SSC MOCK TEST – 32 (SOLUTION)

1. (B) Previous prime number to 97 is 89. Similarly for 43, the previous prime number is 41.

2. (D) As Tiger is found in Forest, similarly Otter is found in the water.

3. (A) $22 : 22^2 + 22 :: 27 : 27^2 + 27$
   $\Downarrow \qquad\qquad \Downarrow$
   506   756

4. (C) Letter   B E   A C
   Position   2 5   1 3
   $\qquad\qquad \Downarrow \qquad\qquad \Downarrow$
   $(2 × 5) × (2 + 5) = 70$ $(1 × 3) × (1 + 3) =$ **12**

5. (B) A Monarch is a type of Butterfly and Cobra is a type of Snake.

6. (D) As chairman is the highest authority in a conference, similarly Editor is in Newspaper at highest authority.

7. (A) $5 : 5^3 + 5^2 :: 11 : 11^3 + 11^2$
   $\qquad \Downarrow \qquad\qquad \Downarrow$
   150   **1452**

8. (D) A Huckster is one who deals in Advertising and a Gangster is one who deals in Crime.

9. (A) T R A D E U Q B C F
   (with +1, –1, +1, –1, +1 pattern)

   Similarly,

   P L A T E **Q K B S F**
   (with +1, –1, +1, –1, +1 pattern)

10. (B) The country of Argentina neighbours the country of Brazil. Similarly, Iraq shares the borders with Iran.

11. (D) All except locust are reptiles, while locust is an insect.

12. (D) Excepts (D), the rest options gives the same result as 19.

13. (C) In all except Trifle, 'tri' indicates 'three'.

14. (B) Except (B), In rest of the options the position of a number gets interchange.

15. (B) All except Argentina are continents, while Argentina is a country.

16. (C) Except (C), in rest of the options, second can be obtained by Multiplying 2.5 to first.

17. (B) All except Director spend money.

18. (C) Orange is the only citrus fruit in the group.

19. (B) MOUSE

20. (C) REPORT

21. (B)
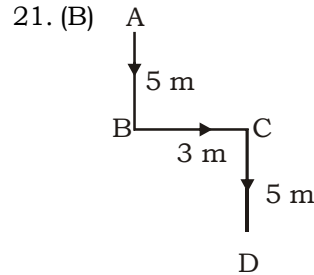
Hence X will face in the end towards South.

22. (A) When the sheet shown in question figure is folded to form a box (cuboid), then the two rectangular-shaded faces lie opposite to each other, two rectangular white faces lie opposite to each other and the two square shaped faces (one shaded and one white) lie opposite to each other. Clearly, the cuboids shown in figures (2) and (4) cannot be formed as in each of the two cuboids the two shaded rectangular faces appear adjacent to each other. So, only the cuboids in figures (1) and (3) can be formed.

23. (B) Let B and G represent the number of daughters and sons respectively.
   Then, we have:
   $B – 1 = G$ and $2 (G – 1) = B$.
   Solving these two equations, we get :
   $B = 4, G = 3$.

24. (B) The statement requests people not to use lift while moving down. This implies that the lift may be used to move up and the request has been made so that more people can use the lift for ascending which would otherwise cause more physical stress than going down the stairs. So, we can conclude that only II is implicit.

25. (D) The woman is the mother of Shashank's granddaughter. Hence, the woman is the daughter-in-law of Shashank.

26. (C) The correct order is :
   Arrival   Introduction   Presentation
   (3)   (5)   (1)
   Discussion   Recommendation
   (4)   (2)

27. (C) Father and mother are parents but they are two different entity.

28. (B) The pattern is +4, +9, +16, +25, +36, +49 ...... i.e. $+2^2, +3^2, +4^2, +5^2, +6^2, +7^2$.....
   So, missing term = $94 + 7^2 = 94 + 49 =$ **143**.

29. (B) The pattern is ÷1, ÷2, ÷3, ÷4, ÷5.

So, missing term = 360 ÷ 1 = 360.

30. (B) The pattern is × 3, + 4, × 5, + 6, × 7, ...

So, missing term = 1022 + 8 = 1030.

31. (C) In these 2 positions one common face with number 3, is in same position. Hence 1 is opposite to 6 and 4 is opposite to 2. Therefore 5 is opposite to 3.

32. (D)
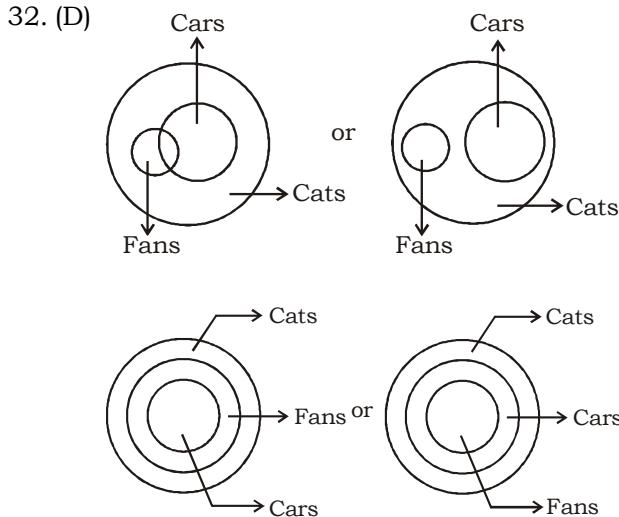

Hence, neither conclusion 1 nor 2 follows.

