (2)^2 + (-1)^2]$

$= \dfrac{1}{2}(2993)(14) + 49$

$= 21000$

131. (B) $\dfrac{\cos^2 60° + 4\sec^2 30° - \tan^2 45°}{\sin^2 30° + \cos^2 30°}$

$= \left(\dfrac{1}{2}\right)^2 + 4\left(\dfrac{2}{\sqrt{3}}\right)^2 - 1$
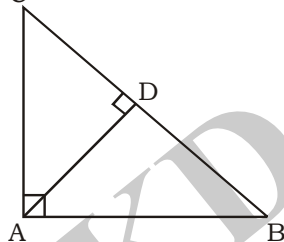
$= \dfrac{1}{4} + \dfrac{16}{3} - 1$

$\Rightarrow \dfrac{3 + 64 - 12}{12} = \dfrac{55}{12}$

132. (A) Let the value of $a = 1$, $b = 1$ and $c = -2$
Put the value in equation

$\left(\dfrac{1+1}{-2} + \dfrac{1-2}{1} + \dfrac{-2+1}{1}\right)\left(\dfrac{1}{1-2} + \dfrac{1}{-2+1} + \dfrac{-2}{1+1}\right)$

$(-1 - 1 - 1)(-1 - 1 - 1) \Rightarrow 9$

133. (A)

AB = $\sqrt{(AD)^2 + (BD)^2}$ = $\sqrt{36 + 16}$ = $\sqrt{52}$ cm
$\Rightarrow AB^2 = BC \times BD$
$\Rightarrow 52 = BC \times 4$
BC = 13 cm

134. (A) $A + B = 90°$
$\Rightarrow B = 90 - A$
$\therefore \sec^2 A + \sec^2 B - \sec^2 A \cdot \sec^2 B$
$= \sec^2 A + \csc^2 A - \sec^2 A \cdot \csc^2 A$

$= \dfrac{1}{\cos^2 A} + \dfrac{1}{\sin^2 A} - \dfrac{1}{\sin^2 A \cdot \cos^2 A}$

$= \dfrac{\sin^2 A + \cos^2 A - 1}{\sin^2 A \cdot \cos^2 A} \Rightarrow 0$

135. (C) Let the total sell be of x rupees

total sales $\to$ 10,000   + $(x - 10,000)$

$\quad\quad\quad\quad$ |10% $\quad\quad$ |12.5%

earning of 1,000   +   1875
salesman

12.5% of $(x - 10,000) = 1875$

$\dfrac{1}{8} \times (x - 10,000) = 1875$

$(x - 10,000) = 15,000$
$x = ₹ 25,000$

136. (B) The following figure gives the movements of the two swimmers.
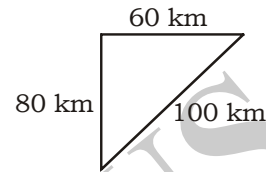
The faster swimmer must have travelled

80 km in 2 hours and hence speed = $\dfrac{80}{2}$

S = 40 km/h

137. (B)

C.P	S.P	M.P
$9_{\times 13}$	$10_{\times 13}$	
100	117	
100	117	130

$\therefore$ Required percentage = 30%

138. (D) ATQ,
$200 \times 31 = 27 \times 200 + 80 \times D$
$4 \times 200 = 80 \times D$
$\Rightarrow D = 10$ days
extra days = $(10 - 4) = 6$ days

139. (D) Let distance be d km.
ATQ,

$\dfrac{d}{7-3} - \dfrac{d}{7+3} = 6$

$\Rightarrow \dfrac{d}{4} - \dfrac{d}{10} = 6$

$\Rightarrow \dfrac{5d - 2d}{20} = 6$

$\Rightarrow d = \dfrac{20 \times 6}{3} = 40$ km

140. (B) Interest for 1st year = ₹ 600
Interest for 2nd year = ₹ 460
Interest for 3rd year = 10% of
$(4600 + 460 - 2000) = ₹ 306$
$\therefore$ the total amount the man pays at the end of 3rd year
= $2000 + 600 + 460 + 306 = ₹ 3366$

141. (B) sum of present ages = 90 years

sum of ages 10 years ago = 90 – (10 × 3)

