National Academic Quiz Tournaments, LLC

1. **For this building, Etsuro Sotoo** [et-soo-roh soh-toh-oh] **designed doors laid with aluminum plants and insects. This building's exterior contains a 4x4** ["four-by-four"] **magic square. Its four central pillars, which resemble trees, are set with jewel-like stones representing the Four Evangelists. This building's austere (*)** Passion Facade was decorated by Josep Subirachs [soo-bee-RAHKS]. Its Glory Facade and ten of its 18 planned towers are still under construction, which began in 1882. For 10 points—name this Barcelona church designed by Antoni Gaudí [gow-DEE].

answer: <u>Sagrada Família</u> [sah-GRAH-dah fah-MEEL-ee-uh] (or Basílica i Temple Expiatori de la <u>Sagrada Familia</u> or Church of the <u>Sagrada Família</u> or Basilica (and Expiatory Church) of the <u>Sagrada Família</u>; prompt on "(Church of the) Holy Family" or "(Basilica of the) Holy Family")

<398809>

2. **A radio mast named for this city was the world's tallest structure until collapsing in 1991. It is home to an art deco-like Palace of Culture and Science. A memorial in this city shows some men escaping a collapsing building represented by huge granite prisms, while others enter a manhole. Its Castle Square is home to a column named for (*)** Sigismund III Vasa, who moved his capital to this city on the Vistula [VIS-choo-lah]. A 1943 Jewish ghetto uprising occurred in—for 10 points—what capital of Poland?

answer: <u>Warsaw</u> (or <u>Warszawa</u>; accept <u>Warsaw</u> Radio Mast or <u>Warsaw</u> Uprising Monument)

<375310>

3. **Peter Martyr d'Anghiera** [dahn-J'YAIR-uh] **wrote a detailed account of this island in Latin, calling it "Quizqueia"** [keez-kay-EE-ah]**. Gonzalo Fernández de Oviedo** [gon-ZAH-loh fair-NAHN-dayss "day" oh-vee-AY-doh] **was in charge of the** *Fortaleza Ozama* [for-tah-LAY-zah oh-ZAH-mah] **in this island. The town of Nueva Isabela** [noo-AY-vah ees-ah-BAY-lah] **was founded in this island, whose (*)** Taíno *caciques* [kah-SEE-kayz] helped another colonist construct La Navidad after the sinking of his ship, the *Santa Maria*. The first permanent European settlement in the Americas was founded by Christopher Columbus on—for 10 points—what Caribbean island?

answer: <u>Hispaniola</u> [his-pan-YOH-luh] (accept <u>Santo Domingo</u> or <u>Saint-Domingue</u>)

<362512>

4. **One of these beings names a place that can turn anything as white as the film of an eggshell and is home to the parents of all swans. Fafnir** [FAHF-neer] **tells Sigurd that these beings come from the Aesir** [AY-"sir"]**, the elves, and the dwarves alike. These figures send Atli** [AHT-lee] **a vision of him being slain by Gudrun. Brynhild** [BROON-hild] **blames these beings for making her desire Sigurd. A (*)** trio of these beings named Verdandi, Skuld, and Urd ("OORD") water the roots of Yggdrasil. For 10 points—name these Norse analogues of the Fates.

answer: <u>Norn</u>s

<406087>

5. **In vertebrates, this structure's nerve fibers are inverted compared to cephalopods** [SE-fuh-luh-"pods"]**. This structure's outermost cells are classified as "on-center" or "off-center" based on the properties of their receptive fields and receive input from (*)** amacrine ["AM"-uh-krin] and bipolar cells. The lateral geniculate [jen-TIK-yoo-let] nucleus is linked to the ganglion cells of this structure, in which the protein rhodopsin [roh-DOP-sin] is activated by photoisomerization ["photo-eye"-SAHM-ur-ih-ZAY-shun] of vitamin A. Rods and cones are found in—for 10 points—what rearmost part of the eye?

answer: retina (prompt on "eye" before "eye")

<444177>

6. **This character calls himself a "shy" and "diffident" man whom others see as "an arbitrary overbearing bossing kind of person." This man, who employs a housekeeper named Mrs. Pearce, throws a ring into a fireplace and curses the time he spent with a "heartless guttersnipe." His rivals include a Hungarian named (*)** Nepommuck, who speaks 32 languages. In the Covent Garden flower market, Colonel ["kernel"] Pickering makes a bet with—for 10 points—what phonetics professor who trains Eliza Doolittle in *Pygmalion* ["pig-MALE"-yun]?