33. (B)
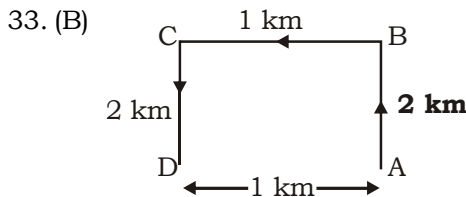
So, initially the boy rode 2 km Northward.

34. (B) When Rahul was born, his brother's age = 6 years

His father's age = (6 + 32) years = 38 years

His mother's age = (38 – 3) years = 35 years

His sister's age = (35 – 25) years = 10 years.

35. (C) ab**c**de/c**d**e**a**b/d**e**abc/e**a**b**c**d

36. (A) $\dfrac{(25+23)}{2}$ = 24

and $\dfrac{(26+28)}{2}$ = 27

Therefore $\dfrac{(18+14)}{2}$ = 16.

37. (B) 6 + (2)² = 10

10 + (3)² = 19

19 + (4)² = 35.

38. (C) (4 + 8) × 9 = 108 ⇒ 108 × 10 = 1080

(5 + 4) × 12 = 108 ⇒ 108 × 10 = 1080

39. (D)

40. (D)

41. (B) 2, 6, 9 contain a triangle with its three medians as the outer element and another element (similar or different) placed inside it.

1, 5, 7 contain a rectangle with its two diagonals as the outer element and another element (similar or different) placed inside it.

3, 4, 8 contain a circle with its two mutually perpendicular diameters as the outer element and another element (similar or different) placed inside it.

42. (B) Every identity is moving at each of the different 5 places in a block.
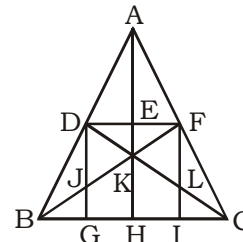
43. (C)

44. (A)
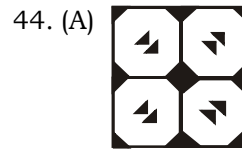
45. (B)

46. (C)

47. (A) All the number in the given set are prime numbers. Here, 5 is also a prime number and it belongs to the same group.

48. (B) 2 * 3 ⇒ 2³ + 3² = 8 + 9 = 17 ⇒ 17² = 289

3 * 4 ⇒ 3³ + 4² = 27 + 16 = 43 ⇒ 43² = 1849

2 * 4 ⇒ 2³ + 4² = 8 + 16 = 24 ⇒ 24² = 576

49. (C)

The Horizontal lines are DF and BC i.e. 2 in number. The Vertical lines are DG, AH and FI i.e. 3 in number.

The Slanting lines are AB, AC, BF and DC i.e. 4 in number.

Thus, there are **2 + 3 + 4 = 9 straight lines** in the figure.

Now, we shall count the number of triangles in the figure.

Simplest triangles are ADE, AEF, DEK, EFK, DJK, FLK, DJB, FLC, BJG and LIC i.e. 10 in number.

Triangles composed of two components each are ADF, AFK, DFK, ADK, DKB, FCK, BKH, KHC, DGB and FIC i.e. 10 in number.

Triangles composed of three components each are DFJ and DFL i.e. 2 in number.

Triangles composed of four components each are ABK, ACK, BFI, CDG, DFB, DFC and BKC i.e. 7 in number.

Triangles composed of six components each are ABH, ACH, ABF, ACD, BFC and CDB i.e. 6 in number.

There is only one triangle i.e. ABC composed of twelve components. There are **10 + 10 + 2 + 7 + 6+ 1 = 36 triangles** in the figure.

50. (C)

51. **(C)** By the Permanent Settlement Act of 1793, the Zamindars class became more powerful than they were in the Mughal period. Earlier Zamindars in Bengal, Bihar and Orissa has been functionaries who held the right to collect revenue on behalf of the Mughal emperor and his representative or diwan in Bengal. The security of tenure of landlords and revenues intermediaries were granted prosperity, so as to minimize the tendency by British administrators to amass a small fortune in sluiced-away revenue.

53. **(A)** Influenza, commonly known as the 'flu', is an infectious disease of birds and mammals caused by RNA viruses. The most common symptoms are fever, sore throat, muscle pains, headache (often severe), cough, weakness/fatigue and general discomfort. Typically, Influenza is transmitted through the air by coughs or sneezes, creating aerosols containing the virus.

55. **(C)** The Chola navy played a vital role in the expansion of the Chola Empire, including the conquest of the Ceylon islands and Sri Vijaya (present day Indonesia), the spread of Hinduism, Dravidian architecture and Dravidian culture to South east Asia and in curbing the piracy in Southeast Asia in the 900 CE. Inscriptions and historical sources assert that the Medieval Chola king Rajendra Chola I sent a naval expedition to Indo-China, the Malay peninsula and the Indonesian archipelago in order to subdue the Srivijaya Empire.

