**Electrical Engineering**

**Subject: ANALOG ELECTRONICS**

**(The answer keys are at the end.)**

1. The breakdown mechanism in a P-N junction is
2. Avalanche breakdown
3. Zener breakdown
4. Both (a) and (b)
5. None of the above
6. A P-N junction diode can be used as
7. Condenser
8. Regulator
9. Amplifier
10. Rectifier
11. A half wave rectifier is used to rectify an alternating voltage of frequency 50 Hz. The number of pulses of rectified current obtained in 1 second is
12. 25
13. 50
14. 100
15. 200
16. The best value of thermal stability factor S is
17. CB configuration
18. CE configuration
19. CC configuration
20. In any configuration
21. A transistor acts like a diode and as a \_\_\_\_
22. Voltage source
23. Current source
24. Resistor
25. Capacitor
26. The relation between β and α is
27. A MOSFET differs from a JFET mainly because
28. Of the power rating
29. The MOSFET has two gates
30. The JFET has a p-n junction
31. MOSFET donot have a physical channel.
32. Class B amplifiers are mostly-
33. R-C coupled amplifiers
34. Transformer coupled amplifiers
35. Push-pull amplifiers
36. Tuned amplifiers
37. Linear Op-Amp includes-
38. Inverting Op-Amp
39. Non-inverting Op-Amp
40. Differential amplifiers
41. All of the above
42. A virtual short in an Op-Amp is
43. Short for voltage but not for current
44. Short for current but not for voltage
45. Short for a resistance
46. Short for a capacitor
47. The unit of temperature coefficient of resistance has units of
48. Ohms per kelvin
49. Ohms kelvin
50. Per kelvin
51. Per ohms per kelvin
52. The resistivity of silver is in the order of
53. For conductors we mostly use are
54. Copper and silver
55. Copper and aluminum
56. Aluminum and silver
57. Copper only
58. The best insulator out of the following is
59. Bakelite
60. Porcelain
61. PVC
62. SiO2
63. By heating a material, the conductivity of the material
64. Increases
65. Decreases
66. May increase or decrease
67. Remain constant
68. For an ideal crystal with no imperfections and impurities the mean free path is
69. Infinite for all temperature
70. Zero at 0 K
71. Infinite at 0 K
72. Depends on the fermi level at 0 K.
73. The main use of super-conductor is
74. For generating magnetic field free regions
75. For generating very strong magnetic field
76. For making superconductor memory
77. For minimizing I2R losses in the wire.
78. The Bragg’s equation for calculating the scattering and θ for the electrons is
79. None of these
80. The structure of a semiconductor is
81. Diamond like
82. Planer
83. Triangular
84. Square shaped.
85. The dipole moment per unit volume of a solid is the sum of all individual dipole movements within that and is called
86. Polarizability of the solid
87. Permittivity of the solid
88. Electrostatic moment
89. None of these
90. The temperature coefficient of resistance is defined as
91. Transport phenomenon of the electron in a conductor is under the influence of
92. Electric field
93. Magnetic field
94. Electric and magnetic field
95. Electric or magnetic field
96. The temperature coefficient of resistivity of semiconductor is always
97. Positive
98. Negative
99. Unity
100. Zero
101. The type of electron-pair bonds in semiconductor are
102. Ionic
103. Hetropolar
104. Homopolar
105. None of these.
106. The normal value of relaxation time is of the order of
107. Nano seconds
108. Micro seconds
109. Mili seconds
110. Seconds

ANSWER KEYS

1. C
2. B
3. B
4. D
5. A
6. C
7. D
8. B
9. A
10. A
11. C
12. B
13. B
14. D
15. A
16. C
17. D
18. B
19. A
20. A
21. C
22. A
23. B
24. C
25. B