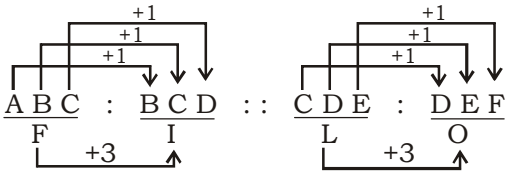
SSC MOCK TEST – 34 (SOLUTION)

1. (A) B O R E
↓ ↓ ↓ ↓
2 +15+18 +5 = 40
40÷ 4 = 10 (Divided by the number of letters)
Similarly,
H O T E L
↓ ↓ ↓ ↓ ↓
8+15+20+5+12 = 60
60÷5 = 12 (Divided by the number of letters)

2. (D) Second is the quality which is present in the first except in option (D).

3. (C) 

4. (B) Cloth is made from thread. Similarly, Mesh is made from wire.

5. (B) Cloth is cut by Scissors. Similarly, Wood is chopped by Axe.

6. (B) Music is a combination of Notation. Similarly, the pattern of poem is formed by the combination of Stanza.

7. (A) Stamp collectors are called the Philatelist. Similarly, coins collectors are called the Numismatist.

8. (A) $\frac{K}{T} = \frac{11}{20}$ → Place value → Place value

Similarly,

$\frac{J}{R} = \frac{10}{18}$ → Place value → Place value

9. (C) 212 + 224 = 436
560 + 224 = 784

10. (C)

11. (C) In all other options money is deposited whereas amounts is paid in the salary.

12. (D) Except option (D) all games are played between two players.

13. (D) (A) R G T F (+2, −1)
(B) M L O K (+2, −1)
(C) C T E S (+2, −1)
(D) V D Z C (+4, −1)

14. (D) $9\frac{1}{11} = \frac{100}{11}$; $7\frac{9}{13} = \frac{100}{13}$; $5\frac{15}{17} = \frac{100}{17}$

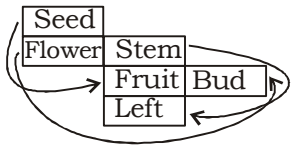
But, $5\frac{6}{19} = \frac{101}{19}$

15. (D) Except option (D), all other pairs are composite number.

16. (C) Except option (C), all are related to entertainment.

17. (C) 84 – 67 = 17
112 – 95 = 17
79 – 63 = 16
167 – 150 = 17

18. (C) Except option (C) all are related to navy.

19. (B) 

20. (D) 24 + 8 – 4 × 2 ÷ 3 = 47
After changing the sign
24 × 8 ÷ 4 + 2 – 3 = 47
⇒ 24 × 2 + 2 – 3 = 47
⇒ 48 + 2 – 3 = 47
⇒ 50 – 3 = 47
⇒ 47 = 47 (True)

21. (A) Moc Don Cil → Beautiful Big House ....(i)
Fit Kon Don → House is Fine .....(ii)
Bai Tin Fit → Cost is More .....(iii)

From eq. (i) & (ii)
House and Don are common
So, House ⇒ Don
From eq. (ii) & (iii)
'Is' and 'Fit' are common
So, Is ⇒ Fit
Then, Kon ⇒ Fine [from eq. (ii)]

22. (C) RETU**R**N

23. (B) $\frac{15+12}{3} = 9$; $\frac{44+28}{8} = 9$;

$\frac{64+53}{\mathbf{13}} = 9$

24. (B) 14 × 4 = 56 16×4 = 64 15 × 4 = **60**
$\sqrt{25} = 5$ $\sqrt{81} = 9$ $\sqrt{49} = 7$

25. (A) $\sqrt{169} + \sqrt{64} + \sqrt{81} = 13 + 8 + 9 = 30$
$\sqrt{625} + \sqrt{\mathbf{324}} + \sqrt{44} = 25 + 18 + 7 = 50$
$\sqrt{1296} + \sqrt{576} + \sqrt{100} = 36 + 24 + 10 = 70$

26. (C) 8 – 5 9 – 6 5 – 2
3 3 3

8 – 2 10–4 15–9
6 6 6

6–3 15–9 14–12
3 6 2

27. (B) $(2 + 6 + 2 + 3)^2 - 1 = 168$
$(3 + 5 + 1 + 2)^2 - 1 = 120$
$(2 + 3 + 5 + 4)^2 - 1 =$ **195**

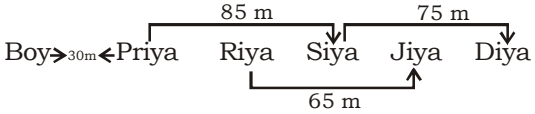
28. (*)

Leopard	Load	Loan	Loath	Long
6	4	3	1	2

Luminous
5

29. (A) P → Q^+ → R^-, Q^+ → X^-, L^+

So, L is grandson of P.

30. (A) 

Required distance = 30 + 85 + 65 = 180 m

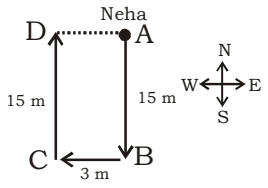
31. (B)

32. (C)

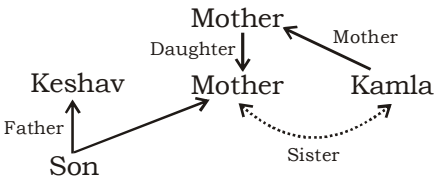
33. (B)

Stone	Rock	Hill	Mountain	Range
5	1	2	3	4

34. (C) Let the number of boys be x.
$2x + 4(7-x) = 20$
$2x + 28 - 4x = 20$
$8 = 2x$
$4 = x$
Then, number of dogs = 7 – 4 = 3

35. (A) 

Hence, Neha is facing towards the North direction.

