National Academic Quiz Tournaments, LLC

1. **The corpse of a man who held this position was exhumed by Stephen VI** ["the sixth"] **and put on trial in the Cadaver Synod.   The "Babylonian Captivity" began in 1309 when (*)** Clement V ["the fifth"] took this post. During the Western Schism, both Avignon [ah-veen-yohn] and Rome claimed to host—for 10 points—what Catholic leadership role?

answer: pope (accept papacy or leader of the Papal States)

<553738>

1. For 10 points each—name these intervals used in music:
A. This interval consists of 12 half-steps, the distance between middle C and the C above it.

answer: (perfect) octave(s)

B. The use of this highly dissonant interval, sometimes called the "devil in music," was shunned, but not banned, in medieval music.

answer: tritone(s) ["TRY-tones"] (accept augmented fourth(s) or diminished fifth(s); prompt on "fourth" or "fifth")

C. The tonic and dominant of a major scale—such as the C and G in C major—define this interval.

answer: perfect fifth(s)

<554929>

2. **This character sees a group of men playing "nine-pins" who may be part of Henry Hudson's old crew.   This man is surprised to discover that villagers no longer honor George III** ["the third"] **and that his beard is a (*)** foot long.   For 10 points—what character in a Washington Irving story sleeps for 20 years?

answer: Rip Van Winkle (accept either underlined portion)

<554962>

2. L'Hôpital's [loh-pee-TAHL'Z] rule is used to evaluate these values.   For 10 points each—
A. Name these values that a function approaches but may not reach.

answer: limits

B. If a function equals its limit at a point, the function has this property at that point.

answer: continuity or being continuous

C. L'Hôpital's rule describes how to take limits of the form "zero over zero" and "infinity over infinity," which are examples of this type of expression.

answer: indeterminate forms

<555999>

3. **This island's namesake strait was the focus of two "crises" in the 1950s.   The Penghu** [PUNG-hoo] **Islands are directly west of this island, which was given a name by Portuguese explorers meaning "beautiful island." (*)** Formosa [fore-MOH-suh] is an alternate name of—for 10 points—what island home to Taipei [TYE-pay] 101?

answer: Taiwan (accept Formosa before "Formosa")

<550820>

3.   In a show on the Starz network, Stephen Amell [uh-MEL] and Alexander Ludwig [rhymes with "good wig"] play brothers who are part of a "league" for this activity.   For 10 points each—

A.   What type of athletic entertainment is the subject of the show *Heels*?

answer: professional <u>wrestling</u> (accept <u>wrestler</u>s or <u>wrestle</u>s or <u>wrestle</u>d; accept Duffy <u>Wrestling</u> League)

B.   Alison Brie [bree] played a wrestler called "Zoya the Destroya" [ZOY-uh "the" dess-TROY-uh] in this Netflix show about a 1980s women's league.

answer: <u>GLOW</u> ["glow"] ["GLOW" stands for "Gorgeous Ladies of Wrestling."]

C.   Many wrestlers of the '80s are depicted in the sitcom *Young Rock*, which is based on the life of this film star who rose to prominence in the WWE ["W-W-E"].

answer: Dwayne (Douglas) <u>Johnson</u> (prompt on "The Rock")

<547692>

4.   **This civilization created the "priest king" and "dancing girl" statues, which were found at a city whose name means "mound of the dead."   Mohenjo-Daro** [moh-HEN-joh-DAR-oh] **and (*)** Harappa [huh-RAH-puh] were major cities of—for 10 points—what ancient civilization that developed along the course of a river in what is now Pakistan?

answer: <u>Indus</u> (River) Valley Civilization (or <u>Indus</u> Valley Culture; accept <u>Harappan</u> Civilization or Culture before "Harappa"; prompt on "IVC")

<556053>

4.   This European country has been governed by the Fifth Republic since 1958.   For 10 points each—

A.   Name this country, whose Fourth Republic collapsed after having 21 administrations in its 12–year existence.

answer: <u>France</u> (or <u>French</u> Republic or République <u>française</u>)

B.   This French leader returned from retirement to lead the transitional government, becoming the first president of the Fifth Republic.

answer: Charles <u>de Gaulle</u> [sharl duh "GOAL"] (or Charles André Joseph Marie <u>de Gaulle</u>; do not accept or prompt on "Gaulle")