142. (A) Area of base = Area of right angled triangle

$= \frac{1}{2} \times 5 \times 12 = 30$ sq. cm

$[\because 5^2 + 12^2 = 13^2]$

$\therefore$ Volume $= \frac{1}{3} \times$ area of base $\times$ height

$\Rightarrow 330 = \frac{1}{3} \times 30 \times h$

$\Rightarrow h = \frac{330}{10} = 33$ cm

143. (D) $\Delta = \frac{1}{2} [x_1 (y_2 - y_3) + x_2 (y_3 - y_1) + x_3 (y_1 - y_2)]$

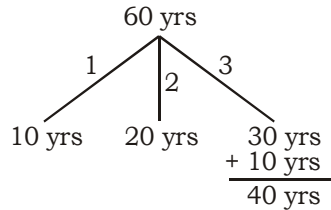$\Delta = \frac{1}{2} [4(4 + 8) - 3(-4 - 5) + 3 (5 - 8)]$

$= \frac{1}{2} [66] = 33$

144. (D) $\sec(7\theta + 28°) = \mathrm{cosec}(30° - 3\theta)$

$\Rightarrow \sec(7\theta + 28°) = \sec(90° - (30° - 3\theta)$

$\Rightarrow 7\theta + 28° = 90° - 30° + 3\theta$

$\Rightarrow 4\theta = 90° - 30° - 28° = 32°$

$\therefore \theta = 8°$

145. (C)

Milk	Water	Total	
$12_{\times 14}$	$3_{\times 14}$	$15_{\times 14}$	same
$10_{\times 15}$	$4_{\times 15}$	$14_{\times 15}$	quantity

$\therefore$ Required ratio

= 168 : 150

= 28 : 25

146. (C) Let the corresponding altitude of the triangle = x cm

ATQ,

Area of the triangle = Area of the circle

$\Rightarrow \frac{1}{2} x \times 8 = \pi \times 8 \times 8$

$\Rightarrow x = 2 \times 8\pi = 16\pi$ cm
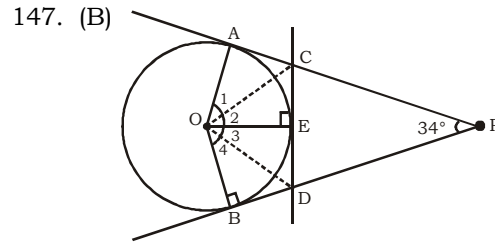
147. (B)

$\angle AOB = 180° - 34 = 146°$

In ΔOAC and ΔOEC

OC = OC (common)

$\therefore \Delta OAC \cong \Delta OEC$

$\therefore \angle AOC = \angle COE = \angle 1 = \angle 2$

Similarly, $\Delta OBD \cong \Delta OED$

$\therefore \angle 3 = \angle 4$

$\angle AOB = 180° - 34° = 146°$

In ΔAOB

$\angle 1 + \angle 2 + \angle 3 + \angle 4 = 146°$

$\Rightarrow \angle 2 + \angle 2 + \angle 3 + \angle 3 = 146°$

$\Rightarrow \angle 2 + \angle 3 = 73°$

$\angle COD = 73°$

148. (D) Average amount of interest paid by the Company during the given period

$= ₹ \left[\frac{23.4 + 32.5 + 41.6 + 36.4 + 49.4}{5} \right]$ lakhs

$= ₹ \left[\frac{183.3}{5} \right]$ lakhs

$= ₹ 36.66$ lakhs

149. (C) Required percentage

$= \left[\frac{(3.00) + 2.52 + 3.84 + 3.68 + 3.96}{(288 + 342 + 324 + 336 + 420)} \times 100 \right]\%$

$= \left[\frac{17}{1710} \times 100 \right]\% \approx 1\%$

150. (C) Required percentage

$= \left[\frac{(288 + 98 + 3.00 + 23.4 + 83)}{(420 + 142 + 3.96 + 49.4 + 98)} \times 100 \right]\%$