36. (C) 

37. (B) Rahul : Rani = $1x : 10x$
Today = $1x + 10x +$ 10 yrs (5 yrs of each) = 32 yrs.
$11x = 22$
$x = 2$

Rahul : Rani = 2 : 20 (5 yrs ago.)
+15 → 17 yrs; +15 → 35 yrs; +15 → 15 yrs (after 10 yrs from today (Total 15 yrs))

38. (A) N M T P O V R Q X T S Z
(+2, +2, +2 / +2, +2, +2 / +2, +2, +2)

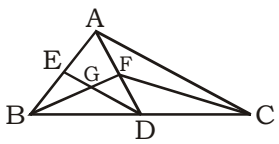
39. (A) 2 6 12 20 30 42 **56**
(+4, +6, +8, +10, +12, +14)

40. (B) a a **a** / b a a **b** / a a **a** / b a **a** b

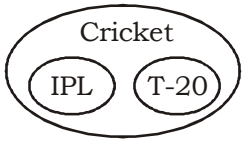
41. (D) b a a **b**/**b** a a b/**b** a a b/b **a** a b

42. (C) People who don't play any game
= 40 – (25 + 22 – 16)
= 40 – 31 = 9

43. (C) Three meaningful word-
ELECTION
ELECTRON
ELECTRIC

44. (B) 

There are 13 triangles in the given fig.
ΔABC, ΔABD, ΔADC, ΔAFC, ΔFDG, ΔAFB, ΔFDB, ΔFBC, ΔGBD, ΔADE, ΔGBE, ΔFDG and ΔDBE

45. (B) 

46. (A)

47. (C)

48. (B)

49. (B)

50. (B)

52. (C) The composition consisting of the words and music of the first stanza of the late poet Rabindra Nath Tagore's song known as "Jana Gana Mana" which is the National Anthem of India. Its playing time is approximately 52 seconds.

54. (C) With the onset of World War I, the British stiffened censorship and restrictions on political activity. Azad's Al-Hilal was consequently banned in 1914 under the Press Act for spreading extremist views. From November 12, 1915, Azad started a new journal, the Al-Balagh and again he started propagating revolutionary ideas and nationalism through this paper. During that time he supported the Khilafat movement. In 1916 the government banned Al-Balagh under Defence of India Regulation Act.

57. (C) Contour ploughing is the farming practice of ploughing across a slope following its elevation contour lines. The rows from slow water run-off during rainstorms to prevent soil erosion and allow the water time to settle into the soil.

61. (D) The Volga is the largest river in Europe in terms of length, discharge, and watershed. It flows through the western part of Russia and is widely viewed as the national river of Russia.

63. (D) At present, the IUCN Red List of Threatened Species (also known as the Red Data List) lists eight classes of organism under the group of threatened categories of critically endangered. The classes of organism for which the 'threatened' tag is applied are mammals, birds, reptiles, amphibians, fishes, insect, mollusc and plants.

65. (B) Satyameva Jayate (Truth Alone Triumphs) is a mantra from the ancient Indian scripture Mundaka Upanishad which is one of the earlier, primary(mukhya) Upanishad , a genre of Hindu scriptures commented upon by Shankara. It is associated with the Atharva Veda. Upon independence of India, it was adopted as the national motto of India. The origin of the motto is a well-known mantra 3.1.6 from the Mundaka Upanishad.

67. (D) If the mass of the body is m, the force of attraction of the earth, or the weight w of the body, is given by the Newton's law of gravitation as w = mg, with acceleration due to gravity $g = \frac{GM}{R^2}$ where M and R are the mass and radius of the Earth respectively. Weight of the body is maximum at the centre of the earth and zero at the centre of the earth.

68. (C) A microcomputer is a small relatively inexpensive computer with microprocessor as its Central Processing Unit (CPU). It is most commonly associated with the first wave of all-in-one 8-bit home computers and small business microcomputer (such as the Apple II, Commodore 64, BBC Micro, and TRS 80).

70. (A) Pitch is a perceptual property that allows the ordering of sounds on frequency-related scale. Pitch may be quantified as a frequency – related scale. Pitch is not a purely objective physical property. It is a subjective psycho-acoustical attribute of sound. When the frequency is high, the wavelength of the sound is shorter.

71. (C) Rajasthan is a land-locked state which is bordered by Pakistan to the west, Gujarat to the south-west, Madhya Pradesh to the south-east, Uttar Pradesh and Haryana to the north-east and Punjab to the north.

73. (B) The Indian citizenship and nationality law and the constitution of India provide single citizenship for all of India. However, there is a form of Indian nationality, the holders of which are known as Overseas Citizens of India. Prime Minister, Atal Bihari Vajpayee, on January 10, 2003 announced a provision for dual citizenship for People of Indian Origin (PIO) living in certain countries. Dual citizenship was made available to PIOs of seven countries-the US, Canada, Australia, New Zealand, Singapore and Malaysia.

