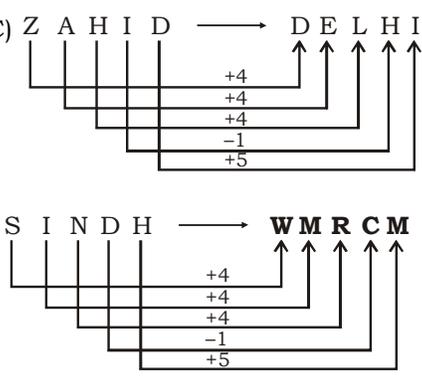
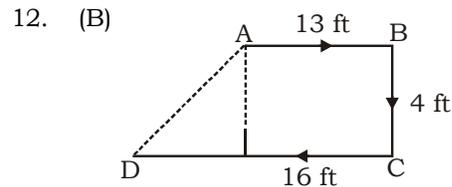


SSC MOCK TEST - 81 (SOLUTION)

1. (A) $246 \Rightarrow \frac{(6)^2}{4} = \frac{36}{4} = 9$
 $239 \Rightarrow \frac{(9)^2}{3} = \frac{81}{3} = 27$
2. (B) Jama Masjid is in Delhi and Gateway of India is in **Mumbai**.
3. (C) 
4. (D) Telescope was invented by Galileo and Bulb was invented was **Edison**.
5. (D)

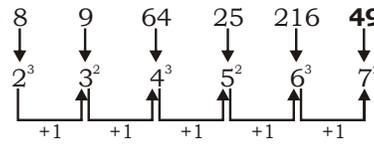
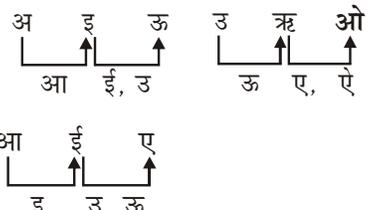
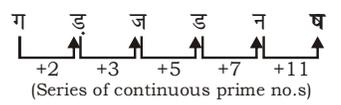
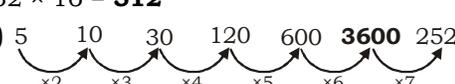
Element	Chemical Formula
Hg	Mercury
Br	Bromine
Ca	Calcium
Mg ≠ Mc	Magnesium
6. (B) Except (B), others have a pair of prime numbers.
7. (D) 'What, When, and How' denotes the question mark, whereas 'So' denotes the answer.
8. (C) Except (C), others have same mirror image.
9. (C) Let x and y be the ten's and unit's digits respectively of the numeral denoting the woman's age.
 Then, woman's age = $(10x + y)$ years
 Husband's age = $(10y + x)$ years.
 $\therefore (10y + x) - (10x + y) = \left(\frac{1}{11}\right) (10y + x + 10x + y)$
 $\Rightarrow (9y - 9x) = \left(\frac{1}{11}\right) (11y + 11x)$
 $\Rightarrow (9y - 9x) = (x + y)$
 $\Rightarrow 10x = 8y \Rightarrow x = \left(\frac{4}{5}\right)y$
 Clearly, y should be a single-digit multiple of 5, which is 5.

- So, $x = 4, y = 5$.
 Hence, woman's age = $10x + y = 45$ yrs
10. (B) Father's wife \rightarrow mother. Hence, the daughter of the mother means sister and sister's younger brother means brother. Therefore, the boy is the **brother** of Mayank.
11. (C) Only "Pink" colour is missing in the given four figures which is not with blue.



Required distance

$$AD = \sqrt{4^2 + (16-13)^2} = \sqrt{4^2 + 3^2} = 5 \text{ ft}$$

13. (C) $3^3 - 4^2 = 27 - 16 = 11$
 $4^3 - 5^2 = 64 - 25 = 39$
 $3^3 - 2^2 = 27 - 4 = 23$
14. (A) 
15. (A) 
16. (B) Part Q of the figure represents those girls who are players, but no coach.
17. (C) $2 \rightarrow 5 \rightarrow 1 \rightarrow 3 \rightarrow 4$
18. (D)
19. (A) 
 (Series of continuous prime no.s)
20. (B) $4 \times 0.25 = 1$
 $1 \times 0.5 = 0.5$
 $0.5 \times 1 = 0.5$
 $0.5 \times 2 = 1$
 $1 \times 4 = 4$
 $4 \times 8 = 32$
 $32 \times 16 = 512$
21. (D) 

K D
Campus
K D Campus Pvt. Ltd

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009

22. (C)

23. (C)  = 8 triangles

 = 10 triangles

Total no. of triangles = 10 + 8 = **18**

24. (B)

(C)	Vowels	Consonant	Result
LIFEBUOY	4	4	44
LIRIL	2	3	23
SANTOOR	3	4	34
REXONA	3	3	33
PATANJALI	4	5	45

26. (A) Kush Bhagat has recently won three gold medals in the 1st Western Asia Youth Chess Championships at Al Ain Chess Club in United Arab Emirates (UAE) in all the three categories - rapid, blitz and standard. With this, he became the only Indian to bag all the crowns in the competition. Bhagat is the 2nd standard student of the NSS Hill Spring International School in Mumbai, Maharashtra.