answer: (Dr.) Henry Higgins (accept either underlined portion)

<434841>

7. **This king's chief minister started a failed colony in Kourou** [KOO-roo] **and was forced to retire for overreacting to the Falklands Crisis. Pasquale Paoli** [pah-SKWAH-lay POW-lee] **fled into exile after this king's forces took Corsica. His forces won the Battle of (*)** Fontenoy and took the Austrian Netherlands, which he returned in the Treaty of Aix-la-Chapelle [eks lah shuh-PEL]. Prussia ended its alliance with this king in the "Diplomatic Revolution." For 10 points—name this French king who lost the Seven Years' War, the lover of Madame de Pompadour.

answer: Louis XV [LOO-ee "the 15th"] (accept Louis the Beloved or Louis le Bien Aimé; prompt on "Louis")

<369044>

8. **As of 2017, the WNBA franchise in this city is the only one that has not reached the WNBA Finals. In 2017 that team from this city made a trade with the Chicago Sky to receive Elena Delle Donne** [DEL-uh "dawn"]**. After selecting Jan Vesely** [yahn VES-uh-lee] **in 2011, the NBA team in this city received the (*)** third overall pick in 2012 and 2013, which they used to take Otto Porter and Bradley Beal. The WNBA's Mystics play in—for 10 points—what city, where Scott Brooks coaches, and John Wall plays for, the NBA's Wizards?

answer: Washington, D.C. (accept either underlined portion; accept District of Columbia)

<431036>

9. **During this event, branches called *bacchoi*** [BAH-koi] **were swung around during a procession along the "Sacred Way," which began in a cemetery. Participants in this event broke their fast by drinking a barley-based drink called *kykeon*** [KYE-kee-un]**, which this event's dedicatee requested after she was taken in by Celeus** ["SELL"-ee-uss]**. (*)** Triptolemus ["trip-TALL"-ih-muss] was one of the first initiates into the cult that staged this event, which was established after the return of Persephone [pur-SEH-fuh-nee]. For 10 points—name this Attic festival honoring Demeter [dih-MEE-tur].

answer: Eleusinian Mysteries [EL-yoo-SIN-ee-un "mysteries"] (or Elefsínia Mystíria or Eleusínia Mystíria; accept answers mentioning mysteries or mystery and Eleusinian or Eleusis)

<418945>

10. **This author addressed his country with the lines "we will not dare to doubt thee / but ask whatever else, and we will dare!" in a "Commemoration Ode" he delivered at Harvard. One of his poems commnents "He who would write and can't write can surely (*)** review." The title knight decides not to quest for the Holy Grail in his poem "The Vision of Sir Launfal." Edgar Allan Poe was called "two fifths sheer fudge" by—for 10 points—what Fireside Poet who wrote *The Biglow Papers* and *A Fable for Critics*?

answer: James Russell Lowell

<221844>

11. **John Nathan's biography of this man claims that he wanted to die in an event he led with the "Shield Society." This man's essay *Sun and Steel* details his obsession with bodybuilding, which figures prominently in a Philip Glass-scored film directed by (*)** Paul Schrader depicting his "life in four chapters." The pearl-diver Hatsue appears in *The Sound of Waves*, a novel by—for 10 points—what Japanese author of *The Temple of the Golden Pavilion*, who committed suicide in 1970 after leading a failed coup?

answer: Yukio Mishima [mih-SHEE-muh] (or Kimitake Hiraoka; accept names in either order; prompt on "Yukio" or "Kimitake")

<426720>

12. **In this year, the U.S. simulated a biological attack in Operation Dark Winter and Balbir Singh Sodhi** [BAHL-beer "sing" SOD-hee] **was killed in a hate crime. The FBI concluded that a crime in this year was masterminded by Bruce Ivins. Ari Fleischer** [FLY-shur] **claimed the word (*)** "in" was not in a memo sent in this year to a president during a month-long vacation to Texas. The Battle of Tora Bora was fought in this year, during which two senators received mail containing anthrax. For 10 points—in what year did 9/11 ["nine eleven"] occur?

answer: <u>2001</u>

<429448>

13. **In this technique, molecules sometimes lose a gamma-hydrogen to their carbonyl group, thus undergoing beta cleavage. Top-down and bottom-up proteomics incorporate the tandem form of this technique. Gentle methods to prepare a sample for this procedure include (*)** MALDI [MAHL-dee] and electrospray ionization. In this process, equal intensity peaks separated by two units can indicate the presence of bromine. For 10 points—name this form of spectrometry that gives the ratio of the namesake quantity to charge.

answer: <u>mass spec</u>trometry or <u>mass spec</u>troscopy (accept <u>mass</u> (spectrometry) or <u>mass</u> (spectroscopy) after "spectrometry"; accept more specific answers like <u>tandem mass spectrometry</u>; prompt on "MS") [The first reaction is the McLafferty Rearrangement.]