74. (C) All proteins contain Nitrogen. Precisely, they contain about 16 percent Nitrogen. The determination of protein requirement is based on Nitrogen balance, which include total Nitrogen in food and excreta.

79. (B) The 52nd Constitutional Amendment of 1985 amended articles 101, 102, 190 and 191; and inserted Schedules 10 to the Constitution of India. It dealt with the Anti Defection Law and provided disqualification of members from parliament and assembly in case of defection from one party to other.

80. (C) Services provided by housewives can be categorized as non-economic services and thus cannot be accounted in national income which is the sum total of all the

goods and services produced in a country, in a particular period of time.

83. (C) The international Monetary Fund has headquarters in Washington, D.C., United States. It is an international organization that was created on July 22, 1944 at the Bretton Woods conference and came into existence on December 27, 1945 when 29 countries signed the Articles of Agreement.

84. (B) Dr. A.P.J. Abdul Kalam is the undisputed father of India's missile programme. He has breathed life into ballistic missiles like the Agni and Prithvi, which put China and Pakistan well under India's missile range. It is too exhausting to track Dr Abdul Kalam's achievements to date. In the 60s and 70s he was a trail blazer in the space department. In the 80s he transformed the moribund Defence Research and Development Laboratory in Hyderabad into a highly motivated team. By the 90s Kalam emerged as the boon for Indian science and technology and was awarded the Bharat Ratna.

85. (C) Hot money is a term that is most commonly used in financial markets to refer to the flow of funds for capital) from (or capital) from one country to another in order to earn a short-term profit on interest rate differences and/or anticipated exchange rate shifts. These speculative capital flows are called "hot money" because they can move very quickly in and out markets, potentially leading to market instability.

88. (D) Lysosomes are known as digestive bag because it digest foreign material as well as worn out cell organelles. They contain powerful digestive enzymes which are capable of breaking down all organic materials.

89. (C) The decibel (DB) is a logarithmic unit that indicates the ratio of a physical quantity (usually power or intensity) relative to a specified or implied reference level. A ratio in decibels is ten times the logarithm to base 10 of the ratio of two power quantities.

90. (B) 'Terra Rossa' in Latin or Italian language is another name for "Red Soil" or "Red Terrain". It is a type of red clay soil produced by the weathering of limestone. Terra Rossa is typically found in regions with a Mediterranean climate.

91. (C) Gross domestic product (GDP) is the market value of all officially recognized final goods and services produced within a country in a given period of time. The united Nations Conference on the Law of the Sea has defined sovereign rights over international waters by defined concepts as Internal waters, exclusive economic zones (EEZs), continental shelf jurisdiction, etc. According to this law, the income generated by Indian fishermen would be accounted in GDP of India.

92. (B) Calcium Sulphate is a common laboratory and industrial chemical. In the form of anhydrite (the nearly anhydrous form), it is used as a desiccant. It is also used as coagulant in products like tofu. The main sources of calcium sulphate are naturally occurring gypsum and anhydrite which occur at many locations worldwide as evaporates.

93. (C) The Ashoka Chakra is a depiction of the Buddhist Dharmachakra, represented with 24 spokes. The most visible use of the Ashoka Chakra today is at the centre of National flag of the Republic of India (adopted on 22 July, 1947), where it is rendered in a Navy-blue colour on a White background by replacing the symbol of Charkha (Spinning wheel) of the pre-independence versions of the flag.

94. (A) Rajendra Kumar Pachauri has been serving as the chairperson of the Intergovernmental Panel on Climate Change since 2002, who was awarded the Nobel Peace Prize in 2007 during his tenure. The IPCC shared the 2007 Nobel Peace Prize with former U.S. Vice President Al Gore, who had earlier criticised Pachauri when he was first elected in 2002.

97. (B) The red blood cells develop in the bone marrow and circulate for about 100-120 days in the body before their components are recycled by macrophages. Each circulation takes about 20 seconds. Approximately a quarter of the cells in the human body are red blood cells.

98. (C) The amoebas do not have nervous system, but they communicate by means of the interaction of the cellular membrane with the outside that surrounds them. In

response to an injurious stimulus, irritating or nutritional, the intracellular communication produces a reaction of the complete cell, moving away or approaching the respective stimulus.

99. (A) Biogas typically refers to a gas produced by breakdown of organic matter in the absence of oxygen. Organic waste such as dead plant and animal material, animal faeces and kitchen waste can be converted into a gaseous fuel called biogas. Biogas originates from biodegradable materials such as biomass, manure, sewage, municipal waste, green waste, plant material, and crops, Biogas comprises primarily methane (CH_4) and carbon dioxide (CO_2) and may have small amounts of hydrogen Sulphate (H_2S)k, moisture and siloxanes.

100. (D) Shivasamudra is a small town in the Mandya District of the state of Karnataka. It is situated on the banks of the river Kaveri, which forms here the boundary to the Chamarajanagar District and the location of one of the first Hydro-electric power stations in Asia, which was set up in the year 1902.

