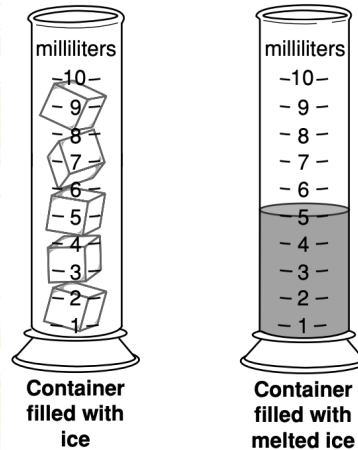


**Natural Science Discipline
Category 1 - Sample Questions**

1. Which sense organ is essential for our sense of balance?
 - A. Ears
 - B. Eyes
 - C. Nose
 - D. Skin
2. Which of the following is not needed by plants to grow?
 - A. Oxygen
 - B. Soil
 - C. Sunlight
 - D. Water
3. Which of the following is not a characteristic of living things?
 - A. They can move.
 - B. They can reproduce.
 - C. They can live eternally.
 - D. They can respond to stimuli.
4. Which is an invertebrate?
 - A. Octopus
 - B. Platypus
 - C. Snake
 - D. Turtle
5. Which is not a characteristic of liquid?
 - A. It has definite mass.
 - B. It has definite shape.
 - C. It has definite volume.
 - D. It has definite density.
6. Which of the following can be added into a compost due to its biodegradability?
 - A. Batteries
 - B. Dried leaves
 - C. Plastic straws
 - D. Tires
7. A pipe cleaner can bend without breaking which makes it a good material for cleaning narrow tubes. What property does it possess?
 - A. Flammability
 - B. Flexibility
 - C. Fluidity
 - D. Fragility
8. Which of the following materials will form a homogeneous mixture when combined?
 - A. Salt and pepper
 - B. Salt and sugar
 - C. Sugar and sand
 - D. Sugar and pepper

9. A hard, solid material X turns liquid when left inside a hot oven. What phase change is shown in this scenario?
- Condensation
 - Evaporation
 - Freezing
 - Melting
10. A container was filled with ice cubes. The container was left outside until the ice cubes melted. Based on the picture, how much water came from the melted ice cubes?



11. Which part of a bicycle best moves in a circle?



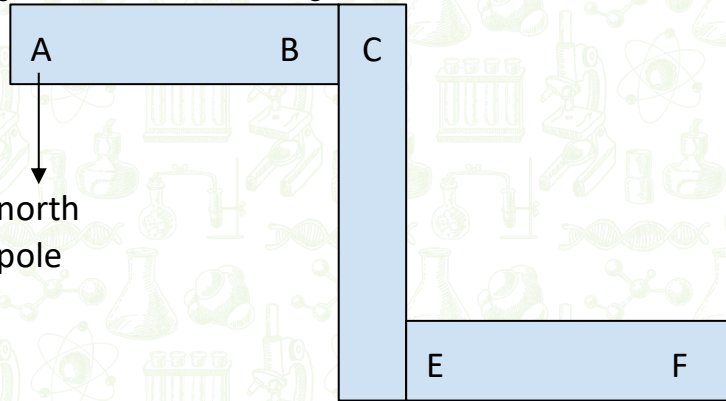
- Frame
 - Foot pedal
 - Kickstand
 - Seat
12. Below are different properties of a metal.

- Conductivity
- Ductility
- Malleability
- Luster

Which property makes metal a suitable material in manufacturing electrical wires?

- 1 and 2 only
- 1 and 4 only
- 1, 3, and 4 only
- 2, 3, and 4 only

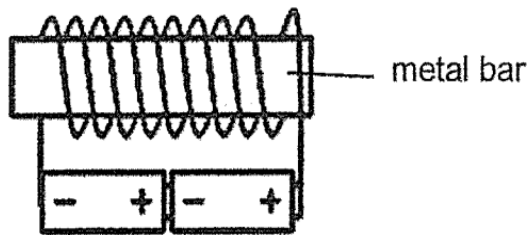
13. Study the three magnets as shown in the image below.



Which of the following correctly identifies poles C and F?

