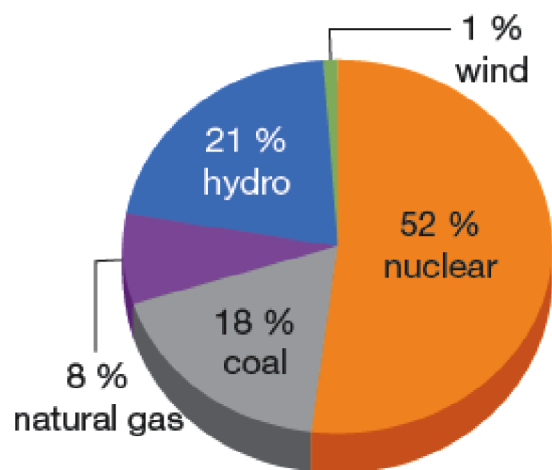


SNC1P Electricity Exam Prep**Multiple Choice**

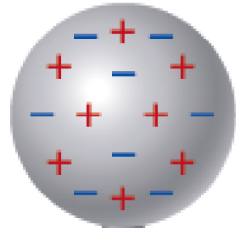
Identify the choice that best completes the statement or answers the question.

- _____ 1. Which of the following is an example of chemical energy?
A) **food** B) voices C) microwaves D) running water
- _____ 2. Which of the following is an example of thermal energy?
A) food B) music C) microwaves D) **warmth from a fire**
- _____ 3. Which of the following is an example of sound energy?
A) wind C) **music coming from a radio**
B) electricity for your home D) microwaves
- _____ 4. Which of the following is an example of radiant energy?
A) **sunlight** B) gasoline C) music D) lightning
- _____ 5. Which of the following is an example of electrical energy?
A) gasoline C) sunlight
B) fireworks D) **electricity for your home**
- _____ 6. Which of the following is a device that produces electricity by rotating a wire coil near a magnet?
A) electrical energy distribution grid C) photovoltaic cell
B) **generator** D) thermal generation
- _____ 7. A kilowatt is equal to which of the following?
A) 10 watts B) 100 watts C) **1000 watts** D) 10 000 watts
- _____ 8. A kilowatt hour is equal to which of the following?
A) **1000 W for 1 h** C) 1000 W for 100 h
B) 1000 W for 2 h D) 100 W for 1 h
- _____ 9. Which device changes light energy into electrical energy?
A) **solar panel** B) wind turbine C) car engine D) light bulb
- _____ 10. Which device changes mechanical energy into electrical energy?
A) solar panel B) **wind turbine** C) car engine D) light bulb
- _____ 11. Fire performs which energy transformation?
A) light energy into electrical energy
B) chemical energy into electrical energy and sound energy
C) **chemical energy into thermal energy and light energy**
D) electrical energy into thermal energy and light energy
- _____ 12. A light bulb performs which energy transformation?
A) thermal energy into mechanical energy and light energy
B) **electrical energy into thermal energy and light energy**
C) mechanical energy into thermal energy and sound energy
D) electrical energy into mechanical energy and light energy
- _____ 13. Which of the following is a **non-renewable** energy source?
A) **thermal generation using fossil fuels**
B) hydro-electric generation
C) wind generation
D) photovoltaic generation
- _____ 14. Which statement **is true** about using nuclear fission as an energy source?
A) **Nuclear fission does not directly emit greenhouse gases.**
B) Nuclear fission is a renewable energy source.
C) Nuclear fission is much less expensive than other sources.
D) Nuclear fission does not cause air, water, or thermal pollution.

- _____ 15. Which statement **is true** about using fossil fuels as an energy source?
- A) **Fossil fuels are a non-renewable energy source.**
 - B) Thermal generation using fossil fuels is much more expensive than nuclear.
 - C) Thermal generation using fossil fuels produces dangerous radioactive wastes.
 - D) Thermal generation using fossil fuels disrupts the natural water flow pattern.
- _____ 16. Which statement **is true** about the use of photovoltaic cells as an energy source?
- A) **Photovoltaic cells do not create air or water pollution.**
 - B) Photovoltaic cells are inexpensive.
 - C) Photovoltaic cells are very efficient.
 - D) Photovoltaic cells operate twenty-four hours a day.
- _____ 17. Which statement **is true** about the use of geothermal generation as an energy source?
- A) Geothermal energy is a non-renewable energy source.
 - B) Geothermal fluids cannot be reused.
 - C) Geothermal generation produces pollution and greenhouse gases.
 - D) **Areas suitable for geothermal generation are rare.**
- _____ 18. This circle graph shows how Ontario's electrical energy was generated in 2007. What percentage of Ontario's electrical energy was generated using non-renewable energy sources?