60. **(A)** The legendary musical prowess of Tansen surpasses all other legends in Indian music. In terms of influence, he can be compared only to the prolific Sufi composer Amir Khusro (1253-1325), or to Bhakti tradition composer such as Swami Haridas. Several of his raga compositions have become mainstays of the Hindustani tradition, and these are often prefaced with Miyan ki ("of the Miyan"), e.g. Miyan ki Todi, Miyan ki Malhar, Miyan ki Mand, Miyan ka Sarang. In addition he is the creator of major ragas like Darbari Kanada, Darbari Todi, and Rageshwari. Tansen also authored Sangeeta Sara and Rajmala which constitute important documents on music.

63. **(C)** Pulses are (20 to 25%) protein by weight, which is double the protein content of wheat and three times that of rice. While pulses are generally high in protein, and the digestibilty of that protein is also high, they are often relatively poor in the essential amino acid methionine.

65. **(A)** Among the Standing Committees, the three Financial Committees i.e. Committees on Estimates, Public Accounts and Public Undertakings, constitute a distinct group as they keep an unremitting vigil over Government expenditure and performance. While Committees of the Rajya Sabha are associated with Committees on Public Accounts and Public Undertakings, the members of the Committee on Estimates are drawn entirely from the Lok Sabha.

71. **(A)** The busiest rail section in respect to goods transportation is Delhi-Kolkata section.

75. **(B)** Kolar, Hutti, Gadag, Ramagir, Honalli, Wyand, Lawa, Mysara, Pahardia, Kundredocha have been some of the gold mines of India. Presently gold is produced from three mines viz Hutti, Uti, Hirabuddni (HGML) in Karnataka and as by product from base-metal sulphide deposite of Khetri (Rajasthan), Mosabani, Singhbum (Jharkhand).

77. **(B)** High levels of uric acid in the blood can cause solid crystals to form within joints. This causes a painful condition called Gout. If Gout remains untreated, these uric acid crystals can build up in the joints and nearby tissues forming hard lumpy deposits called tophi.

80. **(D)** The processing of agricultural products, the production of grain by threshing, the production of flour by milling, the curing of sking and the production of leather, the production and preservation of meat and fish products, the preservation of fruit by drying, bottling, etc., the production of dairy products such as butter or cheese, the production of beer, wine or spirits, the production of baskets and mats, etc, come under processing of primary commodities for own consumption.

83. **(D)** Molars are the posterior most and most complicated kind of tooth in most of the mammals. Adult humans have twelve molars. They are in four groups in which three are at the back of the mouth. The third, rearmost molar in each group is called a wisdom tooth.

85. **(A)** In economics, the study of factor pricing is related to the theory of functional distribution which attempts to explain the prices of land, labour, and capital. It take care of the demand for land, labour and capital as derived demand, stemming from the demand for final goods.

88. (C) Copper : 9% less conductive than silver, aluminium is 10% less conductive than than copper, while steel is the least conductive among the given options. So, the most electrically conductive metal is silver.

90. (C) Chickenpox is a highly contagious disease caused by primary infection with varicella zoster virus (VZV). It is an airborne disease spread easily through coughing sneezing of ill individuals or through direct contact with secretions from the rash.

92. (B) Reflected waves are simply those waves that are neither transmitted nor absorbed, but are reflected from the surface of the medium they encounter. The amount of incident-wave energy that is reflected from a surface depends on the nature of the surface and the angle at which the wave strikes the surface. The amount of wave energy reflected increases as the angle of incidence. The reflection of energy is the reflecting surface.

96. (C) Ethylene glycol (IUPAC name: ethane- 1,2-diol) is an organic compound widely used an automotive antifreeze and a precursor to polymers. In its pure form, it is an odourless, colourless, syrupy, sweet-tasting liquid. Ethylene glycol is a toxic and ingestion which can result in death. Due to its low freezing point ethylene glycol resists freezing. A mixture of 60% ethylene glycol and 40% water freezes at - 45 degree C (-49 degree F). Diethylene glycol behaves similarly. It is used as a deicing fluid for windshields and aircraft. The antifreeze capabillities of ethylene glycol have made it an important component of vitrification (anticrysatallization) mixture for low-temperature preservation of biological tissues and organs.

99. (A) In order to give more strength and more elasticity, natural rubber is heated with sulphur or sulphur compounds at 150°C temperature. Vulcanized rubber has good tensile strength. The working temperature of vulcanized rubber is enhanced up to 100°C. It has good resistance to organic solvents.

101. (C) Minimum pass marks = 50%

50% → = 163 + 37
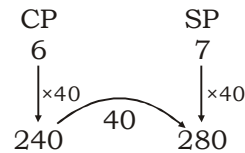
50% → = 200

Maximum marks in exam.