$= \left[\frac{495.4}{713.36} \times 100 \right]\% \approx 69.45\%$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Affidavit	A written statement confirmed by oath or affirmation, for use as evidence in court.	शपथ पत्र
Affiliation	A person's connection with a political party, religion, etc.	संबंध
Amnesty	An official pardon for people who have been convicted of political offenses.	सर्वक्षमा
Anecdote	A short and amusing or story about a real incident or person.	किसी घटना का विवरण
Aristocrat	People born in the highest social class, who have special titles	रईस, कुलीन
Ascertain	Find (something) out for certain; make sure of.	सुनिश्चित करना
Coexist	Exist at the same time or in the same place.	एक साथ होना
Compliance	The action or fact of complying with a wish or command.	आज्ञा पालन
Credulous	Having or showing too great a readiness to believe things.	विश्वास करने को आतुर
Critics	A person who judges the merits of literary or artistic works	समीक्षक
Elite	people who are powerful, rich, intelligent and have a lot of influence.	संभ्रांत, समाज के उत्कृष्ट व्यक्ति
Harmonise	Go well together and produce an attractive result	मिलाना, अनुरूप करना
Ignoramus	An ignorant or stupid person.	मूर्ख
Impressionable	Easily influenced because of a lack of critical ability.	शीघ्र प्रभावित होने वाला
Ingenious	(of a person) clever, original, and inventive.	चतुर, प्रतिभा संपन्न
Insight	The capacity to gain an accurate and deep intuitive understanding of a person or thing.	सूक्ष्म ज्ञान, अंतर्दृष्टि
Intellectual	A person possessing a highly developed intellect.	बुद्धिजीवी
Intolerable	Unable to be endured.	असहनीय
Jocose	Playful or humorous.	हास्यपूर्ण
Lacuna	An unfilled space or interval; a gap.	कमी, रिक्त स्थान
Lassitude	A state of physical or mental weariness; lack of energy.	थकावट, सुस्ती
Latent	(of a quality or state) existing but not yet developed	अंतर्निहित, छिपा हुआ
Lenient	(of punishment or a person in authority) permissive, merciful, or tolerant.	नरम
Menacingly	In a threatening way	भयावह तरीके से
Nepotism	The practice among those with power or influence of favoring relatives or friends, especially by giving them jobs.	भाई-भतीजावाद
Nightmare	An experience very frightening and unpleasant	भयावह अनुभव
Nincompoop	A foolish or stupid person.	मूर्ख
Parable	A simple story used to illustrate a moral or spiritual lesson	नीतिकथा, कहावत
Parentage	The identity and origins of one's parents.	उत्पत्ति
Pedant	A person who is excessively concerned with minor details and rules.	पुस्तकीय ज्ञान या तकनीकी ज्ञान को अधिक महत्त्व देने वाला व्यक्ति
Prowl	(of an animal) to move quietly and carefully around an area, especially when hunting	घात लगाकर
Relentless	Oppressively constant; incessant.	निरन्तर
Ruthless	Having or showing no pity or compassion for others.	क्रूर
Sardonic	Grimly mocking or cynical.	निंदापूर्ण, व्यंग्यात्मक
Steadfast	Resolutely or dutifully firm and unwavering.	दृढ़
Tranquilize	(of a drug) have a calming or sedative effect on.	शांत करना
Voluntary	Done, given, or acting of one's own free will.	स्वैच्छिक

SSC MOCK TEST - 45 (ANSWER KEY)

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

151. (A) Replace 'will kill' by 'would kill'. The sentence is of conditional.
152. (C) Replace 'or' by 'nor', as 'neither' is followed by 'nor'.
153. (D)
154. (C) Replace 'isn't it' by 'didn't she?' as the question tag and the sentence must be in the same tense.
155. (A) Sentence starting with 'Not only' takes inversion form. Thus, it should be as 'not only did the bandit rob the person'. The structure may also be 'The bandit not only robbed ......'
158. (B) 'Yell **at** some one'
'Yell **for** help'.
159. (C) 'Abstain' takes preposition 'from' after it.
176. (C) 'Keen' takes preposition 'on' after 'V_1 + ing'.
178. (B) 'Cut a sorry figure' is an idiom which means 'to leave poor impression'.

179. (D) Sentence starting with 'No sooner' takes an inversion form. Thus it will take following form:

No sooner + did + sub + V_1 + simple past tense

181. (C) Remove 'been' as this is not a passive voice.
182. (B) Plural form of 'woman doctor' is 'women doctors'.

Mock Test - 44 (Corrections)

8. (B) & (D)
59. (C) Demand curve is indeterminate under oligopoly.
73. (B) China is the largest tea growing country in the world.
76. (D)

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