<291859>

14. **This man was the subject of lobbyist Jack Burkman's "Profiling Project." This man's family sent a cease and desist letter to Rod Wheeler, an investigator recommended by Ed Butowsky** [boo-TAU-skee]**. Cars.com pulled ads from Sean Hannity's show for its coverage of this man. An August 2017 (*)** lawsuit alleged that the Trump White House and Fox News falsely tied this man's death to leaked emails. Many conspiracy theories arose after the 2016 murder of—for 10 points—what Democratic National Committee staffer?

answer: Seth (Conrad) <u>Rich</u>

<435720>

15. **A young man in this musical is "promoted" from "idiot apprentice to incompetent clerk" and longs to see "the stuffed whale at Barnum's museum." Rudolf tells his wait staff about the imminent arrival of this musical's title woman, spurring them to dance "The Waiter's Gallop." A milliner in this musical falls in love with (*)** Cornelius Hackl, although she has been set up with his boss, Horace Vandergelder [VAN-der-GELL-der]. The people of Yonkers insist you "put on your Sunday clothes" in—for 10 points—what 1964 musical?

answer: <u>Hello, Dolly</u>!

<395104>

16. **This was the first language to support the use of variadic** [vair-ee-AD-ik] **templates, as discussed in a technical report often called "TR1"** ["T-R-one"]**. Its 2011 standard added "r-value references" and an explicit constant for the null pointer. The Boost libraries work with this language, in which calls to "new" and "delete" have largely replaced (*)** "malloc" ["MAL"-uk] and "free" for memory allocation. Bjarne Stroustrup [b'YAR-nay STROV-stroop] developed—for 10 points—what object-oriented language, partly named for a unary [YOO-nair-ee] operator used to increment variables?

answer: <u>C++</u> ["c-plus-plus"] (do not accept or prompt on "C")

<437724>

17. **One character in this novel is blackmailed during his honeymoon at Granbois** [grahn-bwah] **by a man claiming to be his wife's brother. This novel's protagonist is injured by a rock thrown by Tia while at the Coulibri** [koo-lee-bree] **Estate, which is burned down by a band of (*)** slaves. The third part of this book is set in England, where Grace Poole cares for the now-insane Antoinette Cosway. For 10 points—what novel, told from the perspective of Bertha Mason, was inspired by *Jane Eyre* ["air"] and written by Jean Rhys [REESS]?

answer: <u>Wide Sargasso Sea</u>

<260465>

18. **A 1992 paper showed that this process occurs faster in poorer countries, modified a model of it to consider human capital, and was written by Greg Mankiw** ["MAN-cue"]**, David Romer, and David Weil. High debt levels inhibit this process, according to a 2010 paper by Carmen (*)** Reinhart and Kenneth Rogoff that had errors in its Excel data. Capital accumulation, population increase, and technological progress are factors in the exogenous Solow ["solo"] model of—for 10 points—what process in which an economy's GDP rises?

answer: (economic) <u>growth</u> (accept answers mentioning word forms of <u>grow</u>)

<394951>

19. **A university in this city closed during the Napoleonic wars and merged with a school in nearby Halle** [HAH-luh]**. Sylvester Mazzolini** [MAHT-zuh-LEE-nee] **attacked a document issued in this city that repeats the phrase "Christians are to be taught" and argues against the idea of "treasury of (*)** merit." A university built in this city under Frederick the Wise employed a theologian targeted by the bull *Exsurge domine* [ex-SUR-jay DOH-mee-nay]. A document attacking Johann Tetzel was issued in—for 10 points—what city where Martin Luther posted his *95 Theses*?

answer: <u>Wittenberg</u> [VIT-ten-bairg]

<div align="right"><420443></div>

20. **In *C. elegans*** ["C" EL-uh-gahnz]**, this process is regulated by the XOL-1** [X-O-L-"one"] **Switch protein. In *Drosophila*** [droh-SAH-fuh-luh]**, it is regulated by alternative splicing of the Transformer mRNA. A feedforward loop of Sox9** [socks-nine] **is required by one form of this process. In reptiles, (*)** temperature-dependent changes in the activity of aromatase [uh-ROH-muh-tace] govern this process. This process occurs when the SRY [S-R-Y] gene produces TDF [T-D-F], causing Wolffian [WOLF-ee-in] ducts to form the vas deferens. For 10 points—name this process by which a zygote becomes male or female.

