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**INTERNATIONL MATHENATICS AND SCIENCE OLYMPIAD  
FOR PRIMARY SCHOOLS (IMSO) 2004  
Science Contest in Taiwan**

Name:\_\_\_\_\_ School:\_\_\_\_\_ Grade:\_\_\_\_\_ ID number:\_\_\_\_\_

\_\_\_\_\_1. It is a process whereby a fluid spreads from a more concentrated area to a less concentrated area.

- A. diffusion                      B. effusion                      C. expansion                      D. regulation

**Answer: A. diffusion**

\_\_\_\_\_2. When masses of cold and warm air meet, they form a/ an \_\_\_\_\_.

- A. front                      B. ITCZ                      C. monsoon                      D. storm

**Answer: A. front**

\_\_\_\_\_3. The transfer of pollen grains from one flower to the stigma of another flower of the same kind is called

- A. cross-pollination    B. self-pollination    C. ovulation                      D. vegetative propagation

**Answer: A. cross-pollination**

\_\_\_\_\_4. A neutral atom consists of charged particles. The negatively-charged particle surrounding the nucleus is the \_\_\_\_\_.

- A. electron                      B. meson                      C. neutron                      D. proton

**Answer: A. electron**

\_\_\_\_\_5. Lymphocytes are one of the major types of white blood cells. Which endocrine gland stimulates the production of lymphocytes?

- A. thyroid gland                      B. thymus                      C. pancreas                      D. gonads

**Answer: B. thymus**

\_\_\_\_\_6. A person gets infected by hepatitis A – causing bacteria. Which part of the body does these bacteria infect?

- A. eyes                      B. liver                      C. lungs                      D. skin

**Answer: B. liver**

\_\_\_\_\_7. A blood vessel that carries mostly deoxygenated blood towards the heart is the \_\_\_\_\_.

- A. aorta                      B. artery                      C. capillary                      D. vein

**Answer: D. vein**

\_\_\_\_\_8. What do you call the position of the moon farthest from the Earth?

- A. apogee                      B. aphelion                      C. perigee                      D. perihelion

**Answer: A. apogee**

\_\_\_\_\_9. In plants, fertilization takes place when \_\_\_\_\_.

- A. the sperm nucleus unites with the egg cell of the volume.  
B. seeds begin to germinate.  
C. pollen grains fall from the petals  
D. fruit begins to form

**Answer: A. the sperm nucleus unites with the egg cell of the ovule.**

- \_\_\_\_ 10. If sound waves were to travel from one end to the other of each block at the same starting time, where will the sound reach the other end first?  
A. air                      B. railroad track                      C. underwater                      D. vacuum  
**Answer: B. railroad track**
- \_\_\_\_ 11. Atoms of the same elements have the same atomic numbers but may have different mass numbers. This species is called \_\_\_\_\_.  
A. compounds                      B. ions                      C. isotopes                      D. molecules  
**Answer: C. isotopes**
- \_\_\_\_ 12. It is the imaginary line that divides the earth into two halves: the northern and the southern hemisphere.  
A. meridian                      B. longitude                      C. latitude                      D. equator  
**Answer: D. equator**
- \_\_\_\_ 13. All planets revolve around the sun in a certain path called 'orbit'. The sphere of the earth's orbit is \_\_\_\_\_.  
A. circular                      B. elliptical                      C. oblate spheroid                      D. unknown  
**Answer: B. elliptical**
- \_\_\_\_ 14. A waling-waling is attached to a tree. It is example of a relationship known as \_\_\_\_\_.  
A. predation                      B. parasitism                      C. mutualism                      D. commensalism  
**Answer: D. commensalism**
- \_\_\_\_ 15. The attraction of the molecules of a substance to the molecules of the same substance is called \_\_\_\_\_.  
A. adhesion                      B. capillarity                      C. cohesion                      D. surface tension  
**Answer: C. cohesion**
- \_\_\_\_ 16. More than 300 years ago, Robert Hooke used a primitive microscope to observe the box-like cavities in slices of cork. These compartments are found to be the structural and functional unit of life. They are now called \_\_\_\_\_.  
A. atoms                      B. cells                      C. eggs                      D. nuclei  
**Answer: B. cells**
- \_\_\_\_ 17. Scientists have found that the amount of carbon dioxide in the atmosphere has increased significantly in the past years causing a rise in the global temperature. The trapping of heat radiation in the earth's atmosphere is known as the \_\_\_\_\_.  
A. acid rain                      B. global warming                      C. greenhouse effect                      D. ozone depletion  
**Answer: C. greenhouse effect**
- \_\_\_\_ 18. It is a state of matter that is composed of electrically charged atomic particles.  
A. gas                      B. liquid                      C. plasma                      D. solid  
**Answer: plasma**
- \_\_\_\_ 19. The rhythmic expansion and contraction of blood vessels caused by the pressure of the blood is called \_\_\_\_\_.  
A. blood pressure                      B. heartbeat                      C. heart rate                      D. pulse  
**Answer: D. pulse**

