

SSC solution 04 of March - 019

- (B) Heart — 3 consonants, 2 vowels
Kidney — 4 consonants, 2 vowels
- (A) $256 \Rightarrow (6 \times 5)^2 = 30^2 = 900$
 $248 \Rightarrow (4 \times 8)^2 = 32^2 = 1024$
- (C)

B	E	A	R		D	I	E	S
				+2				
				next vowel				
				+1				
				next vowel				
				+1				

Q	I	E	K		S	O	I	L
				+2				
				next vowel				
				+1				
				next vowel				
				+1				
- (B) Barfi is a sweet and Fig is a fruit.
- (C) 'C' can be drawn with of three lines, whereas H, M and W can be drawn with 4 lines.
- (C) $61 = 4^3 - (4 - 1)$
 $211 = 6^3 - (6 - 1)$
 $503 = 8^3 - (8 - 1)$
 $991 = 10^3 - (10 - 1)$
- (B) Only 'was' represents the past.
- (C) Only Ranchi is in Jharkhand, others cities are in Bihar.
- (D) Clearly, number of boys in the row = $(9 + 12 + 5) = 26$
- (B) They are father and daughter.
- (B) $\sqrt{5+5+5+5} \Rightarrow \sqrt{5 \div 5 + 5 + 5} = \sqrt{\frac{1}{25}}$
 $= \frac{1}{5} = 0.2$
 $\sqrt{4+4+4+4} \Rightarrow \sqrt{4 \div 4 + 4 + 4} = \sqrt{\frac{1}{16}}$
 $= \frac{1}{4} = 0.25$
- (C) White, Wolf, World, Wound, Wrist
- (A) At 1 o'clock, the hour hand is at 1 and the minute hand is at 12.
Thus, they are 5 min spaces apart.
To be together, the minute hand must gain 5 min over the hour hand.
55 min. are gained by minute hand in 60 min

5 min will be gained by it in $\left(\frac{60}{55} \times 5\right)$

$$\text{min} = \frac{60}{11} \text{min} = 5\frac{5}{11} \text{min}$$

Hence, the hands will coincide at $5\frac{5}{11}$

min past 1.

$$14. (C) \frac{2,3}{23}, \frac{5,7}{57}, \frac{11,13}{1113}, \frac{17,19}{1719}, \frac{23,29}{2329}, \frac{31,37}{3137}$$

$$15. (B) 5 \times 1 + 2 = 7$$

$$7 \times 2 + 3 = 17$$

$$17 \times 3 + 4 = 55$$

$$55 \times 4 + 5 = 225$$

$$225 \times 5 + 6 = 1131$$

$$16. (C) 3 \times 5 = 15, \quad 15 \times 3 = 45, \quad 45 - 2 = 43$$

$$4 \times 5 = 20, \quad 20 \times 3 = 60, \quad 60 - 2 = 58$$

17. (A) The series formed with the group of four letters is.

p q r s / p q r s / p q r s / p q r s

$$18. (C) 5! = 5 \times 4 \times 3 \times 2 = 120 \Rightarrow 12/0$$

$$4! = 4 \times 3 \times 2 = 24 \Rightarrow 2/4$$

$$6! = 6 \times 5 \times 4 \times 3 \times 2 = 720 \Rightarrow 7/20$$

$$19. (C) 5 \times 3 + 6 = 21$$

$$4 \times 8 + 7 = 39$$

$$6 \times 9 + 3 = 57$$

$$8 \times 4 + 6 = 38$$

$$20. (C) 5^3 - 4^2 = 125 - 16 = 109$$

$$6^3 - 4^2 = 216 - 16 = 200$$

$$3^3 - 2^2 = 27 - 4 = 23$$

$$7^3 - 6^2 = 343 - 36 = 307$$

21. (C) Let daughter's present age be x yr.

