

SSC Solution (17 March - 2017)

1. (C) Umbrella protects us from rain. Similarly, dam checks flood.  
2. (E) Man lives in house. Similarly, Beast lives in den.

3. (A) B O R E  
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 $2+15+18+5 = 40$   
 $40 \div 4 = 10$

H O T E L  
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 $8+15+20+5+12 = 60$   
 $60 \div 5 = 12$

4. (B)  $2 \times 3 = 6$   
 $3 \times 4 = 12$   
 $4 \times 5 = 20$   
 $5 \times 6 = 30$   
 5. (E) Here, all except Bat, belong to the class of (birds), while bat is mammal.  
 6. (D) In all other numbers the sum of the digits is 28.  
 7. (D) Each other group contains 4 consecutive letters.  
 8. (D)  $118 + (\text{unit digit})^2 = 118 + 8^2 = 118 + 64 = 182$

$182 + 4 = 186$   
 $186 + 36 = 222$   
 $222 + 4 = 226$

9. (C)  $7\frac{1}{7} = \frac{50}{7}$ ,  $8\frac{2}{6} = \frac{50}{6}$ ,  $9\frac{5}{5} = \frac{50}{5}$   
 $12\frac{2}{4} = \frac{50}{4}$ ,  $16\frac{2}{3} = \frac{50}{3}$

The denominator is decreasing by 1, but the numerator remains constant therefore  $\frac{50}{2}$ .

10. (A) Z  $\xrightarrow{-2}$  X  $\xrightarrow{-2}$  V  
 T  $\xrightarrow{-2}$  R  $\xrightarrow{-2}$  P  
 N  $\xrightarrow{-2}$  L  $\xrightarrow{-2}$  J  $\xrightarrow{-2}$  H  
 F  $\xrightarrow{-2}$  D  $\xrightarrow{-2}$  B

11. (B)  $5 \times 3 + 1 = 16$   
 $16 \times 3 + 1 = 49$   
 $9 \times 3 + 2 = 29$   
 $29 \times 3 + 2 = 89$   
 $\therefore 15 \times 3 + 3 = 48$

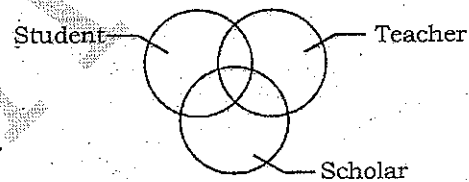
12. (B)  $(6 \times 7) + (8 + 4) = 42 + 12 = 54$   
 $(8 \times 4) + (12 + 7) = 32 + 19 = 51$   
 $(9 \times 5) + (14 + 9) = 45 + 23 = 68$   
 13. (C) There is no 'O' letter in the keyword.  
 14. (A) Using correct symbols, we have:

given expression =  $\frac{(36 \times 4) - 8 \times 4}{4 + 8 \times 2 + 16 + 1}$   
 $= \frac{32 + 8 - 4}{32 - 32 + 1} = \frac{4 - 4}{0 + 1} = 0$

15. (A) L I B E R A T E  
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 5 6 4 2 3 1 7 2

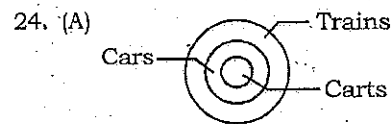
therefore, T R I B A L  
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 7 3 6 4 1 5

16. (D)  
 17. (B)  $1 \rightarrow 3 \rightarrow 5 \rightarrow 4 \rightarrow 2$   
 18. (A) Some students may be scholars and vice-versa.  
 Some students may be teachers and vice-versa.  
 Some students who are scholars may be teachers.