- A. C is north pole, F is north pole
- B. C is south pole, F is north pole
- C. C is north pole, F is south pole
- D. C is south pole, F is south pole

14. The diagram below shows an electromagnet.



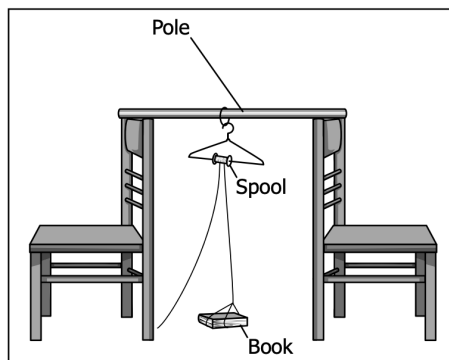
Toby thought of doing the following steps in order for the electromagnet to attract an iron nail from a greater distance.

- (1) Use a thinner wire
- (2) Use three batteries
- (3) Use a bigger metal bar
- (4) Make more coils of wire around the metal bar

Which steps are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 2 and 4 only
- D. 3 and 4 only

15. Which simple machine does this model represent?



16. Which process will most likely cause the dunes to form in deserts?

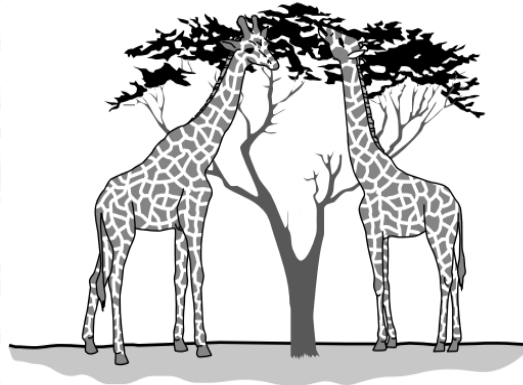


- A. Condensation
- B. Erosion
- C. Evaporation
- D. Transpiration

17. An apple falls off a tree and rolls into a stream. The apple floats down the stream and away from the tree. This is an example of

- A. Migration
- B. Seed dispersal
- C. Adapting to the environment
- D. Changing weather conditions

18. The diagram below shows two giraffes by the tree.



The two giraffes, trying to get leaves from the tree, are competing for

- A. Air
- B. Food
- C. Space
- D. Sunlight

19. Which word describes anything that can harm living organisms when too much of it is released into an ecosystem?

- A. Consumer
- B. Pollutant
- C. Producer
- D. Reaction

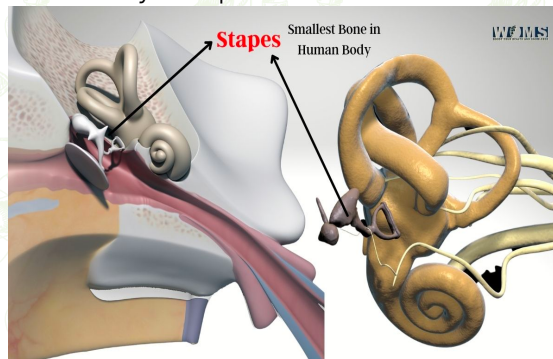
20. The Sun appears to rise and set daily due to

- A. Earth's rotation
- B. Earth's revolution
- C. Sun's rotation
- D. Sun's revolution

21. What is the name of the largest moon in the Solar System and in which planet is it found?
22. At the beginning of the Triassic period, how many continents were there?
- One
 - Two
 - Three
 - Four
23. Where is the longest bone in the body found?



- Arm
 - Chest
 - Leg
 - Torso
24. What dinosaur name means "fast thief" and lived during the Cretaceous period?
- Archosaurs
 - Brachiosaurus
 - Triceratops
 - Velociraptors
25. The smallest bone in the human body is stapes.

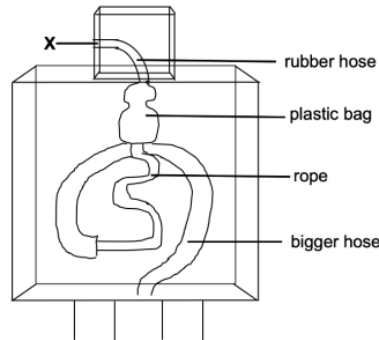


In which body part is this bone found?

26. Edmond Halley was able to predict that a comet seen in 1683 would return in 1758. How did Halley calculate the next arrival of this comet?
- Using the laws of motion
 - Using the ripples theory of Einstein
 - Using the laws of conservation of mass
 - Using the law of gravitational theory of Newton
27. How much part of the moon is always illuminated by the sun?
- One-half
 - One-third
 - One-fourth

D. Whole part

28. The diagram below shows a model of the human digestive system. X represents the mouth.



Which shows the correct digestive organ represented by each material?