C.   A major reason for the Fourth Republic's collapse was the crisis involving this French colony, which gained independence in 1962.

answer: <u>Algeria</u>

<556089>

5.   **As this novel begins, the narrator recalls how Buddy Willard once showed her a corpse.   Doreen works with this novel's protagonist at *Ladies' Day* magazine.   After sinking into a depression, (*)** Esther Greenwood is given electroshock treatment in—for 10 points—what novel by Sylvia Plath?

answer: The <u>Bell Jar</u>

<556116>

5.   The *a* and *b* parameters of the van der Waals [vahlz] equation account for deviations from this equation.   For 10 points each—

A.   Name this equation that can be written as $PV = nRT$ ["P-V equals N-R-T"].

answer: <u>ideal gas</u> law (or <u>general gas</u> law; prompt on "gas law")

B.   The ideal gas law does not account for molecular forces between "induced" examples of these structures, which produce London dispersion forces.

answer: (electric) <u>dipole</u>s ["DIE-pole"] (or instantaneous <u>dipole</u>s or induced <u>dipole</u>s)

C.   The *T* in the ideal gas law stands for this quantity, which for an ideal gas equals the average kinetic energy of its constituent particles.

answer: (absolute) <u>temperature</u> (or thermodynamic <u>temperature</u>)

<555489>

6.   **Pencil and paper ready.   Alan needs to know the value of *x*, given that the mean average of the three numbers** [read slowly] **55, 62, and *x* equals 60.   Since the mean is the sum of the values divided by the number of values, he knows 55 plus 62 plus *x* equals 3 times 60. (*)** For 10 points—find the value of *x*.

answer: x = <u>63</u> [$M = (55 + 62 + x)/3 = 60$, so $117 + x = 180$, and $x = 63$]

<555226>

6. Instructions given to Moses called for this container to be two-and-a-half cubits long and covered with gold. For 10 points each—
A. Name this wooden box that carried the tablets containing the Ten Commandments.
answer: Ark of the Covenant (or aron haberit)
B. This Old Testament book describes God giving instructions for the Ark of the Covenant to Moses on Mount Sinai.
answer: Book of Exodus (or Shmot)
C. The Ark of the Covenant was kept in a sacred tent known in Hebrew as the *mishkan* [MISH-kahn] and usually translated as this word, which also names a Mormon choir.
answer: tabernacle (accept Mormon Tabernacle Choir)

<551561>

7. **This island group includes the Andreanof Islands, which are home to Adak, the southernmost town in the state to which these islands belong.   Kiska [KIS-kuh] and Attu [AH-too], islands in this group, were occupied by the (*)** Japanese in World War II.   For 10 points—what island chain extends southwest from Alaska?
answer: Aleutian Islands

<554699>

7. For 10 points each—answer the following about John Pierre Burr:
A. Burr was the son of founding father Aaron Burr and Mary Emmons, a servant born in this city.   In 1756 43 British soldiers died in a prison called this city's "Black Hole."
answer: Calcutta (or Kolkata; accept Black Hole of Calcutta)
B. John Pierre Burr became a "conductor" on this metaphorical network through which people escaped slavery before the Civil War.
answer: Underground Railroad
C. At some points in his career, Burr encouraged Black Americans to emigrate to this country.   It was founded in 1804 by Jean-Jacques Dessalines [dess-uh-leen].
answer: Haiti (or Republic of Haiti or Republique d'Haïti or Repiblik d' Ayiti)

<542862>

8. **In this game, the player can fight the spider-like Nosk in the dark area of Deepnest.   This game's character Hornet was announced as the protagonist of this game's sequel, (*)** *Silksong*.   The player uses a nail to fight insects in—for 10 points—what 2017 Metroidvania game set in Hallownest?
answer: Hollow Knight

<555076>

8. For 10 points each—answer the following about Ferris wheels:
A. The original Ferris wheel was built in this city when it hosted the World's Columbian Exposition in 1893.
answer: Chicago, Illinois
B. This wheel in England was the tallest in the world when it was completed in 2000.   It stands on the south bank of the River Thames.
answer: London Eye (or Millennium Wheel)
C. What is now the world's tallest Ferris wheel, the High Roller, is on the namesake "strip" of this Nevada city near the Flamingo casino.
answer: Las Vegas (accept Las Vegas Strip)

