Answer-key & Solution

SSC JE (Electrical)
MOCK - (135)
Date:- 17.3.2018

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

Note : *If your opinion differ regarding any answer, please message the mock test and Question number to 9821756838*

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

SOLUTION SSC JE (Elecrtrical) MOCK TEST no. 135

1. (B) $24 \Rightarrow 2^4 = 16$ and $32 \Rightarrow 3^2 = \mathbf{9}$

2. (B) 238 ⇒ 382 and 416 ⇒ **164**
abc bca abc bca

3. (A) A M N **A M F**
next vowel +1 +1 next vowel +1 +1
E N O E N G

4. (D) Cow is **herbivorous** and Bear is omnivorous.

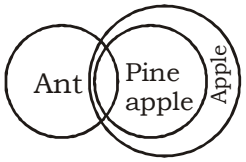
5. (D) 3 + 8 + 5 + 6 = 22 Divisible by 11
2 + 4 + 2 + 3 = 11 Divisible by 11
3 + 6 + 9 + 4 = 22 Divisible by 11
2 + 5 + 1 + 7 = 15 Not Divisible by 11

6. (C) 64 is the only number for which complete square root and cubic root is possible.
$\sqrt{36} = 6$, $\sqrt{16} = 4$, $\sqrt[3]{\mathbf{64}} = \mathbf{4}$ **and** $\sqrt{\mathbf{64}} = \mathbf{8}$, $\sqrt{144} = 12$

7. (C) Expect Vijaywada, other cities are in Madhya Pradesh.

8. (C) Except (C), in other options, the first number is divisible by the second number.

9. (B) C O O L

10. (D)


I. ✗
II. ✓

11. (C) 18+36 = 54, 36+ 12= 48, 12+32=44,
42 + 32 = 74, 42 + 28 = **70**, 28+ 18 = 46

12. (A) 12 + 18 + 26 + 24 = 80
15 + **35** + 30 = 80
42 + 38 = 80

13. (B) $\frac{8}{2} = 4$, $\frac{4}{2} = 2$, $\frac{9}{3} = \mathbf{3}$ and $\frac{6}{2} = 3$

14. (C)

15. (B) $\frac{12 \times 6 \div 9}{8 - 4} = \frac{8}{4} = \mathbf{2}$

16. (B) 2 × 0.5 + 1 = 2
2 × 1 + 2 = 4
4 × 2 + 3 = 11
11 × 4 + 4 = 48
48 × 8 + 5 = **389**

17. (C) 18 35 69 120 **188**
+17 +34 +51 +68
+17 +17 +17

18. (A) 123, 231, 312,123, **231**, 312

19. (C) Sumit himself is the only child of his father. So, Sumit's wife is Sumita's **mother**.

20. (A) S/ST/SST/SSTT/SSSTT

21. (C) C U P B O A R D
4 1 7 2 5 8 6 3

22. (B) From the given dice, we can conclude that 6, 4,1 and 2 dots appear adjacent to 3 dots. Clearly, there will be **3** dots on the face opposite the face with 5 dots.

23. (B) (5 × 2) + 4 – 6 = 8
(4 × 3) + 8 – 9 = 11
(8 × 4) + 1 – 7 = 26
(3 × 6) + 2 – 8 = **12**

25. (D) Total number of triangles = **24**

26. (B) P A N D O G
+2 +4 –2 +2 +4 –2
R E L **F** **S** **E**

27. (A) $76 \Rightarrow 7 \times \frac{6}{2} = 21$, $48 \Rightarrow 4 \times \frac{8}{2} = \mathbf{16}$

28. (C) $482 \Rightarrow 4 + 8 + 2 = 14 \Rightarrow \frac{14}{2} = 7$

$543 \Rightarrow 5 + 3 + 4 = 12 \Rightarrow \frac{12}{2} = \mathbf{6}$

29. (B) Snake is a reptile and Duck is an **Aquatic** animal.

30. (A) Only **April** month is of 30 days.

31. (D) Except **Charminar**, all are in Maharastra state.