answer: <u>sex determination</u> or <u>sexual determination</u> (accept <u>sex differentiation</u> or answers describing <u>determining what sex</u> an offspring will be; accept answers describing <u>determining whether an offspring becomes male or female</u> before "male")

<div align="right"><436640></div>

21. **A person with this quality calls out "Son of David, have mercy on me!" A person of this type in Bethsaida** ["beth-SAY"-ih-duh] **is told "neither go into the town nor tell anyone in the town." Celidonius** ["see"-luh-DOH-nee-us] **is the traditional name given to a man with this quality, who is helped using a mixture of (*)** saliva and mud. A beggar named Bartimaeus [bar-tih-MAY-uss] is a person of this kind whom Jesus encounters near Jericho [JAIR-ih-koh]. For 10 points—name this affliction cured in several people by Jesus, leading him to call himself "the Light of the World."

answer: <u>blind</u>ness (accept answers mentioning forms of the word <u>blind</u> or <u>sightless</u>; prompt on "beggar(s)" before "beggar(s)")

<div align="right"><435092></div>

22. **This opera's title character uses the aria "Es gibt ein Reich"** [ess gibt eyn rykhe] **to rebut Truffaldino** [troo-fahl-DEE-noh] **and Harlequin** [HAR-luh-kwin]**. It includes an extensive piano part in an infamously difficult coloratura** ["color"-uh-TOO-ruh] **aria (*)** "Großmächtige Prinzessin" ["gross"-MEKH-tee-guh prin-T'SEH-sin]. In this work's prologue, a Composer rages when he learns his opera seria [SAY-ree-ah] must be performed alongside a burlesque group. The soprano Zerbinetta [t'ser-bee-NET-tah] leads that burlesque group in—for 10 points—what opera by Richard Strauss [REE-khart shtrouse] with an "opera-within-the-opera" about the title abandoned Greek princess?

answer: <u>Ariadne auf Naxos</u> [ah-ree-AHD-nee owf NAHK-sohs] (accept <u>Ariadne on Naxos</u>)

<div align="right"><442598></div>

23. **During this conflict, the territorial governor Charles Bent was scalped in the Taos Revolt. This war began after a skirmish involving troops led by Seth Thornton. The Mormon Battalion fought in this war, during which John Riley led a unit of Irish immigrants known as (*)** Saint Patrick's Battalion. In this war, the six "Boy Heroes" defended Chapultepec [chuh-POOL-tuh-pek] Castle after the Battles of Contreras [kohn-TRAIR-us], Churubusco [choo-roh-BOOS-koh], and Cerro Gordo [SAIR-oh GOR-doh]. For 10 points—name this war in which Winfield Scott landed at Veracruz [vair-uh-KROOZ].

answer: <u>Mexican</u>-American War

<div align="right"><370345></div>

24. **A poem by this author describes a palm tree that weeps alone "among the burning sands." In his play *Almansor*, this author wrote that "where they burn books, they will ultimately also burn people." This author narrated a trip to visit his mother in Hamburg** [HAHM-boorg] **in (*)** *Germany: A Winter's Tale*. The lines "I know not if there is a reason / why I am so sad at heart" open his poem about a figure who sings boatmen to their death on the Rhine River. For 10 points—name this German Romantic poet of "Die Lorelei" [dee LOR-uh-"lie"].

answer: Heinrich <u>Heine</u> ["HIGH"-nuh] (or Christian Johann Heinrich <u>Heine</u>; accept Harry <u>Heine</u>)

<div align="right"><238410></div>

1. Francis Younghusband's expedition invaded this region to settle a border dispute near Sikkim.   For 10 points each—

A. The Qianlong [cheean-lohng] emperor set up the Kashag council to govern what southwestern region in his empire?

answer: Tibet (or Bod or Xizang [shee-zahng] (Autonomous Region))

B. Younghusband's expedition resulted in the signing of the Treaty of Lhasa with this Chinese dynasty, which fought the Opium Wars with Britain.

answer: (Great) Qing [cheeng] Dynasty (or Ch'ing Dynasty or Manchu Dynasty or Qing cháo)

C. This first British envoy to China led a disastrous 1793 embassy that supposedly insulted the Qing emperor by refusing to kowtow.

answer: George Macartney (accept Macartney embassy)

<428807>

2. In a 2016 *Time* magazine piece, this man applied one of his concepts to then-candidate Donald Trump, who he claimed was mostly just indifferent to truth, as opposed to lying.   For 10 points each—