<529085>

9. **This body is the *larger* of the two bodies at the center of the Theia [THAY-uh] hypothesis.   This planet's axial tilt of (*)** 23.4 degrees is stabilized by one tidally locked moon, which orbits it every 27 days.   A nitrogen-rich atmosphere surrounds—for 10 points—what third-closest planet to the Sun?
answer: Earth

<553977>

9. This poem's title character advises "He prayeth best who loveth best / all things both great and small."   For 10 points each—

A. Name this poem whose title character describes how a dead albatross that he killed with a crossbow was placed around his neck.

answer: The Rime of the Ancient Mariner

B. This English poet wrote *The Rime of the Ancient Mariner*.

answer: Samuel Taylor Coleridge

C. The Ancient Mariner waylays a "guest" planning to attend one of these events, to whom he recounts his tale.

answer: wedding (or marriage or nuptials; accept the wedding-guest)

<556122>

10. **A petition urging Congress to "move on" from this process inspired the name of MoveOn.org** ["move on dot org"]**. Under Article 1, this process involves a Senate trial at which a (*)** two-thirds majority can convict.   "High crimes and misdemeanors" may trigger—for 10 points—what process of forced removal from office?

answer: impeachment (or impeaching the president; accept answers indicating impeachment of Bill Clinton)

<555961>

10. Pencil and paper ready.   For 10 points each—answer these questions about a cube whose edges each have a length of 2:

A. What is the volume of the cube?

answer: 8 [$V = s^3 = 2^3 = 8$]

B. What is the length of any space diagonal of the cube, given that space diagonals have their endpoints on diametrically-opposite vertices [VUR-tis-eez]?   You have 10 seconds.

answer: 2 times the square root of 3 or 2 root 3 or 2 radical 3 [$d = \text{sqrt}(x^2 + y^2 + z^2) = \text{sqrt}(2^2 + 2^2 + 2^2) = \text{sqrt}(2^2 \times 3) = \text{sqrt}(2^2) \times \text{sqrt}(3) = 2$ root 3]

C. What is the volume of the largest *sphere* that can fit inside the cube, given that the sphere would have a *diameter* of 2?

answer: 4/3 pi ["four-thirds pi"] or 4 pi/3 or 1 1/3 pi (do not accept or prompt on "4/3" or "1 1/3") [$V = (4/3) \times \text{pi} \times r^2 = (4/3) \times \text{pi} \times (d/2)^2 = (4/3) \times \text{pi} \times (2/2)^2 = (4/3) \times \text{pi} \times 1^2 = 4/3$ pi]

<555886>

11. **This president criticized defense spending in his Chance for Peace speech and, in a farewell address, warned of the military-industrial complex.   This president created NASA after the U.S.S.R. launched (*)** Sputnik in 1957.   The Korean War ended under—for 10 points—what president and general?

answer: Dwight D(avid) Eisenhower ["EYE"-zen-how-ur] (prompt on "Ike")

<553172>

11. In 1973 the Australian government controversially purchased this artist's *Blue Poles—Number 11, 1952* for over one million Australian dollars.   For 10 points each—

A. Name this painter whose working technique involved sloshing, slinging, and dripping paint on large canvases.

answer: (Paul) Jackson Pollock

B. Pollock's work was a milestone in a style of art known by this word, followed by the word "expressionism."   In general, this word describes non-representational art.

answer: abstract (expressionism) (or abstract expression(ist))

C. Pollock admired the work of José Clemente Orozco [hoh-ZAY klay-MIN-tay oh-ROHZ-koh], a muralist from this country. Another muralist from this country painted *Man at the Crossroads*.

answer: Mexico (or United Mexican States or Estados Unidos Mexicanos) [*Man at the Crossroads* was created by Diego Rivera.]