19. (C)  
 20. (B)  
 21. (C)  
 22. (C)

23. (A)  $T = 6 + \left[ \frac{2}{11} (6 \times 30 + 0) \right]$   
 $= 6 + \left[ \frac{360}{11} \right]$   
 $= 6 \text{ past } 32\frac{8}{11} \text{ min}$



25. (D)

27. (C) Gibbon, Gorilla and Orangutan are apes, but Langur is not an ape, it is prosimians.
29. (B) Pitcher plant is an insectivorous plant. It feeds on living creatures including insects and small mammals. These plants attract the prey with a smell of rotting meat. The victim is dissolved by some enzymes.
30. (B) The Confederation of Indian Industry (CII) is an association of Indian businesses which works to create an environment conducive to the growth of industry in India. The headquarters of CII is located at New Delhi. It is in news because CII has launched a unique platform "Startup Mentorship Circle" in Mumbai to help in connecting start-ups with the global marketplace. The platform is truly a strong eco-system for nurturing innovation and startup to drive sustainable economic growth and generate large scale employment opportunities.
31. (D) The first-ever World Tsunami Awareness Day (WTAD) has been observed on November 5, 2016 to spread awareness among people across the world in matters related to the dangers of tsunami and shall stress on the importance of early warning systems in order to mitigate damage from the often devastating natural hazard. It also aims at reviving traditional knowledge about tsunamis. The 2016 theme of WTAD is "Effective Education and Evacuation Drills".
33. (C) The book "An Era of Darkness: The British Empire in India" has been authored by Dr. Shashi Tharoor, the Lok Sabha MP. The book recalls in some detail misdeeds of the British in looting India and making it suffer an agonizing and violent death. In it, author has rightly points out that British rule in India was effectively and regularly supplemented by famine, forced migration and brutality - the three examples of why British rule over India was despotic and anything but enlightened. The book has recently released by the Vice President of India M. Hamid Ansari.
34. (C) After the 3rd century AD Roman Empire came to an end. Indian merchants meanwhile had begun to rely more heavily on the south-east Asian Trade.
35. (A) The Assam government has recently signed a Memorandum of Understanding (MoU) with the Union Ministry of Civil Aviation (MoCA) under Regional Connectivity Scheme (RCS) - UDAN to boost State air connectivity. The Airports Authority of India (AAI) shall be the Implementing Agency for the scheme on behalf of Ministry of Civil Aviation. As per the MoU, the State Government shall reduce VAT to 1% or less on ATF at RCS Airports and for RCS flights from other airports located within the state. The Government of Assam shall also provide minimum land for development and expansion of RCS Airports and also provide multi-modal hinterland connectivity (road, rail, metro, waterways, etc.) as required.
36. (B) Balaji Vishwanath. As Sambhaji (1680-89) were succeeded by Rajaram, Shivaji II, Tarabai and Shahu ji. Balaji Vishwanath played a crucial role in the final victory of Shahu by winning over almost all the Maratha sardars to the side of Shahu. Under Baji Rao I Maratha power reached a zenith. But that option is not given.
37. (A) The 12<sup>th</sup> edition of International Oil and Gas Conference and Exhibition "Petrotech-2016" will be held at Pragati Maidan in New Delhi on December 5<sup>th</sup>. The 2016 theme is "Hydrocarbons to fuel the future - Choices and Challenges". The purpose of the global event is to bring Energy Ministers, industry leaders, professionals, academicians and domain experts from the energy sector on a common platform. It is a biennial platform for national and international experts in the oil & gas industry to exchange views and share knowledge, expertise and experiences.
38. (C) Nawab Salimullah founded Muslim League in 1906 at Dacca. Communal Award was announced by Ramsay McDonald in 1932.
39. (B) The red data book contains only 8 lists of threatened plant and animal species.
41. (C) Pandit Amaradeva (88), the legendary Sri Lankan singer and composer, has recently passed away in Sri Jayawardenepura Kotte, Sri Lanka. He was the recipient of many international honours, including Ramon Magsaysay Award, Padma Shri, for his contribution to music.
43. (B) The Northern Fertile Plain which is also called the Gangetic Plain lies to the south of Himalayan Region. The soil of this plain is built of the sediments and brought down by the rivers from Himalayas. Such plain is called an alluvial plain and it is very fertile. This plain is one of the largest and most fertile plains of the World. Aggradation is the term used in geology for the increase in land elevation due to the deposition of sediment which includes lowland alluvial rivers, river deltas and alluvial fans.

