

Answer-key & Solution

*SSC JE (Electrical)
Practice Set-17*

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

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*

SOLUTION SSC JE (Electrical) Practice Set-17

1. (B) $W V R T : M L G J :: S R N P : I H C F$

2. (C)
3. (A) $5 : 23 :: 9 : 39$

4. (B) $16+15 \left(\frac{PO}{31}, \frac{NM}{27} \right) 14+13 :: 9+7 \left(\frac{IH}{17}, \frac{GF}{13} \right) 6+7$

5. (A)
6. (A) A group of Cows is called a herd. Similarly a group of fish is called a school

7. (A) $A B C : 1 4 9 :: B C D : 4 9 16$

8. (A) $01 : 08 :: 09 : 64$

9. (B) capital letters become small letters and vice versa

$M N e g : G E n m :: Q S i a : A L s q$

10. (C) (A) $T G R I$ (B) $W D U F$

(C) $N H L I$ (D) $Z A X C$

11. (D) (A) 72 (B) 48 (C) 42 (D) $36 \rightarrow 45$

12. (B) All the remaining have 3 letters in each group.

13. (B)
14. (C) Sluggish is the antonym of the remaining three.
15. (B) Except A all are consonants
16. (A) It is divisible by 3
17. (C)
18. (C) Except option (C) all are only voice communication system

19. (A)

Foundation	Lintel	Roofing	Plastering
3	4	2	5
Flooring	House		
6	1		

20. (C)
21. (B)

REPAIR	REPEAL	REPIECE	REPLACE
5	2	1	3

22. (D) REPOINT

4

Given set

3 9 27

↓ ↓ ↓

3¹ 3² 3³

Similarly

5 25 125

↓ ↓ ↓

5¹ 5² 5³

23. (C) $C I N T Y E J$

24. (D)
25. (A)

26. (A)
27. (C) 7 14 42 168 840

28. (A)

+2 +2 +2 +2

C E G I K

F J N R V

29. (D) 857 969 745 1193 297

30. (B)
31. (D) $b a b d b a b d b a b d$

32. (A) $B E A D$ and $L A T E$

↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓

8 5 1 4 3 1 6 5

then,

T A B L E

↓ ↓ ↓ ↓ ↓

6 1 8 3 5

33. (A) $P O W E R \rightarrow K L D V I$

Similarly

F A I T H → U Z R G S

34. (A) $Rita$ $Tara$ $Sheetal$

Position of Tara from the front
10 (Position of Rita) + 7 + 1 (Tara) = 18

35. (A) $5 \times (8 - 3) = 25$

$5 \times 5 = 25$

36. (A) $5 + 6 \times 3 - 12 \div 2 = 17$

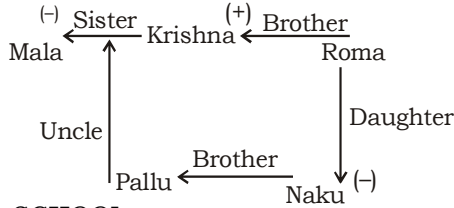
$5 + 6 \times 3 - 6 = 17$

$5 + 18 - 6 = 17$

$23 - 6 = 17$

$17 = 17$

37. (A)



38. (C) SCHOOL

39. (C) 937 (28) 216

521 (?) 418

(28) $\rightarrow 9 + 3 + 7 + 2 + 1 + 6 = 28$

Similarly

(?) $\rightarrow 5 + 2 + 1 + 4 + 1 + 8 = 21$

40. (C) $9 \times 7 \times 3 = 189$

$8 \times 9 \times 2 = 144$

Similarly,

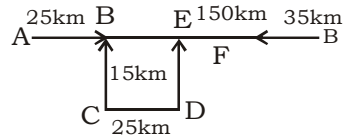
$3 \times 4 \times x = 96$

$12x = 96$

$\therefore x = 96 \div 12$

$\therefore x = 8$

41. (C)



Required distance = DF =

$AB - (AE + BF)$

$= 150 - (50 + 35)$

$= 150 - 85 = 65 \text{ km}$

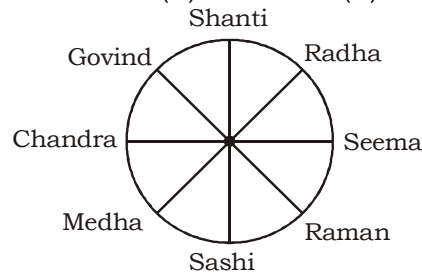
42. (D) SUGARCANE

43. (B)

44. (C)

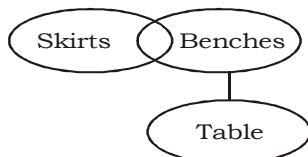
45. (B)

