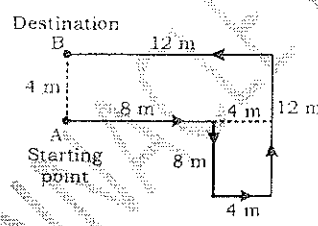
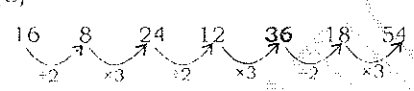
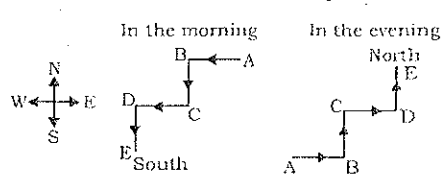


SSC Solution on 21 June - 18

1. (B) August = 3 Vowels and 3 Consonants.
= $3 \times 3 = 9$
January = 3 Vowels and 4 Consonants.
= $3 \times 4 = 12$
2. (B) $6 \times 2 \times 3 = 36 \Rightarrow \sqrt{36} = 6 \Rightarrow 6^3 = 216$
 $2 \times 8 \times 4 = 64 \Rightarrow \sqrt{64} = 8 \Rightarrow 8^3 = 512$
3. (D) Geetanjali was written by Tagore and Godan by **Premchand**.
4. (B)
- | | | | | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|
| R | S | T | Q | P | M | D | N |
| ↓ | +2↓ | -3↓ | +4↓ | -1↓ | -2↓ | -3↓ | +4↓ |
| Q | U | Q | U | O | O | A | R |
5. (D) $2 + 3 + 4 + 6 = 15 \Rightarrow 1 + 5 = 6$
 $7 + 8 + 3 + 5 = 23 \Rightarrow 2 + 3 = 5$
 $4 + 5 + 7 + 2 = 18 \Rightarrow 1 + 8 = 9$
 $1 + 5 + 6 + 7 = 19 \Rightarrow 1 + 9 = 10 \neq 4$
6. (A) Except **Kanpur**, other are capital of the indian states.
7. (D) Except **Shakuntala** devi, other participated in Indian freedom struggle.
8. (C) Except **Heart**, other organs are in pair.
9. (B) From second and third die, we have concluded that
- | | | | |
|--|-------|-------|-------|
| | 4 | 6 | 5 |
| | opp.↓ | opp.↓ | opp.↓ |
| | 2 | 1 | 3 |
- So, **3** on the face opposite to **5**.
10. (B)
- 
- Required distance = **4 m**.
11. (D) $9 + 6 + 8 = 23 \Rightarrow 2 + 3 = 5 \Rightarrow 5 \times 5 = 25$
 $7 + 5 + 3 = 15 \Rightarrow 1 + 5 = 6 \Rightarrow 6 \times 5 = 30$
 $9 + 4 + 5 = 18 \Rightarrow 1 + 8 = 9 \Rightarrow 9 \times 5 = 45$
12. (B) $27 + 32 + 18 + 23 = 35 + 18 + 47 = 72 + 28 = 100$
13. (D) LCM of 18, 12, 36 = 72
LCM of 16, 56, 14 = 112
LCM of 16, 56, 14 = 144
14. (A)

15. (D) **3, 4, 1, 2**
16. (B) $12 \times 1 + 2 = 14$
 $14 \times 2 + 3 = 31$
 $31 \times 3 + 4 = 97$
 $97 \times 4 + 5 = 393$
17. (C)
- 
18. (D) Total number of digits
= (Number of digits in 1-digit page nos. +
Number of digits in 2-digit page nos. +
Number of digits in 3-digit page nos.)
= $(1 \times 9 + 2 \times 90 + 3 \times 246)$
= $(9 + 180 + 738) = 927$
19. (B) Position of the letter from last to first.
C = 24, G = 20, L = 15, D = 23
P = 11, O = 12, E = 22, R = 9
K = 10
Then we have,
CGL $\Rightarrow C + G + L = 24 + 20 + 15 = 59 \Rightarrow 59 \times 10 = 590$
LDC $\Rightarrow L + D + C = 15 + 23 + 24 = 62 \Rightarrow 62 \times 10 = 620$
PO $\Rightarrow P + O = 11 + 12 = 23 \Rightarrow 23 \times 10 = 230$
CLERK $\Rightarrow C + L + E + R + K \Rightarrow 24 + 15 + 22 + 9 + 16 = 86$
 $\Rightarrow 86 \times 10 = 860$
20. (A) a b / c d / a b b / c d d / a b
21. (D) After Changing the signs, as per the given details, we have
 $72 - 144 \div 18 \times 12 + 24$
= $72 - 8 \times 12 + 24$
= $72 - 96 + 24$
= $96 - 96$
= **0**
22. (B) Yash is 17th from the last and Ankit is 7 ranks ahead of Yash. So, Ankit is 24th from the last.
Number of students ahead of Ankit in rank = $(39 - 24) = 15$.
So, Ankit is 16th from the top.
23. (C)
- 
- So, Saloni is going towards either North or South direction.
24. (B)
25. (B)

