## SSC MOCK TEST – 67 (SOLUTION)
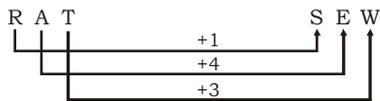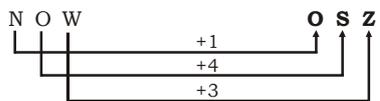
1. (D) The tadpole is a young one's of frog and frogs are amphibians. The lamb is a young one's of sheep and sheep are mammals.

2. (C) As,



Similarly,



3. (B) To drizzle is to rain slowly and to jog is to run slowly.

4. (A) All except cycle run on fuel.

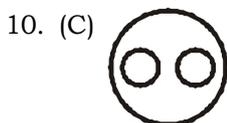5. (C) All except Turkey are countries ruled by kings.

6. (D) Except (241), rest are multiple of 3.

7. (A)
$$\begin{array}{r} 8\,9\,3 \\ -\,3\,9\,5 \\ \hline 4\,\mathbf{9}\,8 \end{array}$$

8. (C) $\dfrac{216}{11}$ remainder = 7, $\dfrac{216}{16}$ remainder = 8

   $\dfrac{216}{21}$ remainder = **6**, $\dfrac{216}{7}$ remainder = 6

9. (B) (8 × 11) + 12 = 100
   (6 × 11) + 14 = 80
   (5 × 9) + 15 = **60**
   (12 × 4) + 22 = 70

10. (C)



Father and mother are parents but they are two different entity.

11. (D) A $ B ⊛ A is the brother of B
    B * C ⊛ B is the son of C
    Hence, ⊛ A is the son of C
    C @ D ⊛ C is the wife of D
    Hence, ⊛ C is the mother of A.

12. (A) $1^2 + 1 = 2$
    $2^2 + 2 = 6$
    $6^2 + 6 = 42$
    $42^2 + 42 = \mathbf{1806}$

13. (B) 6 = 2 × 3, 15 = 3 × 5, 35 = 5 × 7, 77 = 7 × 11
    143 = 11 × 13, **221** = 13 × 17 & 323 = 17 × 19
    (continuous prime no.'s product)
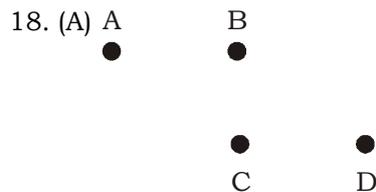
14. (C) 3 ⊛ 2 ⊛ 4 ⊛ 1

15. (C) Let Varun's age today = $x$ years.
    Then, Varun's age after 1 year = $(x + 1)$ years.
    ∴ $x + 1 = 2 (x – 12)$
    ⇒ $x + 1 = 2x – 24$ ⇒ $x = 25$
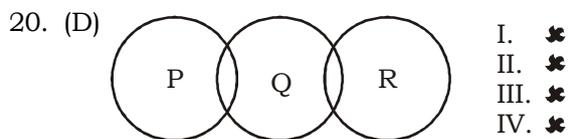    Varun's present age = 25 years

16. (D) We can't find 2 R's and 2 L's in the word SLAVOCRACIES.

17. (A) $1^2 + 3^2 = 10 ⊳ \dfrac{10}{2} = 5$, $2^2 + 4^2 = 20 ⊳ \dfrac{20}{2} = 10$

    $3^2 + 5^2 = 34 ⊳ \dfrac{34}{2} = 17$, $4^2 + 6^2 = 52 ⊳ \dfrac{52}{2} = 26$

18. (A)



∴ D's house is in the South-East direction of A.

19. (C)



20. (D)



I. ✖
II. ✖
III. ✖
IV. ✖
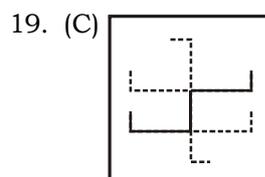
None of the four conclusions follows.

21. (D) From the figures (1) and (3), we have
    6        2        3
    ⁻opp.    ⁻opp.    ⁻opp.
    1        5        4
    Hence, 4 is opposite to 3.

