Answer-key & Solution

SSC JE (Civil)
MOCK -(116)
Date 23/ 9/ 2017

1. B	26. B	51. C	76. A	101. D	126. A	151. C	176. C
2. A	27. D	52. C	77. B	102. B	127. C	152. D	177. B
3. B	28. D	53. C	78. C	103. B	128. B	153. A	178. B
4. B	29. D	54. A	79. C	104. B	129. B	154. D	179. B
5. A	30. B	55. B	80. D	105. A	130. B	155. D	180. B
6. A	31. D	56. C	81. D	106. B	131. C	156. B	181. C
7. B	32. B	57. B	82. B	107. C	132. A	157. B	182. C
8. C	33. C	58. B	83. D	108. D	133. B	158. B	183. C
9. B	34. D	59. C	84. B	109. C	134. A	159. A	184. A
10. C	35. B	60. B	85. A	110. C	135. B	160. C	185. A
11. C	36. B	61. B	86. B	111. A	136. D	161. C	186. C
12. A	37. A	62. B	87. A	112. A	137. C	162. C	187. C
13. A	38. A	63. D	88. B	113. C	138. C	163. B	188. A
14. D	39. A	64. D	89. A	114. C	139. A	164. A	189. A
15. D	40. A	65. B	90. C	115. A	140. C	165. B	190. C
16. B	41. A	66. B	91. D	116. A	141. D	166. B	191. C
17. B	42. D	67. B	92. A	117. C	142. C	167. D	192. A
18. B	43. B	68. C	93. B	118. C	143. C	168. C	193. A
19. C	44. B	69. D	94. B	119. D	144. A	169. A	194. B
20. C	45. A	70. C	95. D	120. B	145. A	170. C	195. C
21. C	46. D	71. B	96. C	121. B	146. C	171. A	196. B
22. A	47. B	72. C	97. B	122. C	147. B	172. D	197. D
23. C	48. C	73. C	98. C	123. C	148. A	173. A	198. C
24. C	49. D	74. D	99. D	124. B	149. C	174. A	199. B
25. B	50. C	75. D	100. C	125. A	150. C	175. B	200. B

Note : *If your opinion differ regarding any answer, please message the mock test and Question number to 9560620353*

Note : *If you face any problem regarding result or marks scored, please contact : 9313111777*

SOLUTION SSC JE (Civil) MOCK TEST no. 116

1. (B) Drum is beated and piano is played.
2. (A) Frog is an amphibian and snake is a reptile.
3. (B) Rice comes under cereals and tea comes under Beverage.
4. (B) Spoon is used to feed and Broom is used to Sweep.
5. (A) $5 = 5 \times 4 \times 3 \times 2 \times 1 = 120$
   $7 = 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 = $ **5040**
6. (A) Odometer is used to measure the speed of a vehicle and seismograph is used to measure earth quake.
7. (B)

$$\text{A \quad C \quad F \quad J \quad M \quad O \quad R \quad V}$$
$$+2 \quad +3 \quad +4 \qquad +2 \quad +3 \quad +4$$
with +3 between J and M

$$\text{D \quad F \quad I \quad M \quad P \quad R \quad U \quad Y}$$
$$+2 \quad +3 \quad +4 \qquad +2 \quad +3 \quad +4$$
with +3 between M and P

8. (C) Furniture is made of woods and ornaments is made of Gold.
9. (B) $11 \xrightarrow{\times 13} 143$ (Next prime number after 11) $\quad 13 \xrightarrow{\times 17} 221$ (Next prime number after 13)
10. (C) A group of soldiers is 'Barrack' and a group of singers is 'Chorus'.
11. (C) All except 'Defence' are forms of attack.
12. (A) Except (A), In all the second is eaten by the first.
13. (A) 3 is a prime number.
14. (D) Parsley, Basil, Dill are types of herbs. 'Mayonnaise' is not a herb.
15. (D) Except 'Punctuation', rest are parts of speech.
16. (B) All except 'Roof' are animal's shelter.
17. (B) Brass is an alloy whereas others are metals.
18. (B) An ounce measures weight and the other choices measure length.
19. (C) All except letter 'C' can be drawn with the help of lines.
20. (C) Except 'Bay', all are landforms.
21. (C) $36 \quad 54 \quad 18 \quad 27 \quad 9 \quad$ **13.5**
    $\times 1.5 \quad \div 3 \quad \times 1.5 \quad \div 3 \quad \times 1.5$
22. (A) a a **a** / b b b / **c** c c / a a b / **b** b c / **c** c a
23. (C) $1, 5, 5, 9, \quad 7, 11, 11, 15, \quad$ **12**, 17, 17, 21
    (+0, +8, +9)
24. (C) S**W**ORD
25. (B) $52 + 17 + 12 + 8 = 89$
    $61 + 24 + 33 + 49 = 167$
    $121 + 61 + 33 + 15 = $ **230**