<555086>

12. **Surgical removal of this C cell-containing organ risks damage to the recurrent laryngeal nerve.   Hundreds of tyrosine residues in a protein in this organ react with (*)** iodine to form the hormones T3 and T4.   Goiter is enlargement of—for 10 points—what butterfly-shaped gland in the neck?

answer: thyroid gland

<555362>

12. Police shot 69 unarmed Black protesters in the Sharpeville Massacre, a demonstration against these specific laws. For 10 points each—

A. Name these laws that specifically limited the movement of civilians in 20th-century South Africa by requiring all citizens to carry namesake books noting their race.

answer: pass laws (accept passbook(s))

B. Pass laws were integral to this system of segregation in place until the 1990s.

answer: apartheid [ah-PAR-tayd]

C. The Defiance Campaign was an anti-pass law movement led by this political party to which Nelson Mandela belonged.

answer: ANC [“A-N-C”] (or African National Congress)

<551941>

13. **The last work in this composer's Opus 10 features long descending runs of sixteenth notes for the left hand. A prelude** [PRAY-lood] **by this man featuring repeated A flats has the nickname (*)** "Raindrop."   The "Revolutionary" Étude [ay-TOOD] is by—for 10 points—what piano virtuoso and composer born in Poland?

answer: Frédéric (François) Chopin [fray-day-REEK shoh-PAN] (or Fryderyk Franciszek Szopen)

<555098>

13. Danish scientist Hans Christian Ørsted [UR-sted] showed that an electric current creates this type of field.   For 10 points each—

A. Name this type of field that affects compass needles.

answer: magnetic field (accept B-field)

B. Earth's magnetic field is generated by currents due to movements of molten metal in this layer of the Earth.

answer: outer core (prompt on "core"; do not accept or prompt on "inner core")

C. The direction of a magnetic field generated by a current is given by this rule.   It's also used to find the direction of a cross product.

answer: right-hand rule (do not accept or prompt on "hand rule")

<547420>

14. **Robert Peel refused to become prime minister because this ruler would not fire six courtiers in the Bedchamber Crisis.   This ruler always wore black after her husband, Prince (*)** Albert, died.   Edward VII [“the seventh”] succeeded her in 1901.   For 10 points—who was Britain's queen for most of the 1800s?

answer: Queen Victoria (or Alexandrina Victoria Hanover)

<534817>

14. For 10 points each—answer the following about animals in picture books:

A. The title bat is separated from her mother and befriends the young birds Pip, Flitter, and Flap in this book by Janell [juh-NEL] Cannon.

answer: Stellaluna [“stella-luna”]

B. This inquisitive monkey created by H. A. and Margret Rey [ray] eventually leaves the zoo, and goes to live with the man in the yellow hat.

answer: Curious George

C. One of these animals named Olivia appears in picture books by Ian Falconer [“falcon”-ur].   In a series by Mo Willems, the elephant Gerald is best friends with one of these mammals.

answer: pigs (or Sus or Sus domesticus; accept swine or hogs or piglets; accept Piggie(s); accept Elephant and Piggie)

<556006>

15. **Harold Thomas designed a flag representing these people whose copyright was purchased by a national government in 2022.   The "history wars" debate concerned the effect of colonization on these people and the (*)** Torres Strait Islanders.   For 10 points—name these indigenous people of Australia.

answer: Aboriginal Australians (or Aboriginals or Australian Aborigines)

<554208>

15. This country's closest point to the U.S. is in the islands of Bimini [bee-MEE-nee], which are about 50 miles east of Miami.   For 10 points each—
A. Name this Caribbean archipelago whose districts include North Andros and Exuma.
answer: The Bahamas (or Commonwealth of the Bahamas)
B. This is the capital and most populous city of the Bahamas.
answer: Nassau [NAA-"saw"]
C. The tropical climate of the Bahamas is moderated by this warm oceanic current that originates in the Gulf of Mexico.
answer: Gulf Stream

<555806>

16. **These numbers are the opposite of their own conjugate.   These numbers are shown on the *y*-axis of an Argand diagram.   The solutions to "*x* squared equals (*)** -4" are this type of number.   For 10 points—name these numbers that are added to a real number to form a complex number.
answer: (purely) imaginary numbers (accept imaginary parts; prompt on "multiples of i")