22. (A)

23. (B)
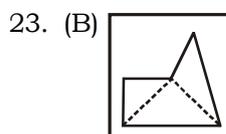


24. (C)

25. (B)

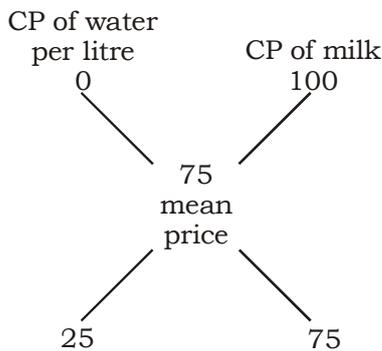26. (D) It is the Moussoleum of Muhammad Adil Shah Sur of Bijapur. This is the second largest dome in the world.

27. (A) Cellulose is a polysaccharide consisting of a linear chain of several hundred/thousands of D-Glucose molecules. Cotton fiber contain 90% cellulose, wood contain 40-50% cellulose.

29. (A) The Continent Antarctica has the highest mean elevation in the world. This is because it is covered by a thick layer of ice, about 7,100 feet (2,200 m) thick.

31. (A) Best answer is 1, 2 and 3. Because only Inter State Council is a constitutional body under article 263. So option 4 should not be included.

32. (B) King Kobra is the only snake that not only lives in holes but also builds a nest.

33. (B) In Gujarat and Maharashtra the Chief Ministers come under the ambit of Lok Ayukta Act.

34. (B) According to 73rd Amendment Act 1993, under Article 243D, not less than $1/3^{rd}$ i.e. 33% seats should be reserved for women in local bodies.

35. (A) An optical fibre is a thin, flexible, transparent fibre that acts as a waveguide or "light pipe" to transmit light between the two ends of the fibre. An optical fibre transmits light along its axis, by the process of total internal reflection. When light traveling in a dense medium hits a boundary at an angle larger than the "critical angle" for the boundary, the light will be completely reflected. This effect is used in optical fibres to confine light in the core.

36. (C) It is a tropical cyclone of north-west Australia. Willy Willy originates in the Timor sea and causes rainfall in different parts of Australia.

37. (B) Arun Goyal, a 1985 batch IAS officer of Union Territory cadre, has been appointed as the Additional Secretary in the Goods and Services Tax (GST) Council. Presently, Goyal is working as Additional Secretary in Project Monitoring Group of Cabinet Secretariat. The GST Council is mandated to decide on tax rate exempted goods and the threshold limit.

38. (D) Non-plan expenditures include non-developmental Expenditure (interest payment, Subsidies, defence expenditure, civil administration), Developmental expenditure and expenditure incurred on projects which remained unfinished in the earlier plans.

40. (C) Velavan Senthilkumar, Indian player from Chennai, has won the Under-19 Asian Junior Individual squash championship title in Kuala Lumpur, Malaysia on September 24th, 2016. He defeated Jordan's Mohammad Al-Sarraj by 12-14, 9-11, 11-6, 11-8, 11-7 to claim the title. With this, he became the 2nd Indian to win the title after Ravi Dixit in 2010.

42. (D) Air bubble in water would act as a diverging lens, because the index of refraction of air is less than that of water.

43. (A) Ergotism is the effect of long term ergot poisoning, due to ingestion of alkaloids produced by fungus Claviceps purpurea which is found in infected cereals and ryes.

44. (C) Vijay Kelkar, the former petroleum secretary, has been elected as the new President of the prestigious Indian Statistical Institute (ISI). He succeeded former RBI governor C Rangarajan. The ISI functions under the Ministry of Statistics and Programme Implementation.

46. (B) Urea is the main nitrogenous excretory product of Ureotelic animals, produced by liver cells from de-aminated excess amino-acids via the urea cycle.

47. (C) Abrasives constitute at least 50% of a typical toothpaste these insoluble particles help remove plaque from teeth, example: Aluminium hydroxide $Al(OH)_3$, Calcium Carbonate $CaCo_3$.