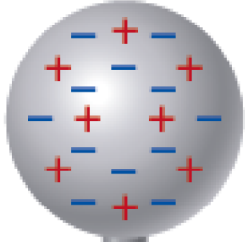


- A) 8 %
 - B) 18 %
 - C) 52 %
 - D) 78 %
- _____ 19. One large wind turbine can supply electricity for about how many homes?
- A) 1
 - B) 50
 - C) 100000
 - D) 250
- _____ 20. Which of the following is a **renewable** energy source?
- A) thermal generation using fossil biomass
 - B) hydro-electric generation
 - C) wind generation
 - D) all of the above
- _____ 21. Which statement **is true** about protons and/or electrons?
- A) Protons attract other protons.
 - B) Electrons attract other electrons.
 - C) Protons and electrons attract each other.
 - D) none of the above
- _____ 22. The object shown here has what type of charge?



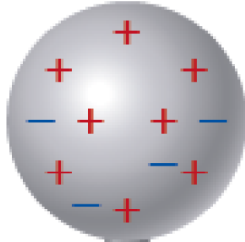
- A) positive
- B) negative
- C) **neutral**
- D) none of the above

23. The object shown here has what type of charge?



- A) positive B) **negative** C) neutral D) none of the above

24. The object shown here has what type of charge?



- A) **positive** B) negative C) neutral D) none of the above

25. Which statement **is true** about neutral objects?

- A) Neutral objects have more protons than electrons.
B) Neutral objects have fewer protons than electrons.
C) **When a neutral object gains electrons, it becomes negatively charged.**
D) A neutral object becomes positively charged by gaining protons.

26. What makes your hair stand up when you touch a van de Graaff generator?

- A) **static electricity** C) alternating current electricity
B) direct current electricity D) grounding

27. You touch a doorknob and feel a shock. What is this an example of?

- A) charging by induction B) direct current electricity C) alternating current electricity D) **electric discharge**

28. Which term describes a continuous path along which electrons can flow?

- A) load B) **electric circuit** C) ampere D) ammeter

29. What component of a flashlight is the load?

- A) spring B) dry cells C) reflector D) **bulb**

30. What component of a flashlight is the energy source?

- A) spring B) **dry cells** C) reflector D) bulb

31. What is a fan an example of?

- A) **load** B) switch C) energy source D) conductor

32. What is a motor an example of?

- A) **load** B) switch C) energy source D) conductor

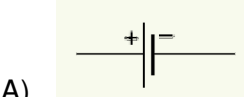
33. What is an oven an example of?

- A) **load** B) switch C) energy source D) conductor

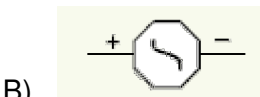
34. What is a doorbell an example of?

- A) **load** B) switch C) energy source D) conductor

35. Which symbol represents an electric cell?



A) **THIS ONE**



B)



C)



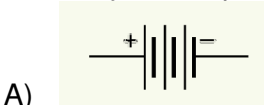
D)

36. What does this symbol represent?

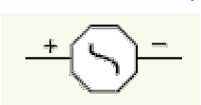


- A) electric cell B) **three-cell battery** C) variable DC power supply D) connecting wire

37. Which symbol represents a variable DC power supply?



A)

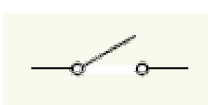


B)

THIS ONE

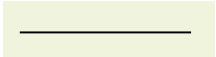


C)



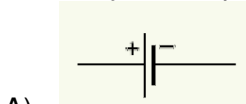
D)

38. What does this symbol represent?

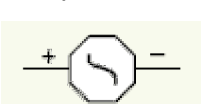


- A) electric cell B) three-cell battery C) **connecting wire** D) electric motor

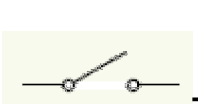
39. Which symbol represents an open switch?



