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2007, OUTRAM LINES, 1ST FLOOR, NEAR GTB NAGAR METRO STATION, GATE NO. - 2, DELHI-110009

Answer-key & Solution

SSC JE (Civil)
MOCK -(63)
Date 03/09/2016

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

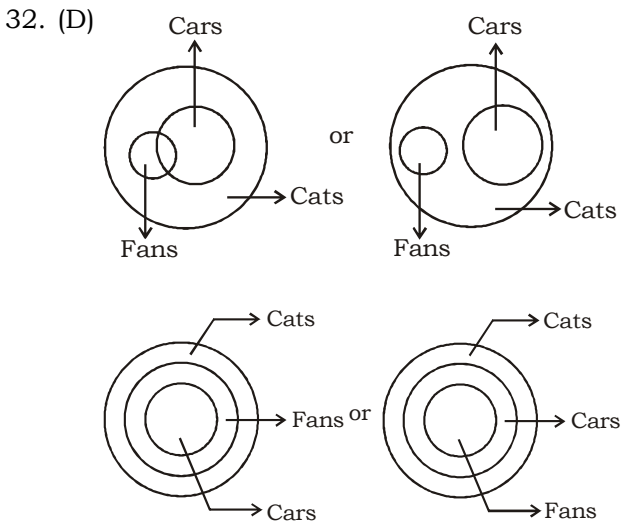
Note : If your opinion differ regarding any answer, please message the mock test and Question number to 8375805483

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

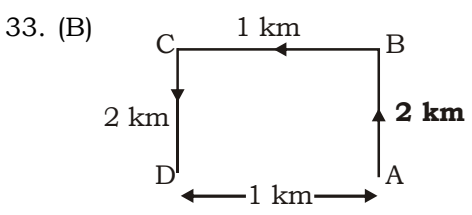
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28. (B) The pattern is +4, +9, +16, +25, +36, +49 i.e. $+2^2, +3^2, +4^2, +5^2, +6^2, +7^2, \dots$
So, missing term = $94 + 7^2 = 94 + 49 = 143$.
29. (B) The pattern is $\div 1, \div 2, \div 3, \div 4, \div 5$.
So, missing term = $360 \div 1 = 360$.
30. (B) The pattern is $\times 3, + 4, \times 5, + 6, \times 7, \dots$
So, missing term = $1022 + 8 = 1030$.
31. (C) In these 2 positions one common face with number 3, is in same position. Hence 1 is opposite to 6 and 4 is opposite to 2. Therefore 5 is opposite to 3.



Hence, neither conclusion 1 nor 2 follows.



So, initially the boy rode 2 km Northward.

34. (B) When Rahul was born, his brother's age = 6 years
His father's age = $(6 + 32)$ years = 38 years
His mother's age = $(38 - 3)$ years = 35 years
His sister's age = $(35 - 25)$ years = 10 years.

35. (C) $abcde/cdeab/deabc/eabcd$

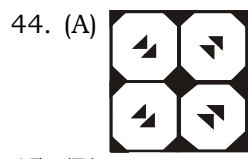
36. (A) $\frac{(25+23)}{2} = 24$
and $\frac{(26+28)}{2} = 27$

Therefore $\frac{(18+14)}{2} = 16$.

37. (B) $6 + (2)^2 = 10$
 $10 + (3)^2 = 19$
 $19 + (4)^2 = 35$.
38. (C) $(4 + 8) \times 9 = 108 \Rightarrow 108 \times 10 = 1080$
 $(5 + 4) \times 12 = 108 \Rightarrow 108 \times 10 = 1080$
39. (D)
40. (D)
41. (B) 2, 6, 9 contain a triangle with its three medians as the outer element and another element (similar or different) placed inside it.
1, 5, 7 contain a rectangle with its two diagonals as the outer element and another element (similar or different) placed inside it.
3, 4, 8 contain a circle with its two mutually perpendicular diameters as the outer element and another element (similar or different) placed inside it.

42. (B) Every identity is moving at each of the different 5 places in a block.

43. (C)

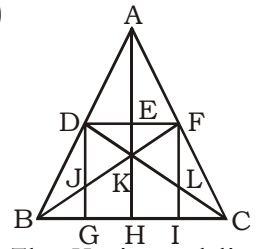


45. (B)

46. (C)

47. (A) All the number in the given set are prime numbers. Here, 5 is also a prime number and it belongs to the same group.
48. (B) $2 * 3 \Rightarrow 2^3 + 3^2 = 8 + 9 = 17 \Rightarrow 17^2 = 289$
 $3 * 4 \Rightarrow 3^3 + 4^2 = 27 + 16 = 43 \Rightarrow 43^2 = 1849$
 $2 * 4 \Rightarrow 2^3 + 4^2 = 8 + 16 = 24 \Rightarrow 24^2 = 576$

49. (C)



The Horizontal lines are DF and BC i.e. 2 in number. The Vertical lines are DG, AH and FI i.e. 3 in number. The Slanting lines are AB, AC, BF and DC i.e. 4 in number.

Thus, there are $2 + 3 + 4 = 9$ straight lines in the figure.

Now, we shall count the number of triangles in the figure.

Simplest triangles are ADE, AEF, DEK, EFK, DJK, FLK, DJB, FLC, BJK and LIC i.e. 10 in number.