101. (C) $4\sec^2 q + 9\,\text{cosec}^2 q$
$= 4(1 + \tan^2\theta) + 9(1 + \cot^2\theta)$
$= 13 + 4\tan^2\theta + 9\cot^2\theta$
$\because a + b \geq 2\sqrt{ab}$
The minimum value of a + b is $2\sqrt{ab}$
Then the minimum value of
$4\tan^2\theta + 9\cot^2\theta = 2\sqrt{4\tan^2\theta.9\cot^2\theta}$
$= 2\times 6 = 12$
Hence, minimum value $= 13 + 12 = 25$

102. (D) Let number of sides be n.
Each exterior angel of regular polygon of n sides $= \frac{360^\circ}{n}$

Each interior angle $= \frac{(n-2)180^\circ}{n}$

ATQ,

$$\frac{360^\circ}{n} = \frac{1}{3}\left[\frac{(n-2)\times 180}{n}\right]$$

$$\Rightarrow \frac{360}{n} = \frac{(n-2)60}{n} \Rightarrow 360 = (n-2)\,60$$

$\Rightarrow n = 8$

103. (D) A's 1 day work $= \frac{1}{15}$

B's 1 day work $= \frac{1}{20}$

(A + B)'s 1 day work $= \left(\frac{1}{15} + \frac{1}{20}\right) = \frac{7}{60}$

(A + B)'s 4 days work $= \left(\frac{7}{60}\times 4\right) = \frac{7}{15}$

Therefore,

Remaining work $= \left(1 - \frac{7}{15}\right) = \frac{8}{15}$

104. (A) We know the sum of square of first n natural number is $= \frac{n(n+1)(2n+1)}{6}$

Now, $25^2 + 26^2 + \ldots\ldots + 50^2$
$= (1^2+2^2 + \ldots..+50^2) - (1^2+2^2+\ldots\ldots+24^2)$

$$= \frac{50(50+1)(100+1)}{6} - \frac{24(24+1)(48+1)}{6}$$

$$= \frac{50\times 51\times 101}{6} - \frac{24\times 25\times 49}{6}$$

$= 42925 - 4900 = 38025$

105. (C) Let number of men = x,
number of women = y
$\Rightarrow$ Efficiency of 4 men and 6 women
$= 100/10 = 10\%$
$\Rightarrow 4x + 6y = 10$
Above equation means 4 men and 6 women can do 10% of a the job in one day.
$\Rightarrow$ Efficiency of 3 men and 7 women
$= 100/8 = 12.5\%$
$\Rightarrow 3x + 7y = 12.5$
By solving both equations we get, $x = -0.5$ and $y = 2$
$\Rightarrow$ Efficiency of 1 women (y) = 2% per day
$\Rightarrow$ Efficiency of 10 women per day = 20%
$\Rightarrow$ 10 women can complete the job in
$= 100/20 = 5$ days

106. (C)Let total votes = x
$\therefore$ Winner gets = (100–35)% of x = 65% of x
Difference = (65–35)% of x = 30% of x
$\therefore$ According to condition
30% of x = 450

$$\Rightarrow x = \frac{450}{30}\times 100 = 1500$$

107. (A) Let the required amount be x .
ATQ,

$$750 = x\times\frac{125}{100}\times\frac{125}{100}\times\frac{125}{100}$$

$$x = \frac{750\times100\times100\times100}{125\times125\times125} = ₹\ 384$$

108. (D) Total age of 26 labourers = 26 × 30
= 780 yrs

Required age = $780 - 25\times30 + (26-1)\times\frac{1}{5}$

$= 780 - 25\times30 + 5$
$= 780 - 750 + 5$
$= 35$ yrs

109. (C) $\frac{2\times(37)^2 - \frac{1}{2}}{2\times37-1} = \frac{2738-\frac{1}{2}}{74-1}$

$= \frac{5476-1}{2\times73} = \frac{5475}{146} = 37.5$

110. (B) Here,
118% of cost – 112% of cost = ₹ 18
$\Rightarrow$ 6% of cost = ₹ 18

$\Rightarrow$ cost = $\frac{18\times100}{6}$ = ₹ 300.

111. (C) $\frac{x^3+\frac{1}{x}}{x^2-x+1}$

Dividing by x, we have

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

$= \frac{3^2-2}{3-1} = \frac{7}{2}$

112. (B) Let the installment amount be ₹100.

For fourth year = $100 + \left(\frac{100\times4\times3}{100}\right) = 112$

For third year = $100 + \left(\frac{100\times4\times2}{100}\right) = 108$

For second year = $100 + \left(\frac{100\times4\times1}{100}\right) = 104$

Fort first year = $100 + \left(\frac{100\times4\times1}{100}\right) = 100$

Total = 112 + 108 + 104 + 100 = 424

$424 \xrightarrow{\times2} 848$

So annual equal installment

$= 100 \xrightarrow{\times2} ₹\ 200$

113. (B) Here instead of every kilometre, every 7th kilometre is given. Hence, we should first calculate no. of times he rests i.e.

$\frac{90}{7} \approx 12$

Required answer $= \frac{90}{18} + 12\times\frac{6}{60}$
= 5 hrs + 1 hr 12 min
= 6 hrs 12 min

114. (A) $p \propto \frac{1}{q}$

pq = k
Let q will be decreased by x %

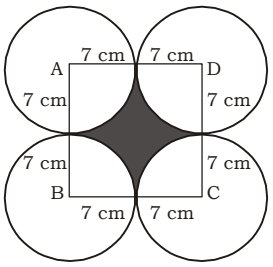
$$\left(p + p\times\frac{100}{100}\right)\times q\left(\frac{100-x}{100}\right) = k$$

$$2p \times q\left(\frac{100-x}{100}\right) = pq$$

$$2 \times \frac{100-x}{100} = 1$$

$\Rightarrow x = 50$
q is decreased by 50%.

