



KD Campus Pvt. Ltd

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

Answer-key & Solution

SSC JE (Mechanical)
MOCK -(113)
Date 03.9.2017

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

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 (Mechanical) MOCK TEST no. 113

1. (C) $\begin{array}{c} 2+25=27 \\ \downarrow \\ A \quad B \quad Z \quad X \\ \uparrow \\ 1+26=27 \end{array} \quad \begin{array}{c} 4+23=27 \\ \downarrow \\ C \quad D \quad X \quad W \\ \uparrow \\ 3+24=27 \end{array}$
2. (C) Flesh of 'Sheep' is called 'Mutton'. Similarly Flesh of 'Deer' is called 'Vension'.
3. (A) Cobbler works on leather. Similarly Tailor works on cloth.
4. (C) $\begin{array}{cccccccc} 1 & 2 & 3 & 4 & 5 & 6 & & 2 & 3 & 4 & 5 & 6 & 1 \\ S & O & C & I & A & L & : & O & C & I & A & L & S \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \end{array}$
- Similarly,
- $\begin{array}{cccccccc} 1 & 2 & 3 & 4 & 5 & 6 & & 2 & 3 & 4 & 5 & 6 & 1 \\ D & R & I & V & E & N & : & R & I & V & E & N & D \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \end{array}$
5. (B) $11 \times 11 = 121 + 11 = 132$
 $9 \times 9 = 81 + 9 = 90$
6. (A) $\frac{1}{9} : \frac{1}{81} = \frac{1}{13} : \frac{1}{169}$
 $\times 9 \quad \times 13$
7. (B) Malayalam is a language whereas the rest three are something in written form.
8. (A) $\begin{array}{ccc} 13 & 9 & 7 & 5 \\ M & I & G & E \\ \downarrow & \downarrow & \downarrow & \\ -4 & -2 & -2 & \end{array} \quad \begin{array}{ccc} 24 & 20 & 17 & 15 \\ X & T & Q & O \\ \downarrow & \downarrow & \downarrow & \\ -4 & -3 & -2 & \end{array}$
- $\begin{array}{ccc} 18 & 14 & 11 & 9 \\ R & N & K & I \\ \downarrow & \downarrow & \downarrow & \\ -4 & -3 & -2 & \end{array} \quad \begin{array}{ccc} 8 & 4 & 1 & 25 \\ H & D & A & Y \\ \downarrow & \downarrow & \downarrow & \\ -4 & -3 & -2 & \end{array}$
9. (A) 42 is not divisible by 4.
10. (A) Year 2012 is a leap year whereas the rest are not leap years.
11. (C) Cylinder is a 3-D figure
12. (B) Submarine runs below the water while the rest on the water.
13. (C) $4 \rightarrow 2 \rightarrow 3 \rightarrow 5 \rightarrow 1$
14. (A) $3 \rightarrow 1 \rightarrow 2 \rightarrow 4$
15. (B) $\begin{array}{c} A \quad C \quad E \quad B \quad D \quad F \\ \uparrow \quad \uparrow \quad \uparrow \\ +1 \quad +1 \quad +1 \\ \uparrow \quad \uparrow \quad \uparrow \\ C \quad E \quad G \quad D \quad F \quad H \\ \uparrow \quad \uparrow \quad \uparrow \\ +1 \quad +1 \quad +1 \end{array}$
16. (B) $\begin{array}{c} +3 \quad +3 \quad +3 \\ \downarrow \quad \downarrow \quad \downarrow \\ A \quad B \quad C \quad P \quad Q \quad R \quad D \quad E \quad F \quad S \quad T \quad U \quad G \quad H \quad I \\ \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \\ +3 \quad +3 \quad +3 \end{array}$

