

SCIENCE MOCK EXAM 3

Types of Energy U2M1L1 : Recognize ways in which electrical energy is transformed into heat, light, sound and motion (PAGE 23)

6. Energy transfer MOTION TO SOUND

Which one below describes this energy transfer?

A	Burning candle heats up
B	Plucked guitar string makes noise
C	Ball rolls down a hill
D	Rubbing warms hands

Sound Energy U2M1L2 : concluded that sound is a wave that transfers energy from one place to another and how it is transmitted (PAGE 30)

7. How does sound energy travel?

A	Waves
B	Beams
C	Particles

Sound Energy U2M1L2 : concluded that sound is a wave that transfers energy from one place to another and how it is transmitted (PAGE 31)

8. Sound Waves travel fastest through

A	Solids
B	Liquids
C	Gases

Electricity U2M1L3 : Determines that electricity flows through an electrical circuit when the circuit is closed.

9. A flow of electrical charges is known as _____.

A	circuit
B	voltage
C	Electricity

Electricity U2M1L3 : Determines that electricity flows through an electrical circuit when the circuit is closed.

10. A switch in a circuit

A	Acts as an insulator
B	Absorbs electricity
C	Allows or stops the flow of electricity

Heat U2M1L4: Describes three methods of heat transfer. Page 68

11. Heat moves from an object with _____ to an object with a _____ temperature

A	Higher to lower
B	Lower to higher

Heat U2M1L4: Describes three methods of heat transfer. Page 70

12. It is very hot outside and you walk barefoot on hot pavement. Predict what will happen

A	The transfer of heat energy from the pavement will cause your feet to feel hot.
B	The transfer of light energy from the pavement will cause your feet to feel hot.
C	The transfer of light energy from the pavement will cause your feet to feel cold.

SCIENCE MOCK EXAM 3

Heat U2M1L4: Describes three methods of heat transfer. Page 70

13. In the image below, what evidence can you gather to prove that energy is being transferred?



- | | |
|---|--|
| A | The smoke shows that the grill is transferring heat energy to cook the food. |
| B | The smoke shows that the grill is transferring sound energy to cook the food. |
| C | The smoke shows that the grill is transferring electrical energy to cook the food. |

Heat U2M1L4: Describes three methods of heat transfer. Page 70

14. Earth's surface is warmed by

- | | |
|---|------------|
| A | Radiation |
| B | Conduction |
| C | Convection |

Energy from Nonrenewable Resources U2M2L1 :Recognize the type of nonrenewable resources Page 94

15. Fossil fuels are ____.

- | | |
|---|------------------------|
| A | Renewable resources |
| B | Nonrenewable resources |
| C | Easily replaced |

Energy from Nonrenewable Resources U2M2L1 :Recognize the type of nonrenewable resources Page 94

16. How are fossil fuels formed?

- | | |
|---|--|
| A | Heat and pressure turn animal and plant remains into fuels. |
| B | Scientists collect fossils and turn them into fuels. |
| C | Fossils sink into swamps and take between five and ten years to turn into fuels. |

Energy from Nonrenewable Resources U2M2L1 :Recognize the type of nonrenewable resources Page 94

17. Which statement is not true about nuclear energy?

- | | |
|---|--------------------------------|
| A | is created using fossil fuels. |
| B | a nonrenewable resource |
| C | used to generate electricity. |

SCIENCE MOCK EXAM 3

Energy from renewable Resources U2M2L2 :Recognize the type of renewable resources page 110

18) Why is Solar power a renewable resource?

A	It cannot be used up
B	It is a natural resource
C	It creates extra sunlight

Energy from renewable Resources U2M2L2 :Recognize the type of renewable resources page 111

19)) Solar energy is an alternative energy that comes from the

A	Sun
B	Moon
C	Earth

Energy from renewable Resources U2M2L2 :Recognize the type of renewable resources page 111

20). Where does geothermal energy come from?

A	Inside the earth
B	Sun
C	Wind Turbines

Energy from renewable Resources U2M2L2 :Recognize the type of renewable resources page 111

21). Geothermal power plants use the _____ from the Earth's interior to generate power

A	Heat
B	Water
C	Wind

Energy from renewable Resources U2M2L2 :Recognize the type of renewable resources page 113

22) Electricity produced from flowing water is called _____.

A	geothermal energy
B	hydroelectricity
C	thermal energy

Energy from renewable Resources U2M2L2 :Recognize the type of renewable resources page 113

23) A hydroelectric plant uses alternative energy sources, such as _____ to generate electricity

A	Wind
B	Water
C	sun

Energy from renewable Resources U2M2L2 :Recognize the type of renewable resources page 113

24) Which type of energy would best be used in an area with a lot of hot springs?