Triangles composed of two components each are ADF, AFK, DFK, ADK, DKB, FCK, BKH, KHC, DGB and FIC i.e. 10 in number.

Triangles composed of three components each are DFJ and DFL i.e. 2 in number. Triangles composed of four components each are ABK, ACK, BFI, CDG, DFB, DFC and BKC i.e. 7 in number.

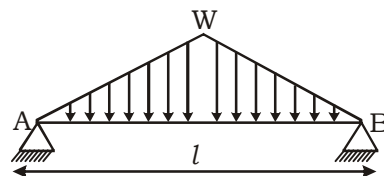
Triangles composed of six components each are ABH, ACH, ABF, ACD, BFC and CDB i.e. 6 in number.

There is only one triangle i.e. ABC composed of twelve components. There are $10 + 10 + 2 + 7 + 6 + 1 = 36$ triangles in the figure.

53. (A) Influenza, commonly known as the 'flu', is an infectious disease of birds and mammals caused by RNA viruses. The most common symptoms are fever, sore throat, muscle pains, headache (often severe), cough, weakness/fatigue and general discomfort. Typically, Influenza is transmitted through the air by coughs or sneezes, creating aerosols containing the virus.
63. (C) Pulses are (20 to 25%) protein by weight, which is double the protein content of wheat and three times that of rice. While pulses are generally high in protein, and the digestibility of that protein is also high, they are often relatively poor in the essential amino acid methionine.
71. (A) The busiest rail section in respect to goods transportation is Delhi-Kolkata section.
75. (B) Kolar, Hutti, Gadag, Ramagiri, Honalli, Wyand, Lawa, Mysara, Pahardia, Kundreocha have been some of the gold mines of India. Presently gold is produced from three mines viz Hutti, Uti, Hirabuddni (HGML) in Karnataka and as by product from base-metal sulphide deposits of Khetri (Rajasthan), Mosabani, Singhbun (Jharkhand).
80. (D) The processing of agricultural products, the production of grain by threshing, the production of flour by milling, the curing of skin and the production of leather, the production and preservation of meat and fish products, the preservation of fruit by drying, bottling, etc., the production of dairy products such as butter or cheese, the production of beer, wine or spirits, the production of baskets and mats, etc, come under processing of primary commodities for own consumption.
83. (D) Molars are the posterior most and most complicated kind of tooth in most of the mammals. Adult humans have twelve molars. They are in four groups in which

three are at the back of the mouth. The third, rearmost molar in each group is called a wisdom tooth.

85. (A) In economics, the study of factor pricing is related to the theory of functional distribution which attempts to explain the prices of land, labour, and capital. It takes care of the demand for land, labour and capital as derived demand, stemming from the demand for final goods.
88. (C) Copper : 9% less conductive than silver, aluminium is 10% less conductive than than copper, while steel is the least conductive among the given options. So, the most electrically conductive metal is silver.
92. (B) Reflected waves are simply those waves that are neither transmitted nor absorbed, but are reflected from the surface of the medium they encounter. The amount of incident-wave energy that is reflected from a surface depends on the nature of the surface and the angle at which the wave strikes the surface. The amount of wave energy reflected increases as the angle of incidence. The reflection of energy is the reflecting surface.
99. (A) In order to give more strength and more elasticity, natural rubber is heated with sulphur or sulphur compounds at 150°C temperature. Vulcanized rubber has good tensile strength. The working temperature of vulcanized rubber is enhanced up to 100°C. It has good resistance to organic solvents.
114. (A)



Total load on the beam

$$= \frac{1}{2} \times l \times w = \frac{wl}{2}$$

Due to symmetrical

$$R_a = R_b = \frac{wl}{4}$$

Maximum B.M will be at the distance of $l/2$



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$$\text{Maximum B.M.} = \frac{wl}{4} \times \frac{l}{2} - \frac{w}{3l} \times \frac{l^3}{8} = \frac{wl^2}{12}$$

115. (D) Slope = $\frac{w \left(\frac{l}{2}\right)^2}{2EI} = \frac{wl^2}{8EI}$

117. (B) $\tau = 5\text{N/mm}^2$ $D = 40 \text{ mm}$

$$\frac{T}{J} = \frac{\tau}{r} = \frac{C\theta}{L}$$

$$T = \frac{\tau J}{r}$$

$$= \frac{\pi}{32} (40)^4 \times 5 \div 20 = 62831.85 \text{ Nmm}$$

$$= 62.83 \text{ Nm}$$

149. (B) More plastic index results more plasticity

Soil A $PI = 40 - 20 = 20$

Soil B $PI = 60 - 25 = 35$

Means soil B is more plastic

184. (A) $\frac{\text{span}}{\text{Effective depth}}$ for

- (i) cantilever = 7
- (ii) simply supported = 20
- (iii) continuous = 26

193. (A) True length = $\frac{30.1 \times 6000}{30} = 6020\text{m}$

194. (C) Magnetic Bearing = N 88° E = 88°
 True Bearing = S 89° E = 180° - 89° = 91°
 True Bearing = magnetic Bearing ± declination
 Declination = 91° - 88° = 3°E
 (East because value is positive)

198. (D)

B.S.	I.S.	F.S.	Rise	Fall
0.50				
	1.00			0.5
	1.50			0.5
1.20		2.00		0.5
	1.70			0.5
	2.20			0.5
		2.70		0.5

$\Sigma \text{ fall} = 3.0$