17. (C) $2, 3, 5, 9, 17, 33$
 $\times 2-1 \quad \times 2-1 \quad \times 2-1 \quad \times 2-1 \quad \times 2-1$
18. (B) $7, 12, 22, 42, 82, 162$
 $\times 2-2 \quad \times 2-2 \quad \times 2-2 \quad \times 2-2 \quad \times 2-2$
19. (D)
20. (A) $9 \times 8 \times 3 = 216$
 $6 \times 30 \times 5 = 900$
 $7 \times 3 \times 8 = 168$
21. (B) $4, 10, 28, 82, 244, 730$
 $\times 3-2 \quad \times 3-2 \quad \times 3-2 \quad \times 3-2 \quad \times 3-2$
22. (C) 10000, 11000, 9900, 10890, 9801, 10781
[Current No. +(No. after excluding last digit)]
 $10000 + 1000 = 11000, 9900 + 990 = 10890$
 $9801 + 980 = 10781$
23. (D) $4, 8, 28, 80, 244, 728$
 $\times 3-4 \quad \times 3+4 \quad \times 3-4 \quad \times 3+4 \quad \times 3-4$
24. (A) 165, 195, 255, 285, 345, 375
 $+30 \quad +60 \quad +30 \quad +60 \quad +30$
25. (B) $a \ b / a \ b / a \ b / a \ b / a \ b / a \ b$
26. (D)
- '+ ' denotes female
27. (A) m o p n / m o p n / m o p n / m o p n
28. (C) $E^+ \xrightarrow{\text{Brother}} N \xrightarrow{\text{Brother}} M^+ \xrightarrow{\text{Brother}} D$
(Here '+' denotes the male)
29. (A) $B \ M \ O \quad E \ O \ O \quad H \ Q \ S \quad K \ S \ U$
 $\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$
 $+2 \quad +2 \quad +2 \quad +2 \quad +2 \quad +2$
 $\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$
 $+3 \quad +3 \quad +3 \quad +3 \quad +3$
30. (A) One letter is omitted from left end to form the next word. Then after one letter is omitted from the right end to form next word.
31. (B)

Word	Position as per English Alphabet
M	13 $\xrightarrow{+6}$ 19
A	1 $\xrightarrow{+6}$ 7
C	3 $\xrightarrow{+6}$ 9
H	8 $\xrightarrow{+6}$ 14
I	9 $\xrightarrow{+6}$ 15

N 14 $\xrightarrow{+6}$ 20
E 5 $\xrightarrow{+6}$ 11

Similarly,

D 4 $\xrightarrow{+6}$ **10**
A 1 $\xrightarrow{+6}$ **7**
N 14 $\xrightarrow{+6}$ **20**
G 7 $\xrightarrow{+6}$ **13**
E 5 $\xrightarrow{+6}$ **11**
R 18 $\xrightarrow{+6}$ **24**

32. (B)

N	O	I	D	A
↓	↓	↓	↓	↓
3	9	6	5	8

I	N	D	I	A
↓	↓	↓	↓	↓
6	3	5	6	8

33. (D) Letters Position as per alphabet
(Last to beginning)

Z	1
I	18
P	11
A	26
V	5
ZIP = 1×18×11 = 198	(Given)
ZAP = 1×26×11 = 286	(Given)
VIP = 5×18×11 = 990	

34. (D) TEACHER VGCEJGT

Similarly,

CHILDREN **EJKNFTGP**

35. (C) From Dice (3) and (4)

1 4 5 (in clockwise direction)

↓ ↓

1 3 6 (in clockwise direction)

So, 2 is at the bottom of the dice when the top is 1.

36. (C)

G	O	L	D
↓+1	↓+0	↓+1	↓+1
H	O	M	E
↓+1	↓+0	↓+1	↓+1
C	O	R	D
↓+1	↓+0	↓+1	↓+1
D	O	S	E

C	O	M	E
↓+1	↓+0	↓+1	↓+0
D	O	N	E
↓+1	↓+0	↓+1	↓+0
S	O	N	S
↓+1	↓+0	↓+1	↓+0
T	O	O	S

37. (B)

Word	Position as per English alphabet
R	18 $\xrightarrow{+2}$ 20
E	5 $\xrightarrow{+2}$ 7
D	4 $\xrightarrow{+2}$ 6