100 → 400

102. (B)

$A \to 24 \searrow 5$
$B \to 30 \to 4 \to (120)$ Total work
$A+B+C \to 12 \nearrow 10$
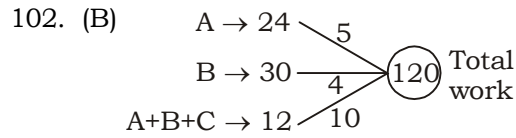
Efficiency of C = 10 – (5 + 4) = 1 unit/day

Required time for C = $\dfrac{120}{1}$ = 120 days

103. (B) $14\dfrac{2}{7}\% = \dfrac{1}{7}$

SP = 7 units, CP = (7 – 1) = 6 units
According to the question,

CP   SP
6   7
↓×40   ↓×40
240 ⌣40   280

% Actual profit = $\dfrac{40}{240} \times 100$ = 16.66%

104. (A) $5x - \dfrac{5}{x}$ = 10

$\Rightarrow x - \dfrac{1}{x} = 2$

$\Rightarrow \left(x - \dfrac{1}{x}\right)^2 = 2^2$

$\Rightarrow x^2 + \dfrac{1}{x^2} - 2 = 4$

$\Rightarrow x^2 + \dfrac{1}{x^2} = 6$

105. (A) According to the question :-
Water filled by the pipe A in 2 hours = 5 × 2 = 10 units
Water filled by the pipe B in 1 hour = 4 × 1 = 4 units
Total water filled = (10 + 4) = 14 units
Now all the pipes will work together.

$\therefore$ Required time = $\dfrac{(60-14)}{(5+4-3)} = \dfrac{46}{6} = \dfrac{23}{3}$

Total time = $2 + \dfrac{23}{3} = 9\dfrac{2}{3}$ hours

106. (B) $\because$ PR||TS
$\therefore \angle PRQ = \angle USR = 50°$
In ΔPQR :
$\angle PQR = 180° - (50° + 60°)$
= 70°
$\therefore \angle TPU = \angle PQR = 70°$
$[\because$ PU||RS||QS]

107. (C) $\tan\theta = \dfrac{4}{3}$ (given)

$\therefore \dfrac{3\sin\theta + 2\cos\theta}{3\sin\theta - 2\cos\theta} = \dfrac{3\tan\theta + 2}{3\tan\theta - 2}$

$= \dfrac{3 \times \dfrac{4}{3} + 2}{3 \times \dfrac{4}{3} - 2} = \dfrac{4+2}{4-2} = 3.0$

108. (C) Suppose the vessel initially contains 8 litres of liquid.

Let x litres of this liquid be replaced with water.

Quantity of water in new mixture

$= \left(3 - \dfrac{3x}{8} + x\right)$ litres

Quantity of syrup in new mixture

$= \left(5 - \dfrac{5x}{8}\right)$ litres

$\therefore \left(3 - \dfrac{3x}{8} + x\right) = \left(5 - \dfrac{5x}{8}\right)$

$\Rightarrow 5x + 24 = 40 - 5x$

$\Rightarrow 10x = 16$

$\Rightarrow x = \dfrac{8}{5}$

So, part of the mixture replaced

$= \left(\dfrac{8}{5} \times \dfrac{1}{8}\right) = \dfrac{1}{5}$

109. (B) $8\dfrac{1}{2} - \left[3\dfrac{1}{4} \div \left\{1\dfrac{1}{4} - \dfrac{1}{2}\left(1\dfrac{1}{2} - \dfrac{1}{3} - \dfrac{1}{6}\right)\right\}\right]$

$= \dfrac{17}{2} - \left[\dfrac{13}{4} \div \left\{\dfrac{5}{4} - \dfrac{1}{2}\left(\dfrac{3}{2} - \dfrac{1}{3} - \dfrac{1}{6}\right)\right\}\right]$

$= \dfrac{17}{2} - \left[\dfrac{13}{4} \div \left\{\dfrac{5}{4} - \dfrac{1}{2}\left(\dfrac{9-2-1}{6}\right)\right\}\right]$

$= \dfrac{17}{2} - \left[\dfrac{13}{4} \div \left\{\dfrac{5}{4} - \dfrac{1}{2} \times \dfrac{6}{6}\right\}\right]$

$= \dfrac{17}{2} - \left[\dfrac{13}{4} \div \left\{\dfrac{5}{4} - \dfrac{1}{2}\right\}\right]$

$= \dfrac{17}{2} - \left[\dfrac{13}{4} \div \left\{\dfrac{5-2}{4}\right\}\right]$

$= \dfrac{17}{2} - \left[\dfrac{13}{4} \div \dfrac{3}{4}\right]$

$= \dfrac{17}{2} - \left[\dfrac{13}{4} \times \dfrac{4}{3}\right] = \dfrac{17}{2} - \dfrac{13}{3}$

$= \dfrac{51-26}{6} = \dfrac{25}{6} = 4\dfrac{1}{6}$

110. (A) Let the SP of 10 article
= ₹ 1 = CP of 11 article

Gain $= \dfrac{1}{10} - \dfrac{1}{11} = \dfrac{11-10}{110} = \dfrac{1}{110}$

Gain % $= \dfrac{\dfrac{1}{110} \times \dfrac{100}{1}}{\dfrac{1}{11}} = 10\%$

111. (A)

A	B	C	D
2	3	**3**	**3**
2	2	**4**	**4**
× **2**	**2**	2	5
8	12	24	60

Required ratio (A : D) = 8 : 60 = 2 : 15

112. (B) Let the cricketer's average runs for his 64 innings be x runs.