32. (D) $123 \Rightarrow 1 + 2 + 3 = 6$, $233 \Rightarrow 2 + 3 + 3 = 8$
$142 \Rightarrow 1 + 4 + 2 = 7$, $\mathbf{235} \Rightarrow 2 + 3 + 5 = 10 \neq 9$

33. (A) Except Ashoka, all are Mughal Emperor.

34. (B) O R A N G **E**

35. (A) Neither conclusion I nor II follows.

36. (C) $7 \times 8 = 56 \Rightarrow \frac{56}{2} = 28$, $9 \times \mathbf{10} = 90 \Rightarrow \frac{90}{2} = 45$

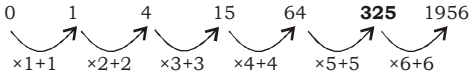
$12 \times 6 = 72 \Rightarrow \frac{72}{2} = 36$

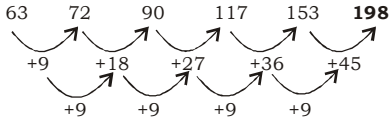
37. (B) $8 + 6 = 14 \Rightarrow \frac{14}{2} = 7$, $9 + 13 = 22 \Rightarrow \frac{22}{2} = 11$

and $3 + \mathbf{5} = 8 \Rightarrow \frac{8}{2} = 4$

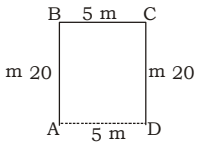
38. (B)
$$\begin{array}{r} 6\ 3\ 8 \\ -\ 2\ 7\ \mathbf{9} \\ \hline 3\ 5\ 9 \end{array}$$

40. (A) After changing the signs,
$20 \div 4 \times 6 - 9 + 4 = 5 \times 6 - 9 + 4$
$= 30 - 9 + 4 = 34 - 9 = \mathbf{25}$

41. (B) 

42. (C) 

43. (B) Apple, Approach, **Appropriate**, Approval, Approve

44. (C) 

$\therefore$ Required distance (AD) = 5 m

45. (D) $3+2+5 \Rightarrow 3\times2\times5 = 30$, $2+4+6 \Rightarrow 2\times4\times6 = 48$
$7+3+2 \Rightarrow 7\times3\times2 = 42$, $5+6+4 \Rightarrow 5\times6\times4 = \mathbf{120}$

46. (C) S O C I A L
4 5 3 2 6 1

47. (B) Digit '2' represents the teachers who are social workers.

48. (D) 8 a 3 c 24 b 12 d 19
$8 \times 3 + 24 \div 12 - 19$
$= 24 + 2 - 19$
$= \mathbf{7}$

50. (C) Total number of triangles = **21**

51. (C) Four great monarchies in the time of the Buddha were Avanti, Magadha, Kosala and Vamsa (or Vatsa).

53. (B) Directive Principles of State Policy aim to create social and economic conditions under which the citizens can lead a good life. They also aim to establish social and economic democracy through a welfare state. The Directive Principles of State Policy is guidelines/principles given to the Central and State governments of India, to be kept in mind while framing laws and policies.

54. (D) Statutory Liquidity Ratio (SLR) is the amount of liquid assets such as precious metals or other approved securities that a financial institution must maintain as reserves. SLR rate is determined and maintained by the Reserve Bank of India (RBI) in order to control the expansion of bank credit.

55. (B) According to Newton's first law, an object that is at rest will stay at rest unless an external force acts upon it and an object that is in motion will not change its velocity unless an external force acts upon it. So this law is known as the law of inertia.

56. (D) Spirit is highly volatile. So when it is exposed, it evaporates rapidly and if released into the environment it produces a cooling effect.

57. (D)
- Ronald Ross invented that Malaria is transmitted by mosquitoes.
- Laveron invented Plasmodium.
- Mekkulai first gave the term 'Malaria'.

58. (C) Rice is the main kharif crop and groundnut.
- Ravi Crops : Crops which are grown during the winter season are called Rabi crops Examples: Wheat, Gram, Pea, Linseed
- Kharif crop : The crops which are grown during the rainy season are called kharif crops. Examples: Paddy, Maize, millet, soyabeen, groundnut and Cotton crops.