<555772>

16. For 10 points each—answer the following about fire in ancient Rome:
A. This emperor built his Golden House on land cleared by the Great Fire of AD 64, which he blamed on Christians.
answer: Nero (Claudius Caesar Augustus Drusus Germanicus)
B. This member of the First Triumvirate ["try"-UM-vih-rut], by some accounts the wealthiest Roman in history, gained some of his wealth by running a extortionary fire brigade.
answer: Crassus ["CRASS"-uss] (or Marcus Licinius Crassus)
C. These six priestesses of the goddess Vesta [VESS-tuh] tended to an eternal flame in a temple in the Roman Forum.
answer: Vestal Virgins (accept Vestales)

<552137>

17. **This event's start was signaled by a declaration that "This meeting can do nothing further to save the country."   After this event, Lord North's government passed the (*)** Intolerable Acts.   The Sons of Liberty led—for 10 points—what 1773 event in which British goods were dumped into a harbor?
answer: Boston Tea Party (prompt on "Tea Party")

<535840>

17. For the first time, researchers in 2021 observed particles in certain environments reliably return to their exact starting positions.   For 10 points each—
A. The phenomenon is a "boomerang effect" named for this branch of physics that describes behavior at atomic and subatomic scales when physical values become discrete.
answer: quantum mechanics (or quantum physics; accept quantum boomerang (effect))
B. The quantum boomerang effect occurs in environments with a high level of this quantity.   It is proportional to the log of the number of microstates according to Boltzmann's formula.
answer: entropy
C. The observed particles were stimulated with one of these devices that emits light by stimulated emission of radiation.
answer: laser(s)

<555050>

18. **This author described the vacationing Anna, who walks her Pomeranian** [pah-muh-RAIN-ee-un] **along the seaside, in his story "The Lady with the Dog."   In a 1904 play by this author, the servant Firs** [feerz] **collapses while axes hack down the title (*)** fruit trees.   For 10 points—what Russian dramatist wrote *The Cherry Orchard*?
answer: Anton (Pavlovich) Chekhov ["CHECK-off"]

<552188>

18. A lack of the G6PD [G-six-P-D] enzyme leads to oxidative destruction of these cells.   For 10 points each—

A. Name these non-nucleated cells that contain hemoglobin to transport oxygen.

answer: red blood cell(s) (or erythrocytes or red blood corpuscle(s) or erythroid cell(s) or haematids; prompt on "RBC(s)")

B. A glutamate-to-valine mutation in hemoglobin causes this condition which causes red blood cells to take a crescent shape.

answer: sickle cell disease or sickle cell anemia

C. Both G6PD deficiency and sickle hemoglobin may help protect against this infectious disease spread by Anopheles mosquitoes.

answer: malaria

<556074>

19. **For an alternating current circuit, the peak value of this quantity is double its time-averaged value since it goes as the square of the sinusoidal current or voltage.   For a resistor, current times (*)** voltage gives—for 10 points—what rate of energy transfer measured in watts?

answer: power

<536995>

19. For 10 points each—name these common features of a baseball stadium:

A. Relief pitchers warm up in this area, which is typically in foul territory or beyond the outfield fence.

answer: bullpen(s) (prompt on "pen(s)")

B. The edge of the outfield is lined with dirt known by this term, because it serves as an indicator that fielders are close to a wall.

answer: warning track(s)

C. To ensure that hitters can easily see a pitched ball, most parks have a solid, dark wall beyond center field known by this two-word term.

answer: batter's eye (accept batter's eye screen)

<508047>

20. **The governor of New Mexico, Michelle Lujan** [LOO-hahn] **Grisham, became licensed in this profession in January 2022.   In 2021 Miguel (*)** Cardona advised officials to use federal funding to address shortages in—for 10 points—what profession, in which staffing issues have increased the need for substitutes?

answer: teacher (or educator or teaching or education; accept elementary school teacher or substitute teacher)

<554209>

20. The term "Yahgan" [YAH-gahn] refers to the indigenous people of this archipelago [ARK-ih-PEL-uh-goh].   For 10 points each—

A. The Strait of Magellan [muh-JEL-lin] separates what archipelago from the South American mainland?

answer: Tierra del Fuego ["tee-AIR-ah" del FWAY-goh]

B. South of Tierra del Fuego is this "passage" used by ships sailing around South America.   Like the Strait of Magellan, this passage is named for an explorer.

answer: Drake Passage (or Mar de Hoces) [after Sir Francis Drake]