$\therefore$ Total runs in 64 innings = $64x$

According to the question,

$\dfrac{64x + 0}{65} = x - 2$

$\Rightarrow 64x = 65x - 130$

$\Rightarrow x = 130$

$\therefore$ New average of runs = $x - 2$

= 130 − 2 = 128

113. (C) Let the amount initially the person has
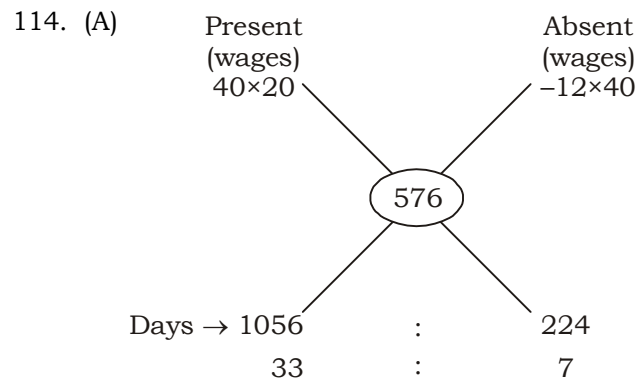= ₹ x

According to the question,

$\left(\dfrac{7}{8}x - 1600\right) \times \dfrac{4}{5} = 960$

$\dfrac{7}{8}x - 1600 = 1200$
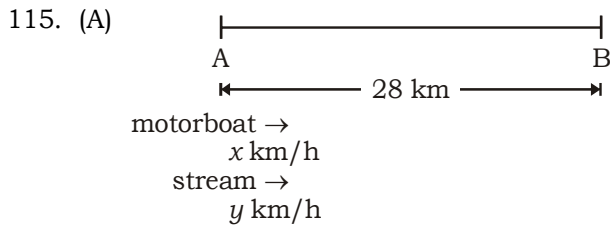
$\dfrac{7}{8}x = 2800$

$x = 3200$

Hence the person initially had ₹ 3200

114. (A)

Present (wages) 40×20		Absent (wages) −12×40
	576	
Days → 1056	:	224
33	:	7

Number of days in which he was absent

$= \dfrac{40}{(33+7)} \times 7 = 7$ days

115. (A)

A ——————————— B
⟵——— 28 km ———⟶

motorboat →
$\quad x$ km/h
stream →
$\quad y$ km/h

Let the speed of motorboat and of stream be x km/h and y km/h respectively.
Condition (i),

$2\left(\dfrac{28}{x+y}\right) = \dfrac{28}{x-y}$

$2x - 2y = x + y$

Condition (ii)
When the speed of the stream is doubled

$\dfrac{28}{x+2y} + \dfrac{28}{x-2y} = \dfrac{672}{60}$ [put $x = 3y$]

$\dfrac{28}{5y} + \dfrac{28}{y} = \dfrac{672}{60}$

$\dfrac{1}{5y} + \dfrac{1}{y} = \dfrac{24}{60}$

$\dfrac{1+5}{5y} = \dfrac{2}{5} = y = 3$ km/h

$x = 9$ km/h

116. (A) $\because x = a^{2/3} - a^{-2/3}$
Cubing both the sides
$x^3 = (a^{2/3} - a^{-2/3})^3$
$\Rightarrow x^3 = (a^{2/3})^3 - (a^{-2/3})^3 - 3.a^{2/3} .a^{-2/3}(a^{2/3} - a^{-2/3})$
$\Rightarrow x^3 = a^2 - a^{-2} - 3 \times 1(x)$

$\Rightarrow x^3 + 3x = a^2 - a^{-2} = a^2 - \dfrac{1}{a^2}$

117. (D) Since, the diagonals of a rectangle bisect each other and are equal.
$\therefore$ OA = OD $\Rightarrow \angle$ODA = $\angle$OAD
But, $\angle$AOD = 44° (vertically opposite angle to $\angle$BOC)

$\therefore$ OAD = $\dfrac{1}{2}$ (180° – 44°)

$= \dfrac{1}{2}$ (136°) = 68°

118. (D) $\sin\dfrac{\pi}{6} + \cos\dfrac{\pi}{3} + \tan^3\dfrac{\pi}{4} = \sin 30° + \cos 60°$
$\qquad\qquad\qquad + \tan^3 45°$

$= \left(\dfrac{1}{2} + \dfrac{1}{2} + 1^3\right) = 2$

119. (A) Old Ratio $= \dfrac{1}{4} : \dfrac{1}{5} : \dfrac{1}{6}$

$= \dfrac{1}{4} \times 60 : \dfrac{1}{5} \times 60 : \dfrac{1}{6} \times 60$

$= 15 : 12 : 10$

Amount of C $= \dfrac{10}{15+12+10} \times 555$

$= \dfrac{10}{37} \times 555 = ₹ 150$

New ratio = 4 : 5 : 6

New Amount of C $= \dfrac{6}{15} \times 555 = 6 \times 37 = ₹ 222$

Required Excess Amount = ₹ (222-150)
$\qquad\qquad\qquad\qquad = ₹ 72$

120. (B) Let the number be x.
Then,

$\dfrac{3}{4} x - \dfrac{3}{14} x = 150$

$\Rightarrow \dfrac{21x - 6x}{28} = 150$

$\Rightarrow 15x = 28 \times 150$

$\Rightarrow x = \dfrac{28 \times 150}{15} = 280$

121. (A) $x \propto \dfrac{1}{y^2 - 1} \qquad \Rightarrow x = \dfrac{k}{y^2 - 1}$
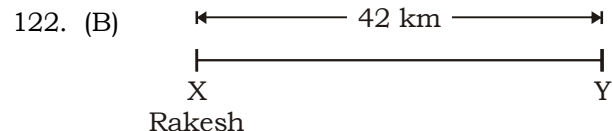
Where k is a constant.
When $y = 10$, $x = 24$, then