45. (B) The man who is suffering from myopia has a vision condition where he can see close objects very clearly, but objects farther away appear blurred. Nearsightedness occurs if the eyeball is too long.
46. (B) Inventory refers to raw materials, work-in-process goods and completely finished goods that are considered to be the portion of a business's assets that are ready or will be ready for sale. Inventory are also represented as one of the most important assets that most businesses possess because the turnover of inventories represents one of the primary sources of revenue generation and subsequent earnings for the company's shareholders/owners.
47. (C) Devaluation in modern monetary policy is a reduction in the value of a currency with respect to those goods, services or other monetary units with which that currency can be exchanged. It means official lowering of the value of a country's currency within a fixed exchange rate system.
48. (D) An uninterruptable power supply (UPS) is a backup power supply, such as a battery that provides emergency power in the event when power is lost from the main supply.
49. (C) An amphoteric oxide is a molecule or ion that can react as an acid as well as a base. Many metals such as zinc, tin, lead, aluminium, beryllium and most metalloids form amphoteric oxides or hydroxides.
50. (D)
- Member of Parliaments are directly elected by citizens of India on the basis of Universal Adult franchise, except two who are appointed by the President of India.
  - The President of India is elected, from an Electoral College comprising a group of nominees, by the elected members of the Parliament of India (Lok Sabha and Rajya Sabha) as well as of the state legislatures (Vidhan Sabhas).
  - The Vice President is elected indirectly by an electoral college consisting members of both houses of the Parliament.
  - Members of the Lok Sabha elect their Speaker in the first meeting of the House after a general election.

51. (C)  $75\% = \frac{3}{4}$

Let the number =  $4x$   
According to the question

$$\Rightarrow 4x \times \frac{3}{4} + 75 = 4x$$

$$\Rightarrow 3x + 75 = 4x$$

$$x = 75$$

$$\therefore \text{Required number} = 4x$$

$$= 4 \times 75 = 300$$

52. (C) S.P = ₹ 96  
let CP = ₹  $x$

$$\therefore \text{Loss}\% = \frac{1}{4}x = \frac{x}{4}$$

$$\text{i.e., } \frac{x}{4} = \frac{x-96}{x} \times 100$$

$$x^2 = (4x-384) \times 100$$

$$\Rightarrow x^2 - 400x + 38400 = 0$$

$$\Rightarrow x^2 - 240x - 160x + 38400 = 0$$

$$(x-240)(x-160)$$

$$x = 240 \text{ or } 160$$

53. (A) 