C. Argentina and this long, narrow country to the west of Argentina share the islands of Tierra del Fuego.

answer: Chile [CHEE-lay] (or Republic of Chile or República de Chile)

<553183>

21. **In ancient Greece, these animals were the most common sacrifice to the god Hecate** [HEK-uh-tee]**.   One of these animals named Argos dies shortly after recognizing Odysseus** [oh-DIH-see-uss] **in the** *Odyssey***.   A (*)** three-headed one of these animals guards the Greek Underworld.   Cerberus [SUR-buh-russ] is—for 10 points—what type of canine?

answer: dogs (accept Canis familiaris; prompt on "canine(s)" before "canine")

<545989>

21. Thomas Midgley helped to develop the first commercial one of these compounds, which is sometimes called "R–12."   For 10 points each—

A. Name these refrigerants that were phased out by the Montreal Protocol.

answer: CFCs or chlorofluorocarbons [KLOR-oh-FLOR-oh-KAR-bunz] (accept Freons; do not accept or prompt on "HCFC(s)" or "hydrochlorofluorocarbon(s)")

B. CFCs exacerbated a "hole" in this atmospheric layer named for a molecule consisting of three atoms of oxygen.

answer: ozone layer (accept ozone hole)

C. Ozone depletion may lead to increased cancer risk because the ozone layer absorbs most of this type of radiation from the Sun.

answer: ultraviolet or UV ["U-V"] (accept ultraviolet C or UV-C or vacuum ultraviolet or vacuum UV)

<550533>

22. **This letter, followed by "dot com," originally named the company that became PayPal.   Barr bodies are inactive forms of a (*)** chromosome named for this letter, which names a "generation" between Baby Boomers and Millennials.   For 10 points—name this letter that, on a treasure map, "marks the spot."

answer: X (accept X.com or X chromosome or Generation X or X marks the spot)

<556052>

22. Critics of this politician often cite his role in the 2002 anti-Muslim riots in Gujarat [GOO-juh-raht].   For 10 points each—

A. Name this leader of the nationalist party BJP.

answer: Narendra (Damodardas) Modi [nah-ren-drah moh-dee]

B. Modi is the current prime minister of this country.

answer: India (or Republic of India or Bharat(iya) Ganarajya)

C. In 2019 Modi dissolved a state named for Jammu [JAH-moo] and this other region, reorganizing it into a pair of union territories.

answer: Kashmir (accept Jammu and Kashmir)

<543463>

23. **In this play, a comedic servant imagines himself the "porter of hell-gate" after hearing persistent knocking. A woman in this play tries to wash off imaginary bloodstains while (*)** sleepwalking.   For 10 points—name this Shakespeare play in which king Duncan is murdered by a Scottish general.

answer: Macbeth (or The Tragedy of Macbeth)

<545347>

23. This poem's speaker muses "I'd like to get away from earth awhile."   For 10 points each—

A. Name this poem whose title trees are described as clicking "upon themselves / as the breeze rises" after an ice storm.

answer: Birches

B. "Birches" is by this poet, who also wrote "Stopping by Woods on a Snowy Evening."

answer: Robert (Lee) Frost

C. This other poem by Frost is about a farmer whose neighbor quotes the adage "good fences make good neighbors."

answer: Mending Wall

<555854>

24. **In 1987, to prevent this animal species' extinction, all surviving members in the wild were captured.   These long-lived birds in genus Gymnogyps ["GYM-no-jips"], which are black except for white patches under their wings, feed on (*)** carrion.   For 10 points—what "California" birds are North America's largest?

answer: California condor(s) (accept Gymnogyps californianus)

<537729>

24. The Chinese zodiac assigns an animal to each year, based on a repeating cycle.   For 10 points each—

A. There are this many animals in the cycle of the Chinese zodiac, who were placed in order after competing in a race organized by the Jade Emperor.

answer: 12

B. February 1, 2022 marked the beginning of the year of this big cat with orange and black stripes.

answer: tiger (or Panthera tigris; accept Year of the Tiger)

C. This animal, the first in the zodiac, won the Jade Emperor's race by treacherously riding across a river on the ox's back with the cat, then pushing the cat into the water to drown and running ahead of the ox.

answer: rat (accept mouse)

<554890>