

Answer-key & Solution

SSC JE (Electrical)
Practice Set-14

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

Correction Mock Test 42
109. C, 110. B, 131. C

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-14

1. (C)

A	B	C	D	E
225	256	121	289	324
↓	↓	↓	↓	↓
15 ²	16 ²	11 ²	17 ²	18 ²
↓	↑	↓	↑	↓
+1	+1	+1	+1	+1

2. (D) February month has 28 or 29 days.

3. (D) Cost price of 1 kg wheat = $\frac{\text{₹}384}{16}$
 $= \text{₹}24/\text{kg}$
 \therefore Cost price of 90 kg wheat = 24×90
 $= \text{₹}2160$

4. (A) The value after exchange

3	6	5	4	1	9
↓	↓	↓	↓	↓	↓
9	2	8	1	4	3

5. (B) STENT

6. (B) 3 (2) (9) → GOD (is) (LOVE)
 (9) (2) 7 → (LOVE) (is) BEAUTIFUL

7. (B)

M	I	G	H	T	→	K	G	E	F	R
↓	↓	↓	↓	↓		↑	↑	↑	↑	↑
						-2	-2	-2	-2	-2
D	I	A	R	Y	→	B	G	Y	P	W
↓	↓	↓	↓	↓		↑	↑	↑	↑	↑
						-2	-2	-2	-2	-2

8. (B) $(4 \times 36) \div 12 = 12$
 $(13 \times 13) \div 13 = 13$
 $(8 \times 32) \div 16 = 16$

9. (C) $5 \times 4 \times 8 = 160$
 $7 \times 8 \times 6 = 336$

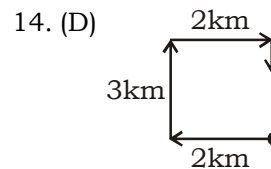
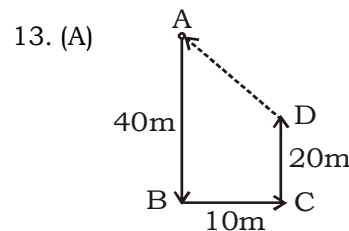
Similarly,
 $9 \times 2 \times x = 108$
 $18x = 108$
 $x = 108 \div 18 = 6$

10. (C) $6 + 5 + 7 + 3 = 21$
 $7 + 3 + 8 + 3 = 21$
 $4 + 5 + 6 + 6 = 21$

11. (A) $5 \times 3 \div 3 - 5 = 0$
 $5 \times 1 - 5 = 0$
 $5 - 5 = 0$

12. (D) $70 \times 7 - 113 + 13 = 390$
 $= 490 - 113 + 13 = 390$
 $= 490 + 13 - 113 = 390$

$= 503 - 113 = 390$
 $= 390 = 390$



15. (A)

16. (C) Cataract : Eye :: Pneumonia : **Lungs**
Affected part Affected part

17. (B) 18. (C)

19. (D) $\frac{T \ T \ T}{\text{Reverse of the English Alphabet}} : \frac{7 \ 7 \ 7}{\text{Reverse of the English Alphabet}} :: \frac{R \ R \ R}{\text{Reverse of the English Alphabet}} : \frac{9 \ 9 \ 9}{\text{Reverse of the English Alphabet}}$

20. (A) C : I :: D : L
 ↓ ↓ ↓ ↓
 3 9 4 12
 $(3 \times 4) - 3$ $(4 \times 4) - 4$

21. (D) YAD : NUS :: **THGIN** : NOOM
 ↓ ↓
 SUNDAY :: MOONNIGHT

22. (B) $27 : 3 :: 873 : 97$
 $\div 9$ $\div 9$

23. (D) $6 : 34 :: 9 : 79$
 $6^2 - 2$ $9^2 - 2$

24. (B) $352 \Rightarrow 3 \times 5 \times 2 = 30$
 $296 \Rightarrow 2 \times 9 \times 6 = 108$
 $628 \Rightarrow 6 \times 2 \times 8 = 96$

25. (D)

26. (C)

27. (A)

28. (A) Except option (A) all are perfect cubes.