 → **6720**

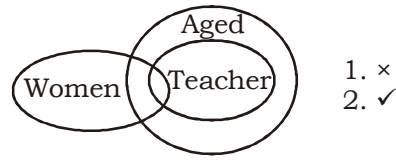
G	7 $\xrightarrow{+2}$ 9
R	18 $\xrightarrow{+2}$ 20
E	5 $\xrightarrow{+2}$ 7
E	5 $\xrightarrow{+2}$ 7
N	14 $\xrightarrow{+2}$ 16

 → **1677209**

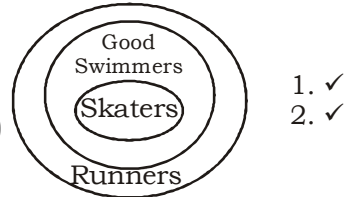
38. (D)

39. (C)

40. (B)



41. (C)



42. (A) 'Aves' (Birds) & Mammals (including man) come in Animal Kingdom.

51. (C) Human Development Index (HDI) is a tool developed by the United Nations to measure and rank countries' levels of social and economic development based on four criteria : Life expectancy at birth, mean years of schooling, expected years of schooling and gross national income per capita. The HDI makes it possible to track changes in development levels over time and to compare development levels in different countries.

52. (B) The term Gilt-edged means 'of the best quality'. It is the market in government securities or the securities guaranteed by the government. The former include securities of the Government of India of the state governments; the latter are securities issued by local authorities (like corporations, municipalities and port trusts) and autonomous government undertakings like state electricity board, development etc.

53. (C) Jawaharlal Nehru proposed to make panchsheel which enshrines the first India-China agreement in 1954 as the Five Principles of peaceful co-existence.

55. (D) Womesh Chandra Banerjee was the first president of Indian National Congress (INC). It was founded in 1885. The first session of INC was held in Bombay in December 1885. Retired British ICS officer AO Hume played a key role in the formation of INC.

56. (D) Durand cup is associated with football. It was first held in 1888 and co-hosted by the Durand football Tournament Society (DFTS).

57. (A) Devaluation refers to a decrease in a currency's value with respect to other currencies. A currency is considered

- devalued when it loses value relative to other currencies in the foreign exchange market.
60. (A) Direct Action Day (16th Aug 1946) also known as Calcutta Riots, was manslaughter between Hindus and Muslims in the city of Kolkata in the Bengal province of British India. The Direct Action day was announced by the Muslim league council to show the strength of Muslims feelings both to British and Congress because they felt that it will result in the communal riots.
61. (C) The Indian rupee is a blend of the Devanagari 'Ra' and Roman 'R'. The new symbol was designed by Bombay IIT post graduate D Udaya Kumar.
63. (B) Mitosis is a process by which chromosomes in a cell nucleus are separated into two identical sets of chromosomes each in its own nucleus. In general, Mitosis is a division of nucleus and so organs repair themselves through this process.
64. (A) Hot currency - Money that flows regularly between financial markets as investors attempt to ensure that they get the highest short term interest rates possible. Hot money will flow from low interest rate yielding countries into higher interest rates countries by investors looking to make the highest return.
66. (C) Community Development is the method used in the Rural area and the agency through which the five year plan seeks to initiate a process of transformation of the social and economic life of the villages. The Main lines of activity are- Agriculture, Irrigation, communication, health, Education, Supplementary employment, Housing, Training, Social welfare, peoples participation (the crux of programme) etc. Because with the execution of the community development project, planning is also important. This infact is the essence of the project.
68. (C) Only charged particles can be accelerated in a magnetic field. A neutron does not have a charge, it is neutral so, cannot it be accelerated in a magnetic field.
69. (A) Vegetative propagation or a sexual propagation is the method of reproducing plants with the use of organs other than the seed and spores. Vegetative propagation allows the production of clones or plants which are considered duplicates of the parent plants genotypically and also phenotypically.
72. (B) Third five year plan (1961-1966) focussed on agriculture and improvement in the production of wheat, but two wars Sino-Indian war and India-Pak war exposed weaknesses in the economy and also there was severe drought in 1965.
81. (D) Isobars are lines on a weather map connecting points of equal atmospheric pressure.
82. (A) The colour of stars depends upon the temperature but actually it depends upon the amount of mass it has. Very massive stars, which can be over ten times the mass of the sun, are the hottest and smaller stars, with less than half the mass of the sun, are the coolest.
83. (C) Chemical name of Plaster of Paris is Calcium Sulphate Hemihydrate i.e. $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$.
84. (B) Jhum cultivation is also known as shifting cultivation practised in states of North Eastern hilly region of India, Central Highland and people involved in such cultivation are called jhumia. The practice involves clearing vegetative/forest cover on land/ slopes of hills, drying and burning it before onset of monsoon and cropping on it thereafter. After harvest, this land is left fallow and vegetative regeneration is allowed on it till the plot becomes reusable for same purpose in a cycle.
88. (D) Chlorophyll is vital for photosynthesis, which allows plants to absorb energy from light and with the help of this plants prepare their own food.
89. (D) National Emergency (Article 352)- If the president of state is not satisfied with a grave emergency exists whereby the security of India or any part is threatened whether by a war or an external aggression or an armed rebellion, then he may proclaim a state of national emergency for the whole of India or a part of India. Such a proclamation of emergency may be revoked by the president subsequently. It may be subjected to the Judicial review and constitutionally can be questioned in a court of law on the grounds of malafide intention. It should be approved by both the houses of



