I. Multiple Choice 60%

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

____ 1. Discovering and formulating scientific laws requires
   a. logic.
   b. imagination.
   c. use of scientific methods.
   d. all of these answers.

____ 2. Not a part of a computer.
   a. mouse
   b. hard drive
   c. desk
   d. keyboard

____ 3. H₂O and NaCl are
   a. elements
   b. mixtures.
   c. inorganic compounds.
   d. organic compounds.

____ 4. The cycle most responsible for linking the other biogeochemical cycles is the
   a. carbon cycle.
   b. nitrogen cycle.
   c. phosphorous cycle.
   d. hydrologic cycle.

____ 5. An assistant is a person who:
   a. takes care of finances
   b. cleans bathrooms and cooks meals
   c. does simple tasks to help another person do their job
   d. helps someone cross the street

____ 6. Patterns of speciation and extinction are least likely to be affected by
   a. climatic changes.
   b. continental drift.
   c. meteorites crashing into the earth.
   d. changes in the weather.

____ 7. The introduction of gasoline-powered pumps to tap underground water supplies in the desert has served as a positive feedback loop to all of the following except
   a. the cattle population.
   b. the human population.
   c. the kangaroo rat population.
   d. groundwater depletion.
8. Taiwan is an island with only a few:
   a. taxis
   b. airports
   c. mountains
   d. McDonalds

9. A popular American sport is called Football.
   a. You don’t need a lot of protection to play.
   b. A racquet is needed in the game.
   c. It is a different game with the same name in other countries.
   d. It is important to get the ball past the goalie.

10. Oceans cover about _____ of the earth's surface.
    a. 50%
    b. 60%
    c. 70%
    d. 80%

11. Flying foxes are now listed as endangered because
    a. they congregate and are easy targets.
    b. they are hunted.
    c. of deforestation.
    d. of all of these answers.

12. A new kitten is added to a home with an established older cat. The older cat is observed to gobble up its food as well as that of the younger cat. This behavior is best described as
    a. interference competition.
    b. exploitation competition.
    c. mutualism.
    d. predation.

13. Prey are least likely to defend themselves against predators by
    a. camouflage.
    b. acute senses of sight and smell.
    c. protective shells.
    d. pursuit and ambush.

14. Not one student showed up for the scheduled meeting.
   a. 遺失
   b. 表演
   c. 顯示
   d. 出現

15. Which of the following does not apply to sea otters?
    a. They have blubber to keep them warm.
    b. They can eat 25% of their weight per day in sea urchins and other benthic
organisms.
c. They use tools.
d. They have the thickest fur of any mammal.

____ 16. A population crash occurs when
a. a population approaches its carrying capacity.
b. environmental resistance comes into play gradually.
c. resources are essentially unlimited.
d. a population overshoots carrying capacity and environmental pressures cause effects.

____ 17. It's very large indeed; in fact it's the largest I've ever seen.
a. may be
b. actually
c. often
d. usually

____ 18. Which of the following rocks is most likely to be formed from compacted shells and skeletons?
a. coal
b. limestone
c. rock salt
d. marble

____ 19. Which of the following types of soils holds the most water?
a. silt
b. loam
c. clay
d. sand

____ 20. An agricultural style that prevents erosion on steep slopes is
a. conventional-tillage farming.
b. conservation-tillage farming.
c. alley cropping.
d. terracing.

____ 21. Today we have beef and chicken, which do you prefer?
a. I prefer beef.
b. chicken, please.
c. I like beef.
d. all of above.

____ 22. The telephone marketer called to see if Sandy wanted to renew her __________ to the fashion magazine.
a. interest
b. subscription
c. encryption
d. request
23. Which of the following statements about human migration is false?
   a. People tend to move from areas of low opportunity to areas of higher opportunity.
   b. Most countries restrict immigration rates.
   c. Migration from urban areas to rural areas is increasing worldwide.
   d. The number of environmental refugees is increasing.

24. The newest model of mobile phone has many new _____________.
   a. machines
   b. apparatus
   c. operators
   d. features

25. Agriculture can harm the land through
   a. soil erosion.
   b. salinization.
   c. reduction in microorganism diversity.
   d. all of these answers.

26. Jeff enjoyed snacking on junk food, ____________ it was necessary to exercise more to stay fit.
   a. though
   b. when
   c. if
   d. for

27. Which of the following statements about liquefied natural gas (LNG) is false?
   a. Natural gas has to be liquefied before it can be transported by ship.
   b. Shipment of LNG is safe and inexpensive.
   c. Explosions in urban areas near LNG loading facilities could kill people and cause much damage.
   d. Conversion of natural gas to LNG reduces net energy yield by one-fourth.

28. The cheapest and most energy-efficient way to heat a house is super insulation coupled with
   a. active solar heating and a natural gas furnace.
   b. active solar heating and electric resistance heating produced by a nuclear power plant.
   c. passive solar heating and a high-efficiency natural gas furnace.
   d. passive solar and electric resistance heating produced by a nuclear power plant.