A.

Rubber hose	Esophagus
Plastic bag	Small intestine
Rope	Stomach
Bigger hose	Large intestine

B.

Rubber hose	Esophagus
Plastic bag	Stomach
Rope	Small intestine
Bigger hose	Large intestine

C.

Rubber hose	Stomach
Plastic bag	Small intestine
Rope	Esophagus
Bigger hose	Large intestine

D.

Rubber hose	Esophagus
Plastic bag	Stomach
Rope	Large intestine
Bigger hose	Small intestine

29. What property of metal makes it a good material for electrical wirings?

- A. High conductivity
- B. Low conductivity
- C. Low melting point
- D. Luster

30. Which of the following is not a mixture?

- A. Air
- B. Milk
- C. Steel
- D. Water

31. There are three pots with different types of soil. Each pot has a hole at the bottom to allow water to pass through it. When you put an equal amount of water in each container, only pot B did not let the water pass through it.

What conclusion can you make based on your observation?

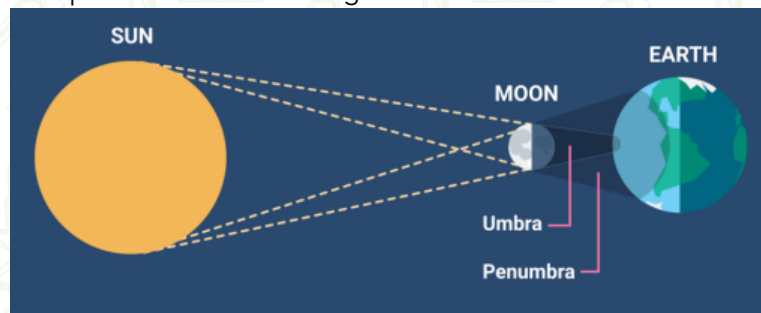
- A. Pot B has loam which retains water in it.
- B. Pot B has clay which can hold much water in it.

- C. Pot B has plenty of humus which holds the water in it.
- D. Pot B has sand which does not allow water to pass through.

32. From the chart below, which of the following scenarios is certain to happen?

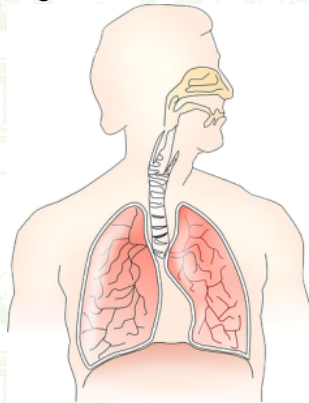
Date	City		
	Bree	Lorien	Rohan
Oct 4			

- A. It is raining right now in Lorien.
 - B. The weather is overcast in Lorien.
 - C. Heavy rains are experienced for the whole day in Rohan.
 - D. There is a thunderstorm and scattered rain showers in Bree.
33. What usually happens to absorbed light?
- A. It will bounce back.
 - B. It will be converted to heat.
 - C. It will pass through the object.
 - D. It will bend away from the object.
34. What type of solar eclipse is shown in the diagram below?



- A. Annular
 - B. Partial
 - C. Penumbral
 - D. Total
35. Which of the following statements shows displacement?
- A. The ball rolled 50-cm forward.
 - B. The car covered 40 meters in 10 minutes.
 - C. The door is 3 meters away from the teacher's table.
 - D. The runner took 3 minutes to finish one complete lap.
36. Which is not a mechanical agent of weathering?
- A. Animals
 - B. Plants
 - C. Oxygen
 - D. Wind
37. Which planet is the farthest from Earth?
- A. Mercury
 - B. Neptune
 - C. Saturn
 - D. Venus

38. Which body system is shown in the diagram below?



- A. Digestive system
- B. Excretory system
- C. Nervous system
- D. Respiratory system

39. How many phases of moon are there?

- A. 2
- B. 4
- C. 6
- D. 8

40. What type of adaptation is where one animal imitates the traits of another animal?

- A. Camouflage
- B. Instinct
- C. Mimicry
- D. Reflex

41. Which gas mainly comprises Earth's atmosphere?

- A. Carbon dioxide
- B. Hydrogen
- C. Nitrogen
- D. Oxygen

42. Jimin tested four electromagnets – A, B, C, and D – using some paper clips. The kind of batteries used were similar, but the number of batteries increases for B, C, and D electromagnets. The table below shows the results.