115. (A)



Area of square = 14^2
= 196 sq. cm

Area of all sectors = $\frac{1}{4}\times4\times\pi r^2$

$= \frac{22}{7}\times7\times7 = 154$ sq. cm.

Required area = 196 – 154
= 42 cm²

116. (C) Part of the cistern filled by pipe X in 18 minutes = $\frac{18}{24} = \frac{3}{4}$

Remaining part = $1 - \frac{3}{4} = \frac{1}{4}$

$\because$ Pipe Y can fill the whole cistern in 32 minutes

$\therefore$ Pipe Y can fill $\frac{1}{4}$ part in $\frac{1}{4}\times32 = 8$ min

$\Rightarrow$ Pipe Y should be closed after 8 minutes.

117. (B) In ΔTQR, $90° + 40° + x = 180°$

(Angle sum property of a triangle)
Therefore, $x = 50°$
Now, $y = \angle SPR + x$
Therefore, $y = 30° + 50° = 80°$

118. (D) $\frac{2x}{3x^2-5x+3} = \frac{\frac{2x}{x}}{\frac{3x^2}{x}-\frac{5x}{x}+\frac{3}{x}}$

$= \frac{2}{3x+\frac{3}{x}-5} = \frac{2}{3\left(x+\frac{1}{x}\right)-5}$

$= \frac{2}{3\times 5-5} = \frac{2}{10} = \frac{1}{5}$

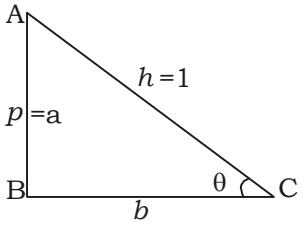
119. (B) $r = h$ (Given)
Ratio of volumes :

$\frac{2}{3}\pi r^3 : \pi r^2 h : \frac{1}{3}\pi r^2 h = \frac{2}{3}r^3 : r^3 : \frac{1}{3}r^3$

$= \frac{2}{3} : 1 : \frac{1}{3} = 2 : 3 : 1.$

120. (C) If $10°6' 32'' = \theta$ then
$79° 53' 28'' = 90° - \theta$

$\therefore \sin\theta = a = \frac{p}{h}$



$\therefore b = \sqrt{1-a^2}$
$\therefore \cos(79° 53' 28'') + \tan(10° 6' 32'')$
$= \cos(90° - \theta) + \tan\theta$

$= \sin\theta + \tan\theta = a + \frac{a}{\sqrt{1-a^2}}$

$= \frac{a\sqrt{1-a^2}+a}{\sqrt{1-a^2}} = \frac{a\left(1+\sqrt{1-a^2}\right)}{\sqrt{1-a^2}}$

121. (D) Area of $\Delta FBE = 108\ cm^2$
Let each side be $6x$.

$\therefore BE = \frac{1}{3}BC = \frac{1}{3}\times 6x = 2x$

$BF = \frac{1}{2}AB = \frac{1}{2}\times 6x = 3x$

Area of $\Delta FBE = \frac{1}{2}3x \times 2x = 3x^2$

$\therefore 3x^2 = 108$
$\therefore x^2 = 36$
$\therefore AC^2 = AB^2 + BC^2 = 2AB^2$
$= 2(36)^2$

$\Rightarrow AC = 36\sqrt{2}$ cm.

122. (B) Roots of equation are real and equal then,
$b^2 - 4ac = 0$
$\therefore (-p)^2 - 4\times 25\times 4 = 0$
$p^2 = 400$
$p = \pm 20.$

123. (A) Weight of new men = Wt. of outgoing man + increase in wt. × No. of men
$= 60 + 1 \times 8$
$= 68$ kg

124. (B) SI = ₹ (7200–6000) = ₹ 1200

$\therefore SI = \frac{PRT}{100} \Rightarrow 1200 = \frac{6000\times R\times 4}{100}$

$\Rightarrow R = \frac{1200\times 100}{6000\times 4} = 5\%$

New rate (R) = 5×1.5 = 7.5%

Then, SI = $\frac{6000\times 7.5\times 5}{100}$ = ₹ 2250

$\therefore$ Amount = ₹ (6000 + 2250) = ₹ 8250

125. (B) Let the distance of the place be x km.
According to the question,

$\frac{x}{6-2}-\frac{x}{6+2} = 3$

$\Rightarrow \frac{x}{4}-\frac{x}{8} = 3$

$\Rightarrow x = 8 \times 3 = 24$ km

126. (*) Required time = 7 AM + $\frac{24-4}{4+6}$

= 7 AM + $\frac{20}{10}$ hrs

= 9AM

Required distance = 4×3 = 12 km from Delhi and also 12 km from Alwar

127. (D) Let the CP be 100%
ATQ,

$(80\%)\frac{125}{100} = 120\% - 75$

$\Rightarrow 100\% = 120\% - 75$
$\Rightarrow 75 = 20\%$

$\Rightarrow 100\% = \frac{75}{20}\times 100$

= ₹ 375

128. (A) Let the third number be 100.
then, the first number = 135

the second number = 150

Required percentage = $\frac{135}{150}\times 100 = 90\%$

129. (A) $\sqrt{48}-\sqrt{45} = \sqrt{3}\left(\sqrt{16}-\sqrt{15}\right)$

Multiplying numerator and denominator by 2, we get $\frac{\sqrt{3}\left(\sqrt{64}-2\sqrt{15}\right)}{2}$