26. (B) $3 \quad 8 \quad 10 \quad 2 \quad \mathbf{5} \quad 1$
    $\times(3-1) \quad \times(8-1) \quad \times(10-1) \quad \times(2-1) \quad \times(3-1) \quad \times(1-1)$
    $6 \quad 56 \quad 90 \quad 2 \quad 20 \quad 0$
27. (D) $\dfrac{3 \times 8 \times 4}{2} = \dfrac{96}{2} = 48$

    $\dfrac{5 \times 7 \times 2}{2} = \dfrac{70}{2} = $ **35**
28. (D) $3, \dfrac{1}{3}, 14, \dfrac{1}{14}, 25, \dfrac{1}{25}, $ **36**
    (+11, Reciprocal)
29. (D) $\dfrac{2}{17}, \dfrac{4}{19}, \dfrac{7}{22}, \dfrac{11}{26}, \mathbf{\dfrac{16}{31}}$
    (+2, +3, +4, +5 numerator; +2, +3, +4, +5 denominator)
30. (B) $2.1 \quad 5.2 \quad 8.4 \quad 11.7 \quad 15.1 \quad$ **18.6**
    $+3.1 \quad +3.2 \quad +3.3 \quad +3.4 \quad +3.5$
31. (D) $11\dfrac{1}{9}, \quad 12\dfrac{1}{2}, \quad 14\dfrac{2}{7}, \quad 16\dfrac{2}{3}, \quad$ **20**

    $\dfrac{100}{9} \quad \dfrac{25}{2} = \dfrac{100}{8} \quad \dfrac{100}{7} \quad \dfrac{50}{3} = \dfrac{100}{6} \quad \dfrac{100}{5}$
    (-1 denominator)
36. (B) At 10 o'clock difference between minute and hour hand = 50 minutes and for the meeting of both the hands, minute hand has to travel 50 minutes more.

    $\therefore$ Time spent $= \dfrac{50 \times 12}{11} = \dfrac{600}{11}$

    $= 54\dfrac{6}{11}$ minutes

    So, the time at which both the hands coincide with each other $= 10 + 54\dfrac{6}{11}$

    $= 10 : 54\dfrac{6}{11}$
37. (A) $112 \times 4 \div 1 - 8 + 2$
    After changing the signs we have,
    $112 + 4 - 1 \times 8 \div 2$
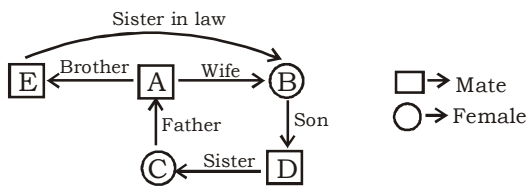 $= 112 + 4 - 1 \times 4$
    $= 112 + 4 - 4$
    $= 112$
38. (A) Z Ⓨ X Ⓦ V Ⓤ T Ⓢ R Ⓠ P Ⓞ N Ⓜ L Ⓚ J Ⓘ H Ⓖ F Ⓔ D Ⓒ B Ⓐ
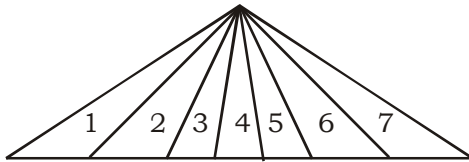   After removing every second letter.