$\therefore 24 = \dfrac{k}{10^2 - 1} \Rightarrow 24 = \dfrac{k}{99}$

$\Rightarrow k = 24 \times 99$
When $y = 5$, then

$x = \dfrac{k}{y^2 - 1} = \dfrac{24 \times 99}{5^2 - 1} = \dfrac{24 \times 99}{24} = 99$

122. (B)

⟵——— 42 km ———⟶

X $\qquad\qquad\qquad\qquad\qquad$ Y
Rakesh

→ 60 km/h

Distance travelled by Rakesh in first 10

minutes $= 60 \times \dfrac{10}{60} = 10$ km

Now he will reduce his speed by 6 km/h
= (60 – 6) = 54 km/h
Distance in next 10 minutes

$= 54 \times \dfrac{10}{60}$ = 9 km

Similarly:

Time (10 min) → I II III IV V
Distance (km) → 10 9 8 7 6

Total time = 50 min, Total distance covered = 40 km

Remaining distance = 42 – 40 = 2 km

Now speed of Rakesh = 30 km/h

Required time = $\dfrac{2}{30}$ × 60 = 4 min

Total time = (50 + 4) = 54 minutes

123. (B) We know that
[Selling price = cost price + profit]

Profit at selling price = $\dfrac{1 \to \text{Profit}}{5 \to \text{S.P.}}$

Profit at cost price = $\dfrac{1 \to \text{Profit}}{4 \to \text{S.P.}}$
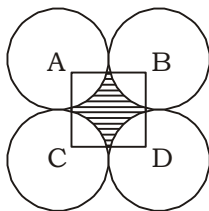
Hence, the selling price = $\dfrac{5}{4}$ of C.P.

$\dfrac{5}{4}$ × C.P = 600

C.P. = ₹ 480

To earn a profit of $\dfrac{5}{8}$ of cost price, selling

price must be $\dfrac{13}{8}$ of CP.

So, $\dfrac{13}{8}$ × C.P = $\dfrac{13}{8}$ × 480 = ₹ 780

124. (B)

Area of the shaded region
= Area of square of side 6 cm – 4 × area of right angled sector

$= 36 - 4 \times \dfrac{\pi \times 3^2}{4}$

= 36 – 9π = 9(4 – π) sq. cm

125. (D) If the remainder be x, then (11284 – x) and (7655 – x) are divisible by three digit number. i.e. (11284 – x) – (7655 – x)
= 3629 is divisible by that number.
3629 = 19 × 191
Hence, required number = 191
Sum of digits = 1 + 9 + 1 = 11

126. (C) LCM of 9, 10 and 15 = 90
⇒ The multiple of 90 are also divisible by 9, 10 or 15.
∴ 21 × 90 = 1890 will be divisible by them.
∴ Now, 1897 will be the number that will give remainder 7.
1936 – 1897
Required number = 1936 – 1897 = 39

127. (C) Let the distance be x km.

Total time = 5 hours 48 minutes = $5 + \dfrac{48}{60}$

$= \left(5 + \dfrac{4}{5}\right)\text{hr} = \dfrac{29}{5}\text{hr}$

$\therefore \ \dfrac{x}{25} + \dfrac{x}{4} = \dfrac{29}{5}$

$\Rightarrow \dfrac{29x}{100} = \dfrac{29}{5}$

$\Rightarrow x = \dfrac{100}{5}$ = 20 km

128. (A)   CP   :   SP
        (100 – 12) : (100 + 32)
             88   :   132
Now according to the question,

SP = 132 × $\dfrac{(100 - 20)}{100}$

SP = 105.6

Profit % = $\dfrac{(105.6 - 88)}{88}$ × 100

$= \dfrac{17.6}{88}$ × 100 = 20%

129. (A) Ratio of Amount = $\dfrac{1}{15} : \left(\dfrac{1}{10} - \dfrac{1}{15}\right)$

$= \dfrac{1}{15} : \dfrac{1}{30}$ = 1 : 2

Suresh share = $\dfrac{2}{3} \times 1500$ = 1000

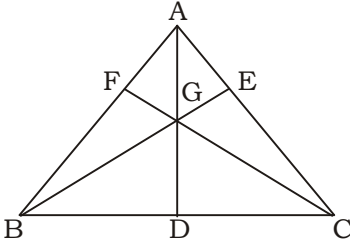Rama share = $\dfrac{1}{3} \times 1500$ = 500

130. (D) ∵ $x + y + z = 0$
∴ $x^3 + y^3 + z^3 = 3xyz$

$\Rightarrow \dfrac{x^3}{xyz} + \dfrac{y^3}{xyz} + \dfrac{z^3}{xyz} = 3$

$\Rightarrow \dfrac{x^2}{yz} + \dfrac{y^2}{xz} + \dfrac{z^2}{xy} = 3$

131. (D) We know that the centroid of a triangle divides each median in the ratio of 2 : 1