Then, mother's present age = $(3x)$ yr

Five years ago, mother's age = $(3x - 5)$ yr

and daughter's age = $(x - 5)$ yr

$$\text{So, } 3x - 5 = 4(x - 5)$$

$$\Rightarrow 3x - 5 = 4x - 20$$

$$\Rightarrow x = 15 \text{ yr}$$

So, daughter's age = 15 yrs

Now, mother's present age = $3 \times 15 = 45$

22. (D) We can't find 2 'R' and 2 'A' in the given word 'BEHAVIOUR'.

$$23. (B) \text{Number of squares} = 1^2 + 2^2 + 3^2 + 4^2$$

$$= 1 + 4 + 9 + 16 = 30$$

24. (C)

$$25. (A) 12 \times 6 + 1 \div 4 - 2 \Rightarrow 12 - 6 \times 1 + 4 \div 2$$

$$= 12 - 6 \times 1 + 2$$

$$= 14 - 6 = 8$$

26. (A) Novak Djokovic, a Serbian tennis professional has won the Qatar Open Men's singles tennis tournament by defeating Andy Murray in the final by 6-3 5-7 6-4 at the Khalifa International Tennis and Squash Complex in Doha, Qatar. It was the 36th contest between the two and Murray lost for the 25th time against his old rival.
27. (C) Four great monarchies in the time of the Buddha were Avanti, Magadha, Kosala and Vamsa (or Vatsa).
28. (D) In India plans are formulated by Planning Commission and are finally approved by National Development Council. All state chief ministers are members of NDC. The NDC is headed by Prime Minister of India.
29. (C) Order of precedence is President, Vice President, PM, Governor of State within their respective states, Former Presidents and Deputy PM, CJI and Speaker of LS.
30. (B) Finance Bill means a Bill ordinarily introduced every year to give effect to the financial proposals of the Government of India for the next financial year and includes a Bill to give effect to supplementary financial proposals for any period. The Finance Bill is introduced immediately after the presentation of the Budget. The introduction of the Bill cannot be opposed.
31. (D) Jyotiba Phule was an activist, thinker, social reformer, writer, philosopher, theologian, scholar, editor and revolutionary from Maharashtra founded the Satya Shodhak Samaj in 1873 in Maharashtra.
32. (B) The 25th New Delhi World Book Fair (NDWBF) has been at Pragati Maidan, New Delhi from January 7-15, 2017. The 2017 theme is "Manushi - Books Written on and by Women", which will exhibit the rich tradition of women writings from ancient times till present. The focus of the Book Fair is on the 'Culture of Reading'. The book fair is organized by National Book Trust (NBT), India. About 20 countries including China, Egypt, France, Germany, Japan and Iran are participating in the Foreign Pavilion.
33. (D) The 9th edition of Jaipur International Film Festival (JIFF) has started in Jaipur on January 7, 2017. The purpose of the 5-day event is to promote emerging directors, encourage exchange of knowledge, information, ideas and culture between India and the participating nations. The festival will witness participation by 250 filmmakers and artists from the fraternity.
- The festival will have 17 workshops and seminars on various aspects of cinema. This year's Life Time Achievement Award was presented to internationally acclaimed visionary Ramesh Prasad, who is said to have created specialized post production facilities and established the Prasad Film Laboratory with advanced equipment.
34. (D) PESA Act does not identify the freedom of tribal people from exploitation as its objectives, but it automatically becomes a by-product of its objectives.
35. (C) Changes in weather involve air movements, formation of clouds, and precipitation. Energy is needed to make all these things happen. The energy comes from the sun. Heat energy enters and moves through the atmosphere in three different ways. One of the way through which heat energy is transferred is radiation. Hot bodies (The sun) radiate their energy mainly in the form of short waves. These short waves are seen as visible light. Cooler bodies such as Earth radiate their energy as longer waves.
37. (B) In the fourteenth and fifteenth century gun powder was used for military purpose in India and even artillery in its rudimentary form was known. The Babur's first real expedition took place in India in 1519 when he captured Bhera. The Delhi Sultanate's greatest contribution to Indian fine arts was the introduction of Islamic architectural features, including true domes and arches, and the integration of Indian and Islamic styles of architecture. The Timurid dynasty was a Sunni Muslim dynasty. Members of the Timurid dynasty were strongly influenced by the Persian culture and had established two well-known empires in history, namely the Timurid Empire (1370-1507) in Persia and Central Asia and the Mughal Empire (1526-1857) in the Indian subcontinent.
38. (D) Lithium has the highest specific heat capacity. Lithium metal is often used in coolants for heat transfer applications. It belongs to the alkali metal group of chemical elements. Under standard conditions it is the lightest metal and the least dense solid element. Like all alkali metals, lithium is highly reactive and flammable. For this reason, it is typically stored in mineral oil.