A	Hydroelectricity
B	Wind Energy
C	Geothermal Energy

SCIENCE MOCK EXAM 3

Impact of Energy Use U2M2L3 :Explore the effect of obtaining and using energy resources Page 128

25) The overuse of fossil fuels leads to_____.

A	Pollution
B	Flooding
C	Fertile soil

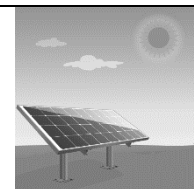
Impact of Energy Use U2M2L3 :Explore the effect of obtaining and using energy resources Page 132

26) When an item is _____ it is made into a new product

A	Reduced
B	Reused
C	Recycled

Design Energy Solutions U2M2L4 : Design Energy Solutions page 144

27. How does the solar panel solve a design problem?



A	It transforms energy without producing air pollution.
B	It transforms sunlight energy to wind energy.
C	It uses nonrenewable resources for power.

Design Energy Solutions U2M2L4 : Design Energy Solutions page 144

28. Engineers designing a new energy efficient product will make the first model, called a

A	Prototype
B	Constraint
C	Criteria

29. Match the meaning to the words

Engineer	an original or first model of something from which other forms are developed
Prototype	something that limits or restricts someone or something
Criteria	a series of steps that engineers follow to solve a problem
Design process	one who designs solutions to problems
Constraint	a standard on which a judgement or decision is based




SCIENCE MOCK EXAM 3

30- Electricity: Build a simple circuit Page 50

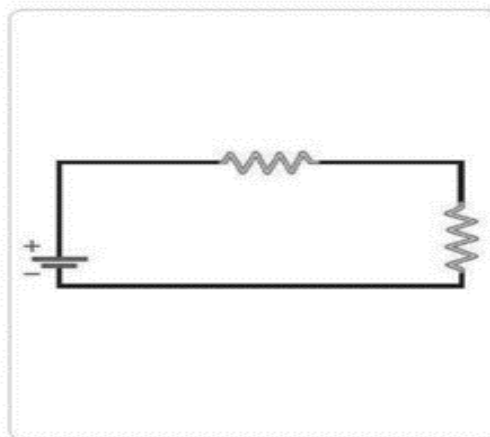
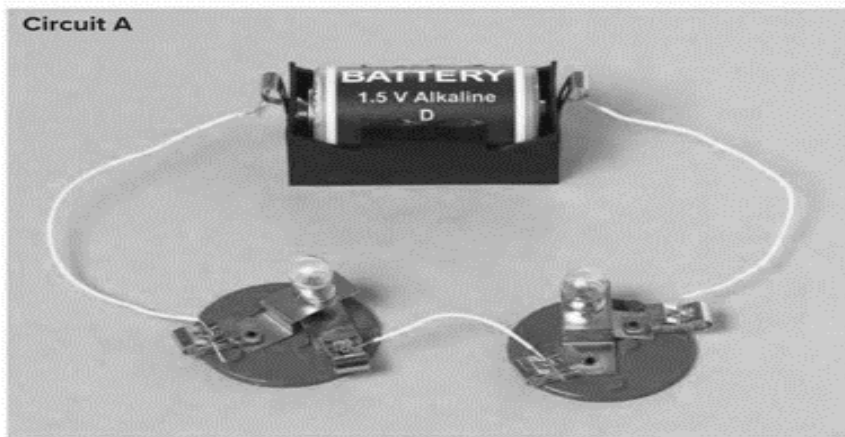
Label a Diagram: Electric Circuits

Circuit A has been drawn for you. Use the key to complete the circuit diagram for Circuit B.