∴ BG : BE = 2 : 3

$\Rightarrow$ BE = $\dfrac{3}{2}$ BG = $\dfrac{3}{2}$ × 6 = 9 cm

132. (B) Total cost of all calculators
= 150 × 250 + 2500 = 40,000
Selling price of all calculators

= $\dfrac{19}{20}$ × (150 × 320) = 45600

Profit percentage = $\left(\dfrac{45600 - 40,000}{40,000} \right) \times 100$

= $\left(\dfrac{5600}{40,000} \right)$ × 100 = 14%

133. (A) $x + \dfrac{1}{x}$ = 5 = a (Say)

∴ $x^2 + \dfrac{1}{x^2}$ = $a^2 - 2$ = 25 − 2 = 23
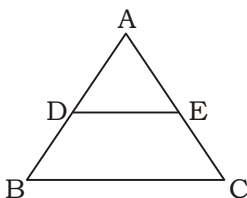
Now, $\dfrac{x^4 + 3x^3 + 5x^2 + 3x + 1}{x^4 + 1}$

= $\dfrac{x^2 \left(x^2 + 3x + 5 + \dfrac{3}{x} + \dfrac{1}{x^2} \right)}{x^2 \left(x^2 + \dfrac{1}{x^2} \right)}$

= $\dfrac{\left(x^2 + \dfrac{1}{x^2} \right) + 3 \left(x + \dfrac{1}{x} \right) + 5}{x^2 + \dfrac{1}{x^2}}$

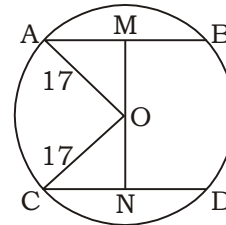= $\dfrac{23 + 3 \times 5 + 5}{23}$ = $\dfrac{23 + 20}{23}$ = $\dfrac{43}{23}$

134. (D)

$\dfrac{AD}{DB}$ = $\dfrac{AE}{AC}$ = $\dfrac{1}{3}$

∴ ΔABC ~ ΔADE

∴ $\dfrac{DE}{BC}$ = $\dfrac{1}{3}$ $\Rightarrow$ DE = $\dfrac{15}{3}$ = 5 cm

135. (D) MN = 23 cm

AM = MB = $\dfrac{16}{2}$ = 8 cm

∴ In ΔAMO,
$(OM)^2 = (17)^2 - (8)^2$
$\Rightarrow$ OM = 15 cm
∴ ON = 23 − 15 = 8 cm
In ΔONC,
$(CN)^2 = (17)^2 - (8)^2 \Rightarrow$ CN = 15 cm
∴ CD = 2CN = 30 cm

136. (A) For a diff. of 10', diff. in value
= 0.7133 − 0.7112
∴ for a diff. of 8', diff. in value

= $\dfrac{0.0021}{10}$ × 8 = 0.00168

∴ cos 44° 38' = (0.7133 − 0.00168)
= 0.71162

137. (C) Let the CP be ₹ 100
After 20% profit, SP = 100 + 100 of 20%
= ₹120

Marked price = 120 × $\dfrac{100}{75}$ = $\dfrac{120 \times 4}{3}$
= ₹ 160
∴ Required percentage = 160 −100
= ₹ 60 (which is 60% of 100)

138. (C) 20% = $\dfrac{1}{5}$

	Old	:	New
Wages →	5	:	6
Time →	5	:	4
Total wages →	25	:	24
	4000		3840

(Wages and Time multiplied; Total wages × 160)

for 1 week, wages = ₹ 3840
for 4 week, wages = 3840 × 4 = ₹ 15360

139. (C) Volume of the cylinder = πr²h

= $\dfrac{22}{7}$ × 10 × 10 × 21 = 6600 cu. cm

Volume of the cone = 6600 – 4400
= 2200 cu. cm

$\therefore 2200 = \dfrac{1}{3}\pi \times 10^2 \times h$

$\Rightarrow 2200 = \dfrac{2200}{21} \times h \Rightarrow h = 21$ cm

140. (C) $2\dfrac{1}{2}\% = \dfrac{1}{40}$

Initial value	New value
40	41
40	41
40	41
64000 :	68921

Hence the population of the town after 3 years = 68,921

141. (C) Radius of sector = Slant height of cone

$= \sqrt{h^2 + r^2} = \sqrt{6^2 + 8^2} = \sqrt{36 + 64}$

$= \sqrt{100} = 10$ cm

142. (B) Average cost of a chair
= ₹ x, then
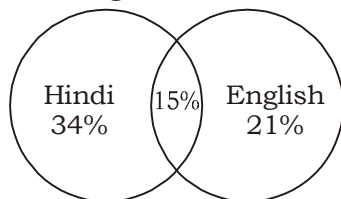x × 12 + 6 × 750 = 7800
$\Rightarrow$ 12x = 7800 – 4500 = 3300

$\Rightarrow x = \dfrac{3300}{12} = ₹ 275$

143. (B) Venn diagram of the soldiers

Total % of soldiers who do not speak any language
= 100 – (34 + 15 + 21) = 30%
According to the question,
30% = 900