A. Name this philosopher who wrote the essay "On Bullshit."

answer: Harry (Gordon) Frankfurt

B. Frankfurt developed a "compatibilist" view of this idea, which holds that the mind is able to make decisions that are not entirely decided by external factors.

answer: free will (or freedom of the will; prompt on "will")

C. Frankfurt roughly equated free will with capacity for this kind of "desire" or "volition."   This kind of logic is the simplest that permits quantifying over predicates and sets.

answer: second-order (desires or volitions) (accept second-order logic)

<438407>

3. For 10 points each—answer the following about autos-da-fé [aw-tohss-duh-FAY]:

A. This Bulgarian Nobel Prize-winner wrote the novel *Auto-da-Fé*, as well as the treatise *Crowds and Power*.

answer: Elias Canetti

B. Tomás de Torquemada oversaw hundreds of autos-de-fé under the authority of what tribunal established by Ferdinand and Isabella?

answer: Spanish Inquisition (or Inquisición española or Tribunal of the Holy Office of the Inquisition of Spain or Tribunal del Santo Oficio de la Inquisición de España; prompt on "Inquisition" or "Inquisición" or "Holy Office (of the Inquisition)" or "Santo Oficio (de la Inquisición)")

C. Roger Zelazny's [zuh-LAZZ-nee's] short story "Auto-da-Fé" appeared in *Dangerous Visions*, an anthology edited by this science-fiction writer of the story "'Repent, Harlequin!' Said the Ticktockman."

answer: Harlan (Jay) Ellison

<263145>

4.   For 10 points each—name these concepts that mathematician Ernst Lindelöf [lin-deh-LOHF] generalized:

A.   In topology, every open cover of a Lindelöf space has a *countable* subcover—a generalization of this property, in which the subcovers would have to be finite.   By the Heine-Borel theorem, subsets of "R-*n*" with this property must be closed and bounded.

answer: <u>compact</u>ness

B.   The Phragmén-Lindelöf [frag-men-lin-deh-LOHF] theorems are generalizations of this "principle" of complex analysis, which states that the magnitude of a holomorphic function does not attain its supremum on a domain.

answer: <u>maxi</u>mum <u>mod</u>ulus principle (do not accept or prompt on just "maximum principle," which applies to harmonic functions)

C.   The Picard-Lindelöf theorem for differential equations generalizes the existence theorem named for this Italian mathematician, who also developed axioms describing the natural numbers.

answer: Giuseppe <u>Peano</u> [joo-SAYP-pay pee-AH-noh] (accept <u>Peano</u>('s) axioms or <u>Peano</u> (existence) theorem)

<403112>

5.   This book's second part focuses on the 1973 Chilean coup as an example of the title kind of policy.   For 10 points each—

A.   Name this 2007 book by Naomi Klein that chronicles the "rise of disaster capitalism."   Its thesis is that governments engage in actions such as the Iraq War to pass unpopular policies in their wake.

answer: The <u>Shock Doctrine</u>(: The Rise of Disaster Capitalism)

B.   Klein's 2014 book on climate change, *This Changes Everything*, includes a chapter criticizing this Virgin Group founder's failure to live up to his pledge to contribute 3 billion dollars to climate-change efforts.

answer: Richard <u>Branson</u> (or Sir Richard Charles Nicholas <u>Branson</u>)

C.   The final section of Klein's 1999 book *No Logo* profiled a British libel trial in which this company sued Helen Steel and David Morris over a leaflet about its business practices.

answer: <u>McDonald's</u> (Corporation) [The trial was known as the "McLibel case."]

<450122>

6.   Belá Bartók's [BEL-ah bar-TAHK's] *Concerto for Orchestra* supposedly parodies the "Invasion Theme" from this man's *Leningrad Symphony*.   For 10 points each—

A.   Name this Soviet composer, who wrote his fifth symphony after being attacked by Stalin.

answer: Dmitri (Dmitriyevich) <u>Shostakovich</u> [shawss-tuh-KOH-vitch]

B.   That attack came in the *Pravda* article "Muddle Instead of Music," which condemned this Shostakovich opera as "bourgeois" [boor-ZHWAH] and "coarse."

answer: <u>Lady Macbeth of the Mtsensk District</u> or <u>Lady Macbeth of Mtsensk</u> (or <u>Ledi Makbet Mtsenskogo Uyezda</u>; do not accept or prompt on "Katerina Ismailova"; prompt on just "Lady Macbeth")