$= \frac{\sqrt{3}}{2}\left(8-2\times\sqrt{5}\times\sqrt{3}\right) = \frac{\sqrt{3}}{2}\left(\sqrt{5}-\sqrt{3}\right)^2$

$\therefore$ Required square root = $\frac{\sqrt[4]{3}}{\sqrt{2}}\left(\sqrt{5}-\sqrt{3}\right)$

130. (A) Area of the field

$= \frac{\text{Total cost}}{\text{Cost per hectare}} = \frac{486}{36} = \frac{27}{2}$ hectare

$\therefore$ Area of the field = $\frac{1}{2}\times 3\times$ Height$\times$Height

$= \frac{3}{2}$ (Height)^2 ($\because$ Base = 3$\times$Height)

$\Rightarrow \frac{3}{2}$ (Height)$^2 = \frac{27}{2}$ hectares.

$\Rightarrow$ (Height)$^2 = \frac{27}{2}\times\frac{2}{3} = 9$ hectares

= 90000 sq.m

$\Rightarrow$ Height = $\sqrt{90000}$ = 300 m.

and , base = 3 $\times$ Height = 900 m.

131. (B) 180° = π Radian

$\Rightarrow 27^\circ = \frac{\pi}{180^\circ}\times 27^\circ = \frac{3\pi^c}{20}$

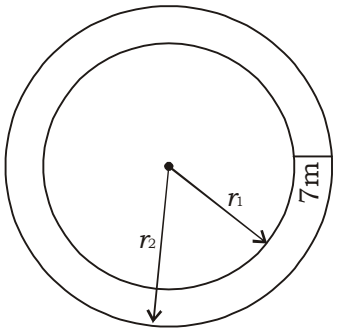
132. (B) Sum of 4 new numbers
= 50 $\times$ 104 – 100 $\times$ 44
= 5200 – 4400 = 800

$\therefore$ Average = $\frac{800}{4} = 200$

133. (A) Let the radius of inner circle be r_1
$\therefore 2\pi r_1 = 704$

$\Rightarrow r_1 = \frac{704}{2\pi} = \frac{704\times 7}{2\times 22} = 112$ m.

Let the radius of outer circle = r_2
$\therefore r_2 = r_1 + 7 = 1112 + 7 = 119$ m.



$\therefore$ Area of the path = $\pi r_2^2 - \pi r_1^2$

$= \pi\left(r_2^2 - r_1^2\right) = \pi(r_2 + r_1)(r_2 - r_1)$

$= \frac{22}{7}\times(119+112)(119-112) = \frac{22}{7}\times 231\times 7$

= 5082 m^2

134. (C) Let the share of B = ₹ x.
Then share of A = 3903 – x
ATQ,

$(3903-x)\left(1+\frac{4}{100}\right)^7 = x\left(1+\frac{4}{100}\right)^9$

$\Rightarrow (3903-x) = x\left(\frac{26}{25}\right)^2 = \frac{676x}{625}$

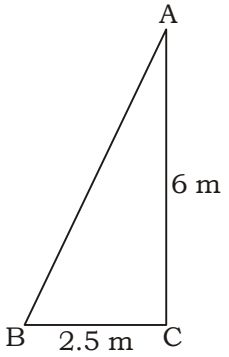
$\Rightarrow 3903\times 625 - 625x = 676x$

$\Rightarrow 1301x = 3903\times 625$

$\Rightarrow x = \frac{3903\times 625}{1301}$ = ₹ 1875

Share of B = ₹ 1875

135. (D) Le AB be the ladder and CA be the wall with the window at A. Also, BC = 2.5 m and CA= 6 m



From Pythagoras Theorem, we have :
AB^2 = BC^2 + CA^2
= (2.5)^2 + (6)^2 = 42.25
So, AB = 6.5
Thus length of the ladder is 6.5 m.

136. (B) Cost price of all the mangoes = ₹ 1440
Cost price of the mangoes sold
= 800– 44 = 756
$\therefore$ Highest possible cost price of each mango (HCF of 1440 and 756) = 36
Again the cost price of the mangoes left

= 1440 – 756 = 684

∴ The minimum number of mangoes left = 684 ÷ 36 = 19

137. (A) Required Ratio = $\dfrac{(50-56)+\dfrac{40}{100}\times 50}{56}$

$= \dfrac{-6+20}{56} = \dfrac{1}{4} = 1:4$

138. (B) Sides opposite to equal angles are equal.
Here,
∠ADB = ∠CAD = 30°
So, Sides AC = CD.

139. (C) Let the number of boys be $2x$ and the number of girls b $3x$.
No. of boys is increased by 20%

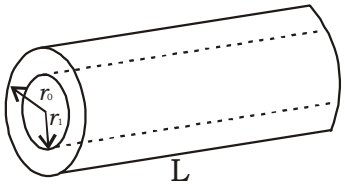
$= 2x \times \dfrac{120}{100} = \dfrac{12x}{5}$

No. of girls is increased by 10%

$= 3x \times \dfrac{110}{100} = \dfrac{33x}{10}$

The new ratio of the number of boys to that of girls = $\dfrac{\frac{12x}{5}}{\frac{33x}{10}} = 8:11$

140. (C)



Let r_0 = Outer radius
r_1 = Inner radius
and L = Length of the tube

Volume of the outer cylinder = $\pi r_0^2 L$

Volume of the inner cylinder = $\pi r_1^2 L$

We get the cylindrical tube when we cut out the inner cylinder from the outer cylinder, both the cylinders being concentric.