ZXVTRP(N)LIHFDB
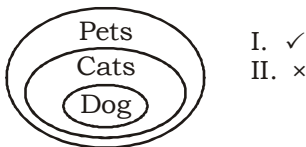6 letters ← middle → 6 letters

39. (A)

40. (A)

Number of triangles at base = $n = 7$

∴ Total number of triangles in given figure

$$= \frac{n(n+1)}{2} = \frac{7 \times 8}{2} = 28$$

41. (A)

I. ✓
II. ✗

42. (D) Health will be better or not can't be concluded from the given statement and we know warning is given at the time when we feel that it is needed. So neither conclusion I nor II follows.

43. (B) In English alphabet, we have 15 letters which can be written through lines.
A, E, F, J, I, K, L, M, N, T, V, W, X, Y, X,

44. (B) $n(H) = 34$, $n(E) = 25$, $n(H \cup E) = 50$

$n(H \cap E) = n(H) + n(E) - n(H \cup E)$
$= 34 + 25 - 50$
$= 9$

47. (B)

51. (C) Ashoka also known as Ashoka the Great, was an Indian emperor of the Maurya Dynasty. Ashoka means 'Painless, without sorrow'. In his edicts, he is referred to as 'Devanampriya beloved of the Gods' and Priyadarsin who regards everyone with affection.

• Samudragupta was the ruler of Gupta Empire and successor to Chandragupta I. The coins issued by him bearing the epithets like Parakramah (valour), Kritantaparashu (deadly battle axe) and Vyaghra Parakramah (valourous tiger) prove his being a skilful warrior.

• Chandragupta II was also called Vikramaditya, powerful emperor of Northern India.

• Skandagupta ascended the Gupta throne and assumed the title of Kramaditya Vikramaditya.

52. (C) The Supreme Court Judgment in the case of Namit Sharma V/s Union of India has brought the whole RTI mechanism in the country to a standstill.

• RTI 2005 came into force on 12th October, 2005. The Act was extended to the whole India except the state of J&K. It includes the right to inspect works, documents, records, take notes, extracts or certified copy of documents or records, take certified samples of material etc.

53. (C) Article 243 I of the Indian Constitution prescribes that the Governor of a state shall, as soon as may be within one year from the commencement of the Constitution (73rd A) Act, 1992 and thereafter at the expiration of every fifth year constitute a Finance Commission to review the financial position of the Panchayats and to make recommendations to the Governor as to the distribution between the State and the Panchayats of the net proceeds of the taxes, duties, tolls and fees leviable by the state etc.

In the options given (R) is not the correct explanation of (A): As, Union Finance Commission make recommendation to president as to the measures needed to augment the Consolidated Fund of a State to supplement the resources of the panchayats and municipalities in the state on the basis of the recommendations made by the Finance Commission of the state mentioned in Article 280 of the Constitution.

56. (C) The pollutants generated by the cigarette arise from the chemical process of burning organic matter. Combustion of tobacco, paper and gases, emitted by the cigarette are benzene and carbon monoxide (CO) which are invisible to the eye. These particles enter deep into the lungs where they can cause serious health problems.

57. (B) Kidney stones are made up of a compound called Calcium Oxalate and are the result of an accumulation of dissolved minerals

on the inner lining of the kidneys. These deposits can grow to the size of a golf ball while maintaining a sharp, crystalline structure. Calcium and vitamin D supplements could increase the risk of developing kidney stones because they raise levels of calcium in the blood and urine.

58. (B) Union Government in the fourth week of December 2014 decided to launch 'Operation all out' against Bodo militants in Assam. This decision was to review the security situation in Assam after National Democratic Front of Bodoland (NDFB) militants on 23rd December 2014 massacred at least 81 tribal people in two districts of Assam, Kokrajhar and Somitpur. The two tier armed operation was carried by Indian Army and Arunachal Pradesh border to plush out militants of the NDFB.