Electromagnet	Number of batteries used	Number of paper clips attracted
A	1	5
B	2	10
C	3	?
D	4	20

- A. 12
- B. 13
- C. 14
- D. 15

43. What is the largest moon in the solar system?

- A. Callisto
- B. Deimos
- C. Ganymede
- D. Titan

44. What kind of energy transformation is involved in the given image below?

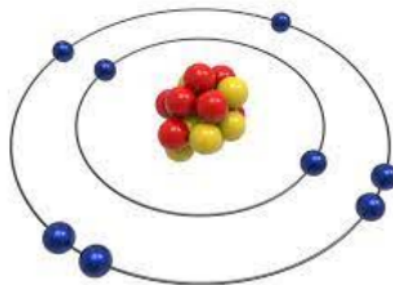


- A. Light energy to chemical energy
- B. Heat energy to electrical energy
- C. Light energy to electrical energy
- D. Chemical energy to heat energy

45. Which planet is known to be the hottest due to the chemical composition of its atmosphere?

- A. Mars
- B. Neptune
- C. Saturn
- D. Venus

46. Below is a model of an atom.



What subatomic particles are found in the nucleus of the atom?

- A. Electron and proton
- B. Electron and neutron
- C. Neutron and proton
- D. Electron, neutron, and proton

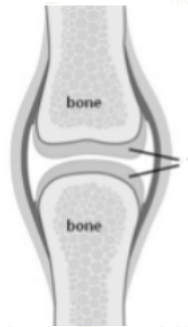
47. Which of the following cannot cause mechanical weathering?

- A. Acid
- B. Animals
- C. Water
- D. Wind

48. What is vibration that travels through the air or another medium and can be heard when they reach a person or animal's ear?
- Light
 - Solar energy
 - Sound
 - Thermal energy

49. The chemical makeup of the Sun is comprised mainly of
- Hydrogen and helium
 - Hydrogen and oxygen
 - Hydrogen and sulfate
 - Oxygen and helium

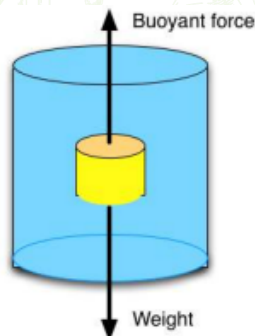
50. What tissue covers the ends of bones?



- Cartilage
 - Ligaments
 - Muscle
 - Tendons
51. Which of the following substances is a compound?
- Baking soda
 - Milk
 - Table salt
 - Water

52. Which type of precipitation is not solid?
- Hail
 - Sleet
 - Snow
 - Rain

53. Analyze the given diagram below.



Which statement best describes the buoyant force?

- A. It is a downward force that keeps an object afloat.
 B. It is an upward force that opposes the weight of an object.
 C. It is a downward force that prevents the object from floating.
 D. It is an upward force that goes with the direction of the weight of an object.
54. Which of the following is not a Jovian planet?
 A. Neptune
 B. Saturn
 C. Uranus
 D. Venus
55. Where is the asteroid belt located?
 A. Between the orbits of Earth and Mars
 B. Between the orbits of Mars and Jupiter
 C. Between the orbits of Mercury and Venus
 D. Between the orbits of Saturn and Neptune
56. How many constellations were identified by the International Astronomical Union?
 A. 68
 B. 72
 C. 88
 D. 92
57. Which shows the correct arrangement of the levels of biological organization?
 A. cell → tissue → organ → organ system → organism
 B. cell → organ → tissue → organ system → organism
 C. cell → organ system → organ → tissue → organism
 D. cell → tissue → organ → organ system → organism
58. Which information in the periodic table of elements tells the total number of protons and neutrons of an atom?
 A. Atomic number
 B. Chemical symbol
 C. Indicator
 D. Mass number
59. Which element is a nonmetal?
 A. Carbon
 B. Calcium
 C. Iron
 D. Manganese
60. Which of the following statements correctly describe a magma chamber?
 A. It is the ductile upper layer of the earth's mantle.
 B. It is a large cavern full of molten rock and volatile gases.
 C. It is the pathway by which magma traverses to the surface.
 D. It is a reservoir of porous or fractured rock, where magma accumulates.
61. What is the primary process behind the movement of tectonic plates away from each other along divergent margins?
 A. Normal faulting
 B. Seafloor faulting
 C. Strike-slip faulting