∴ Volume of the material of the cylindrical tube = $\pi r_0^2 L - \pi r_1^2 L = \pi L\left(r_0^2 - r_1^2\right)$

$= \dfrac{22}{7} \times 35[(15)^2 - (12)^2]$

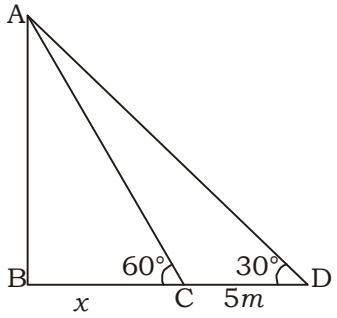
$= 22 \times 5 \times 81 = 8910\ \text{cm}^3$

141. (D) $x = a + 2b - 3c$
$y = 3a - b - 2c$
$z = 5c - 4a - b$
On adding $x + y + z = 0$
∴ $(x+y)^2 = (-z)^2$
$\Rightarrow x^2 + y^2 + 2xy = z^2$
$\Rightarrow x^2 + y^2 - z^2 = -2xy$
$\Rightarrow \dfrac{x^2+y^2-z^2}{xy} = \dfrac{-2xy}{xy} = -2$

142. (A) Let AB is the pole and BC = x m
The initial length of shadow is BD which reduce to BC.
Then in ΔABC,

$\tan 60° = \dfrac{h}{x}$

$\Rightarrow \sqrt{3} = \dfrac{h}{x}$



In ΔABC, $\tan 30° = \dfrac{AB}{BD}$

$\Rightarrow \dfrac{1}{\sqrt{3}} = \dfrac{h}{x+5}$

$\Rightarrow \dfrac{1}{\sqrt{3}} = \dfrac{h}{\frac{h}{\sqrt{3}}+5}$

$\Rightarrow \sqrt{3}\,h = \dfrac{h}{\sqrt{3}} + 5 \Rightarrow 3h = h + 5\sqrt{3}$

$\Rightarrow 2h = 5\sqrt{3} \Rightarrow h = \dfrac{5\sqrt{3}}{2}$

$\Rightarrow$ Height of pole = $\dfrac{5\sqrt{3}}{2}$ m

143. (A) $\left(\dfrac{2+\sqrt{3}}{2-\sqrt{3}} + \dfrac{2-\sqrt{3}}{2+\sqrt{3}} + \dfrac{\sqrt{3}-1}{\sqrt{3}+1}\right)$

$= \dfrac{(2+\sqrt{3})(2+\sqrt{3})}{(2-\sqrt{3})(2+\sqrt{3})} + \dfrac{(2-\sqrt{3})(2-\sqrt{3})}{(2+\sqrt{3})(2-\sqrt{3})} + \dfrac{(\sqrt{3}-1)(\sqrt{3}-1)}{(\sqrt{3}+1)(\sqrt{3}-1)}$

$= \dfrac{4+3+4\sqrt{3}}{4-3} + \dfrac{4+3-4\sqrt{3}}{4-3} + \dfrac{3+1-2\sqrt{3}}{3-1}$

$= \dfrac{7+4\sqrt{3}}{1} + \dfrac{7-4\sqrt{3}}{1} + \dfrac{4-2\sqrt{3}}{2}$

$= 14 + 2 - \sqrt{3} = 16 - \sqrt{3}$

144. (C) Let the required distance be x km.
Then time taken during the first journey

$= \frac{x}{3}$ hr.

and time taken during the second journey

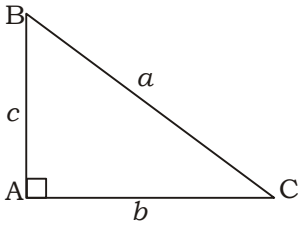
$= \frac{x}{2}$ hr.

$\therefore \frac{x}{3}+\frac{x}{2} = 5 \Rightarrow \frac{2x+3x}{6} = 5 \Rightarrow 5x = 30$

$\therefore x = 6$

$\therefore$ required distance = 6 km

145. (D)



$\tan B = \frac{\text{Length}}{\text{base}} = \frac{b}{c}$

$\tan C = \frac{\text{Length}}{\text{base}} = \frac{c}{b}$

$\therefore \tan B + \tan C$

$= \frac{b}{c}+\frac{c}{b} = \frac{b^2+c^2}{bc} = \frac{a^2}{bc} \qquad \left(\because a^2 = b^2+c^2\right)$

146. (C) It is clear from the graph that annual premium for a man whose age 26 year is ₹ 45.7

