**SCIENCE BOWL – ROUND**

**TOSS UP**

BIOLOGY *Short Answer* Which body protein makes the skin tough and is very flexible?

ANSWER: Keratin

**BONUS**

BIOLOGY *Multiple Choice* Name the four choices of the respiratory system in order from top to bottom:  
i. nasal cavity

ii.larynx

iii. pharynx

iv.trachea.

ANSWER: 1,3,2,4

**TOSS-UP**

CHEMISTRY *Short Answer* What is the name of the compound CH4?

ANSWER: methane

**BONUS**

CHEMISTRY *Short Answer* What is the reaction CH4+H2O🡪 CO + 3H2 often referred to?

ANSWER: Industrial Synthesis of Hydrogen

**TOSS-UP**

EARTH SCIENCE *Short Answer* Which type of clouds are most likely to form in stable air and precipitation is most frequently associated with them?

ANSWER: Nimbostratus

**BONUS**

EARTH SCIENCE *Multiple Choice* At what time, night or day, do the clouds act as a blanket by absorbing outgoing terrestrial radiation and reradiating a portion of it back towards the surface?

ANSWER: night

EARTH SCIENCE *Short Answer* In the state of Washington, which is most likely the volcanic area found?

W: Deccan Traps

X: Columbia River Basalts

Y: Ontong Java Plateau

Z: Yellowstone

ANSWER: (X) Columbia River Basalts

**TOSS-UP**

EARTH SCIENCE *Multiple Choice* Which tectonic plate is moving towards the South American plate with a velocity of above 7 centimeters per year?

W: Cocos Plate

X: Juan de Fuca Plate

Y: Pacific Plate

Z: Nazca Plate

ANSWER: (Z) Nazca Plate

**BONUS**

EARTH SCIENCE *Short Answer* What two subsurface materials strongly influence the rate of groundwater movement and the amount of it that can be stored?

ANSWER: porosity and permeability

**TOSS UP**

BIOLOGY *Short Answer*  What is the scientific name was mucus?

ANSWER: phlegm

**BONUS**

BIOLOGY *Short Answer* Which part of the brain links hormonal systems and is also involved in basic body functions which include thirst, hunger, and temperature control?

ANSWER: The Hypothalamus

**TOSS UP**

MATH *Short Answer* What is the value of (x+3)2 if x=y-3?

ANSWER: y2

**BONUS**

MATH *Short Answer* What are the possible rational roots for the equation x4+3x3+2x2+36?

ANSWER: Plus or minus 36, Plus or minus 18, Plus or minus 12, Plus or minus 9, Plus or minus 6, Plus or minus 4, Plus or minus 3, Plus or minus 2, Plus or minus 1

**TOSS UP**

BIOLOGY *Short Answer* The two types of cells that make up the retina of the eye are called what?

ANSWER: rods and cones

**BONUS**

BIOLOGY *Short Answer* What is the name of an enzyme that oxidises a substrate by a reduction reaction that transfers one of more hydrides to an electron acceptor, usually NAD+.

ANSWER: Dehydrogenase

**TOSS-UP**

PHYSICS *Short Answer* Considering a body of one kilogram, moving in a circle of radius one meter, and an angular velocity of one radian per second, what is the kinetic energy in joules?

ANSWER: ½ joule

**BONUS**

PHYSICS *Short Answer* An object is thrown from a cliff 80 meters above the ground, and has a horizontal velocity of 30 meters per second. What is the average velocity of this object?

ANSWER: 50 meters per second