27. (B) Sir Thomas Roe also visited the court of Jahangir. He was an ambassador of James - I, king of England. Tavernier's account covers the reign of Shahjahan and Aurangzeb.

28. (C) Copacabana Beach is located in Rio de Janeiro in Brazil. Copacabana Beach is one of the most famous and most beautiful beaches in the world. Copacabana is nicknamed the "Little Princess of the Sea". One of the most unmistakable features of Copacabana beach is the black and white wave motif that weaves up the entire promenade and also serves as inspiration behind many of the beach's best-sold souvenirs.

29. (D) Diamond is the polymorph of the element carbon. Calcium is the basic element of naturally occurring marble. Sand formed by Silicon and Aluminium is the basic element of naturally occurring Ruby.

30. (D) The Union Minister for Social Justice and Empowerment, Thaawarchand Gehlot has recently launched the 'Mobile App and Facebook Page' of the National Trust on December 30 to mark the '2016 National Trust Foundation Day (NTFD)' on the theme "Celebrating Inclusion" to create support network for persons with disabilities by sensitizing unreached section of society.

The National Trust is a statutory body of the Ministry of Social Justice and Empowerment, Government of India, set up under the "National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities" Act (Act 44 of 1999), which was passed in the Parliament on December 30, 1999. Thus, the NTFD is observed every year on December 30 in India to create awareness for the welfare of persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities.

32. (C) The Bihar government has recently declared 50% reservation in all judicial services for aspirants belonging to the Extremely Backward Classes (EBCs), Other Backward Classes (OBCs), Scheduled Castes (SCs) and Scheduled Tribes (STs). The reservation will be in both Superior Judicial Services and Subordinate Judicial Services. According to the Bihar Cabinet, aspirants belonging to EBCs will get 21% reservation, OBCs will have 12 % reservations, SCs will have 16 % reservation and STs will be provided 1% reservation in all judicial services of the State. Beside this, there will be 35% horizontal reservation for women and 1% reservation for disabled persons. Currently, there is a provision for only 27% reservation in subordinate services while no quota in superior services.

34. (C) Sounds may be generally characterized by pitch, loudness, and quality. Sound "quality" or "timbre" describes those characteristics of sound which allow the ear to distinguish sounds which have the same pitch and loudness. Quality is then a general term for the distinguishable characteristics of a tone.

35. (D) Anil Bajjal, a 1969 batch IAS officer, has been appointed as the new Lt Governor of Delhi. He succeeded Najeeb Jung, who recently resigned from the post. Bajjal had served as Union Home Secretary under the Atal Bihari Vajpayee government besides holding key positions in other ministries.

36. (A) ONGC is India's largest petrochemical company. IPCL is the second largest petrochemical company. It produces around 69% of India's crude oil and around 62% of its natural gas.

37. (D) Daily intake of protein for active woman is 46 gram. But for pregnant women the protein requirement increase to 47 - 60 gm per day.