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parliament within one month after proclamation.

90. (D) A good deal of parliament business is, therefore, transacted by what are called Parliamentary committees. They are of two types-adhoc and standing committee. The Principal adhoc committees are the selected and joint committees on Bills. Others like the Railway Convention committee, the committees on the draft five year plans and the Hindi equivalents. Standing committees act as Parliaments'. 'Watch dogs' over the executive committee on subordinate Legislation, the committee on Government Assurances, the Committee on Estimates, the committee on Public Accounts and the committee on Public Undertaking and department related standing committees (DRSCS).

91. (D) To connect the Janmabhoomi and Karmabhoomi of former Prime Minister Atal Bihari Vajpayee, the Indian Railways has decided to commence the operation of Sushasan express on December 25th, 91st birthday of the former PM Atal Bihari Vajpayee from Gwalior to Gonda via Lucknow. The trains would gradually be extended to Balrampur.

93. (B) Pistil is the ovule producing part of a flower. The ovary often supports a long style, topped by a stigma. The mature ovary is a fruit and the mature ovule is a seed.

97. (B) The first Battle of Tarain was fought between Sultan Mohammad Ghori and Prithviraj Chauhan in 1191 near the town of Tarain in Haryana. The army of Mohammed Ghori was defeated by the Rajput army of Chauhan.

103.(B) $\frac{\delta L_1}{\delta L_2} = \frac{2}{5}$

$$\frac{\frac{\sigma_1}{E_1} L_1}{\frac{\sigma_2}{E_2} L_2} = \frac{2}{5}$$

$L_1 = L_2, \sigma_1 = \sigma_2$

So $\frac{E_2}{E_1} = \frac{2}{5}$

or $\frac{E_1}{E_2} = \frac{5}{2}$

108.(C) $\tau_{\max} = \frac{\sigma_{\max} - \sigma_{\min}}{2}$
 $= \frac{20 - (-10)}{2}$

$\tau_{\max} = 15 \text{ kN} / \text{m}^2$

123.(B) $C_c = \frac{A_v}{A_o}$

$= \left(\frac{d_v}{d_o}\right)^2$

$= \left(\frac{32}{40}\right)^2$

$C_c = 0.64$

139.(C) $N_s = \frac{N\sqrt{Q}}{H^{3/4}}$

$= \frac{725\sqrt{0.75}}{(15)^{3/4}}$

$N_s = 82.37 \text{ rpm}$

142.(B) $P_{\text{abs}} = P_{\text{gauge}} + P_{\text{atm}}$
 $= 25 + 1.03$

$P_{\text{abs}} = 26.03 \text{ bar}$



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