29. Amy liked all three dresses she received as gifts, but the blue dress was _______ her favorite.
   a. mostly
   b. the best
   c. by far
   d. easy
30. Cells that convert solar energy directly into electricity are called
   a. electrosolar chips.
   b. photovoltaic cells.
   c. helioelectric units.
   d. photoelectric cells.

II. Reading Comprehension Test (閱讀理解測驗) 40%

Please answer the questions below with alphabets (A) (B) (C) or (D) and put it in the parentheses, (    ), as following: Answer: (     )
Four (4) points for each question (4 points x 10 questions = 40 points)

The Faithful Dog

Which animal is “man’s best friend”? We all know it’s the dog. Dogs have earned the love and respect of humans. Many have given their own lives to save people. Dogs are faithful and devoted. For example Bobby, a Skye terrier, went to market with his Scottish master every day. After the man died, Bobby would not move from his grave. He stayed there for about 10 years. He stayed until he died.

Dogs serve many useful functions. They are good at watching and herding sheep. Wherever sheep are raised, a sheep-herding dog is developed. For instance, there is the German Shepherd dog. In Scotland, there is the Shetland sheep dog. Both are recognized breeds.

Specially trained dogs lead the blind. Such dogs are carefully selected. It takes about three to five months to train them. Guide dogs will refuse to cross a busy street unless the traffic has stopped.

One interesting dog is the St. Bernard. How did it get its name? It was developed by the monks of the St. Bernard Monastery. This is located in the Alps of Switzerland. The dog weighs from 140 to 220 pounds. It’s one of the heaviest of all dogs.

St. Bernards are famous for rescuing travelers lost in the snow. They have a wonderful sense of smell. They find people buried under several feet of snow. A St. Bernard named Barry rescued 40 persons. This was over a period of years.

There is a popular misconception about these dogs. They do not carry flasks around their necks. Sir Edwin Landseer misrepresented them this way in a painting.

1. This passage is mainly about?
   Answer: (     )
   (A) friendly dogs.
   (B) breeds of dogs
   (C) useful dogs.
   (D) small dogs.

2. Dogs trained to lead the blind are
   Answer: (     )
   (A) Saint Bernards.
   (B) chosen very carefully.
   (C) trained for seven to 10 months.
   (D) raised around blind people.
3. The dog named Bobby can best be described as?
   Answer: (     )
   (A) lost.
   (B) tired.
   (C) loyal.
   (D) friendly.

4. To tell this story the author depends mainly on?
   Answer: (     )
   (A) stories from dog trainers.
   (B) lists of different kinds of dogs.
   (C) stories about specific dog breeds.
   (D) detailed descriptions of various dogs.

5. The word misconception means something that is
   Answer: (     )
   (A) well stated.
   (B) not correctly understand.
   (C) a personal life.
   (D) confusing

No Moisture Here!

They are the world’s driest places. Sometimes rain doesn’t fall there for years. These dry areas- deserts- cover about one-fifth of the earth’s surface.

Perhaps you think of a desert as a place filled with sand. This is true of many deserts, but not all. Areas near the North and South poles are also considered deserts by some scientists. They define a desert as any area where the moisture that is lost, mostly by evaporation, is greater than the moisture that falls as rain or snow.

Many deserts are near the equator, where the air is dry and warm. Others are in regions blocked off from oceans by mountains. In these areas the moisture from the ocean winds evaporates as the winds pass over the mountains and cool off. But some deserts are found right next to oceans. Deserts usually form along coastlines if there is a cold current in the ocean water. The cold wind blowing across that current and onto the nearby land holds little moisture.

Most deserts get less than ten inches of rain a year. Because the land is so dry, the rain doesn’t penetrate it; it just washes over the surface. Some deserts almost never get any rain. For instance, it rains in the Atacama Desert on the coast of Chile about once every hundred years!

Not many varieties of plants will grow in a desert. Some cactuses survive because they store water inside themselves after a rain. When it does rain, a desert landscape may flourish. Many plants will put forth bright and beautiful flowers.

6. The purpose of this passage is to?
   Answer: (     )
   (A) describe desert conditions.
   (B) keep people from traveling across deserts.
   (C) tell about the driest desert in the world.
   (D) compare very dry and very wet climates.
7. If conditions are right, desert may be found
   Answer: (____)
   (A) only near the equator.
   (B) only near the North and South Poles.
   (C) only along coastlines.
   (D) throughout the world.

8. It is clear that most deserts would be good places to
   Answer: (____)
   (A) build summer homes.
   (B) plant food crops.
   (C) look for water holes.
   (D) carry extra water.

9. To make the point about deserts that never get rain, the author
   Answer: (____)
   (A) describes some flowering desert plants.
   (B) uses the example of the Atacama Desert.
   (C) discusses the effect of the equator.
   (D) discusses the effect of winds over mountains.

10. In this passage, penetrate means
    Answer: (____)
    (A) soak through.
    (B) race across.
    (C) dig holes in.
    (D) fall on.