


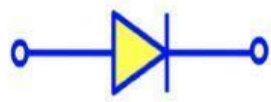
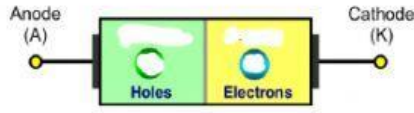






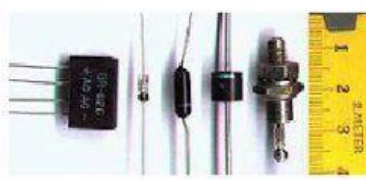
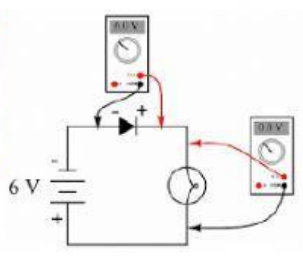
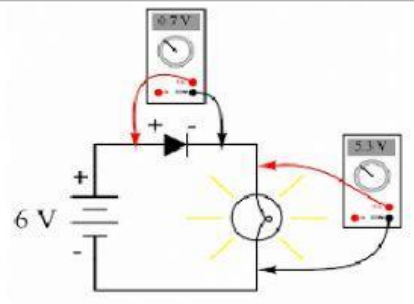
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|---------|--------|---------|---|
| Grade | 12 AEE | Subject | Term 3- Electronics Principles and App. AEE70 |
| Name | | ID | |
| Section | 01 | Date | W1-WS1 |

Answer all questions

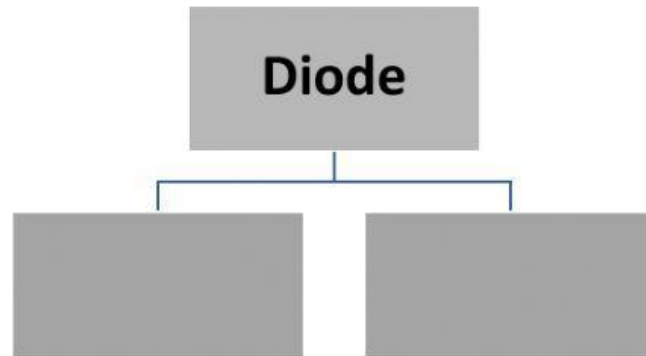
Q1) Diode structure, types and symbols.

Copy the letter, symbol or word from the list to its correct place.

Diode symbol, Diode structure, A, K, Cathode, P-Type, N-type, +, -, Photo diode, Rectifier diode, Zener diode symbol, Zener diode, Diode packaging, forward biased diode, Reverse diode, low poer diode, Light emitting diode

| | | |
|---|---|---|
|  |  |  |
| <p style="text-align: center;">Typical diode</p> | | |
|  |  |  |
|  |  |  |
|  |  |  |
| | | |

Q2) Complete the chart with diode classifications according to semiconductor types.



Q3) Use JEDEC coding to identify the characteristics of the following diodes as per the example.

| Code | First number | Second letter | Subsequent numbers |
|---------|--------------|------------------|--------------------|
| 1N4001 | 1= Diode | N= Semiconductor | 4001 |
| 1N4728A | | | |
| 2N2222 | | | |

Q4) Use Pro-Electron coding to identify characteristics of the following diodes as per the example.

| Code | Semiconductor material | Diode type | Serial number | Voltage Rating |
|------------|------------------------|------------|------------------|----------------|
| BZY74-C6V3 | B= Silicon | Z = Zener | Y74 = Industrial | 6.3 V |
| AAV74 | | | | - |
| BZY74-C3V3 | | | | |

Q5) Match Diode testing circuit with its characteristics.

| # | Circuit | # | Results |
|---|---------|---|---|
| 1 | | | <ul style="list-style-type: none"> • Forward direction test. As Red(+ve) lead is connected to A and Black (-ve) lead is connected to K. • The test will measure the internal resistance of the diode. • Typica reading is <10 ohms for good diodes. And 0.3V for Ge and 0.7 for Si diode when tested by Digital Multimeter. |
| 2 | | | <ul style="list-style-type: none"> • Reverse direction test. As Red(+ve) lead is connected to K and Black (-ve) lead is connected to A. • The test will measure the internal resistance of the diode. • Typica reading is >1000M ohms for good diodes. And 1 or OL when tested by Digital Multimeter |