29. (D) (A) 1876

$\Rightarrow 1 + 8 + 7 + 6 = 22$ (Even Number)

(B) 1984

$\Rightarrow 1 + 9 + 8 + 4 = 22$ (Even Number)

(C) 2024

⇒ 2 + 0 2 + 4 = 8 (Even Number)

(D) 2014

⇒ 2 + 0 + 1 + 4 = 7 (odd Number)

30. (D) (A) **3** — **9** (B) 5 — 25

↑
Square and
odd number

↑
Square and
odd number

(C) 7 — 49

(D) 8 — 64

↑
Square and
odd number

↑
Square and
even number

31. (C) (A) O H A (B) P I B

↑ -7 ↑ -7 ↑

↑ -7 ↑ -7 ↑

(C) **J** **Q** **C**

(D) R K D

↑ +7 ↑ -14 ↑

↑ -7 ↑ -7 ↑

32. (D) (A) D H F (B) K O M

↑ +4 ↑ -2 ↑

↑ +4 ↑ -2 ↑

(C) R V T

(D) **W** **Y** **X**

↑ +4 ↑ -2 ↑

↑ +2 ↑ -1 ↑

33. (C) (A) B D F H

↑ +2 ↑ +2 ↑ +2 ↑

(B) J L N P

↑ +2 ↑ +2 ↑ +2 ↑

(C) **Y** **O** **I** **C**

↑ -10 ↑ -6 ↑ -6 ↑

(D) R T V X

↑ +2 ↑ +2 ↑ +2 ↑

34. (B)

Foundation	Floor	Window	Ventilator
2	3	1	4

Roof
5

35. (A)

LEADEN	LEAF	LEAK	LEARNED
5	1	4	2

LEAVED
3

36. (A)

Fan	Feast	Fish	Flesh	Fraud
2	4	1	3	5

37. (B)

	+0		+0	
↓	↓	↓	↓	↓
A	D	G	G	J
M	P	S	M	P
↑ +3	↑ +3	↑ +3	↑ +3	↑ +3

38. (C)

A	C	F	K	R
↑ +2	↑ +3	↑ +5	↑ +7	↑

39. (B)

K	H	E	B	Y	V	S	P	M
↑ -3	↑ -3	↑ -3	↑ -3	↑ -3	↑ -3	↑ -3	↑ -3	↑ -3

40. (C)

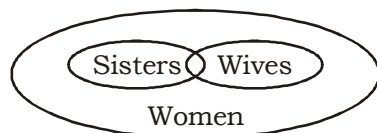
25	35	55	85	125
↑	↑	↑	↑	↑
+10	+20	+30	+40	
↑ +10	↑ +10	↑ +10	↑ +10	

41. (D)

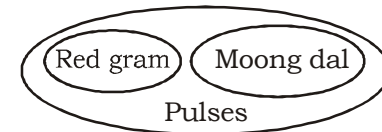
43. (B)

42. (C)

44. (B)



45. (A)



46. (C)

47. (A)

48. (D)

49. (D)

50. (D) B → 01, **11**, 21, 34, 43

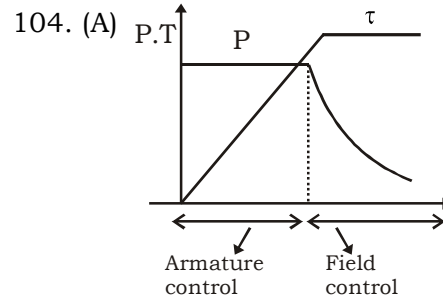
L → 06, 50, **66**, 75, 88

A → 00, **12**, 21, 34, 43

C → 02, 14, **20**, 33, 42

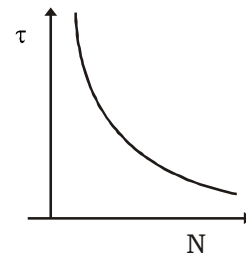
K → 05, **57**, 67, 77, 80

101. (C) Swinburne test is performed at no load.