- | | |
|---|--|
| <p>27. (D) The area of Andhra Pradesh is 160,205 sq km, area of Gujarat is 196,024 sq km, the area of Karnataka is 191,791 sq km and Tamil Nadu is 130,058 sq km.</p> | <p>35. (D) The executive in a Parliamentary system is responsible to the legislature for all its actions. The ministers are answerable to the Parliament and responsible to the Lok Sabha. The Council of Ministers remains in office as long as they enjoy the support and confidence of the Lok Sabha.</p> |
| <p>28. (D) According to Article 368, an amendment of the Constitution may be initiated only by the introduction of a Bill for the purpose in either House of Parliament, and when the Bill is passed in each House by a majority of the total membership of that House present it shall be presented to the President who shall give his assent to the Bill and thereupon the Constitution shall stand amended in accordance with the terms of the Bill.</p> | <p>37. (A) Organic farming is a production system of crops which avoids the use of synthetic and chemical inputs like fertilizers, pesticides, growth regulators and livestock feed additives.</p> |
| <p>30. (B) Human body has different resistances. When dry, resistance is 100,000 ohms and when wet because of sweat or water, resistance is only 1,000 ohms.</p> | <p>38. (C) The 4th Rollball World Cup will be held in Dhaka, Bangladesh from February 17 to 23, 2017. Approx 700 competitors from 45 countries are expected to participate in the tournament. It is the largest-ever event in any field where such a huge number of countries will be participating in any Asian Country. The International Rollball Federation (IRBF) is a body which is associated with International Rollball. This game was created by Raju Dabhade of Pune City and is also the Secretary of the IRBF. Rollball is a game played between two teams of 12 players. Out of 12, only 6 players are allowed to play on court at a time. This game is played on skates.</p> |
| <p>31. (*) Ilmenite, Zircon and Sillimanite are found in Kollam district in Kerala but Tungsten is not found in the beach sands of Kerala.</p> | <p>39. (C) Distribution of power between the Centre and the States in the Indian Constitution is based on the Government of India Act, 1935.</p> |
| <p>32. (D) Recombinant DNA is DNA sequences, which result from bringing genetic material from different sources. The genes can be transferred between any species that is across different species of plants, from animals to plants and from micro organisms to higher organisms.</p> | <p>40. (B) A simple machine is a mechanical device that changes the direction or magnitude of a force. In general, they can be defined as the simplest mechanisms that use mechanical advantage to multiply force. Thus, simple machine helps us in doing same amount of work with lesser force. Few examples of simple machines are pulley, lever, wheel, screw, etc.</p> |
| <p>33. (B) The book "Band, Bajaa, Boys!" has been authored by Rachna Singh, an HR and marketing consultant. This book explores the many hilarious shades of small town life, with an underlying theme of rejection.</p> | <p>41. (D) Ethylene glycol solutions are marketed as "permanent anti-freeze", and is used as anti-freeze agent for the automobile engine in cold countries where temperature is below zero degree centigrade.</p> |
| <p>34. (B) The International Day of Zero Tolerance for Female Genital Mutilation (FGM) is observed every year across the world on February 6 to promote the UN's campaign to raise awareness and educate people about the dangers of Female Genital Mutilation (FGM) and to stop genital mutilation of girls and women. Basically, this day is an awareness campaign to end a harmful practice that violates girls' and women's rights. The 2017 theme is "Building a solid and interactive bridge between Africa and the world to accelerate ending FGM by 2030"</p> | <p>42. (B) Body piercing or getting one's body tattooed may cost one a huge price- Infection of Hepatitis B and C virus is absolutely possible. The needle used in the act may just be infected with the said virus causing liver disease, which in its ultimate stage often turns cancerous. This is deemed to happen if the needle is not properly sterilized.</p> |

43. (C) Rajeev Singh, Member (Finance) in Prasar Bharati Board, has taken charge as acting Chief Executive Officer (CEO) of the public service broadcaster Prasar Bharti. He succeeded Suresh Panda, who retires on February 4, 2017. Panda has been serving as interim CEO since November 2016, after full time chief Jawhar Sircar resigned in October 2016. Prasar Bharati looks after the functioning of Doordarshan and All India Radio (AIR).