59. (A) Bengaluru city police has launched "Pink Hoyslas", police patrol vehicles for women safety. Pink Hoysalas will be stationed at 51 hot spots that have been identified on the basis of the crime pattern in various city areas, especially those related to safety of women and children. The vehicles will also patrol during the night to extend a moral support for women of Bengaluru. Apart from this, an emergency panic alarm app "Suraksha" has also launched for women to send emergency alerts directly to the city police control room in case of threat. The Suraksha app is available from Android and iOS platforms.

60. (A) As per the first bi-monthly monetary policy review for 2017-18 of the Reserve Bank of India (RBI), the repo rate — the main policy rate at which banks borrow from RBI remain unchanged at 6.25%. While, RBI raised the Reverse Repo (RR) rate by 25 bps to 6% and cut the Marginal Standing Facility (MSF) rate and the bank rate by 25 bps to 6.50%. The central bank also allowed banks to invest in Real Estate Investment Trusts (REITs) and Infrastructure Investment Trusts in a bid to spur investments in core infrastructure sectors. The Reverse Repo rate is the rate at which banks lend funds to the RBI.

61.(C) The Kushan period is considered the Golden period of Gandhara. Peshawar Valley and Taxila are littered with ruins of stupas and monasteries of this period. Gandharan art flourished and it produced some of the best pieces of Indian sculpture. Many monuments were created to commemorate the Jataka tales. The Gandhara civilization peaked during the reign of the great Kushan King Kanishka (128-151).

62.(B)
- Mt. Rainier is a volcanic mountain situated in U.S.A.
- Mt. Etna is situated in Europe, Paricutin volcanic mountain present in Mexico.
- Taal volcanic mountain is present in Philippines.

63. (D) PN Bhagwati was CJI during July 1985–Dec 1986. During his tenure as CJI, PIL was introduced to the Indian judicial system.

64.(C) Convertibility of rupee implies freely permitting the conversion of rupee to other currencies and vice versa. Currency Convertibility is the ease with which a country's currency can be converted into gold or another currency.

66. (A) The total energy of a revolving electron in any orbit is the sum of its kinetic and potential energies. Energy of an electron at infinite distance from the nucleus is zero. As an electron approaches the nucleus, the electron attraction increases and the energy of electron decreases and thus becomes negative. Thus, it can never be positive.

68.(A) The Union Minister for Information & Broadcasting, M Venkaiah Naidu has recently released a book titled "Gandhi in Champaran" authored by Dinanath Gopal Tendulkar at National Mahatma Gandhi Museum in New Delhi.

69. (A) Badami was also known as Vatapi in Bijapur district of Karnataka. Panamalai or Kanchi in Tamil Nadu was the capital of Pallavas.

70. (A) Indira Gandhi Canal originated from Harike barrage at Sultanpur on Sutlej but Ghaggar is a tributary of river Saraswati, which ends in the Thar Desert.

72. (C) Population density of Arunachal Pradesh is 13, Himachal Pradesh is 109, Meghalaya is 103, and Sikkim is 76.The state of Arunachal Pradesh has the lowest record of population density having just 17 per square kilometer.

75. (A) The Indian Veterinary Research Institute (IVRI) is the India's premier advanced research facility in the field of veterinary medicine and allied branches.At present, a DNA bank exists in Hyderabad. The headquarters of IVRI is located at Bareilly in Uttar Pradesh.

76. (C) In 1018, Rajendra conquered Ceylon (Sri Lanka). Earlier Rajaraja I conquered only half of it.

77. (A) The Nile River begins at the equator and ends at the Mediterranean Sea. It flows through Egypt, Sudan, Uganda, Ethiopia, Zaire, the Sahara Desert, Kenya, Tanzania, Eritrea, Burundi and Rwanda. The Nile River is the longest river in the world. It is often associated with Egypt. It has two tributaries. The White Nile starts at Lake Victoria, and the Blue Nile starts at Lake Tana. The two tributaries merge in Sudan.

79. (B) In 1881 the first entirely Indian joint stock bank was the Oudh Commercial Bank, established in Faizabad. It collapsed in 1958. The next i.e the Punjab National Bank was established in Lahore in 1895, which has survived to the present and is now one of the largest bank in India.