39. (D) The actual average distance between the Sun and the earth is 152×10^6 km which is near to 150×10^6 km. The distance from Earth to the Sun is called an astronomical unit.
40. (A) CRR or the Cash Reserve Ratio is that ratio of the total deposits held by a bank which it has to keep with the central bank of the country.
43. (B) Indigo is a dye different from any other dye. It does not require any mordant. Rather it is dyed through a living fermentation process. The process 'reduces' the Indigo, changing it from blue to yellow. In this state, it is a bright green. Slowly the air changes it to the beautiful deep and rich blue of Indigo.
45. (B) Gymnosperm is a plant, such as a cycad or conifer, the seeds of which are not enclosed within an ovary. In gymnosperms, no special structure develops to enclose the seeds, which begin their development 'naked'.
46. (C) The Constitution of India recognizes religious and linguistic minorities under article 29 and 30 (Cultural and Educational rights). However it does not define the term Minority.
47. (C) Dhanvantri is an Avatar of Vishnu in the Hindu tradition. He appears in the Vedas and Puranas as the physician of the gods (devas) and the god of Ayurvedic medicine. It is common practice in Hinduism for worshippers to pray Dhanvantri seeking his blessings for sound health for themselves and/or others. Dhanvantri is depicted as Vishnu with four hands, holding medical herbs in one hand and a pot containing rejuvenating nectar called amrita in another. The Purans state that Dhanvantri emerged from the 'Ocean of Milk' and appeared with the pot of nectar during the story of the Samudra or Sagar manthan whilst the ocean was being churned by the devas and asuras, using the Mandara mountain and the serpent Vasuki.
48. (A) Justice Jagdish Singh Khehar, who led the five-judge constitution bench in the Supreme Court which had struck down the controversial NJAC Act for appointment of judges, has been sworn-in as the 44th Chief Justice of India (CJI) and will remain on the post till August 27, 2017. He is the first Chief Justice from the Sikh community, who succeeded Justice T.S. Thakur.
50. (D) At 'M₄' position of the diagram, the height of the tide is at maximum, because in this position the earth, the moon and the sun are in a straight line.
51. (C) Required digit = $(4)^{102} + (4)^{103}$
as $(4)^2$ gives unit digit 6
so $(544)^{102}$ unit digit is 6
and $(544)^{103}$ unit digit is 4, unit digit of $6 \times 4 = 4$,
The sum of unit digits = $6 + 4 = 10$
 \therefore Required answer = 0
52. (B) Let R% be the rate of simple interest ATQ,
$$\left(\frac{5000 \times R \times 2}{100}\right) + \left(\frac{3000 \times R \times 4}{100}\right) = 2200$$

 $\Rightarrow 100R + 120R = 2200$
 $\Rightarrow R = 10\%$
 \therefore Rate of simple interest = 10%
53. (B) Time = $\frac{50}{60}$ hr = $\frac{5}{6}$ hr
Speed = 48 m/h
Distance = $S \times T = 48 \times \frac{5}{6} = 40$ km
New time will be 40 minutes
so, Time = $\frac{40}{60}$ hr = $\frac{2}{3}$ hr
Now we know,
Speed = $\frac{\text{Distance}}{\text{Time}}$
New speed = $40 \times \frac{3}{2}$ km/h = 60 km/h
54. (D)
$$\frac{a^3 + b^3 + c^3 - abc}{(a-b)^2 + (b-c)^2 + (c-a)^2}$$

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

$$= \frac{1}{2}(a+b+c) = \frac{1}{2}(35 + 18 - 41) = \frac{12}{2} = 6$$
55. (C) Present age of father = x
Present age of son = $60 - x$
ATQ,
 $(x - 6) = 5(60 - x - 6)$
 $\Rightarrow x - 6 = 5(54 - x)$
 $\Rightarrow x - 6 = 270 - 5x$
 $\Rightarrow 6x = 276$
 $\Rightarrow x = 46$
 \therefore Son's present age = $60 - 46 = 14$ yrs
and son's age after 6 yrs = $14 + 6 = 20$ yrs
56. (C) Failed in mathematics, $n(A) = 34$
Failed in English, $n(B) = 42$
 $\Rightarrow n(A \cup B) = n(A) + n(B) - n(A \cap B)$
 $= 34 + 42 - 20 = 56$
 \therefore Percentage passed
 $= (100 - 56)\% = 44\%$