C.   This later orchestral work by Shostakovich begins on what sounds like E-minor, even though it's in E-flat major, and has a single french horn for its brass section.   The third of its four movements consists entirely of a cadenza.

answer: <u>Cello Concerto No.1</u> in E-flat Major, Opus 107 (accept <u>First Cello Concerto</u>; prompt on just "Cello Concerto")

<397999>

7.   The protagonist of this novel is bankrupted when customs officials seize and burn his autobiography upon his return from Paris.   For 10 points each—

A.   Name this satirical novel about Adam Fenwick-Symes's quest to scrounge up funds to marry Nina Blount.

answer: <u>Vile Bodies</u>

B.   The author of *Vile Bodies* went on to write this novel, in which Sebastian Flyte invites the protagonist to the title estate.

answer: <u>Brideshead Revisited</u>

C.   Both *Scoop* and *Brideshead Revisited* were written by this British novelist.

answer: Evelyn <u>Waugh</u> [EE-vuh-lin WAW] (or Arthur Evelyn St. John <u>Waugh</u>)

<416834>

8. Despite a collapse in stocks in the 1970s, this country remains the world's leading producer of fishmeal.   For 10 points each—

A. What country is the namesake of a species of anchovy that consistently yields the largest annual catches of any fish species in the world?

answer: Peru (or Republic of Peru or República del Perú; accept Peruvian anchoveta or Peruvian anchovy)

B. Peru's enormous anchovy population is due to the massive upwelling caused by this marine system, which is driven by trade winds.

answer: Humboldt Current (System)

C. Peru's flying squid catch has been devastated due to overfishing by companies from this Asian country home to millions of acres of carp farms in its Pearl and Yangtze [yang-tsee] river basins.

answer: China (or People's Republic of China or PRC or Zhongguo or Zhonghua Renmin Gongheguo; do not accept or prompt on "Republic of China")

<442838>

9. For 10 points each—answer the following about the advocacy organization ACT UP:

A. ACT UP was founded in 1987 at the height of this crisis.   By the mid-1990s, this medical crisis claimed over 40,000 lives a year in the U.S.

answer: AIDS crisis (accept answers denoting a crisis or epidemic (or pandemic) centered on HIV and/or AIDS or human immunodeficiency virus or acquired immune deficiency syndrome or acquired immunodeficiency syndrome)

B. In 1988 ACT UP picketed this magazine after it ran a story claiming that heterosexual sex cannot transmit HIV to women.   Longtime editor Helen Gurley Brown ran this fashion magazine during the protests.

answer: Cosmopolitan (accept Cosmo)

C. ACT UP made prominent use of this gay artist's "SILENCE = DEATH" poster and slogan.   This bespectacled artist of *Crack is Wack* often drew wiggly lines around figures to suggest movement or dancing.

answer: Keith (Allen) Haring

<427847>

10. When this phenomenon is "positive," it results in a sigmoidal binding curve.   For 10 points each—

A. Name this phenomenon in which the binding of one substrate molecule alters the affinity of the remaining binding sites for more substrate molecules.

answer: cooperativity (accept cooperative)

B. This technique can determine binding constants by measuring the release or absorbance of heat as a ligand [LIG-und] is gradually added to a sample.

answer: isothermal titration calorimetry or ITC (prompt on "calorimetry")

C. Positive cooperativity is seen in the binding of this protein's four iron atoms to oxygen, which this protein carries in red blood cells.

answer: hemoglobin (prompt on "Hb" [H-B] or "Hgb" [H-G-B])

<435211>

11. This show, which first aired in 1992, is currently the longest-running on its network.   For 10 points each—

A. Name this reality show whose first season was set in New York, and whose more recent seasons have been subtitled "Skeletons" and "Ex-Plosion."

answer: The Real World

B. *The Real World* airs on this cable network whose other programs have included *Singled Out* and *Jersey Shore*.

answer: MTV (or Music Television)

C. This participant in the 2001 series *The Real World: Back to New York* has gone on to star in several films in *The Marine* franchise and as a WWE wrestler.

answer: The Miz (or Michael Gregory Mizanin)

<401217>

12.   One of these stories describes a "Chola [CHOH-lah] widow" named Hunilla [hoo-NEE-yah], while another describes a climb up the Rock Rodondo.   For 10 points each—

A.   Name this collection partly based on its author's experiences in the Galápagos.

answer: The Encantadas (or The Enchanted Isles)

B.   This author later incorporated the sketches of *The Encantadas* into his *The Piazza Tales*.

answer: Herman Melville

C.   *The Piazza Tales* contains a story about this scrivener, who responds to demands for him to do work with the line "I would prefer not to."