147. (C) Required age of the person is 24 years

148. (D) Required premium = 43.75 × 10
= ₹ 437.5

149. (B) Required increase

$= \left(\frac{46.5}{44.25}-1\right)\times 100\%$

= (1.0508–1) × 100%
= 5.08%

150. (B) Required difference
= (44.25 – 43.50) × 100
= 0.75 × 100 = ₹ 75

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Apathy	the feeling of not being interested in or enthusiastic about something	उदासीनता
Audacious	willing to take risks or to do something shocking	दु:साहसी, ढीठ
Ballistophobia	a fear of missiles and projectiles, fear of being shot	मिसाइलों और गोलियों का डर
Blow hot and cold	to be changeable or uncertain (about something)	अस्थिर या अनिश्चत होना
Bucolic	connected with the countryside or country life	देहाती, ग्रामीण
Cheeky	rude in an amusing or an annoying way	धृष्ट, गुस्ताख
Conscience	the part of your mind that tells you whether your actions are right or wrong	अन्तरात्मा, जमीर
Contemporary	belonging to the same time	समसामयिक
Cord	strong thick string or thin rope	रस्सी
Deity	a god or goddess	ईश्वर
Diffidence	a lack of confidence in yourself; being unwilling to talk about yourself	आत्मसंशय
Elicit	to get information or a reaction from somebody	प्रतिक्रिया को जानना या प्राप्त करना
Eulogise	to praise somebody/something very highly	प्रशंसा करना
Extrapolation	to form an opinion or to make an estimate about something from known facts	मुल्यांकन करना, आंकना
Flare	(especially of anger and violence) to suddenly start or become much stronger	भड़कना
Gratitude	a feeling of thankfulness and appreciation	आभार, कृतज्ञता
Hiatus	a pause in activity when nothing happens	अंतराल, रिक्ति
Interpolation	the act of making a remark that interrupts a conversation	टिप्पणी
Jester	a man who in the past was kept by a ruler to amuse people by acting silly and telling jokes	मसखरा, विदूषक
Laconic	using only a few words to say something	मितभाषी
Maim	to injure somebody seriously, causing permanent damage to their body	विकलांग बनाना
Maverick	independent, with unusual opinions	स्वतंत्र विचारों वाला
Merriment	laughter and enjoyment	हर्षोल्लास
Metamorphosis	a process in which somebody/something changes completely into something different	कायापलट, रूपांतरण
Plight	a difficult and sad situation	दुर्दशा
Plunder	to steal things from a place, especially using force during a time of war	लूटना
Profligate	using money, time, materials, etc. in a careless way	अपव्ययी
Prolix	using too many words	शब्दों का आडम्बरपूर्ण उपयोग
Rogue	a man who is dishonest and immoral	दुष्ट
Salacity	the trait of behaving in an obscene manner	कामुकता, अश्लीलता
Set off	to begin a journey	प्रस्थान करना
Shabbiness	the state of being in poor condition or badly dressed because things have been used or worn a lot	फटेहाल अवस्था
Smell a rat	to suspect that something is wrong	संदेह होना
Stenophobia	fear of narrow things or places	संकीर्ण स्थानों का डर
To cut a sorry figure	to leave poor impression	प्रभावहीन
Trembling	shaking slightly because you are afraid, nervous or excited	कांपना
Turn over a new leaf	Make a fresh start / to change for better	नई शुरुआत
Umbrage	feeling offended, insulted or upset by something, often without a good reason	रोष, नाराजगी
Xenophobia	a strong feeling of dislike or fear of people from other countries or anything foreign	विदेशियों या विदेशी वस्तुओं के प्रति विकर्षण या घृणा
Zeal	great energy or enthusiasm connected with something that you feel strongly about	उत्साह, जोश

SSC MOCK TEST - 34 (ANSWER KEY)

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

151. (*) Add 'to' after 'gave'. Replace 'his' by 'her'
152. (C) Change 'sell' to 'sold'. 'V_2' comes after. It is time + subject'.
153. (C) Change 'would have broken' into 'would break'. The structure of the sentence is:
$\boxed{If + sub + V_2}$ + $\boxed{Sub + would + V_1}$
154. (A) Change 'appear' into 'appear', since the subject of the sentence 'a number of problems' is plural.
155. (B) Change 'if' into 'whether', 'whether.....or' is the correct pair. 'If....or' is not the correct correlative.
156. (C) Since the sentence is in present perfect tense.
157. (A) 'Elicit' means 'to draw out a reaction or response from somebody'.
159. (C) As the sentence is in present perfect continuous tense.
160. (B) 'Smell a rat' means 'to suspect that something is wrong about a situation'.
161. (C) Change 'reached at calcutta' into 'reached calcutta'. 'Reach' does not take any preposition if it is followed by a destination.
162. (C) Sentence is in Interrogative form.
Change 'you have been doing' into 'have you been doing'?
163. (A) 'Suppose' and 'if never come together as this will make the sentence superfluous.
Change 'Supposing if he comes' into 'If he comes'.
164. (B) Change 'in one quarter of an hour' into 'a quarter of an hour'.
165. (D) The sentence is of past imaginary position. Formula:
$\boxed{If + sub + were.....}$,+ $\boxed{Sub + would + V_1}$
and since it is an interrogative sentence, 'sub' is preceded by helping verb ' would'.
166. (A) Change 'ignited' into 'flared'.
Ignite - to set on fire.
'Flare-up' means a sudden occurrance or expression of anger or an occurence in which something (such as violence) suddenly begins – भड़कना (गुस्सा, हिंसा या आग का)
167. (B) Deny – To declare untrue – किसी बात की सत्यता का खंडन करना
Refuse–Show unwillingness towards-मना करना
Decline – To reject an offer - अस्वीकार करना

Correction of Mock Test-33

160. (B)
168. (B)
178. (A) and (C)

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