57. (D) As $2^1 = 2, 2^2 = 4, \dots, 2^{10} = 1024$
 \therefore Required number of terms = 10

58. (A) $\frac{\cos^2 \theta}{\cot^2 \theta - \cos^2 \theta} = \frac{1}{3}$

$$\Rightarrow \frac{\cos^2 \theta}{\frac{\cos^2 \theta}{\sin^2 \theta} - \cos^2 \theta} = \frac{1}{3}$$

$$\Rightarrow \frac{\cos^2 \theta}{\cos^2 \theta \left(\frac{1}{\sin^2 \theta} - 1 \right)} = \frac{1}{3}$$

$$\Rightarrow \frac{\sin^2 \theta}{1 - \sin^2 \theta} = \frac{1}{3}$$

$$\Rightarrow \frac{\sin^2 \theta}{\cos^2 \theta} = \frac{1}{3} \Rightarrow \tan^2 \theta = \frac{1}{3}$$

$$\Rightarrow \tan \theta = \frac{1}{\sqrt{3}} \therefore \theta = 30^\circ$$

59. (C) Let breadth = x cm,
then, length = $3x$ cm

$$x^2 + (3x)^2 = (8\sqrt{10})^2 \Rightarrow 10x^2 = 640 \Rightarrow x = 8$$

So, length = 24 cm and breadth = 8 cm
Perimeter = $2(l + b) = 2(24 + 8) = 64$ cm

60. (A) As Trains are moving in same direction,
So, Relative Speed = $40 - 20 = 20$ km/h

$$= 20 \times \left(\frac{5}{18} \right) = \frac{50}{9} \text{ m/sec}$$

Length of Train = Speed \times Time

$$\text{Length} = \frac{50}{9} \times 5 = \frac{250}{9} = 27\frac{7}{9} \text{ m}$$

61. (D) $\triangle ABC \sim \triangle PQR$

$$\Rightarrow \frac{\text{Perimeter of } \triangle ABC}{\text{Perimeter of } \triangle PQR} = \frac{AB}{PQ} = \frac{BC}{QR} = \frac{CA}{RP}$$

$$\Rightarrow \frac{6 + 4 + 8}{\text{Perimeter of } \triangle PQR} = \frac{AB}{PQ} = \frac{6}{8} = \frac{3}{4}$$

$$\Rightarrow \frac{18}{\text{Perimeter of } \triangle PQR} = \frac{3}{4}$$

$$\therefore \text{Perimeter of } \triangle PQR = \frac{18 \times 4}{3} = 24 \text{ cm}$$

62. (B) Let the cost price = ₹ 100
then, Marked price = ₹ 135
Required gain = 8%
So, Selling price = ₹ 108
Discount = $135 - 108 = 27$

$$\text{Discount}\% = \left(\frac{27}{135} \right) \times 100 = 20\%$$

63. (C) Principal = ₹ 16,000

Time = 9 months = 3 quarters

Rate = 20%, it will be $\frac{20}{4} = 5\%$ per quarter

$$\text{Now, Amount} = 16000 \left(1 + \frac{5}{100} \right)^3 = ₹ 18522$$

$$\text{C.I} = 18522 - 16000 = ₹ 2522$$

64. (D) $\frac{A}{B} : \frac{B}{C} : \frac{C}{A} = \frac{2}{3} : \frac{3}{4} : \frac{2}{1}$

$$= \frac{2}{3} \times 12 : \frac{3}{4} \times 12 : \frac{2}{1} \times 12 = 8 : 9 : 24$$

65. (C) 1 minute work done by both the punctures

$$= \left(\frac{1}{9} + \frac{1}{6} \right) = \frac{15}{54} = \left(\frac{5}{18} \right)$$

So, both punctures will make the tyre flat in

$$= \frac{18}{5} \text{ min} = 3\frac{3}{5} \text{ min}$$

66. (B) Required HCF = $2 \times 3 \times 3 \times 7 = 126$

67. (C) Let x number of students came in hostel
after 15 days,

$$\Rightarrow 2000 : (2000 + x) :: 20 : (54 - 15)$$

$$\Rightarrow 2000 : (2000 + x) :: 20 : 39$$

$$\Rightarrow 2000 \times 39 = (2000 + x) \times 20$$

$$\Rightarrow 3900 = 2000 + x$$

$$\Rightarrow x = 3900 - 2000$$

$$\Rightarrow x = 1900$$

\therefore Required no. of students = 1900

68. (B) Let initial investment of A is $3x$ and B is $5x$, then C investment is also $5x$