$1\% = \dfrac{900}{30}$

$21\% = \dfrac{900}{30} \times 21 = 630$

144. (A) The cost price paid by A

$= 2310 \times \dfrac{100}{100 + P_1\%} \times \dfrac{100}{100 + P_2\%}$

$= 2310 \times \dfrac{100}{100 + 10} \times \dfrac{100}{100 + 5}$

= ₹ 2000

145. (A) $-1^{25} + 1^{32} = -1 + 1$

146. (C) Overall by B in all subjects

$\% = \dfrac{399}{600} \times 100 = 66.5\%$

147 (D) Ratio $= \dfrac{360}{435} = \dfrac{24}{29} = 24 : 29$

148. (A) Average $= \dfrac{441}{6} = 73.5$

149. (D) Average % marks $= \dfrac{633}{500} \times 100 = 70.3\%$

$\approx 70\%$

150. (D) Total$_A$ = 84 + 66 + 73 + 61 + 24 + 52 = 360
Total$_E$ = 108 + 78 + 78 + 70 + 39 + 48 = 421

$\therefore$ Required % $= \dfrac{421 - 360}{360} \times 100$

$= \dfrac{6100}{360} \approx 17\%$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Accusation	a formal charge of wrongdoing brought against a person; the act of imputing blame or guilt	दोषारोपण
Acrimony	angry bitter feelings or words	कटुता
Allegation	a public statement that is made without giving proof, accusing somebody of doing something that is wrong or illegal	बयान
Assassin	a person who murders somebody important or famous, for money or for political reasons	हत्यारा
Bibliomania	extreme preoccupation with collecting books	पुस्तकें एकत्र करने की प्रवृति
Bit	a small piece or quantity of something	छोटा अंश
Brevity	the use of brief expressions , conciseness	संक्षिप्तता
Bring up	to care for a child, teaching him or her how to behave, etc.	पालन–पोषण करना
Chip	A small piece	छोटा टुकड़ा
Chunk	a thick solid piece that has been cut or broken off something	खण्ड
Confronted	to deal with a problem or difficult situation	सामना करना
Consensus	agreement in the judgment or opinion reached by a group as a whole	सर्वसम्मति
Debilitating	to make somebody's body or mind weaker	दुर्बलता
Delude	to make somebody believe something that is not true	छलना
Despair	a state in which all hope is lost or absent	विषाद
Dialogue	a conversation between two persons	संवाद
Dissipation	the process of disappearing or of making something disappear	क्षय
Dromomania	an exaggerated desire to wander	घुमक्कड़ प्रवृति
Endeavours	an attempt to do something, especially something new or difficult	प्रयत्न, प्रयास
Epigram	a short poem or phrase that expresses an idea in a clever or amusing way	सूक्ति
Eternal	without an end, existing or continuing forever	चिरकालिक, अनादि
Flattered	praise somewhat dishonestly	चापलूसी करना
Indictment	a formal document written for a prosecuting attorney charging a person with some offence	अभियोग
Instigate	provoke or stir up	भड़काना, बहकाना
Logomania	abnormal talkativeness	असामान्य बातूनीपन
Modulate	vary the pitch of one's speech	सुर बदलना
Obscure	not clearly understood or expressed	अस्पष्ट
Ordeal	a difficult or unpleasant experience	कठिन परीक्षा
Pacified	to make somebody who is angry or upset become calm and quiet	शान्त करना, मनाना
Perilous	very dangerous	खतरनाक
Precise	sharply exact or accurate or delimited	सटीक
Procrastination	the act of delaying something that you should do, usually because you do not want to do it	स्थगन, टाल–मटोल
Pyromania	an uncontrollable desire to set things on fire	दहनोन्माद
Recklessly	in a way that shows a lack of care about danger and the possible results of your actions	अंधाधुध, लापरवाही से
Resolution	the quality of being determined	दृढ़ता, संकल्प
Scrap	a small fragment of something broken off from the whole	टुकड़ा
Swayed	move back and forth or sideways	झूलना
Swift	happening or done quickly and immediately	उतावला, तीव्र
Transmute	change or alter in form, appearance, or nature	रूप या स्वरूप बदल लेना
Vital	urgently needed; absolutely necessary	अत्यावश्यक

SSC MOCK TEST - 32 (ANSWER KEY)

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

151. (A) Substitute 'by' in place of 'with'. Phrase 'take somebody by surprise' means 'to happen unexpectedly so that somebody is slightly shocked'.

152. (C) Remove 'for'.

153. (B) Replace 'in' by 'to'. 'Appoint' will take 'to' after it, as 'appoint someone to something' means 'choose somebody for a job or position of responsibility'.

154. (B) 'Insist' will take 'on' after it. 'Insist on doing something' means 'to continue doing something'.

155. (A) Replace 'away' by 'out'. Phrase 'put out' means 'to stop something from burning and shining'.

162. (C) Since 'remain' is not used usually in progressive tenses.

163. (C) Phrase 'To rise to the occasion' means 'perform better than usual in response to a special situation or event'.

165. (B) 'Come by train/bus/metro' is a phrase.

166. (B) 'Few' means 'hardly any', whereas 'a few' means 'some at least'.

167. (C) Use a noun i.e, 'Upbringing'.

Mock 31 Corrections

85. (*)   91. (*)

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