110. (A) For Booster we use → series generator.

112. (C) For DC series motor.



123. (C) $\frac{Q_1}{Q_2} = \frac{I_1^2}{I_2^2}$

$$\text{or } \frac{5}{1} = \frac{10^2}{I_2^2}$$

$$\therefore I_2 = 4.47 \text{ A}$$

126. (C) $L_{eq} = L_1 \parallel L_2$
 $L_1 L_2 / L_1 + L_2$

137. (C) $I_{rms} = \frac{I_m}{\sqrt{2}} = \frac{2}{\sqrt{2}} = 1.414 \text{ A}$

138. (A) Compared to the 100 Watts bulb, the 40 Watts bulb has greater resistance. So, the voltage drop across the 40 Watts bulb is more than the 100 Watts bulb. Since, the bulb is connected in series with the heater. So, the voltage across the heater is reduced. Hence, the output heat generation from the heater will decrease.

139. (D) The general equation of a current wave is

$$i = I_m \sin \omega t = I_m \sin 2\pi f t \quad \dots(1)$$

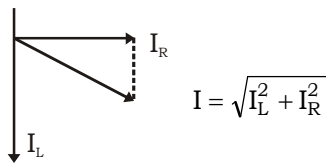
where, f is the frequency of the current wave. Here, the given equation is

$$i = I_m \sin 2\omega t \quad \dots(2)$$

on comparing, (1) and (2) we get,
 $2\omega t = 2\pi f t$ or, $\omega = \pi f$ or, $f = \omega / \pi$

140. (B) In a series electric circuit, the current is same and the voltage drops across the connected loads are varied depends on the internal resistance of each load. So, the "option B" is wrong.

154. (C)

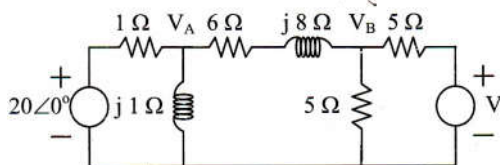


$$I = \sqrt{(12)^2 + (16)^2} = 20A$$

$$= \sqrt{144 + 256} = \sqrt{400}$$

155. (B) With two or three wattmeter we can always measure the power. One wattmeter method for measuring power can be used only when the load is balanced.

156. (A)



$$V_A = \frac{20}{1+j} \times j ; \quad V_B = \frac{V}{2}$$

$$V_A = V_B \quad \text{since } I = 0 \Rightarrow \frac{20}{1+j} \times j = \frac{V}{2}$$

$$\Rightarrow V = 20\sqrt{2} \angle 45^\circ$$

157. (D) Maximum power factor is one

158. (B) $Z_{12} = \frac{V_2}{I_1} = Z_{21}$ for reciprocal network

159. (B) For series RC circuit

$$Z = R + \frac{1}{j\omega C} = R - j\left(\frac{1}{\omega C}\right)$$

$$Z = R + j\omega L = \frac{1}{j\omega C}$$

$$\text{For RLC circuit} = R - j\left(\frac{1}{\omega C} - \omega L\right)$$

164. (A) A reduction in load on the generator

causes the governor to close the turbine gates and thus create an increased pressure in the penstock. This may result in water hammer phenomenon and may need pipe of extraordinary strength to withstand it otherwise the penstock may burst. So water hammer is developed in penstock.

165. (B) Surge tank is provided to absorb sudden changes in water requirements and reduce water hammer and negative pressure in penstock.

170. (D) The word relative permittivity is associated with the capacitance. Since, the Schering's bridge is used to find out the unknown value of capacitance. After finding the capacitance, we can find out the relative

permittivity by using the formula, $\epsilon_r = \frac{C_r}{C_0}$

172. (D) Class C (>180° C) insulator consists of mica, porcelain, glass and quartz with / without an inorganic binder.