38. (D) The Mudrarakshasa ("The Signet of the Minister"), a historical play in Sanskrit by Vishakhadatta (4th century CE) narrates the ascent of the king Chandragupta Maurya to power in Northern India.
39. (D) The Government of India has established NITI Aayog to replace the Planning Commission. The Union Government of India announced formation of NITI Aayog on 1st January 2015 and the first meeting of NITI Aayog was held on 8 February 2015.
40. (B) The World Bank (WB) has recently approved a \$235 million credit for the Bihar Rural Roads Project to improve and effectively manage rural road network of the state. The project will support the construction of about 2,500 km of rural roads under the Mukhya Mantri Gram Sampark Yojana (MMGSY). The roads will be constructed using cost-effective designs and will incorporate engineering measures that ensure road safety. The project will also suggest better contract management practices to avoid time and cost over-runs. The credit is from the International Development Association (IDA) - the World Bank's concessionary lending arm - with a maturity of 25 years, including a 5-year grace period.
42. (A) Pitt's India act - 1784;
Indian Arms Act - 1878;
Ilbert Bill - 1883 - 84
43. (C) Bisphenol A, commonly abbreviated as BPA, is an organic compound with two phenol functional groups. Bisphenol A is used primarily to make a plastic which is used in making food packaging material. It is a key monomer in production of epoxy resins and used to make polycarbonate plastic. Polycarbonate plastic, which is clear and nearly shatter-proof, is used to make a variety of common products including baby and water bottles, sports equipment, medical and dental devices, dental fillings and sealants, eyeglass lenses, CDs and DVDs, and household electronics.
45. (A) The world's highest bridge "Beipanjiang Bridge" has been opened to traffic in China. The bridge soars 565 metres (1,854 feet) above a river and connects the two mountainous provinces of Yunnan and Guizhou and is expected to reduce road travel times from Liupanshui to Xuianwei from 4 hours to 2 hrs. The bridge overtook the Si Du River Bridge in the central province of Hubei to become the world's highest bridge.
47. (D) The asteroids are group of small pieces of rock revolving round the sun between the orbit of Mars and Jupiter. They are approximately 40,000 in number.
48. (C) Hepatitis-B is a potentially life-threatening liver infection caused by the hepatitis B virus. It can cause chronic liver disease and puts people at high risk of death from cirrhosis of liver and liver cancer. Hepatitis-B virus is transmitted between people by contact with blood or other body fluid.
49. (C) A fluorescent lamp or fluorescent tube is a gas discharge lamp that uses electricity to excite mercury vapour. The excited mercury atoms produce shortwave ultraviolet light that then causes a phosphor to fluoresce, producing visible light. 6500 K is usually printed on a used fluorescent tube light.
50. (D) The book "That thing called love" has been authored by Tuhin A. Sinha, the best-selling author and commentator. The book explores the trivialization of relationships in the current urban society in India. Recently, the author is in news because he has been appointed as the new spokesperson of the Mumbai unit of the Bharatiya Janata Party (BJP).
51. (C) Let the number of days required be x
ATQ,

$$\frac{10(60 + 55 + 50 + 45)}{2400} + \frac{40 \times x}{2400} = 1$$

$$\Rightarrow \frac{2100}{2400} + \frac{x}{60} = 1 \Rightarrow \frac{x}{60} = \frac{1}{8}$$

$$\Rightarrow x = 7.5 \text{ days}$$

$$\therefore \text{Required number of days} = 7.5 \text{ days}$$
52. (B) $R^3 = r_1^3 + r_2^3 + r_3^3 \Rightarrow R = \sqrt[3]{6^3 + 8^3 + 10^3}$

$$= (1728)^{\frac{1}{3}} = 12 \text{ cm}$$

$$\Rightarrow \text{Diameter (D)} = 2R = 2 \times 12 = 24 \text{ cm}$$
53. (A) $d = t \times 10$ also $d = (t - 2) \times 15$
we get, $t = 6$ hrs and $d = 60$ km
Now, $60 = 5 \times \text{speed} \Rightarrow \text{speed} = 12 \text{ km/hr}$
54. (D) Let the prices of the houses be $16x$ and $23x$
ATQ,

$$\left(16x \times \frac{110}{100}\right) : (23x + 477) = 11 : 20$$

$$\Rightarrow 16x \times \left(\frac{110}{100}\right) \times 20 = (23x + 477)11$$

$$\Rightarrow 16x \times \left(\frac{11}{10}\right) \times 20 = (23x + 477)11$$

$$\Rightarrow 16x \times 2 = 23x + 477$$

$$\Rightarrow 9x = 477$$

$$\Rightarrow x = 53$$

Original prices are $16x$ and $23x$. i.e., ₹ 848 and ₹ 1219.

$$\text{Required Difference} = 1219 - 848 = ₹ 371$$

55. (B) Part of tank filled in 4 hrs

$$= \frac{1}{4} + \frac{1}{5} + \frac{1}{4} + \frac{1}{5} = \frac{9}{10} = 90\%$$

$$\text{Time taken by A to fill 10\% part} = \frac{1}{\frac{1}{10}} = \frac{1}{4}$$

$$= \frac{2}{5} \text{ hr} = 24 \text{ min}$$

Required time = 4 hr 24 min

56. (C) Let the expenditure per student = x
ATQ,

$$60(x - 1) = 50x + 70$$

$$\Rightarrow 60x - 60 = 50x + 70$$

$$\Rightarrow x = 13$$

$$\therefore \text{Expenditure of 50 student} = 13 \times 50 = ₹ 650$$

57. (*) Require territory (distance covered in

$$\text{kms}) = \pi r^2 = \frac{22}{7} \times 135 \times 135 = 57278.5 \text{ km}^2$$