80. (A) Stars twinkle because they are point light sources. Passing through the atmosphere, the small beam of light constantly shifts by bouncing off particles in the air. Planets are closer, so they appear as discs, with the shifting of light from one side cancelling out the other. The atmosphere of the Earth is a turbulent medium, with streams and columns of air churning around and dispersing all the time. These disturbances act like lenses and prisms that shift the light from side to side by small amounts several times a second. Since they are so far away and the beam of light is so thin, the stars appear to twinkle.

81. (C) There are 118 known elements on the periodic table. The most recently discovered element, Ununoctium, was first reported by Russian scientists from Dubna in 2002.Russian scientist Dmitri Mendeleev is usually credited with the first known publication of a periodic table of elements, in 1869. He created the table by arranging known elements into rows and columns based on atomic weight and the similarity between elements. Using this method, he was also able to predict the existence of unknown elements, such as Gallium and Germanium. The standard periodic table style in use today is attributed to Horace Deming, an American scientist.

82. (A) Ergotism is the effect of long term ergot poisoning, due to ingestion of alkaloids produced by fungus Clavicepspurpurea which is found in infected cereals and ryes.

83. (B) PROLOG is a general purpose logic programming language associated with artificial intelligence and computational linguistics.

84. (B) The Sessa Orchid Sanctuary is located in the Himalayan foothills in Bhalukpong Forest Division of West Kameng District, Arunachal Pradesh. It conjoins Eaglenest Wildlife Sanctuary to the southwest. It is a part of the Kameng Protected Area Complex (KPAC), which is an Elephant Reserve. The sanctuary is unique in having 7 endemic species of saprotrophic orchids.

85. (C) The 2017 BRICS Film Festival will be held in Chengdu, southwest China's Sichuan Province from June 23 to 27. During the festival, 30 films from BRICS countries (Brazil, Russia, India, China and South Africa) will be screened, including an anthology by five directors from the aforementioned countries, "Where has the time gone". The feature film consisting of five 18-minute shorts on the same theme is a joint work by Walter Salles from Brazil, Aleksey Fedorchenko from Russia, Madhur Bhandarkar from India, Jahmil X. T.Qubeka from South Africa, and JiaZhangke from China. The first BRICS Film Festival was held in New Delhi, India in September 2016.

86. (B) States such as Champaka (Chamba), Durgara (Jammu), Trigarta (Jalandhar), Kuluta (Kulu), Kumaon and Garhwal managed to remain outside the main areas of conflict in the northern plains.

87. (C) Diamantine Trench is situated in south-east part of Indian Ocean. The depth of Diamantine Trench is 8047 m.

	Name	Deepest point (km)	Ocean
1	Mariana Trench	11.0 km	Pacific Ocean (near Japan)
2	Philippine Trench	10.4 km	Pacific Ocean (near the Philippine islands
3	Bonin Trench	9.99 km	Pacific Ocean (near Japan)
4	New Britain Trench	9.94 km	Pacific Ocean (near New Guinea)
5	Kuril Trench	9.75 km	Pacific Ocean (near Russia)

90. (D) It is just because woolen clothes have fibres and between those fibres air is trapped which reduces heat loss. Air reduces heat loss because it is an insulator i.e. poor conductor of heat. Hence, all the heat from our body gets trapped inside the clothes which makes us feels warmer with the clothes.

91. (A) **Friedrich Wohler** is widely considered the father of organic chemistry. He was a German chemist who lived in the 1800s and is well-known for synthesizing urea in 1828.Brass is a bright gold metal that is more malleable than zinc or bronze. It is often used in musical instruments because of its acoustic properties.

92. (D) Saffron is a spice derived from the flower of Crocus sativus, commonly known as the "saffron crocus". Saffron is a spice obtained from the stigma of the flower of Crocus sativus Linnalus.