answer: Bartleby (accept Bartleby, the Scrivener: A Story of Wall Street)

<257948>

13.   This artist led a rendition of the protest song "We Shall Overcome" during the 1963 March on Washington.   For 10 points each—

A.   Name this folk singer and anti-war activist in the 1960s.   She reflected on her relationship with Bob Dylan in her song "Diamonds & Rust."

answer: Joan (Chandos) Baez

B.   In August 1969 Baez performed at this music festival on a New York dairy farm that attracted over 400,000 attendees.

answer: Woodstock Music & Art Fair (or Woodstock Festival)

C.   In the essay "Where The Kissing Never Stops," which profiles Baez's Institute for the Study of Nonviolence, this author wrote that Baez was "a personality before she was entirely a person."

answer: Joan Didion

<405908>

14.   This band's album *The Warrior's Code* features a cover of the song "The Auld Triangle," which was originally written by playwright Brendan Behan [BEE-un].   For 10 points each—

A.   Name this band who also included a cover of the Boston Red Sox anthem "Tessie" on that album.

answer: Dropkick Murphys

B.   The Dropkick Murphys' version of "I'm Shipping up to Boston" appeared in this 2006 crime film by Martin Scorsese, in which Billy Costigan infiltrates the Irish mob.

answer: The Departed

C.   This band chose the Dropkick Murphys as their opening act on a 1997 tour promoting the album *Let's Face It*, which featured this band's biggest hit, "The Impression That I Get."

answer: The Mighty Mighty Bosstones (accept The Bosstones)

<303949>

15.   A mnemonic aid for many of these relations is a square with upward diagonal arrows paired with the phrase "Valid Facts and Theoretical Understanding Generate Solutions to Hard Problems."   For 10 points each—

A.   Name these relations that link partial derivatives of quantities labeled 'V', 'S', 'T', and 'P'.

answer: Maxwell relations (of thermodynamics)

B.   'V' stands for this quantity, which multiplies pressure in the ideal gas law.

answer: volume

C.   The mnemonic square was introduced by this scientist, who first interpreted quantum mechanical wavefunctions in terms of probability amplitudes.

answer: Max Born (accept Born interpretation)

<450677>

16. Tamerlane avenged a 1387 revolt in this city by massacring 70,000 of its inhabitants.   For 10 points each—
A. Name this city home to the Gunbad-i-Khaki [goon-BAHD-ee-KAH-kee], or Dome of Earth.   It became the capital of a "gunpowder empire" during the 16th century.
answer: Isfahan (or Esfahan)
B. Isfahan was the capital of this Islamic empire.
answer: Safavid [suh-FAH-vid] Empire (or Safavid Dynasty or Dudamn e Safavi or Safavids)
C. Isfahan is now the third most populous city in this country; it is also the site of its premier nuclear research facility.
answer: Iran [ih-RAHN] (or Islamic Republic of Iran or Jomhuri-ye Eslami-ye Iran)
<240255>

17. Fairmont operates a historic hotel in this city known as The Empress.   For 10 points each—
A. Name this Canadian city whose neighborhood of Brentwood Bay is home to the Butchart ["BUTCH"-ert] Gardens.
answer: Victoria
B. Victoria is the most populous city on this large island of British Columbia.
answer: Vancouver Island
C. Victoria lies at the northeastern end of this strait, which was supposedly discovered in 1592 by a namesake Greek navigator seeking the mythical Strait of Anian.
answer: Strait of Juan de Fuca (or Juan de Fuca Strait)
<380373>

18. This book's character Stortebeker [SHTOR-tuh-bay-kur] is a parody of Martin Heidegger who calls underdone potatoes "spuds forgetful of Being."   For 10 points each—
A. Name this novel in which Eduard Amsel keeps a notebook in which he draws designs for scarecrows.
answer: Dog Years (or Hundejahre)
B. *Dog Years* is the final novel of Günter Grass's [GOON-tur GRAHS's] Danzig Trilogy, following this second novel that focuses on Joachim Mahlke [YOH-ah-keem MAHL-kuh].
answer: Cat and Mouse (or Katz und Maus)
C. Oskar Matzerath [MAHT-zuh-rahth] has a scream that can shatter glass in this first book of the Danzig Trilogy.
answer: The Tin Drum (or Die Blechtrommel)
<221848>