44. (B) Kolleru lake, one of the largest shallow fresh water lakes in Asia, is located between Krishna delta and the Godavari in Andhra Pradesh

47. (A) International Development Association (IDA), is that part of the World Bank that helps the world's poorest countries. It complements the World Bank's other lending arm—the International Bank for Reconstruction and Development (IBRD) which serves middle-income countries with capital investment and advisory services. IDA was created in 1960.

48. (C) Chlorofluorocarbons are used in the production of plastic foams, in cleaning electronic components and as pressurizing agents in aerosol cans.

49. (A) Ticks and mites are categorized under Arachnids of phylum Arthropoda of animal kingdom.

50. (D) Anish Kapoor, the well-known Indian-origin British sculptor, has won the prestigious \$1 million Genesis Prize 2017 by Israel for his commitment to Jewish values. Kapoor's work include 'Turning the World Upside-Down' at the Israel Museum in Jerusalem, 'Cloud Gate' in Chicago's Millennium Park and the 'Orbit' in London. The Genesis Prize is also regarded as Jewish Nobel Prize and is given annually to those who have attained excellence and international renown in their chosen professional fields, and who inspire others through their engagement and dedication to the Jewish community and/or the State of Israel.

51. (C) $2A = 3B = 5C$, LCM = 30

$$\Rightarrow A = \frac{30}{2} = 15, B = \frac{30}{3} = 10 \text{ and } C = \frac{30}{5} = 6$$

$$\text{So, } A : B : C = 15 : 10 : 6$$

$$52. (B) \frac{x-b-c}{a} + \frac{x-c-a}{b} + \frac{x-a-b}{c} = 3$$

$$\Rightarrow \frac{x-b-c}{a} - 1 + \frac{x-c-a}{b} - 1 + \frac{x-a-b}{c} - 1$$

$$= 3 - 3$$

$$\Rightarrow$$

$$\frac{x-b-c-a}{a} + \frac{x-c-a-b}{b} + \frac{x-a-b-c}{c} =$$

$$0$$

$$\Rightarrow (x-a-b-c) \left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c} \right) = 0$$

$$\Rightarrow x = a + b + c \left[\frac{1}{a} + \frac{1}{b} + \frac{1}{c} \neq 0 \right]$$

53. (C) $3M = 4W$

4 women = 12 days

1 women = 48 days

$$3M + 2W = 4W + 2W = 6W$$

$$\Rightarrow 6W = \frac{48}{6} = 8 \text{ days}$$

\therefore Required No. of days = 8 days.

54. (C) Sum of all digits which remains same when the digits interchange

$$= 11 + 22 + 33 + 44 + \dots + 99$$

$$= 11(1 + 2 + \dots + 9)$$

$$= \frac{11 \times 9 \times 10}{2}$$

$$\therefore \text{ Required average} = \frac{11 \times 9 \times 10}{2 \times 9}$$

$$= 55$$

$$55. (C) x^2 + \frac{1}{x^2} = \left(x + \frac{1}{x} \right)^2 - 2$$

$$= (\sqrt{2})^2 - 2$$

$$= 0$$

	Rs 1	50 p	25 p
Ratio	13	11	7
Number of coins	13	22	28

ATQ,

$$63 = 378 \Rightarrow 1 = 6$$

$$\Rightarrow 28 = 28 \times 6$$

$$= 168$$

\therefore Number of Coins = 168

$$57. (D) SI = \frac{P \times R \times T}{100} = \frac{1200 \times 10 \times 1 \frac{73}{365}}{100}$$

$$= \frac{1200 \times 10 \times 6}{5 \times 100}$$

$$= ₹ 144$$

$$58. (C) \text{ Sum of first 50 odd numbers} = (50)^2$$

$$= 2500$$

$$\therefore \text{ Required average} = \frac{2500}{50} = 50$$

$$59. (D) a^2 + a + 1 = 0 \text{ (Given)}$$

$$(a^3 + a^4 + 1) = (a^2 + a + 1)(a^3 - a + 1)$$

$$= 0 \times (a^3 - a + 1)$$

$$= 0$$

60. (D) As, 5, 12, 13 is s triplet.

So, Area of $\Delta = \frac{4}{3} \times$ Area of triangle by considering median as the length of the side

$$= \frac{4}{3} \times \frac{1}{2} \times 5 \times 12 = 40\text{cm}^2$$

61. (B) Let the length of the journey be d km and speed of train be S km/hr.