93. (C) The National Safety Council (NSC) is a self-supporting non-profit autonomous society, set up by the Ministry of Labour and Employment, Govt. of India (GoI) on 4th March 1966. Its aim is to strengthen a national movement on Safety, Health & Environment (SHE) to prevent and mitigate loss of life, human suffering & economic losses and provide support services. It is in news because the 2016 NSCI Safety Awards will be presented by the Minister of State (Independent Charge), Labour& Employment Bandaru Dattatreya on April 20, 2017 in New Delhi. The NSCI Safety Awards are coveted national level awards in the field of Workplace Safety, Health and Environment. The headquarters of the NSC is located in Mumbai, Maharashtra.

94. (C) Cabinet mission proposed a rejection of the demand for a full-fledged Pakistan because the Pakistan so formed would include large Non-Muslim population – 38% in the N-W and 48% in the N-E.

95. (D) Venus can be seen with the unaided eye from Earth. It is the brightest planet in our Solar System. Venus was given the nickname evening star and morning star because of its bright consistent presence.

100. (B) The Civil Services Day (CSD) is organized every year on April 21 in India by civil servants to rededicate and recommit themselves to the cause of the people. This day gives civil servants the opportunity for introspection and thinking about future strategies to deal with the challenges being posed by the changing times. On this occasion, all officers of Central and State Governments are honoured for excellence in public administration by the Prime Minister of India. The Prime Minister Narendra Modi will confer PM's awards for Excellence in Public Administration to Districts/Implementing units and other Central/State organisations on April 21, 2017 for effective implementation of Identified Priority Programmes and Innovation.

101.(C) Resistance $= \frac{1}{\text{conductance}}$

Conductance $= \frac{1}{\text{Resistance}} = \frac{1}{R} = \frac{I}{V}$

$= \frac{I}{\frac{W}{Q}} \qquad \left(\because V = \frac{W}{Q}\right)$

$= \frac{I}{\frac{ML^2T^{-2}}{I.T}} \qquad Q = It = I.T$

$= \frac{I^2T}{ML^2T^{-2}} \qquad W = F.S = ML^2T^{-2}$

$F = m.a = MLT^{-2}$

$= M^{-1}L^{-2}I^2T^3$

102.(D) $R = \rho\frac{l}{A}$

$R \propto \frac{1}{A}$

106.(A) V = IR

$= 3 \times \frac{1}{0.3}$

= 10 Volt

107.(A) $C = \frac{Q}{V}$

Q = CV

$= 0.01 \times 10^{-3} \times 20$

= 0.2 mC

108.(A) V = 8V

R = 24 ohms

$l_2 = 2l_1$

cut into two equal part then effective length is remains l_1

So,

$R_1 = R_2 = \rho\frac{l}{A}$

$R_1 = R_2 = 2R$

$R_1 \,||\, R_2$

$R_{eff} = \frac{2R \times 2R}{4R}$

$R_{eff} = R$

V = IR

$I = \frac{8}{24}$

= 0.33A

109.(B) $W = I^2Rt$

$= 0.5 \times 0.5 \times 15 \times 8$

= 30 Jouls

110.(C)

Color	1st digit	2nd digit	Multiplier	Tolerance
Black	0	0	10^0	—
Brown	1	1	10^1	1%
green	5	5	10^5	0.5%