48. (B) Venture capital (VC) is a long term financial Capital provided to early-stage, high-potential, Growth startup companies or new companies.

49. (B) NAFTA : North American Free Trade Agreement

NATO : North Atlantic Treaty Organisation

EEC : European Economic Community

ASEAN : Association of South East Asian Nations.

NATO is military alliance.

51. (A) Let CP of milk = ₹ 100 per litre
SP of mixture = ₹ 100 per litre

Profit = $33\dfrac{1}{3}\%$

CP of mixture = $\dfrac{100 \times 100}{100 + \dfrac{100}{3}} = \dfrac{100 \times 100 \times 3}{400} = ₹\ 75$

CP of water
per litre     CP of milk
0            100
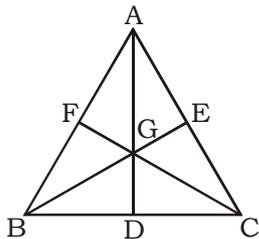
75
mean
price

25        75

∴ Required ratio = $\dfrac{25}{75}$ = $\dfrac{1}{3}$ = 1 : 3

52. (C) Unit digit of $7^{27}$ = 3
Unit digit of $3^{14}$ = 9
∴ Required difference unit digit = 1 3 – 9 = 4
         —
          carry

53. (A)

A

F   G   E

B   D   C

Sum of the length of two medians is always greater than the length of third median
(BE + CF) > AD

$\dfrac{2}{3}$ (BE + CF) > $\dfrac{2}{3}$ AD

GB + GC > GA

54. (B) Volume of tank = 50 × 44 × 0.07
= 154 $m^3$
Volume of water filled by tap in 1 hr = $\pi r^2 h$

= $\dfrac{22}{7}$ × 0.07 × 0.07 × 5000 = 77 $m^3$

∴ Required time = $\dfrac{154}{77}$ = 2 hrs = 120 min

55. (A) $2u_6 - 3u_6 + 1$
= $2(\cos^6 \theta + \sin^6 \theta) - 3(\sin^4 \theta + \cos^4 \theta) + 1$
= $2 - 6\sin^2 \theta \times \cos^2 \theta + 6\sin^2 \theta \times \cos^2 \theta - 3 + 1$
= 3 – 3 = 0

56. (B) Let the MP be 100
SP after 25% discount = 100 – 100 × 0.25 = ₹ 75
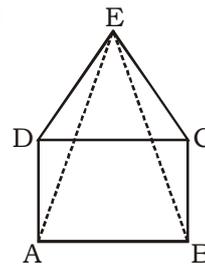
CP (as profits 25%) = 75 × $\dfrac{100}{125}$ = ₹ 60

When discount is 20% then SP = 100 – 100 × 0.2 = ₹ 80
let the gain be x% then,

60 + $\dfrac{60x}{100}$ = 80 ⊳ $\dfrac{3x}{5}$ = 20 ⊳ x = $33\dfrac{1}{3}$%

∴ Required % gain = $33\dfrac{1}{3}$%

57. (A)

E

D    C

A    B

∠ADE = 90° + 60° = 150°
∵ DE = DC = EC (equilateral Δ) ...(i)
and AD = DC = AB = BC (square) ...(ii)
In ΔADE we have
∠DEA = ∠DAE = x° (as, AD = DE)
∴ x + x + 150° = 180° ⊳ ∠DAE = x = 15°

58. (B) $2\pi r \times 560 = 11000$

⊳ 2 × $\dfrac{22}{7}$ × 560 × r = 11000

⊳ r = $\dfrac{11000 \times 7}{44 \times 560}$ = 3.125 m

59. (C) $x + y = \dfrac{\dfrac{u+v}{1-uv} + \dfrac{u-v}{1+uv}}{1 - \left(\dfrac{u+v}{1-uv} \times \dfrac{u-v}{1+uv}\right)} = \dfrac{2u}{1-u^2}$

