

**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

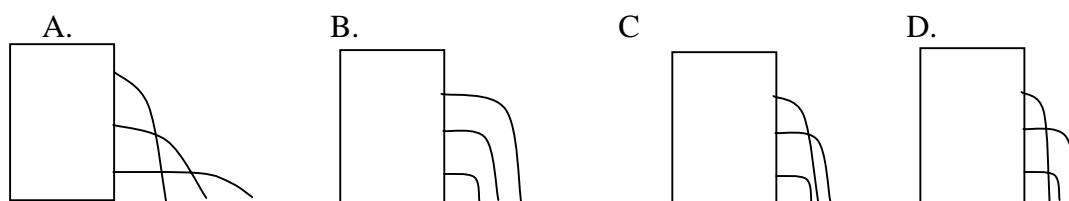
Answer: C. hardness

_____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?

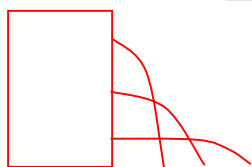
- A. peristalsis B. epiglottis C. digestion D. bolus

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?



Answer: A.



_____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