58. (B) $\sqrt{x} - \frac{1}{\sqrt{x}} = \sqrt{2} \Rightarrow x + \frac{1}{x} = 4$

$$\therefore \left(x + \frac{1}{x}\right) + \left(x^2 + \frac{1}{x^2}\right) + \left(x^4 + \frac{1}{x^4}\right)$$

$$= 4 + (4^2 - 2) + (14^2 - 2)$$

$$= 4 + 14 + 194 = 212$$

59. (D) Let the number of ₹ 1, 50 p and 10 p coins be $3x$, $4x$ and $5x$ respectively
ATQ,

$$(3x \times 1) + \left(4x \times \frac{50}{100}\right) + \left(5x \times \frac{10}{100}\right) = 187$$

$$\Rightarrow x = \frac{187}{3 + 2 + 0.5} \Rightarrow x = \frac{187}{5.5} = 34$$

$$\therefore \text{Total number of coins} = 34(3 + 4 + 5) = 34 \times 12 = 408$$

60. (C) $\frac{a+b}{b+c} = \frac{2}{4} = \frac{1}{2} \Rightarrow 2a + 2b = b + c$

$$\Rightarrow b = c - 2a$$

$$\text{Also, } \frac{b+c}{c+a} = \frac{4}{3} \Rightarrow 3b + 3c = 4c + 4a$$

$$\Rightarrow c = 3b - 4a = 3(c - 2a) - 4a$$

$$\Rightarrow c = 3c - 10a \Rightarrow c = 5a \text{ and } b = 3a$$

$$\text{Now, } 2(a + b + c) = 9 \Rightarrow 2(a + 3a + 5a) = 9$$

$$\Rightarrow a = 0.5, b = 3 \times 0.5 = 1.5 \text{ \& } c = 0.5 \times 5 = \mathbf{2.5}$$

61. (B) Required ratio = $\frac{1}{15 \times 16} : \frac{1}{16 \times 20} = 4 : 3$

62. (C) Required time = $110 \times \frac{1}{\frac{32}{6} + \frac{40}{5}}$

$$= 110 \times \frac{1}{\frac{32}{6} + \frac{40}{5}} = \frac{33}{4} \text{ hrs} = 8 \text{ hr } 15 \text{ min}$$

63. (C) Let the length of journey be d km and speed of train be s km/hr

$$\frac{d}{s+6} = t - 4 \quad \dots(i)$$

$$\text{and } \frac{d}{s-6} = t + 6 \quad \dots(ii)$$

$$\text{Also, } t = \frac{d}{s} \quad \dots(iii)$$

After subtracting equation (i) from (ii)

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

Substituting (iii) in (i) we get $s = 30$ km/hr and $d = 720$ km

\therefore length of the journey = 720 km

64. (D) Let the number of apples be 100.

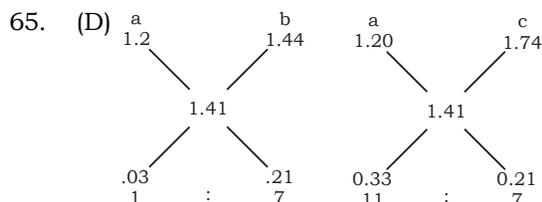
On the first day he sells 60% apples i.e., 60 apples. Remaining apples = 40.

He throws 15% of the remaining i.e., 15% of 40 = 6.

Now he has $40 - 6 = 34$ apples

The next day he throws 50% of the remaining 34 apples i.e., 17.

\therefore In total he throws $6 + 17 = 23$ apples. = 23%



$$\text{Required ratio} = (11 + 1) : 7 : 7 = 12 : 7 : 7$$

Campus
K D Campus Pvt. Ltd

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009

66. (A) 7 : 3 means it has 21 litre milk and 9 litre water as there is 30 l milk
As 40% is water then 60% should be milk.
Let x litre of water must be added
we have 60% of $(30 + x) = 21$
 $\Rightarrow x = 35 - 30 = 5$
 \therefore 5 litres of water must be added.