60. (A) T = (22 + 30 + 21) = 73 days = $\dfrac{1}{5}$ yrs

SI = $\dfrac{PRT}{100}$ = $\dfrac{1820 \times 15 \times 1}{2 \times 5 \times 100}$ = ₹ 27.30

61. (A) Here 5 – 4 = 1, 6 – 5 = 1 and 7 – 6 = 1
LCM of (5, 6, 7) = 210
∴ Required no. = 210 – 1 = 209

62. (B) Let x < 90° and other angle be y
Also, x + y = 180° (Linear pair)
⊳ y = 180° – x ⊳ y > 90° (obtuse) [∵ x < 90°]

63. (B)    Let   A : B : C   be
         100   300   400
        ↓×1.05   ↓×1.1   ↓×1.15
New ratio 105    330    460 = 21 : 66 : 92

64. (A) Speed downstream = $\dfrac{15}{3\dfrac{3}{4}}$ = 4 km/hr

    Speed upstream = $\dfrac{5000 \text{ m}}{150 \text{ min}} = \dfrac{5}{2\dfrac{1}{2}}$ = 2 km/hr

    ∴ Speed of current = $\dfrac{1}{2}$ (4 – 2) = 1 km/hr

65. (A) $\dfrac{1}{1-a+a^2} - \dfrac{1}{1+a^2+a} - \dfrac{2a}{1+a^2+a^4}$

    $= \dfrac{1+a^2+a-(1+a^2-a)}{(1+a^2+a)(1+a^2-a)} - \dfrac{2a}{1+a^2+a^4}$

    $= \dfrac{1+a^2+a-1-a^2+a}{(1+a^2)^2-a^2} - \dfrac{2a}{1+a^4+a^2}$

    $= \dfrac{2a}{1+a^4+a^2} - \dfrac{2a}{1+a^4+a^2} = 0$

66. (B) $6^{12} = 2^{12} \times 3^{12}$, $35^{28} = 5^{28} \times 7^{28}$, $15^{16} = 3^{16} \times 5^{16}$
    $14^{12} = 2^{12} \times 7^{12}$, $21^{11} = 3^{11} \times 7^{11}$

    So, $\dfrac{6^{12} \times 35^{28} \times 15^{16}}{14^{12} \times 21^{11}} = \dfrac{2^{12} \cdot 3^{12} \cdot 5^{28} \cdot 7^{28} \cdot 3^{16} \cdot 5^{16}}{2^{12} \cdot 7^{12} \cdot 3^{12} \cdot 3^{11} \cdot 7^{11}}$

    $= 3^{17} \times 5^{44} \times 7^5$

    ∴ Req. no. of prime factors = 17 + 44 + 5 = 66

67. (A) As we know that,

    $\dfrac{a}{\sin A} = \dfrac{b}{\sin B} = \dfrac{c}{\sin C}$ = k

    then, ⊳ a = k sin A, b = k sin B, c = k sin C

    $(b^2 - c^2)\dfrac{\cos A}{\sin A} + (c^2 - a^2)\dfrac{\cos B}{\sin B} + (a^2 - b^2)\dfrac{\cos C}{\sin C}$

    $= (b^2 - c^2)\left(\dfrac{b^2+c^2-a^2}{2bc}\right)\left(\dfrac{k}{a}\right) + (c^2 - a^2)$

    $\left(\dfrac{c^2+a^2-b^2}{2ac}\right)\left(\dfrac{k}{b}\right) + (a^2 - b^2)\left(\dfrac{a^2+b^2-c^2}{2ab}\right)\left(\dfrac{k}{c}\right)$

    $= \dfrac{k}{2abc} \times 0 = 0$

68. (D) Let the initial fraction be *x*.