ATQ,

$$\frac{d}{S+6} = t-4 = \dots\dots(I)$$

$$\frac{d}{S-6} = t+6 \dots\dots(II)$$

Subtracting I from II we have,

$$\frac{d}{S-6} - \frac{d}{S+6} = 10$$

$$\text{Now } t = \frac{d}{S}$$

We have

$$S = 30 \text{ km/hr}$$

$$d = 720\text{km}$$

So, Required distance = 720km

$$62. (B) \text{ Sum of age of 5 members} = 5 \times 24 = 120$$

$$8 \text{ years ago, sum of ages} = 120 - 8 \times 5$$

$$= 80$$

$$\therefore \text{ Required average age} = \frac{80}{5} = 16 \text{ years}$$

$$63. (A) \text{ Area of four walls of a room}$$

$$= 2(l+b)h$$

$$= 2(5+4) \times 3$$

$$= 6 \times 9$$

$$= 54\text{cm}^2$$

$$64. (A) \begin{matrix} A & 30 & 2 \\ B & 20 & 60 & 3 \\ C & 10 & 6 \end{matrix}$$

$$A + B = 5$$

$$A + C = 8$$

$$2 \text{ days} = 13 \text{ work}$$

$$\Rightarrow 8 \text{ days} = 52 \text{ work}$$

$$\Rightarrow 9 \text{ days} = 57 \text{ work}$$

$$\Rightarrow 9 \frac{3}{8} \text{ days} = 60 \text{ work} = \text{Total work}$$

$$\therefore \text{ Required no of days} = 9 \frac{3}{8} \text{ days}$$

$$65. (B) \text{ Average speed} = \frac{7 \times 4}{\frac{7}{10} + \frac{7}{20} + \frac{7}{30} + \frac{7}{60}}$$

$$= \frac{28}{42 + 21 + 14 + 7}$$

$$= \frac{28}{60}$$

$$= \frac{28 \times 60}{84} = 20\text{km/hr}$$

$$66. (C) \text{ Required ratio of average time} = \frac{5}{3} / \frac{6}{5}$$

$$= \frac{5}{3} \times \frac{5}{6} = \frac{25}{18}$$

$$= 25 : 18$$

$$67. (B) \begin{matrix} A \rightarrow 8 & 3 \times 6 = 18 \\ B \rightarrow 3 & 8 \times 2 = \frac{16}{2} \end{matrix}$$

$$\therefore \text{ Required number of days} = \frac{24-2}{3}$$

$$= \frac{22}{3} = 7 \frac{1}{3} \text{ days}$$

$$68. (A) \sin \theta = \frac{5}{13}, \cos \theta = \frac{12}{13}, \tan \theta = \frac{5}{12}, \cot \theta = \frac{12}{5}$$

$$\operatorname{cosec} \theta = \frac{13}{5}$$

$$\text{then, } \operatorname{cosec}^2 \theta + \cot^2 \theta = \left(\frac{13}{5}\right)^2 + \left(\frac{12}{5}\right)^2$$

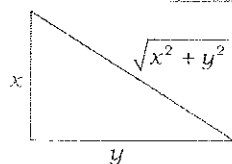
$$= \frac{169}{25} + \frac{144}{25} = \frac{313}{25}$$

$$69. (A)$$

$$\therefore \text{ Required ratio} = \frac{a}{\sqrt{3}} : \frac{a}{2\sqrt{3}}$$

$$= 2 : 1$$

70. (A)



$$\sin \theta = \frac{x}{\sqrt{x^2 + y^2}}$$

$$\cos \theta = \frac{y}{\sqrt{x^2 + y^2}}$$

$$\therefore \left[\frac{\sin \theta}{x} = \frac{\cos \theta}{y} \right]$$

$$\Rightarrow \sin \theta - \cos \theta = \frac{x - y}{\sqrt{x^2 + y^2}}$$

71. (B) Required number of diagonals

$$= \frac{n(n-3)}{2} = \frac{8(8-3)}{2} = \frac{8 \times 5}{2} = 20$$

72. (C) Surface Area =

$$(2 \times \text{Area of base}) + (\text{Perimeter of base} \times \text{height})$$

$$= 2 \times 25 + 24 \times 8$$

$$= 50 + 192$$

$$= 242 \text{ m}^2$$

73. (B) Labour - Steel = $90^\circ - 54^\circ = 36^\circ$

$$= 360^\circ \text{ of } 10\% = 10\% \text{ of Total}$$

74. (A) Timber

$$= 360^\circ - (54^\circ + 54^\circ + 54^\circ + 90^\circ + 72^\circ)$$

$$= 36^\circ$$

$$\therefore 360^\circ = 6 \text{ Lakhs}$$

$$\Rightarrow 36^\circ = 60,000$$

75. (B) $\therefore \text{Cement} = 72^\circ = \frac{360^\circ}{5}$

$$\therefore 360^\circ = 6 \text{ Lakhs}$$

$$\therefore \frac{360^\circ}{5} = 1.2 \text{ Lakhs} = ₹ 1,20,000$$



Pinnacle Learning Destination
Plot No.3 Third Floor Main Road
Raghunathpur, Sector 22 -Noida,
Uttar Pradesh
Pin-201301Ph-+91-9555662244

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