67. (D) The number $N = 16$ and its 5 factors are 1, 2, 4, 8, 16.
 $\Rightarrow N - 1 = 16 - 1 = 15$
Factors of 15 = 1, 3, 5, 15 $\Rightarrow X = 4$
 $\therefore N - X = 16 - 4 = 12$

68. (A) In $\triangle AOC$,
 $OA = OC$
 $\therefore \angle OAC = \angle OCA = 15^\circ$
Now, In $\triangle BOC$,
 $OB = OC$
 $\therefore \angle OBC = \angle OCB = 50^\circ$
 $\angle ACB = \angle OCB - \angle OCA$
 $\Rightarrow \angle ACB = 50 - 15 = 35^\circ$
Now, $\angle AOB = 2\angle ACB$
 $\therefore \angle AOB = 2 \times 35^\circ = 70^\circ$

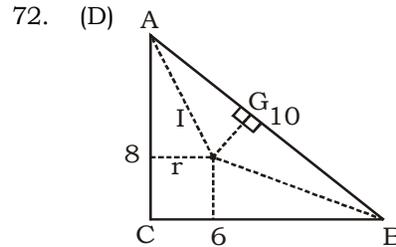
69. (C)

SP	6	6
CP	5	7

$$\text{Required loss\%} = \frac{7-6}{7} \times 100 = 14\frac{2}{7}\%$$

70. (B) Area of equilateral $\triangle(B) = \sqrt{3}$
 $\frac{\sqrt{3}}{4}a^2 = \sqrt{3} \Rightarrow a = 2$ cm
Area of Prism = Area of base \times height
 $= \sqrt{3} \times 2 = 2\sqrt{3}$ cm³

71. (C) $\frac{1}{64^{\sin\theta} \times 256^{\cos\theta}} = \frac{1}{4^{3\sin\theta} \times 4^{4\cos\theta}}$
 $= \frac{1}{4^{3\sin\theta+4\cos\theta}}$
Minimum value of $3 \sin \theta + 4 \cos \theta$
 $= \sqrt{3^2 + 4^2}$
 $\therefore \frac{1}{4^{\sqrt{3^2+4^2}}} = \frac{1}{4^5} = \frac{1}{1024}$



$$\text{In radius} = \frac{AC+BC-AB}{2}$$

$$= \frac{8+6-10}{2} = 2 \text{ cm}$$

$$\therefore \text{Area of } \triangle BIA = \frac{1}{2} \times AB \times IG$$

$$= \frac{1}{2} \times 10 \times 2 = 10 \text{ cm}^2$$

73. (C) $\therefore 100\% = 360^\circ$
 $\Rightarrow 100\% \times 40\% = 360^\circ \times 40\%$
 $\Rightarrow 40\% = 144^\circ$
 \therefore Required angle = 144°

74. (B) $\therefore 15\% = 345 \Rightarrow 1\% = 23 \Rightarrow 100\% = 2300$
 \therefore Required number of females = $\frac{2300 \times 3}{(7+3)}$
 $= \frac{2300 \times 3}{10} = 690$

75. (B) $\therefore 100\% = 360^\circ \Rightarrow \frac{100}{4}\% = \frac{360^\circ}{4}$
 $\Rightarrow 25\% = 90^\circ$
 \therefore Required angle = 90° [$\because 40\% - 15\% = 25\%$]

MEANINGS IN ALPHABETICAL ORDER

Word	Meaning in English	Meaning in Hindi
Advocate	publicly recommend or support	समर्थन करना
Centipede	a predatory myriapod invertebrate with a flattened elongated body composed of many segments bearing a single pair of legs	कनखजूरा
Conscious	aware of and responding to one's surroundings	जागरूक, सचेत
Cumbersome	large or heavy and therefore difficult to carry or use	बोझिल
Emerge	move out of or away from something and come into view	उभरना
Encounter	unexpectedly experience or be faced with	सामना करना
Epic	a long poem, typically one derived from ancient tradition, narrating the deeds and adventures of heroic or legendary figures	महाकाव्य
Fauna	the animals of a particular region, habitat, or geological period	पशुवर्ग
Flora	the plants of a particular region, habitat, or geological period	वनस्पति
Herbivorous	(of animals) eating only plants	शाकाहारी
Lunatic	mentally ill	मानसिक रूप से विकृष्ट
Lyric	word of a song	गाने के बोल
Mongrel	cross-bred dog	दो नस्ल से पैदा हुआ कुत्ता
Resemble	look or seem like	सदृश होना
Sanctions	official permission or approval for an action	मंजूरी
Sonnet	a poem of fourteen lines using any of a number of formal rhyme schemes, in English typically having ten syllables per line	चौदह पंक्तियों का लघुकाव्य



K D Campus Pvt. Ltd

2007, OUTRAM LINES, 1ST FLOOR, OPPOSITE MUKHERJEE NAGAR POLICE STATION, DELHI-110009

SSC MOCK TEST - 81 (ANSWER KEY)

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

76. (C) Change 'he will be going' into 'he went', as the sentence is in past tense.
77. (C) Change 'to be performed' into 'to perform', as the sentence shall be in active voice form.
78. (A) Change 'what to make people' into 'what makes people'.

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