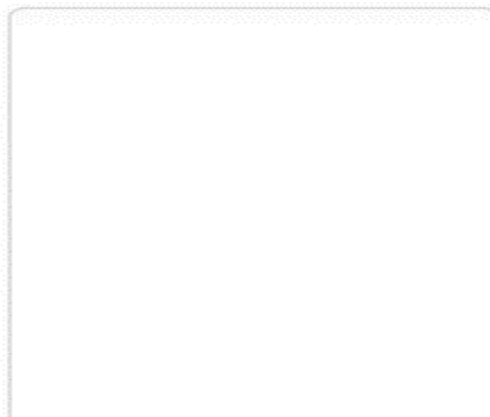
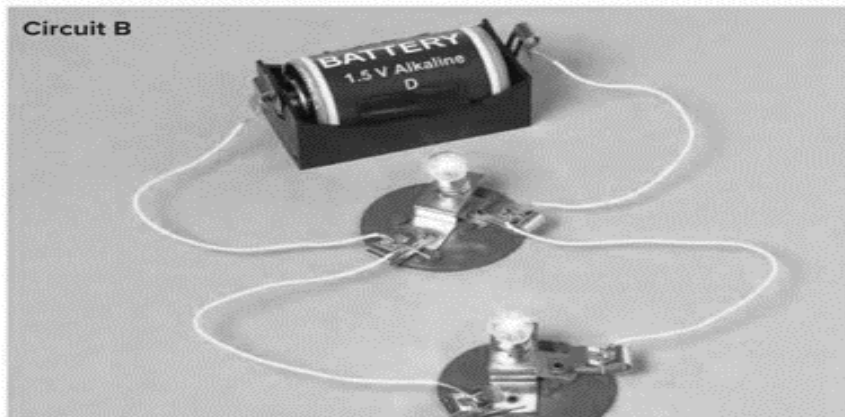
KEY

-  wire
-  resistor
-  voltage source

Circuit A



Circuit B



SCIENCE MOCK EXAM 3

Answers

1	A
2	B AND C
3	SEE BELOW
4	C
5	B
6	B
7	A
8	A
9	C
10	C
11	A
12	A
13	A
14	A
15	B
16	A
17	A
18	A
19	A
20	A
21	A
22	B
23	B
24	C
25	A
26	C
27	A
28	A
29	SEE BELOW
30	SEE BELOW

SCIENCE MOCK EXAM 3

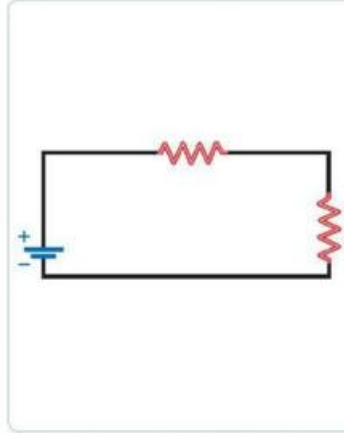
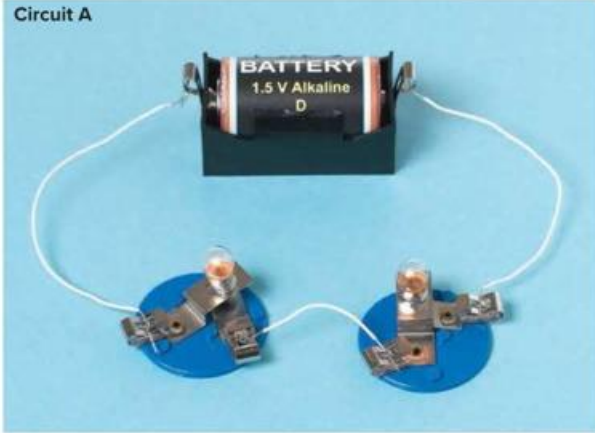
Label a Diagram: Electric Circuits

Circuit A has been drawn for you. Use the key to complete the circuit diagram for Circuit B.

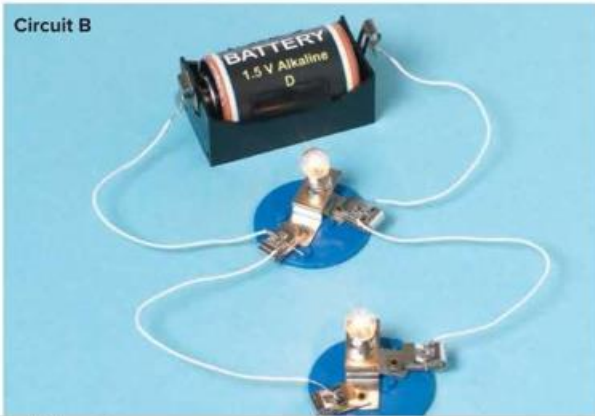
KEY

- wire
- ⚡ resistor
- ⎓ voltage source

Circuit A



Circuit B



SCIENCE MOCK EXAM 3

28 Match the meaning to the words

Engineer	an original or first model of something from which other forms are developed
Prototype	something that limits or restricts someone or something
Criteria	a series of steps that engineers follow to solve a problem
Design process	one who designs solutions to problems
Constraint	a standard on which a judgement or decision is based

SCIENCE MOCK EXAM 3

Stored Energy	Energy of Motion
chemical energy, nuclear energy	electrical energy, thermal energy, sound energy, light energy