A)

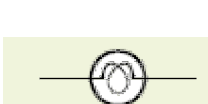


B)



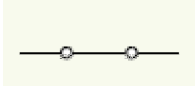
C)

HIS ONE



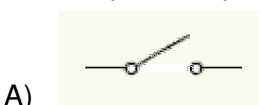
T D)

40. What does this symbol represent?

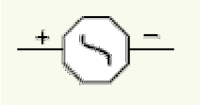


- A) **closed switch** B) open switch C) connecting wire D) lamp

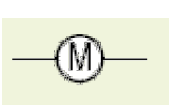
41. Which symbol represents a lamp?



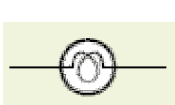
A)



B)



C)



D)

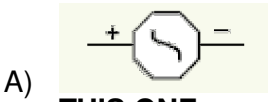
THIS ONE

42. What does this symbol represent?



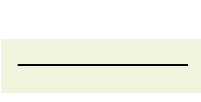
- A) lamp B) **electric motor** C) connecting wire D) closed switch

43. Which symbol represents an energy source?

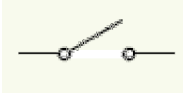


A)

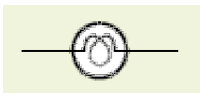
THIS ONE



B)

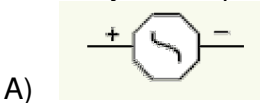


C)

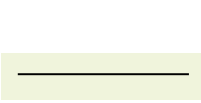


D)

44. Which symbol represents an electrical conductor?

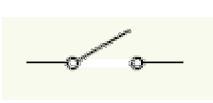


A)

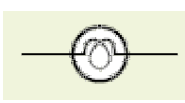


B)

THIS ONE

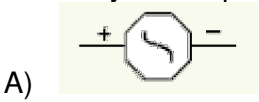


C)

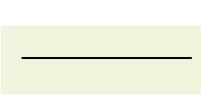


D)

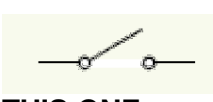
45. Which symbol represents a control device?



A)

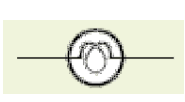


B)



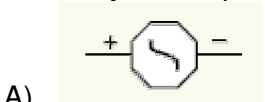
C)

THIS ONE



D)

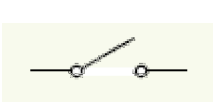
46. Which symbol represents a load?



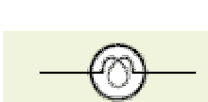
A)



B)



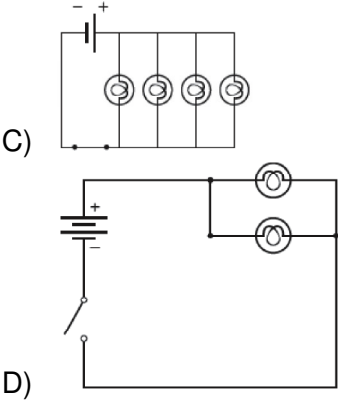
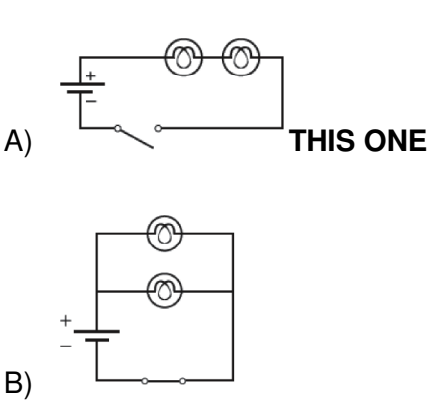
C)



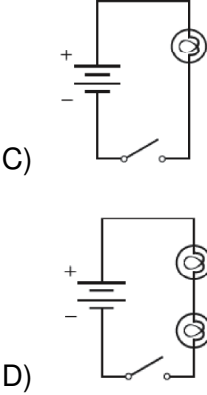
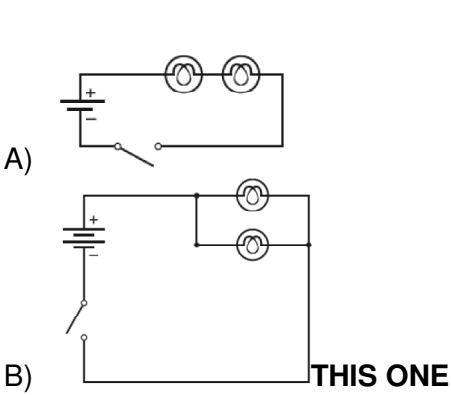
D)