114.(C) V = IR

$I = \frac{36}{9}$

= 4 A

115.(A) Maximum power transfer condition

$Z_L = Z_S^*$

$= (8 + j4)^*$

$= 8 - J4$

116.(C) $R_{eff} = 20||20 + 20||20$

$= 10 + 10$

= 20 ohms

V = IR

$I = \frac{50}{20} = 2.5A$

117.(B) $P_m = 80W$

$V_{th} = 80V$

$P_m = \frac{V_{th}^2}{4R_{th}}$

$R_{th} = \frac{80 \times 80}{4 \times 80} = 20\,ohms$

118.(B) $R_{th} = \left((3\|3+3)\|3\right)+3$

$= [((1.5+3)||3)] + 3$

$= [4.5 \,||\, 3] + 3$

$= \left[\frac{4.5 \times 3}{7.5}\right] + 3$

$= 1.8 + 3$

= 4.8 ohms

119.(B) $R_{th} = (3||3||3)||1$

$= 1||1$

= 0.5 ohms

120.(C) $I_{30} = \frac{V}{R}$

$= \frac{40+20}{30}$

= 2A

121.(C) $e = -L\frac{di}{dt}$

$L = \frac{e.t}{i}$

$L = \frac{W}{\frac{Q}{i}}.t = \frac{W}{i^2} = ML^2T^{-2}A^{-2}$

125.(D) Intensity of magnetization $= \frac{M}{A}$

$= \frac{30}{2}$

= 15 A/m

126.(B) mmf = NI

= 160 × 0.15

= 24 Amp – turns

127.(A) Reluctance $= \frac{NI}{\phi}$

$= \frac{50}{25}$

= 2 AT/Wb

128.(B) $H = \frac{NI}{l}$

$= \frac{100 \times 0.6}{5}$

= 12. Amp-Turn/m

129.(A) $L = \frac{\mu_0 N^2 A}{l}$

$= \frac{\mu_0 N^2 \pi \left(\frac{d}{2}\right)^2}{l}$

$= \frac{4\pi \times 10^{-7} \times 300 \times 300 \times \pi \times 6 \times 6 \times 10^{-4}}{3}$

= 0.41 mH

130.(C) l = 60 cm = 0.6m

N = 400

B = 6 mT

$B = \frac{\mu_0 NI}{l}$

$I = \frac{Bl}{\mu_0 N}$

$= \frac{6 \times 10^{-3} \times 0.6}{4\pi \times 10^{-7} \times 400} = 7.2A$

131.(D) $V_{rms} = \frac{V_m}{\sqrt{2}}$

$= \frac{40}{\sqrt{2}}$

= 28.29

132.(A) $T = \frac{1}{f}$

$= \frac{1}{60}$

T = 16.67 ms

135.(A) $V_{avg} = \frac{2V_m}{\pi}$

$= \frac{2 \times 120}{3.14} = 76.44 Volt$

136.(B) X_C = 40 ohms

f = 50 Hz

$C = \frac{1}{2\pi f X_C}$

$= \frac{1}{314 \times 40}$

C = 0.8 μF

137.(D) $P = \sqrt{3} V_L I_L \cos\phi$

$P_{avg} = 3 \times 240 \times 20 \times \frac{1}{2}$

= 7.2 KW

138.(A) $B_C = 2\pi fc$

$= 314 \times 0.08 \times 10^{-3}$

= 0.025 siemens

139.(B) T = RC

$= 20 \times 10^3 \times 600 \times 10^{-6}$

= 12sec

140.(C) L = 0.04 mH C = 0.04 mF

$f_c = \frac{1}{2\pi\sqrt{LC}}$

$= \frac{1}{2 \times 3.14\sqrt{0.04 \times 10^{-3} \times 0.04 \times 10^{-3}}}$

= 3.98 KHz

$\approx 4KHz$

145.(A) Galvanometer

Valtmeter reading = $4 \times 10^{-3} \times 40$

= 160 mV

= 0.16 V

Multiplier (m) = $\frac{0.4}{0.16} = 2.5$

Total voltmeter resistance required

= 40 × 2.5

= 100 ohm

then external series resistance is

= 100 – 40 = 60 ohms

146.(D) Total voltmeter resistance = 280 KΩ

full-scale reading of voltmeter = 240V

sensitivity $= \frac{280}{240} \times 10^3$

= 1166.67 ohms/Volt

147.(D) Given bridge is a maxwell's bridge-

$L_X = 40 \times 40 \times 60 \times 10^{-6}$

$= 96 \times 10^{-3}$ H

= 96 mH

$R_x = \frac{60 \times 40}{60} = 40\,ohms$

148.(B) Q = VI sin ϕ

$= 80 \times \sqrt{1 - \cos^2 \phi}$

$= 80 \times \sqrt{1 - 0.25}$

= 80 × 0.866

= 69.28 VAR

149.(B) $n = \frac{V_S}{V_P}$

$V_P = \frac{V_S}{n} = \frac{11000}{102}$

= 107.84 × % ε

$= 107.84 \times \frac{3}{100}$

V_P = 104.6 Volt

150.(B) maxwell's bridge

Q = w C_4R_4

= 2π f C_4 R_4

= $314 \times 20 \times 10^{-6} \times 60$

= 0.4