Sum	Amount
40	41
+1	

$$\% \text{ rate} = \frac{1 \times 100}{40 \times \frac{1}{4}}$$

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

54. (D) Amount =  $8000 \left(1 + \frac{5}{100}\right)^2$

$$= 8000 \times \frac{21}{20} \times \frac{21}{20}$$

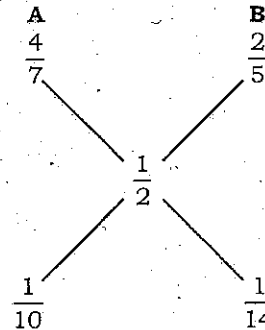
$$= ₹ 8820$$

55. (A) Milk : Water

A 4 : 3

B 2 : 3

New mixture 1 : 1



ratio = 7 : 5

56. (B)  $\frac{2}{3}A = \frac{4}{5}B$

$\Rightarrow 10A = 12B$

A : B

12 : 10

6 : 5

57. (D)  $\frac{150}{\text{total work}}$

A  $\rightarrow$  25 | 6

B  $\rightarrow$  30 | 5

$\therefore$  A does 6 units in 1 day

B does 5 units in 1 day

Total work of (A + B) in 1 day = 11 units

$\therefore$  5 days =  $11 \times 5 = 55$  units

work left =  $150 - 55 = 95$  units

Remaining work =  $\frac{95}{150} = \frac{19}{30}$

58. (A) Volume of cistern =  $\pi r^2 h$

$\pi r^2 h = 22,000 \text{ cm}^3$

$\frac{22}{7} \times \frac{50}{2} \times \frac{50}{2} \times h = 22,000$

$h = \frac{22000 \times 7 \times 2 \times 2}{22 \times 50 \times 50}$

$h = \frac{56}{5} \text{ cm}$

$h = 11 \frac{1}{5} \text{ cm}$

59. (C) Time  $\times \frac{1}{\text{distance}}$

A : B

45 : 48

15 : 16

A : B

Speed 16 : 15

16 : 15

$\times 5$   $\downarrow$  Diff. = 1  $\downarrow$   $\times 5$

80 km  $\downarrow$  5 km

60. (A) Let third number =  $x$

$\therefore$  second number =  $2x$

and first number =  $4x$

$\therefore 4x + 2x + x = 154 \times 3$

$\Rightarrow 7x = 462$

$\therefore x = \frac{462}{7} = 66$

$\therefore$  First number =  $4x = 4 \times 66 = 264$

61. (C)  $2\sqrt[3]{2^3 \times 4} - 3\sqrt[3]{4} + \sqrt[3]{5^3 \times 4}$

$= 2 \times 2\sqrt[3]{4} - 3\sqrt[3]{4} + 5\sqrt[3]{4}$

$= 9\sqrt[3]{4} - 3\sqrt[3]{4}$

$= 6\sqrt[3]{4}$

62. (C)  $\frac{x}{a} = \frac{1}{a} - \frac{1}{x}$

$\frac{x}{a} - \frac{1}{a} = -\frac{1}{x}$

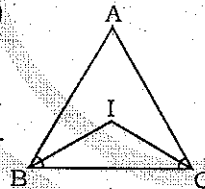
$\frac{x-1}{a} = -\frac{1}{x}$

$\frac{1-x}{a} = \frac{1}{x}$

$x(1-x) = a$

$x - x^2 = a$

63. (B)



$\angle ACB = 55^\circ$

$\angle ABC = 65^\circ$

$\angle BIC = ?$

$\therefore \angle ACB + \angle ABC + \angle BAC = 180^\circ$

$\angle BAC = 180^\circ - 55^\circ - 65^\circ$

$\angle BAC = 60^\circ$

We know that

$\angle BIC = 90 + \frac{1}{2} \angle A$

$\angle BIC = 90 + \frac{1}{2} \times 60$

$90 + 30$

$\angle BIC = 120^\circ$

64. (A)  $x = 3 - \sqrt{8}$

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

$x + \frac{1}{x} = 6 \quad \dots(i)$

So,  $x - \frac{1}{x} = \sqrt{36 - 4} = \sqrt{32} \quad \dots(ii)$

$(x^2)^2 - \left(\frac{1}{x^2}\right)^2$

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

$$= 34 \left(x + \frac{1}{x}\right) \left(x - \frac{1}{x}\right)$$

$$= 34 \times 6 \times \sqrt{32}$$

$$= 34 \times 6 \times \sqrt{2 \times 2 \times 2 \times 2 \times 2}$$

$$= 34 \times 6 \times 4\sqrt{2}$$

$$= 816\sqrt{2}$$

65. (A)  $27^{\sin 30} \cdot 81^{\cos 30}$   
 $= 3^{3 \sin 30} \cdot 3^{4 \cos 30}$   
 $= 3^{3 \sin \theta + 4 \cos \theta}$   
 $= 3^{-5}$

$$\left(\because a \sin \theta + b \cos \theta\right)$$

$$\left(\min = -\sqrt{a^2 + b^2}\right)$$

66. (C) Perimeter of rhombus

$$= 4a = 2P$$

$$2a = P$$

$$\Rightarrow 4a^2 = P^2$$

We know,

$$d_1^2 + d_2^2 = 4a^2 \text{ (when } d_1, d_2 \text{ are diagonals)}$$

$$d_1 + d_2 = m$$

$$(d_1 + d_2)^2 = m^2$$

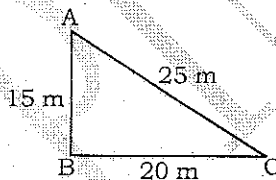
$$d_1^2 + d_2^2 + 2d_1d_2 = m^2$$

$$P^2 + 2d_1d_2 = m^2$$

$$\therefore \text{Area of rhombus} = \frac{1}{2} d_1d_2$$

$$= \frac{1}{4} (m^2 - P^2)$$

67. (D)