THIS ONE

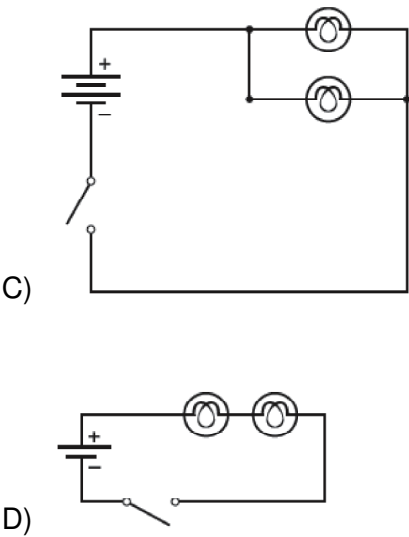
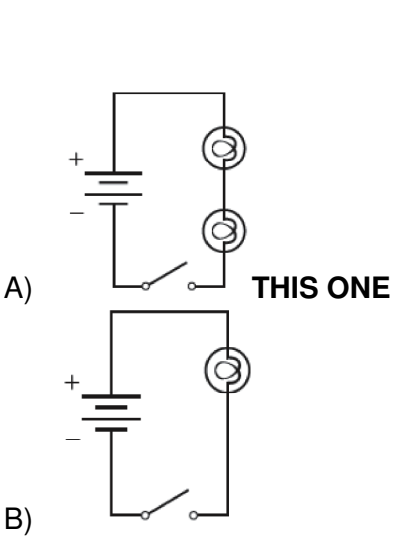
47. Which circuit diagram represents a series circuit?



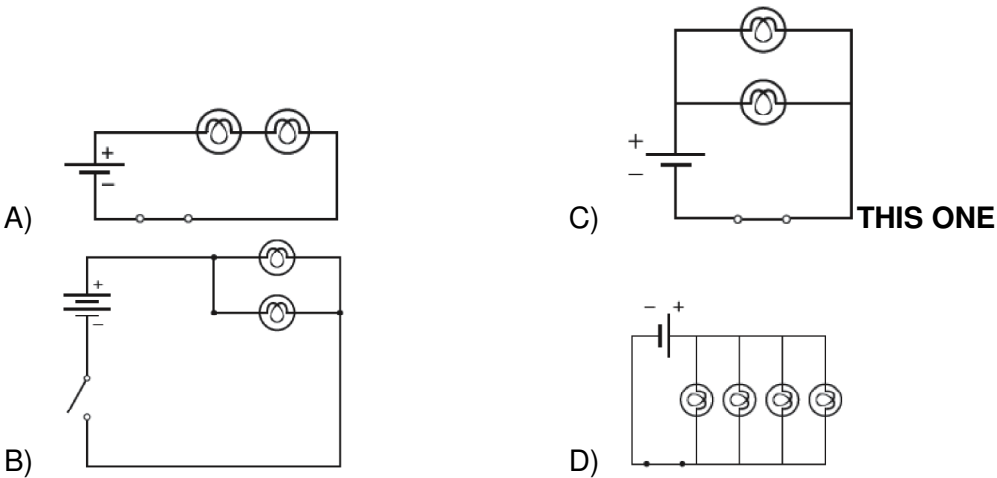
48. Which circuit diagram represents a parallel circuit?



49. Which circuit diagram models a circuit with a two-cell battery, two lamps, and an open switch connected in series?



50. Which circuit diagram models a circuit with an electric cell, two lamps, and a closed switch connected in parallel?



Completion
Complete each statement.

51.

force	non-renewable	thermal	renewable	discharge
energy grid	electrical	energy	negatively	static

52. An energy source that cannot be replaced in a relatively short period of time is called a(n) **non-renewable** energy source.
53. **Thermal** generation is a method for generating electricity in which water is heated to produce steam, which spins a turbine connected to a generator.
54. A(n) **renewable** energy source is an energy source that can be replaced in a relatively short period of time.
55. **Energy** is the ability to do a task, such as moving an object.
56. The electrical **energy grid** is the network that carries electricity from the energy generating station to the consumer?
57. Electric **force** describes the attraction or repulsion between charged objects?
58. **Negatively** charged describes an object that has more electrons than protons?
59. **Static** electricity describes an imbalance of electric charge at rest on the surface of an object?
60. Electrical **discharge** describes the rapid transfer of electrons from one object to another?
61. **Electrical** energy is the energy of moving charged particles.