D. Subduction

62. What is a particle that represents a quantum of light or other electromagnetic radiation?

- A. Electron
- B. Neutron
- C. Photon
- D. Proton

63. Which unit is used to express work?

- A. Calorie
- B. Hertz
- C. Joule
- D. Watts

64. In which region in the solar system do most long-term comets originate?

- A. Asteroid belt
- B. Kuiper belt
- C. Magellanic cloud
- D. Oort cloud

65. What objective lens must be used in observing the entire body of an ant?

- A. Scanner objective lens
- B. Low-power objective lens
- C. High-power objective lens
- D. Oil-immersion objective lens

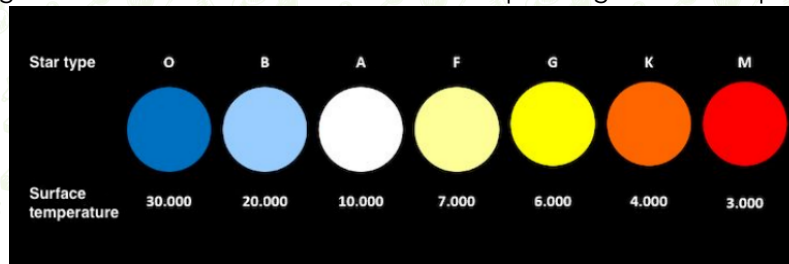
66. Below is an image of Mt. Fuji, the tallest mountain in the world which is also a dormant volcano.



What type of volcano is Mt. Fuji?

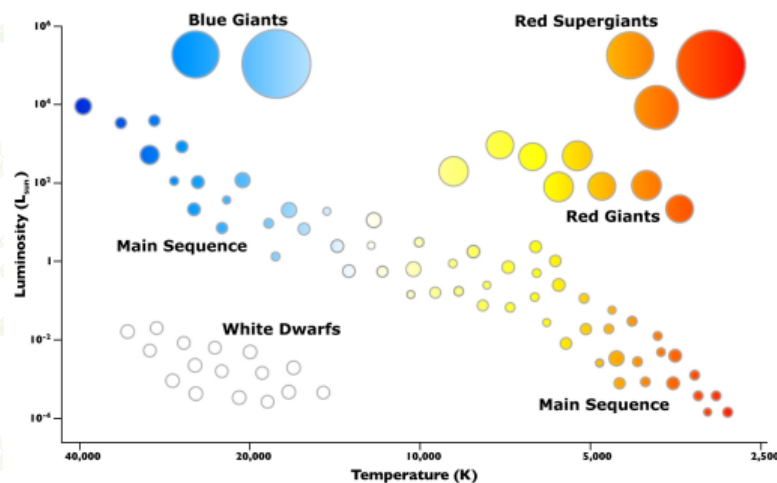
- A. Cinder cone
- B. Composite
- C. Shield
- D. Supervolcano

67. Analyze the diagram below of star colors and their corresponding surface temperature.



- A. Red stars are hotter than blue stars.
- B. Blue stars are hotter than red stars.
- C. Red stars are hotter than yellow stars.
- D. Yellow stars are hotter than white stars.

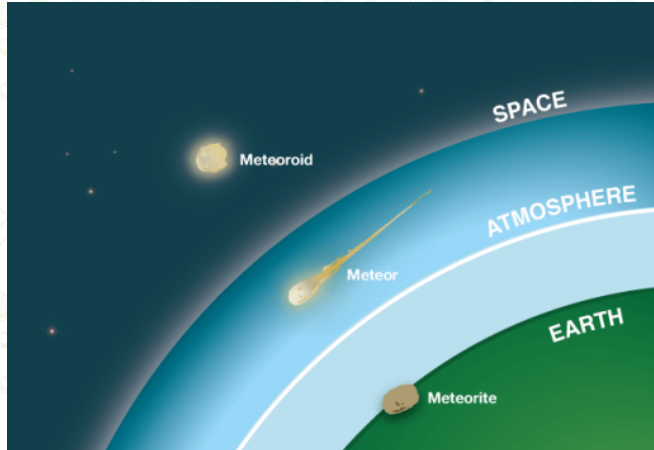
68. What is the process of converting carbon dioxide and water into glucose and oxygen in the presence of light?
- Digestion
 - Photosynthesis
 - Respiration
 - Transpiration
69. Element X has an electron configuration of $1s^2 2s^2 2p^6 3s^1$. How many electrons does element X have?
- 5
 - 7
 - 9
 - 11
70. In which layer of the atmosphere is the ozone layer found?
- Mesosphere
 - Stratosphere
 - Thermosphere
 - Troposphere
71. Sun is a medium-sized, yellow star. Based on the Hertzsprung-Russell diagram below, to which category does the sun belong?