19. For 10 points each—answer the following about French Baroque landscape painters:
A. Later in life, this man created such landscapes as *Funeral of Phocion* [FOH-shee-un], as well as pastoral scenes such as *Et in Arcadia Ego*.
answer: Nicolas Poussin [nee-koh-lah poo-san]
B. Both Poussin and his classicizing colleague Claude Lorrain spent most of their lives working in this city.   The painters of the Utrecht School got their style from working in this city.
answer: Rome (or Roma)
C. There are two major sources for the lives of Italian artists in the 17th century; name *either* author.   One prominently featured his friend Poussin in his *Lives*, while the other wrote a biography of Bernini in addition to his *Notizie*.
answer: Gian Pietro Bellori
          Filippo Baldinucci
<100924>

20. After Atalanta [at-uh-LAN-tuh] wounded the Calydonian [kal-ih-DOH-nee-un] Boar, this man killed it.   For 10 points each—

A. Name this figure from Greek myth who was married to a woman named Cleopatra.

answer: Meleager [mel-ee-AY-gur] (or Meleagros)

B. This father of Meleager ordered the hunt for the boar, and also introduced the art of winemaking to Aetolia [ee-TOH-lee-uh].

answer: Oeneus [EE-nee-us] (or Oineus)

C. This mother of Meleager killed her son by placing a brand upon a fire after Meleager killed her brothers Toxeus [TAHK-see-us] and Plexippus [plek-SIH-puss].

answer: Althaea

<226404>

21. The nearest-neighbor exchange energy divided by kT ["K-T"] gives these systems' "interaction parameter."   For 10 points each—

A. Name these systems, whose "regular" type is modeled using a square lattice, with each site occupied by one of two species.

answer: regular solutions [The two species are molecules of solute or solvent.]

B. Equilibrium constants for reactions in non-ideal solutions are formulated in terms of this quantity, the "effective concentration" of a species under non-ideal conditions.

answer: thermodynamic activity (do not accept or prompt on "activity coefficient")

C. Ideal solutions are described by this law, which gives the partial pressure of each component of a mixture as the product of the component's mole fraction with the pure-component vapor pressure.

answer: Raoult's law

<444654>

22. Cass Sunstein [SUN-steen] posits a "law" by which this process's "group" form affects any group of people that starts out relatively like-minded.   For 10 points each—

A. Name this process by which a group's views get more extreme.   In recent decades, it has grown within and between the U.S.'s major political parties.

answer: (group or political or ideological) polarization (accept answers mentioning forms of the word polarize such as polarized or polarizing)

B. Nolan McCarty found that this economic condition grows in tandem with polarization.   The Kuznets [KOOZ-nets] curve and the Piketty formula "r > g" ["r is greater than g"] track its change over time.

answer: (economic or income or wealth) inequality (accept top 1 percent's income share or wealth gap)

C. Keith Poole and Howard Rosenthal devised this multi-dimensional scaling method to plot the ideologies of Congress's members, or graph party polarization over time.

answer: DW-NOMINATE (or dynamic, weighted nominal three-step estimation; accept D-NOMINATE or W-NOMINATE)

<438582>

23. These units first saw action at the Siege of Kazan [kuh-ZAHN] in 1552.   For 10 points each—

A. Name these units of Russian musketmen whose hereditary service led them to accrue to great political power.

answer: streltsy (prompt on "shooter(s)")

B. The Siege of Kazan occurred during the reign of this Russian tsar, who ruled from 1533 until 1584 and assumed the title Tsar of Russias in 1547.

answer: Ivan the Terrible (or Ivan IV ["the fourth"] Vasilyevich or Ivan Grozny; prompt on "Ivan")

C. The streltsy were initially armed with this type of firearm distinguished from its predecessor, the hand cannon, by the presence of a matchlock.

answer: arquebus(es) [AR-kih-bus] (or harquebus or harkbus or hackbut or archibugio or schiopo or sciopus)

<238416>

24. This character is introduced to her future husband by her cousin Dick Caramel during a trip to New York.   For 10 points each—

A. Name this woman, the daughter of a businessman from Kansas City, who appears in a 1922 novel.

answer: <u>Gloria</u> (Gilbert) Patch (prompt on "Patch")

B. Gloria marries Anthony Patch in this second novel by F. Scott Fitzgerald.

answer: The <u>Beautiful and Damned</u> (do not accept or prompt on "The Beautiful and the Damned")

C. In 1922 Fitzgerald also published a short story collection whose title refers to "tales" of an "age" named for this style of music.   It also titles a 1992 novel by Toni Morrison.

answer: <u>jazz</u> (accept <u>Tales of the Jazz Age</u> or <u>Jazz</u>)

<424867>