Demo PDF file. This file includes questions: 10 from 2719. Full version of file looks the same as demo, but full version includes all questions. You may download file with all questions by link on bottom of this page

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MEWB - Electrical, Electronic, & Control Engineering

1. An electrical connection between the wiring of an electric motor and its metal frame is known as what?

- flux leakage
- impedance
- **ground**
- eddy current

Note:
A ground provides a safety connection between electrical wiring and a motor's metal frame, ensuring fault currents return to the source and minimizing shock hazards. This deliberate connection keeps metal parts at or near earth potential and allows protective devices to operate, unlike flux leakage, impedance, or eddy currents which describe different electrical phenomena.

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2. A circuit that has a conductor in electrical contact with the hull of a ship is called what?

- **grounded circuit**
- short circuit
- series circuit
- closed circuit

Note:
A grounded circuit is defined as a circuit intentionally connected to the ship's hull, which serves as the electrical ground reference. This distinguishes it from a short circuit (an unintended fault), a series circuit (describing current flow), and a closed circuit (simply indicating a complete path).

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3. An unintended path of low resistance bypassing the intended path and allowing passage of an abnormally high amount of current is known as what?

- **short circuit**
- polarized ground
- ground reference point
- open circuit

Note:
A short circuit is defined as an unintended, low-resistance path that allows excessive current to bypass the intended load. This condition directly matches the question's description of an unintended path with low resistance allowing abnormally high current. Open circuits interrupt current flow, while ground references describe system voltage referencing, making 'short circuit' the correct answer.

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A short circuit is defined as an unintended, low-resistance path that allows excessive current to bypass the intended load. This condition directly matches the question's description of an unintended path with low resistance allowing abnormally high current. Open circuits interrupt current flow, while ground references describe system voltage referencing, making 'short circuit' the correct answer.

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5. What is the basic unit of measure for inductance?

- coulomb
- ohm
- farad
- **Henry**

Note:
Inductance is measured in henrys (H), the SI derived unit defined as one weber per ampere. Coulombs measure electric charge, ohms measure electrical resistance, and farads measure capacitance; therefore, the correct answer is Henry.

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6. In terms of units, how is the inductance of a coil measured?

- amperes
- **henrys**
- ohms
- volts

Note:
Inductance is measured in henrys, the SI unit defined as the property of a circuit that opposes changes in current, producing 1 volt when current changes at 1 ampere per second.

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7. How may the unit "hertz" be best described?

- **cycles per second**
- revolutions per minute
- revolutions per second
- coulombs per second

Note:
Hertz is defined as cycles per second, representing the SI unit of frequency.

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8. What unit of measure is used to quantify electrical power?

- ohms
- volts
- amps
- **watts**

Note:
Electrical power is quantified in watts. Watts represent the rate at which electrical energy is converted or used, while ohms measure resistance, volts measure potential, and amps measure current.

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9. What is the unit of measure for electrical power?

- ampere
- kilovolt
- **watt**
- farad

Note:
Electrical power is the rate of energy transfer, and is measured in watts. Amperes measure current, kilovolts measure voltage, and farads measure capacitance.

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10. Electric current is the flow of electrons through a conductor. How is the rate of this flow measured?

- **amperes**
- ohms
- watts
- volts

Note:
Amperes measure the rate of electric charge flow, which defines electric current. Ohms measure resistance, volts measure potential difference, and watts measure power.

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