    $\dfrac{5}{2} = \dfrac{x \times 1.20}{0.95}$ ⊳ $x = \dfrac{5}{2} \times \dfrac{19}{24} = \dfrac{95}{48}$

    ∴ Initial fraction = $\dfrac{95}{48}$

69. (B) Put *x* = 1
    $P^2 (P^2 + 1) = P (P^3 + P) = P^4 + P^2 = P^4 + P^2$
    Now, put *x* = – 1
    $P^{-2} (P^2 + 1) = (P^{-3} + P^{-1}) P$
    ⊳ $P^0 + P^{-2} = P^{-2} + P^0$
    Hence, *x* = ±1

70. (B) No. of turns required, if both P and Q are

    used = $\dfrac{60}{1+\dfrac{1}{3}}$ = 60 × $\dfrac{3}{4}$ = 45 turns

71. (C) Prime numbers between 1 to 100 are
    2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
    Their sum = 1060

    ∴ Avg. = $\dfrac{1060}{25}$ = 42.4

72. (C) Required ratio = $\dfrac{\text{Volume of hemisphere}}{\text{Volume of cylinder}}$

    $= \dfrac{2}{3} \text{pr}^3 : \text{pr}^2\text{h} = \dfrac{2}{3}\text{pr}^3 : \text{pr}^3 = 2 : 3$

73. (C) Required percentage

    $= \left(\dfrac{81}{72+79+248+210+404}\right) \times 100\%$

    $= \left(\dfrac{81}{1013}\right) \times 100\% = 7.99\% = 8\%$ approx

74. (C)

| **Vehicles** | **% Increment** |
|---|---|
| Two wheeler | $\dfrac{7}{404}$ × 100% = 1.73% |
| Jeep | $\dfrac{31}{210}$ × 100% = 14.76% |
| Light comm. vehicle | $\dfrac{14}{79}$ × 100% = 17.72% |
| Cars | $\dfrac{32}{248}$ × 100 = 12.90% |

75. (A) In this question, by referring the table chart, first we need to calculate the increase(in percentage) in sale of Heavy Vehicle in 1994 over 1993
    Heavy Vehicle sold in 1993 = 81
    Heavy Vehicle sold in 1993 = 107
    Increase = 107 – 81 = 26
    Now, we need to find 26 is what percent of 81 ?

    $\left(\dfrac{26}{81} \times 100\right)\% = 32.09\%$

    $\dfrac{132.09}{100}$ × 107 = 141.33 = 141 (approx)

# MEANINGS IN ALPHABETICAL ORDER

| Word | Meaning in English | Meaning in Hindi |
| --- | --- | --- |
| Inveterate | having a particular habit long-established and unlikely to change. | अभ्यस्त, आदी |
| Garish | obtrusively bright and showy | भड़कीला |
| Desultory | lacking a plan, purpose, or enthusiasm. | अनियमित |
| Duplicity | deceitfulness; double-dealing. | कपट, छल |
| Putrid | decaying or rotting and emitting a fetid smell. | सड़ा हुआ, बदबूदार |
| Mischievous | Naughty; misbehaving | शरारतपूर्ण |
| Voluptuous | of or relating to luxury or sensual pleasure | कामुक |
| Perceptible | able to be seen or noticed | प्रत्यक्ष, दिखने योग्य |
| Fatalist | one who believes in fate and inevitable | वह जो भाग्य में भरोसा करता है |
| Fanatic | a person who is extremely enthusiastic about something | कट्टर |
| Philogymist | one who shows fondness to women | स्त्रीप्रेमी |
| Genuine | truly what something is said to be; authentic. | विशुद्ध, सच्चा |
| Absenteeism | the practice of regularly staying away from work without good reason | कार्य से अनुपस्थित होना |
| Retaliation | the action of doing something in return | प्रतिकार |
| Grip | to grasp or to take hold of | नियंत्रण में लेना |
| intractable | hard to control or deal with | कठिन, सख्त |

# SSC MOCK TEST - 67 (ANSWER KEY)

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

76. (B) Replace 'insure' by 'ensure'. Insure means 'to buy insurance for' and 'ensure' means 'to make sure on certain'.

77. (*) 'Type' being singular takes singular verb 'depends'. Read 'acquired' into 'acquire'.

78. (B) 'Comprise' doesn't take 'of' in active voice.

92. (B) 'Yet' denotes that the sentence should be in present perfect tense.

*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*