\_\_\_\_\_20. The moon and the sun exert a gravitational pull on earth causing a change in the water level of the oceans. What do you call this rise and fall in water level?

- A. eclipse                      B. phase                      C. season                      D. tide

**Answer: D. tide**

\_\_\_\_\_21. In females, what do you call the hormone whose function is important for the occurrence of menstruation?

- A. estrogen                      B. oxytocin                      C. progesterone                      D. prolactin

**Answer: C. progesterone**

\_\_\_\_\_22. The hormone responsible for the development of secondary male characteristics is \_\_\_\_\_.

- A. adrenalin                      B. progesterone                      C. testosterone                      D. thyroxin

**Answer: C. testosterone**

\_\_\_\_\_23. It states that the Earth's crust is broken into small pieces. This theory is \_\_\_\_\_.

- A. Theory of Isostasy                      B. Theory of Evolution  
C. Plate Tectonic Theory                      D. Continental Drift Theory

**Answer: C. Plate Tectonic Theory**

\_\_\_\_\_24. It is the ability of a substance to scratch another substance.

- A. scratchiness                      B. malleability                      C. hardness                      D. lizard

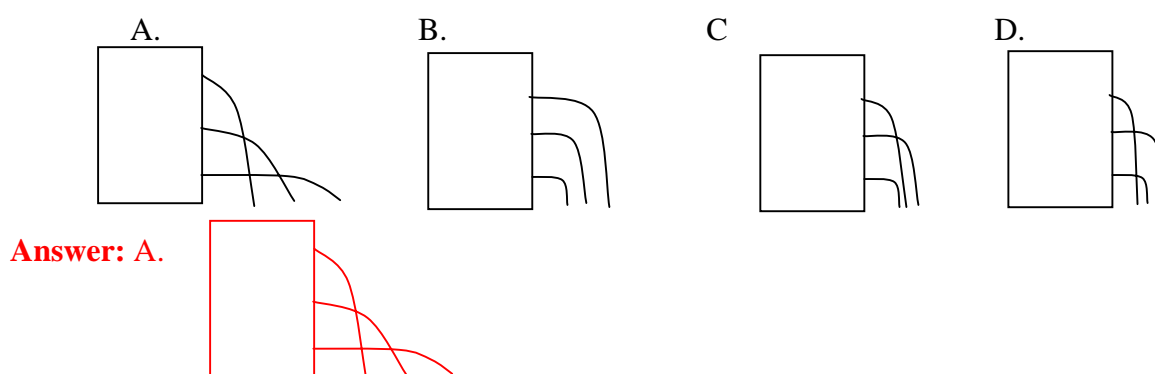
**Answer: C. hardness**

\_\_\_\_\_25. When food is swallowed, it is involuntarily pushed along the esophagus. What do you call the 'wavelike' motion of the muscles in this tube?

- A. peristalsis                      B. epiglottis                      C. digestion                      D. bolus

**Answer: A. peristalsis**

\_\_\_\_\_26. Liza fills a drum with water. If she makes three equal holes on the side of it at different heights, which of following best represents the situation?



\_\_\_\_\_27. If after the first heating the substance is said to exhibit the same chemical properties as the original one, what could have been the cause of the decrease in mass?

- A. it releases carbon dioxide                      B. it has air in it  
C. it gives off water vapor                      D. it gives off hydrogen gas

**Answer: C. it gives off water vapor**

- \_\_\_\_ 28. What kind of change occurred after the second heating?
- A. Physical change
  - B. Chemical Change
  - C. Mechanical Change
  - D. Biological Change

**Answer: C. Chemical Change**

- \_\_\_\_ 29. A positively charged atom is called a (an) \_\_\_\_\_
- A. anion
  - B. cation
  - C. positron
  - D. proton

**Answer: B. cation**

- \_\_\_\_ 30. Which of the following is NOT an example of matter?
- A. air
  - B. ice
  - C. light
  - D. wood

**Answer: C. light**