Now, A : B : C = $(3x \times 12) : (5x \times 12) : (5x \times 6)$
 $= 36 : 60 : 30 = 6 : 10 : 5$

69. (A) Let the original price per egg be ₹ x

Then, increased price will be $\left(\frac{130x}{100} \right)$

Now, we have

$$\Rightarrow \frac{7.80}{x} - \frac{7.80}{\frac{130x}{100}} = 3$$

$$\Rightarrow \frac{7.8}{x} - \frac{6}{x} = 3 \Rightarrow \frac{1.8}{x} = 3 \Rightarrow x = 0.6$$

Actual price was ₹ 0.6

Present price per dozen will be ₹ $12 \times 0.6 \times 1.3 = ₹ 9.36$

70. (A) Let x is subtracted.
Then,

$$\frac{(6-x)}{(7-x)} < \frac{16}{21} \text{ or } 21(6-x) < 16(7-x)$$

$$\Rightarrow 5x > 14 = x > 2.8$$

\therefore The least number is 3.

71. (D) $b - [b - (a + b) - \{b - (b - a + b)\} + 2a]$

$$= b - [b - a - b - \{b - (2b - a)\} + 2a]$$

$$= b - [-a - \{b - 2b + a\} + 2a]$$

$$= b - [-a - \{-b + a\} + 2a]$$

$$= b - [-a + b - a + 2a]$$

$$= b - [-2a + b + 2a]$$

$$= b - b$$

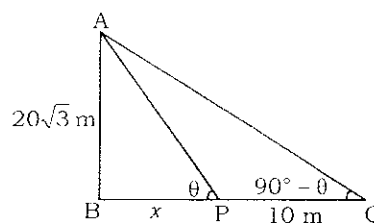
$$= 0$$

72. (A) Sum of the present ages of husband, wife and child = $(27 \times 3 + 3 \times 3)$ years = 90 years.

Sum of the present ages of wife and child = $(20 \times 2 + 5 \times 2)$ years = 50 years.

- \therefore Husband's present age = $(90 - 50)$ years = 40 years

73. (B)



We have, $\frac{20\sqrt{3}}{x} = \frac{x+10}{20\sqrt{3}}$

$$\Rightarrow x^2 + 10x - 1200 = 0$$

$$\Rightarrow (x - 30)(x + 40) = 0$$

$$\Rightarrow x = 30$$

(ignore -ve value)

\therefore Distance of P from the building = 30 m

74. (C) $48 - 7 = 41\%$

$$\Rightarrow 41\% = 6.15 \text{ lakhs} \Rightarrow 1\% = \frac{6.15}{41}$$

$$\therefore 100\% = \frac{6.15}{41} \times 100 \text{ lakhs} = 15 \text{ lakhs}$$

75. (D) Required percentage = $48 \times \frac{40}{60+40}$

$$= 48 \times \frac{2}{5} = 19.2\%$$

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Armament	military weapons and equipment	युद्ध उपकरण
Blandish	coax (someone) with kind words or flattery	चाटुकारिता करना
Captivate	attract and hold the interest and attention of something	आकर्षित करना
Coax	to cajole or flatter	चापलूसी करना
Confluence	the junction of two rivers	दो नदियों का संगम
Disjunction	a lack of correspondence or consistency	अलगाव, विच्छेद
Enchant	to charm	मंत्रमुग्ध करना
Epitome	a summary of a written work, an abstract	सार संग्रह
Inscription	words inscribed, as on a monument	शिलालेख
Loathe	feel intense dislike	घृणा करना
Mountebank	a charlatan	कपटी, धोखेबाज
Postscript	an additional remark at the end of a letter	पत्र के अंत में अतिरिक्त जुड़ा भाग
Puissant	having great power or influence	शक्तिशाली
Rostrum	a raised platform on which a person stands to make a public speech	भाषण मंच
Sanatorium	an establishment for the medical treatment of people having a chronic illness	आरोग्य आश्रम
Soaked	extremely wet	भीगा हुआ
Wheedle	to cajole or entice	खुशामद करना

SSC Answer key on 08 March 09

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



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