1. **An experiment is performed to find the refractive index of glass using a travelling microscope. In this experiment distance are measured by**  
     
   **(a)** a vernier scale provided on the microscope  
   **(b)** a standard laboratory scale  
   **(c)** a meter scale provided on the microscope  
   **(d)** a screw gauage provided on the microscope  
     
   **Answer** (a) a vernier scale provided on the microscope
2. What is the SI unit of energy?

a.watt

b.joule

c.newton

d.henrey

ans b

3)

|  |  |
| --- | --- |
|  | Permeability is the inverse equivalent of which electrical term? |
| |  |  |  |  | | --- | --- | --- | --- | | [A.](javascript:%20void%200;) | Voltage | [B.](javascript:%20void%200;) | Current | | [C.](javascript:%20void%200;) | Resistance | [D.](javascript:%20void%200;) | Conductance | |

Ans c

|  |  |
| --- | --- |
| 4) | Which electromagnetic device uses ***brushes*** and a ***commutator***? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | A speaker | | [B.](javascript:%20void%200;) | A dc generator | | [C.](javascript:%20void%200;) | A relay | | [D.](javascript:%20void%200;) | A solenoid | |

Ans:b

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| 5. | What are the effects of moving a closed wire loop through a magnetic field? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | A voltage is induced in the wire. | | [B.](javascript:%20void%200;) | A current is induced in the wire. | | [C.](javascript:%20void%200;) | The polarity across the wire depends on the direction of motion. | | [D.](javascript:%20void%200;) | All of the above | |

Ans d

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| 6. | The Hall effect |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | is a phenomenon with no practical applications | | [B.](javascript:%20void%200;) | is used in various sensor applications | | [C.](javascript:%20void%200;) | can develop potentials of thousands of volts | | [D.](javascript:%20void%200;) | is the basis for solar cell operation | |

Ans b

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| --- | --- |
| 7. | "Series" and "parallel" as applied to dc motors refer to |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | the connection of the motor and controller | | [B.](javascript:%20void%200;) | the connection of the field coil and armature windings | | [C.](javascript:%20void%200;) | the connection of the brush and commutator | | [D.](javascript:%20void%200;) | the connection of the motor batteries | |

Ans b

|  |  |
| --- | --- |
| 8. | The component that produces power in an electromagnetic generator is called the |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | armature | | [B.](javascript:%20void%200;) | field winding | | [C.](javascript:%20void%200;) | commutator | | [D.](javascript:%20void%200;) | brush | |

Ans a

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| --- | --- |
| 9. | A Hall effect sensor |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | exists only in theory | | [B.](javascript:%20void%200;) | is a noncontacting magnetic sensor | | [C.](javascript:%20void%200;) | can operate only a few times before failure | | [D.](javascript:%20void%200;) | produces very large voltages | |

Ans b

|  |  |
| --- | --- |
| 10. | Which two values are plotted on a *B-H* curve graph? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | Reluctance and flux density | | [B.](javascript:%20void%200;) | Permeability and reluctance | | [C.](javascript:%20void%200;) | Magnetizing force and permeability | | [D.](javascript:%20void%200;) | Flux density and magnetizing force | |

Ans d

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| --- | --- |
| 11. | Which electromagnetic device has a flexible ***cone***? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | A speaker | | [B.](javascript:%20void%200;) | A dc generator | | [C.](javascript:%20void%200;) | A relay | | [D.](javascript:%20void%200;) | A solenoid | |

Ans a

|  |  |
| --- | --- |
| 12. | The unit of flux density is known as |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | magnetomotive force | | [B.](javascript:%20void%200;) | a weber | | [C.](javascript:%20void%200;) | a maxwell | | [D.](javascript:%20void%200;) | a tesla | |

Ans d

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| --- | --- |
| 13. | What do you call the characteristic of a magnetic material whereby a change in magnetization lags the application of a magnetizing force? |
| |  |  |  |  | | --- | --- | --- | --- | | [A.](javascript:%20void%200;) | Hysteresis | [B.](javascript:%20void%200;) | Induction | | [C.](javascript:%20void%200;) | Retentivity | [D.](javascript:%20void%200;) | Reluctance | |

Ans a

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| --- | --- |
| 14. | Which electromagnetic device has a movable iron core called a ***plunger***? |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | A speaker | | [B.](javascript:%20void%200;) | A dc generator | | [C.](javascript:%20void%200;) | A relay | | [D.](javascript:%20void%200;) | A solenoid | |

Ans d

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| --- | --- |
| 15. | The polarity of induced voltage while a field is collapsing is |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | independent of the force creating the field | | [B.](javascript:%20void%200;) | opposite to the force creating the field | | [C.](javascript:%20void%200;) | identical to the force creating the field | | [D.](javascript:%20void%200;) | present only if the force is stationary | |

Ans b

|  |  |
| --- | --- |
| 16. | What is the unit for measuring the amplitude of a sound? |
| |  |  |  |  | | --- | --- | --- | --- | | [A.](javascript:%20void%200;) | Decibel | [B.](javascript:%20void%200;) | Coulomb | | [C.](javascript:%20void%200;) | Hum | [D.](javascript:%20void%200;) | Cycle | |

Ans a

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| --- | --- |
| 17. | Reading of a barometer going down is an indication of |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | snow | | [B.](javascript:%20void%200;) | storm | | [C.](javascript:%20void%200;) | intense heat | | [D.](javascript:%20void%200;) | rainfall | |

Ans d

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| --- | --- |
| 18. | One fathom is equal to |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | 6 feet | | [B.](javascript:%20void%200;) | 6 meters | | [C.](javascript:%20void%200;) | 60 feet | | [D.](javascript:%20void%200;) | 100 cm | |

Ans a

|  |  |
| --- | --- |
| 19. | Fathom is the unit of |
| |  |  |  |  | | --- | --- | --- | --- | | [A.](javascript:%20void%200;) | sound | [B.](javascript:%20void%200;) | depth | | [C.](javascript:%20void%200;) | frequency | [D.](javascript:%20void%200;) | distance | |

Ans b

|  |  |
| --- | --- |
| 20. | Very small time intervals are accurately measure by |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | White dwarfs | | [B.](javascript:%20void%200;) | Quartz clocks | | [C.](javascript:%20void%200;) | Atomic clocks | | [D.](javascript:%20void%200;) | Pulsars | |

Ans c

|  |  |
| --- | --- |
| 21. | A chronometer measures |
| |  |  | | --- | --- | | [A.](javascript:%20void%200;) | colour contrast | | [B.](javascript:%20void%200;) | sound waves | | [C.](javascript:%20void%200;) | time | | [D.](javascript:%20void%200;) | water waves | |

Ans c