46. (D)



47. (A)

48. (B)



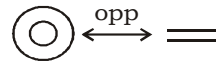
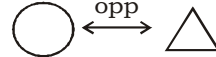
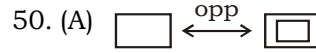
Conclusions : I = x

II = ✓

III = x

IV = x

49. (A)



147. (D) Electrical conductivity of metals is of the order of 10^6 ohm^{-1} . For semiconductors $10^3 \text{ ohm}^{-1} \text{ m}^{-1}$ and for insulators 10^{-12} to $10^{-15} \text{ ohm}^{-1} \text{ m}^{-1}$

148. (A) The unit of mobility is $\text{m}^2\text{V}^{-1} \text{ S}^{-1}$

$$\mu = -\frac{v_d}{E}$$

$$V_d \rightarrow \frac{\text{distance}}{\text{sec}} = \text{ms}^{-1}, E = \frac{\text{Volt}}{\text{distance}} = \text{Vm}^{-1}$$

150. (B) For maximum power transfer

$$R_g = R_2 = 60\Omega$$

$$\therefore \text{Load Power } P_2 = \left(\frac{40}{60+40}\right)^2 \times 60 = 6.67 \text{ W}$$

155. (C) Maximum efficiency occurs at fraction x of full load such that

$$x = \sqrt{\frac{P_i}{P_c}} = \sqrt{\frac{400}{800}} = 70.7\%$$

157. (B) Given, rotor power output = 15 kW

$$\text{Slip } S = 0.04$$

$$\text{Rotor input} = \frac{\text{output}}{1-s} = \frac{15}{1-s} \text{ kW}$$

And rotor copper loss = (Rotor inputs) $\times s$

$$= \frac{15s}{1-s} = \frac{15 \times 4}{96} \times 1000\text{W} = 625\text{W}$$

$$I_2^2 r_2 = \frac{S}{1-s} \times P_m = \frac{0.04}{0.96} \times 51000 = 625\text{W}$$

160. (A) leading power factor

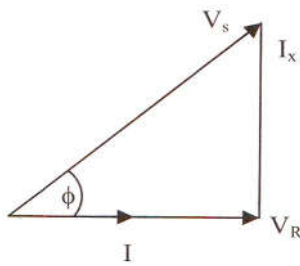
$$\text{Voltage regulation} = V_R \cos\theta - V_R \sin\theta$$

164. (D) (flux is constant), $T \propto I_a$

165. (B) $N \propto \frac{V}{\phi}$

$$V_1 = \frac{V}{2}, \phi = \frac{\phi}{2}, N_1 = N$$

169. (D)



$$IX = 500 \times .8 = 400V$$

$$V_R = 300V$$

$$V_s = \sqrt{300^2 + 400^2} = 500$$

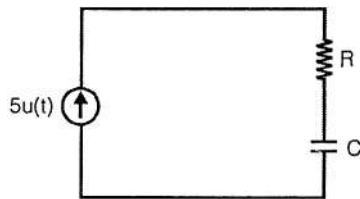
$$\cos \phi_2 = \frac{300}{500} = .6 \text{ lagging}$$

171. (A)

The short circuit level

$$= 20 \times \frac{1}{0.16} \times 4 = 500 \text{ MVA}$$

176. (C)



$$i = \frac{Cdv}{dt}$$

$$5 = \frac{Cdv}{dt}$$

$$\frac{5}{C} = dv$$

on Integrating

$$\frac{5t}{C} = V$$

177. (C) $P = I^2R$ or $\frac{V^2}{R}$ is a non-linear response.

184. (A) $L_{\text{eff}} = L_1 + L_2 \pm 2m$

But, in this case

(because the connection are differential)

$$L_{\text{eff}} = L_1 + L_2 - 2m$$

$$= 2 + 4 - 2 \times 0.15 = 5.7 \text{ mH}$$

185. (A) $R_1 = \frac{R_{ab} \cdot R_{ac}}{R_{ab} + R_{ac} + R_{bc}}$

$$R_1 = \frac{5 \times 15}{5 + 15 + 30} = \frac{5 \times 15}{50} = 1.5$$

$$R_2 = \frac{15 \times 30}{50} = 3$$

$$R_3 = \frac{15 \times 30}{50} = 9$$

186. (C) by coupling coefficient formula

$$L_1 + L_2 + 2K\sqrt{L_1L_2} = |-j18\Omega|$$

$$15j + 12j \times k = j 18$$

$$K = \frac{3}{12} = 0.25$$

200. (A) $Q = \frac{f}{\Delta f}$

$$\Delta f = \frac{f}{Q} = \frac{10^6}{100} = 10 \text{ kHz}$$