59. (C) List of books written by A.P.J. Abdul Kalam are, Development in Fluid Mechanics and Space Technology 1988, India 2020: A vision for the new Millennium 1998, Envisioning and empowered Nation, You are born to Blossom, Target 3 Billion 2011, The family and the Nation 2008, A Manifesto for Change: A Sequel to India 2020, Reignited: Scientific Pathways to a Brighter Future 2015, Transcendence My Spiritual experiences with Pramukh Swamiji 2015, My Journey; Transforming Dreams into Actions 2013, Indomitable Spirit, Ignited Minds: Unleashing the Power within India 2002, The Luminous Sparks. 2004, Mission India, 2005, Inspiring Thoughts 2007, Forge your future: Candid, Forthright, Inspiring 2014, Turing point: A journey through Challenges 2012.
• Two Years at months and Twenty at Night by Salman Rushdie
• My country My life by L.K Advani

60. (B) The teachings of Buddha are preserved in the Pali Canon. The sources of Pali are the Tipitaka, the sub commentaries called the Atthakatha, Tika and others such as Anu- tika, Madhu-Tika etc.

61. (B) **Deepavali Declaration (31 Oct, 1929)**: Sir John Simon recommended a conference of Representatives of both British India & the Indian states to take a final decision on the question of Constitutional reforms for India. The suggestion was accepted by the British Cabinet and subsequently Lord Irwin made this statement. According to this declaration, the objective of British policy was to grant dominion status to India and a Round Table conference would be held in London after the Simon commission had reported.

62. (B) The early Rig Vedic Arya tribes were predominantly pastoral. The importance of cattle to these people can be gauged from one hymn, 28 Mandala V1 of the Rig Veda. The is a hymn composed in praise of cows.

63. (D) In 1944 'Gandhian Plan' was given by Shriman Narayan Agarwal. Also known as Gandhian Plan of economic development it allowed limited role for modern Industry.
• In 1945, 'People plan' was given by M.N Roy.
• In 1950, 'Sarvodaya Plan' was given by J.P Narayan.

64. (D) The nick name of Korea in English is "The land of the Morning calm". This was coined by Percival Lowell in his book, "chosen the land of the Morning Calm" published in 1885.

65. (B) The Eleventh Schedule of the Constitution of India contains matters on which the Panchayats may be devolved with powers and responsibility by the State Legislatures by law. The Eleventh Schedule was added to the Constitution by the 73rd Amendment Act which came into force on 24th April 1992. Currently, there are 29 entries in the Eleventh Schedule.

67. (B) The Indian subcontinent has a history of devastating earthquakes. The major reason for high frequency and intensity of the earthquakes is that the Indian plate is driving into Asia. The earthquake zoning map of India divides India into 4 seismic Zones; Zone II, III, IV and V. Zone V expects the highest level of seismicity whereas zone II is associated with the lowest level of seismicity.
• Hyderabad comes under zone II and not I.

68. (C) Satyamev Jayate literal meaning "Truth Alone triumphs" is taken from Mundak Upanishad. Upon Independence of India, it was adopted as the national motto of India. It is inscribed in Devanagari script at the base of the National Emblem. The emblem and the words " Satyameva Jayate" are inscribed on one side of all Indian currencies. The emblem is an adaptation of the Lion Capital of Ashoka which was created around 250 BC at Sarnath, near Varanasi in north Indian state of UP.

69. (D) Light appears to travel in a straight line because of reflection, which is a process in which light enters a prism and bends.

70. (C) In 1969, the Indian Government nationalised 14 major private banks.

71. (B) Fundamental Rights is a charter of rights contained in the Constitution of India. Total 8 Fundamental Rights have been recognised by the Constitution. Right to equality is an important right provided under articles 14 to 18 of the Constitution.

72. (C) The most important factor contributing to the loss of vulture population in India is due to Diclofenac drug which is an anti-inflammatory drug administered to livestock. It is used to treat the symptoms of inflammations, fever or pain associated with disease or wounds. The drug is fatal to vultures. They are exposed to this drug if they eat carcass of an animal.

73. (C) NDP = GDP– Depreciation
     If the net factor income from abroad is positive then NNP will be more than NDP, If the net factor income from abroad is negative then NNP will be less than NDP and it would be equal when net factor income from abroad is zero.
     Therefore, NNP= NDP + NFIA
     NNP = Net National Product
     NDP = Net Domestic Product
     NFIA = Net factor Income from abroad

76. (A) Special economic zone (SEZ) was announced in April 2000 with the objective of making the SEZ an engine for economic growth supported by quality infrastructure and an attractive fiscal package both at the Central and State level.

