

八十八年大專預備軍官複選英文考試試題

Directions: Choose the most appropriate answer to each question according to the passage given.
For questions 1~5

Animals are not the only carnivorous organisms in the world. Certain plants- usually those in nitrate-poor soils-- occasionally consume meat to stay alive. One of the best-known is the venus-flytrap, found in the bogs of North Carolina. A current is generated, which causes a change in motor cell water retention. The motor cells, located at the middle of the two lobes, go limp; the plant closes trapping the creature-all within about two-fifths of a second. Digestive juices in the plant then take over, absorbing the nitrogen and other nutrients from the creature. After the soft parts are digested, the plant opens and drops the skeleton to the ground.

- (B) 1. the word "carnivorous" is used to describe animals that eat _____.
A grass B meat C plants D soil
- (D) 2. The word "kidney-shaped" is to describe something that is in the shape of a(an) _____,
A octagon B square C triangle D irregular oval
- (C) 3. The word "alight" means _____. A to burn B to adjust C to land D to make less heavy
- (B) 4. When something goes "limp" it becomes _____.
A stronger B weaker C denser D thicker
- (A) 5. "nutrients" are _____. A substances B gases C insects D plants

For questions 6~10

The procedure of donating blood has been in use since World War I. Blood is needed for transfusion, mainly for surgical procedures and for accident victims. Donors usually give a pint of whole blood, which is then divided into platelets, white blood cells, and red blood cells. A pint of blood is collected, the platelets are removed, and then the processed blood is transfused back to the donor. This process takes place eight times to get the amount of platelets needed. Pheresis donors can give platelets every two weeks, because the body replaces the platelets more quickly than it replaced red blood cells. In addition, this method yields as many platelets as ten normal whole blood donations.

Donated blood is routinely tested for a multitude of foreign bodies, such as HIV (which causes AIDS), hepatitis B, and syphilis. In addition, blood that will be used by newborns and infants is usually irradiated to eliminate harmful elements in the blood.

- (C) 6. "chemotherapy" is a treatment which may need a large supply of _____.
A white blood cells B red blood cells C platelets D whole blood
- (B) 7. The purpose of "pheresis" is to collect _____ only.
A whole blood B platelets C red blood cells D white blood cells
- (A) 8. Which of the following titles is the best for this passage?
A Donating Blood B Donated Blood C Donors D Platelets
- (B) 9. One can donate platelets as often as _____.
A once every two months B once every two weeks C eight times a year D ten times a month
- (D) 10. Which of the following ideas is "NOT" found in the passage?
A Donated blood may contain harmful elements.
B blood may be needed for surgical procedures.
C blood donors usually give a pint of whole blood at a time.
D A white blood cell is larger than a red blood cell in size.

For questions 11~15

New developments in food preservation technology include irradiating some foods with gamma radiation to keep them fresh. The procedure is relatively simple: Food travels by conveyor belt through an irradiation chamber containing pellets of gamma-emitting radioisotopes (usually cobalt-60). As the food passes, the gamma radiation destroys bacteria, molds, and yeasts that cause spoilage. The radiation is also used to sterilize vacuum-packed meat, which then can be stored for years without spoilage.

C to put something into a bag D to heat something until it is eatable

- (D) 11. A "radioisotope" is _____ -
A a method B an instrument C a machine D a substance
- (B) 12. Which of the following foods is "NOT" mentioned in the passage?
A bacon B banana C meat D strawberries
- (C) 13. According to the passage, which of the following statements is "NOT" true?
A Food irradiation has been approved by a number of nations for various foods.
B food irradiation is not widely accepted by Americans.
C the procedure of irradiating foods is very complicated.
D some people are worried about the safety of irradiated foods
- (D) 15. Which of the following ideas is "NOT" mentioned in the passage?
A irradiation is one of the new developments in food preservation technology.
B prolonging foods' shelf life can increase world food supplies.
C radiation might create harmful materials in foods.
D food value is usually measured in vitamins, minerals, or calories.

For questions 16-20

when certain metals such as lead or mercury are cooled to temperatures very near absolute zero, they exhibit a phenomenon known as superconductivity, where they lose almost all resistance to the flow of electric current. If a current is set moving in a closed loop of superconducting wire, the current will continue to flow indefinitely.

Superconductors are used to make very powerful electromagnets for particle accelerators. Someday, they may be used to build trains that float above their tracks on magnetic fields, allowing them to travel at a very high speed because of the reduced friction. Superconductors also may be used to build superfast computers. Until recently, the highest temperature at which any known superconductor would operate was around 22K, or 22 degrees above absolute zero. Such superconductors must be cooled by immersing them in liquid helium, which boils at about 4 K. Unfortunately, liquid helium is expensive and in fairly short supply. Recently, new ceramic materials have been found that become superconducting at temperature up to around 70 K. These can be cooled with liquid nitrogen, which is much cheaper and more abundant.

So far these new materials have not been able to carry as much current as metal superconductors, and because they are ceramics, they have been difficult to form into wires. Eventually, superconductors may be cooled with conventional refrigeration equipment. But the real dream is to find superconductors that function at room temperature.

- (C) 16. Ceramic superconductors are better than metal ones because they _____
A can be formed into wires easily B can carry much more electric current
C become superconducting at a higher temperature D can function at room temperature
- (A) 17. The "superconductivity" of certain materials is caused by _____
A a very low temperature B a very high moving speed
C a very high magnetic force D a very low air pressure
- (D) 18. The capital letter "K" in this passage (as in "22K") is used as the symbol for _____
A the boiling point of water B the number of a thousand
C electrical resistance D absolute temperature
- (A) 19. Which of the following ideas is "NOT" found in the passage?
A absolute zero is the theoretical temperature where a molecular motion stops.
B liquid helium boils at about 4K.
C liquid nitrogen is more abundant than liquid helium.
D Mercury can become superconductive.

- (C) 20. Which of the following statements is "NOT" true according to the passage?
A lead can lose almost all resistance to the flow of electric current because of low temperature
B superconductors may be used to build trains that float above their tracks.
C ceramic superconductors can carry as much current as metal ones do.
D liquid nitrogen is much cheaper than liquid helium

For questions 21-25

Radar has been used since World War II to locate and track storms all over the world. Radar antennas send out radio wave pulses toward the clouds. All types of precipitation and even boundaries created by air temperature differences reflect some of the waves back to the antennas. The received radio wave data are plotted on maps, which are used to create many of the weather maps we see on television and in newspapers. The latest weather radar techniques use the Doppler effect- a phenomenon discovered by Austrian scientist Christian Doppler in 1842., who noted that the frequency of sound waves from an approaching source is shifted to a higher frequency and that those from a receding source is shifted to a lower frequency. The same principle is applied to Doppler radar-radar that gathers radio wave frequency to "read" weather events.

Doppler radar can determine precipitation moving toward a weather station, from the increase in the radio wave frequency reflected from the clouds. The radar detects any frequency change in the speed of the clouds and uses the data to show wind patterns. For example, if the precipitation is being blown away from the antenna, the frequency of the radio waves decrease. Doppler radar is also used to predict tornadoes; The changeable winds around a storm could indicate the internal circulation in a storm that could lead to a twister.

- (C) 21. The word "receding" means _____
A going down B going up C moving away D coming out
- (C) 22. Radar is introduced in this passage mainly as a device to detect _____ -
A aircraft B ships C storms D missiles
- (C) 23. In this passage, which of the following is mentioned as a type of "precipitation" ?
A snow B hail C cloud D rain
- (D) 24. The word "pulse" in this passage refers to _____ A heartbeat