15, 20, 25 form a triplet

$$\text{Clearly} = 25^2 = 15^2 + 20^2$$

$\Delta ABC$  is a right angled triangle

$$\text{Area of right } \Delta ABC = \frac{1}{2} \times AB \times BC$$

$$= \frac{1}{2} \times 15 \times 20 = 150 \text{ sq. m}$$

$$\text{cost of sowing seeds} = 150 \times 15 = ₹ 2250$$

68. (B) Let the four numbers are a, b, c, d

$$\frac{a+b+c+d}{4} = 12$$

$$a+b+c+d = 48$$

$$\text{Also, } \frac{a+b+c}{3} = 2d$$

$$a+b+c = 6d$$

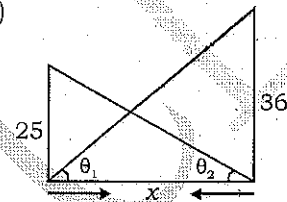
$$\therefore a+b+c+d = 48$$

$$6d+d = 48$$

$$7d = 48$$

$$d = \frac{48}{7}$$

69. (A)



$$\text{If } \theta_1 + \theta_2 = 90^\circ$$

$$\text{then } x = \sqrt{h_1 h_2} \text{ (h = height of towers)}$$

$$x = \sqrt{25 \times 36}$$

$$x = 30 \text{ m}$$

70. (B) According to question

Given:

$$\text{interior angle} = 2 \times \text{exterior angle}$$

As we know that

$$\text{interior angle} + \text{exterior angle} = 180^\circ$$

$$2 \times \text{exterior angle} + \text{exterior angle} = 180^\circ$$

$$3 \text{ exterior angle} = 180^\circ$$

$$\text{exterior angle} = 60^\circ$$

$$\text{No. of sides} = \frac{360^\circ}{\text{Exterior angle}}$$

$$\text{No. of sides} = \frac{360^\circ}{60^\circ} = 6$$

71. (B) Given:

$$a+b = 37$$

$$a^2 - b^2 = 185$$

$$a^2 - b^2 = (a+b)(a-b)$$

$$185 = 37(a-b)$$

$$(a-b) = 5$$

72. (A)  $\therefore \frac{a^3 + b^3 + c^3 - 3abc}{a + b + c}$

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

$$= \frac{1}{2} (3^2 + 5^2 + 1^2)$$

$$= \frac{1}{2} (9 + 25 + 1)$$

$$= 17.5$$

73. (B) Profit of 2013 = 50 - 30 = ₹ 20 lakh

Profit of 2014 = 40 - 25 = ₹ 15 lakh

Difference = ₹ 5 lakh

74. (D) Average income of all year

$$= \frac{30 + 50 + 40 + 60 + 60}{5}$$

$$= \frac{240}{5} = ₹ 48 \text{ lakhs}$$

Average profit of all year

$$= \frac{10 + 20 + 15 + 20 + 25}{5} = \frac{90}{5} = 18$$

So, ratio is 48 : 18 = 8 : 3

75. (A) Total income from 2012 to 2016

$$= 30 + 50 + 40 + 60 + 60$$

$$= 240 \text{ lakhs}$$

Total expenditure from 2012 to 2016

$$= 20 + 30 + 25 + 40 + 35$$

$$= 150 \text{ lakhs}$$

$$\text{Difference} = 240 - 150 = 90 \text{ lakhs}$$

## MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Attic	a room or space just below the roof of a house, often used for storing things	अटारी
Catalogue	a complete list of items, typically one in alphabetical or other systematic order, in particular	सूची, तालिका
Clutch	a tight grasp	शिकंजा, पकड़
Discharge	to do everything that is necessary to perform and complete a particular duty	निर्वाह करना, कर्तव्य निभाना
Disintegrate	to break into small parts or pieces and be destroyed	टुकड़े-टुकड़े करना
Dreary	dull and not interesting	नीरस
Dribble	fall slowly in drops	बूंद-बूंद कर टपकना
Forsake	abandon	त्यागना
Glossary	a list of technical or special words, especially those in a particular text, explaining their meanings	शब्दावली
Keen	having or showing eagerness or enthusiasm	इच्छुक, हताही
Outlook	a person's point of view or general attitude to life	दृष्टिकोण
Root out	tear (something) up by the roots	समूल नष्ट करना
Stratagem	a trick or plan that you use to gain an advantage or trick	कपट, छल
Toil	to work very hard	कठिन परिश्रम
Unceasing	not coming to an end; continuous	निरंतर
Undeniably	in a way that is true or certain and cannot be denied	बेशक रूप से

Answer Key on 17 March - 2017

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

PINNACLE