77. (B) Semiconductors are the elements which lie in between metals and non-metal. Semi-Conductors act as non-metals at low temperature where the electrons are trapped within the atom. As the temperature of the semi-conductor increases, the electrons in the valence band gain sufficient energy to escape from the confines of their atom. As a result, in higher temperature, a semi-conductor valence electrons become free and equal to the conduction. As a result resistivity decreases.

79. (C) Sunn hemp originated in India where it has been grown since the dawn of agriculture. It has been utilized as a green manure, livestock feed, and as a non-wood fiber crop. It has also been grown in Brazil and Bangladesh as a soil-improving crop.

81. (D) Teeth - Calcium Phosphate
     Bhopal Gas Tragedy-Methyl Isocyanate
     Acid Rain - Sulphur dioxide and Nitrogen Oxide

82. (B) Cholecalciferol (toxiferol) or Vitamin D3 is one of the five forms of Vitamin D.

86. (B) The Shadow Banking system is a term for the collection of non-bank financial intermediaries that provide services similar to traditional commercial banks.

88. (B) Xeric condition refers to dry environment i.e containing little moisture.

87. (A) Orobanche are aggressive root parasitic weeds, which attack strategic food crops such as legumes and vegetables and threaten the livelihood of many nations. Plants that it parasitizes are tomato, eggplant, potato, cabbage, sunflower, beans etc.

92. (A) An Ice Core is a core sample that is typically removed from an ice sheet most commonly from the polar ice caps of Antarctica, Greenland or from high mountain glaciers elsewhere. As the ice forms from the incremental buildup of annual layer of snow, lower layer are older than upper, and an ice core contains ice which is formed over a range of year. The properties of the ice and the recrystallized clarification needed inclusions within the ice and can then be used to reconstruct a climate record over the age range of the core normally through isotopic analysis. This enables the reconstruction of local temperature records and the history of atmospheric compositions

95. (D) Sarkaria Commission was set up in June 1983 by the Central Government of India. The Sarkaria Commissions charter was to examine the relationship and balance of power between state and central government in the country and suggest changes within the framework of Constitution of India. The commission was so named as it was headed by Justice Rajinder Singh Sarkaria a retired Judge of the Supreme Court of India. The other two members of the committee were Dr. S.R. Sen and B. Sivaraman.

96. (C) Nitrogen gas is used for inflating the tyres of Aeroplanes because ordinary air contains a small amount of water vapour, which in cold weather condenses out slightly reducing the tire pressure. So due to the nitrogen tires will last longer.

99. (D) Ultimate Frisbee is a limited contact team field sport played with a flying disc usually called the disc or Frisbee.

119. (D) R.L. of B = R.L. of A + BS. on A + F.S on B

$$= 100.00 + 2.455 + 2.745 \text{ m}$$
$$= 105.20 \text{ m}$$

144. (A) $C_C = \dfrac{D_{30}^2}{D_{60} \times D_{10}}$ and $C_u = \dfrac{D_{60}}{D_{10}}$

$$\dfrac{D_{30}}{D_{10}} = \sqrt{C_u \times C_C} = \sqrt{1 \times 4} = 2$$

145. (A) $V = n\, V_S$

V_S (seepage velocity) $= \dfrac{v}{n}$

$$= \dfrac{v(1+e)}{n}$$

$$= \dfrac{6 \times 10^{-7}(1+0.5)}{0.5}$$

$$= 6 \times 10^{-7} \times 3$$
$$= 18 \times 10^{-7} \text{ m/sec}$$

174. (A) Rankine load P_R is given by

$$\dfrac{1}{P_R} = \dfrac{1}{P_C} + \dfrac{1}{P_E}$$

$$P_R = \dfrac{P_C \times P_E}{P_C + P_E}$$

$$= \dfrac{1500 \times 1000}{1500 + 1000} = 600 KN$$

175. (B) $P = \dfrac{2\pi NT}{60}$ $P \propto T$ and $T \propto (D)^3$

than $P \propto D^3$

$$\dfrac{P_1}{P_2} = \left(\dfrac{D_1}{D_2}\right)^3$$

given $D_1 = 2D_2$

$$\dfrac{P_1}{P_2} = \dfrac{8D_1^3}{D_2^3} \quad or \quad P_1 = 8P_2$$

186. (C) Axial force, shearforce and Bending moment.