- Blue giants
 - White dwarfs
 - Main sequence
 - Super giants
72. Photosynthesis cannot take place if _____ is not available.
- Ammonia
 - Sodium chloride
 - Oxygen
 - Light
73. What law of matter states that mass can neither be created nor destroyed?
- Law of mass action
 - Law of mass balance
 - Law of mass-energy balance
 - Law of conservation of mass

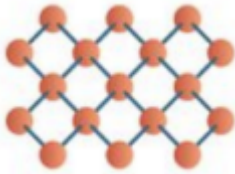
74. How are faults described?
- A. Faults are locations that generate earthquakes.
 - B. Faults are boundaries between tectonic plates.
 - C. Faults are breaks in Earth's crust with a displacement.
 - D. Faults are raised portions of the ground after an earthquake.

75. Analyze the given diagram below.

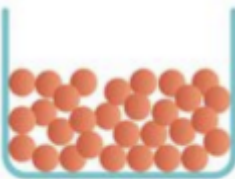


How will you describe a meteorite?

- A. It is a boulder of rock floating in space.
 - B. It is a meteoroid that has entered the Earth's atmosphere.
 - C. It is a burning rock that flashes a streak of light in the atmosphere.
 - D. It is a meteoroid that survived the Earth's atmosphere and reached the surface.
76. Which of the following diagrams represent plasma?



A.



B.



C.



D.

77. An earthquake occurred and is reported to have destroyed a few poorly built structures. In addition, people described that they had a hard time standing during the shaking. What is the intensity of the earthquake based on the modified intensity scale?

- A. Intensity V
 - B. Intensity VII
 - C. Intensity IX
 - D. Intensity X
78. Who among the following scientists accurately predicted the next arrival of a certain comet?
- A. Ed Greyjoy
 - B. Edward Collins
 - C. Eddie McFlurry
 - D. Edmond Halley
79. Which among the following is an application of the law of dominance?
- A. The inherited alleles from both parents are random.
 - B. The white flowers of one parent pear plant cannot be inherited.
 - C. A cross between white-flowered and purple-flowered peas produced offspring with only purple flowers.
 - D. Both pea plant parents are heterozygous for purple flowers, so the offspring will have flowers that are light purple.
80. What type of weather disturbance is formed over the warm waters of Indian ocean?
- A. Hurricane
 - B. Tropical cyclone
 - C. Typhoon
 - D. Storm
81. What quantity defines the amount of electric potential energy per unit charge?
- A. Conductance
 - B. Current
 - C. Resistance
 - D. Voltage

Natural Science Discipline
Category 1 - Sample Questions
ANSWER KEY

No	Answer	No	Answer	No	Answer	No	Answer
1	A	21	Ganymede of Jupiter	41	C	61	B
2	A	22	A	42	D	62	C
3	C	23	C	43	C	63	C
4	A	24	D	44	C	64	D
5	B	25	Ear	45	D	65	A
6	B	26	D	46	C	66	B
7	B	27	A	47	A	67	B
8	B	28	B	48	C	68	B
9	D	29	A	49	A	69	D
10	5 mL	30	D	50	A	70	B
11	B	31	B	51	B	71	C
12	A	32	C	52	D	72	D
13	C	33	B	53	B	73	D
14	C	34	D	54	D	74	C
15	Pulley	35	A	55	B	75	D
16	B	36	C	56	C	76	D
17	B	37	B	57	D	77	B
18	B	38	D	58	D	78	D
19	B	39	D	59	A	79	C
20	A	40	C	60	D	80	B
						81	D