



Invitational Series #210
Packet 1

Questions

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1. **At the end of this novel, its protagonist admonishes his sons that "it is the end of a family when they begin to sell the land." A girl in this novel, who is mentally-challenged because she was starved as an infant, is called "Poor Fool." This novel's protagonist pulls a (*) rickshaw after he is forced to move to the city with his wife, O-Lan. For 10 points—name this novel about the farmer Wang Lung, written by Pearl S. Buck.**

answer: The Good Earth

<551999>

1. The Southern Song and Northern Yuan were examples of these states that clung to power after dynastic shifts. For 10 points each—

A. Give this term for a small remnant ruled by a state that has been diminished by conquest or other losses.

answer: rump state

B. The Seleucid [sel-YOO-sud] Empire was reduced to a rump state in Syria after the conquests of Mithridates I [mith-ruh-DATE-eez "the 1st"] of this Asian empire, known for its horse archers' tactic of firing while retreating.

answer: Parthian [PAR-thee-in] Empire (or Parthia or Parthians or Arsacid Empire or Arsacids; accept Parthian shot)

C. The Southern Ming became a rump state after this last dynasty of imperial China took power in 1644.

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

<537605>

2. **This religion inspired Nanban [nahn-bahn] art. Bernard Petitjean [peh-tee-zhawn] discovered so-called "hidden" practitioners of this faith who worshiped a figure disguised as a Buddhist Bodhisattva [boh-dih-SUT-vuh] Kannon. Suspected practitioners of this faith were made to step on images called (*) fumi-e [foo-mee ay]. The 26 Martyrs practiced this faith, which was outlawed by the Tokugawa [toh-koo-gah-wah] shogunate ["SHOW-gun"-ate]. For 10 points—what faith was spread to Japan by Francis Xavier, a Jesuit?**

answer: Christianity (accept Roman Catholicism)

<551670>

2. For 10 points each—name these locations of wintry mazes:

A. The largest ice maze in the U.S. is in the town of Stillwater in this state's Minneapolis-St. Paul metropolitan area.

answer: Minnesota (accept MN ["M-N"])

B. In 2021 a massive snow maze was constructed in Saint Adolphe in this Canadian Prairie province, which lies directly west of Ontario.

answer: Manitoba

C. At this European country's southern border along the Tatra Mountains, a large snow maze is among the attractions of Snowlandia in its so-called "Winter Capital" of Zakopane [zahk-koh-PAH-nay].

answer: Poland (or Republic of Poland or Rzeczpospolita Polska)

<551875>

3. **In myths from this civilization, two “sycamores of turquoise” stand at the eastern gate of heaven. In various cities, these people prayed to sets of gods called the Ogdoad [AHG-doh-ad] and the Ennead. These people held that in the underworld Du’at [doo-AHT], the serpent (*) Apep [AY-pep] fought nightly with the driver of the solar barge. The scarab [“SCARE”-ub] beetle was sacred to—for 10 points—what ancient society that believed descendants of Ra ruled as pharaohs?**

answer: (Ancient) Egypt(ians) (accept Old Kingdom or Middle Kingdom or New Kingdom)

<550626>

3. Virtual pairs of these particles and their antiparticles create a phenomenon called a “sea.” For 10 points each—
A. A proton consists of three of what particles, whose flavors include “up” and “down”?

answer: quarks (accept quark sea or sea quarks)

- B. The annihilation of sea quarks produces these particles, which are found along with quarks in a namesake type of plasma.

answer: gluons [GLOO-ahnz] (accept quark-gluon plasma)

- C. Because they have color charge, quarks and gluons have this property, meaning that they cannot exist in isolation.

answer: color confinement (accept confined)

<536797>

4. **This element’s chloride salt forms an orange mineral called sylvite [SIL-vyte] left over as evaporite [uh-VAP-uh-“rite”] in extremely dry conditions. The decay of a radioisotope of this element to argon [AR-gahn] is used in radioactive dating of rocks. This element’s nitrate [“NITE-rate”] salt, called (*) saltpeter, is an oxidizer found in gunpowder. For 10 points—what alkali [AL-kuh-lye] metal below sodium on the periodic table is found in bananas?**

answer: potassium (or K)

<536498>

4. For 10 points each—answer the following about the May Laws of 1873:

- A. The May Laws were part of this empire’s attempt to suppress the Catholic Church during a “culture struggle.”

answer: German Empire (or Germany; accept Deutsches Reich)

- B. The German May Laws were the brainchild of this Prussian, who was nicknamed the “Iron Chancellor.”

answer: Otto von Bismarck (or Otto Eduard Leopold, Fürst von Bismarck)

- C. During the Kulturkampf, Bismarck promised that 19th-century Germany “would not go” to this place, an Italian fortress where medieval Emperor Henry IV [“the fourth”] did penance during the Investiture Controversy.

answer: Canossa [kuh-NOH-sah] (accept We will not go to Canossa or penance at Canossa or walk to Canossa)

<483223>

5. **This character is more skilled at making clothes than “those of Ypres [eep] and of Ghent.” In one speech, this character notes that both Jacob and Abraham married more than once. This character describes a knight whom Queen Guinevere gives a year and a day to discover what (*) women most desire, and who finds the answer is “sovereignty” [SAHV-run-tee]. Alyson is one possible name of—for 10 points—what character from *The Canterbury Tales*?**

answer: The Wife of Bath (accept Alyson or Alys before “Alyson”)

<552042>

5. For 10 points each—answer the following about people Donald Trump fired by tweet:

- A. Rex Tillerson claimed that he learned of his firing from this office from a tweet. Mike Pompeo [pahm-PAY-oh] held this diplomatic office later in the Trump administration.

answer: (United States) secretary of state (prompt on partial answers)

- B. In September 2019 Trump tweeted the firing of this national security advisor, whose memoir of his time in the Trump administration is titled *The Room Where It Happened*.

answer: John (Robert) Bolton

- C. Trump also used a tweet to dismiss this woman from her post as secretary of homeland security in April 2019.

answer: Kirstjen [KEERST-gen] (Michele) Nielsen

<501838>

6. **A 20th-century composer from this country called for a player to scrape piano strings in his piece *The Banshee*. Henry Cowell was a composer from this country, where Erich ["Eric"] Korngold wrote *Captain Blood* and other (*) film scores after leaving Austria. A composer from this country wrote a ballet that begins and ends on "The Open Prairie." For 10 points—what country was home to the composer of *Billy the Kid*, Aaron Copland?**

answer: United States of America or U.S.A. (accept any underlined portion)

<551399>

6. These numbers are the zeroes of cyclotomic [syk-loh-TAH-mik] polynomials. For 10 points each—
- A. Give this term for complex numbers that are solutions for x in the equation $x^n = 1$, where n is an integer.

answer: (nth) roots of unity (accept primitive roots of unity)

- B. There are n solutions for x to the $x^n = 1$ according to this theorem, which states that a polynomial of degree n has n complex roots.

answer: fundamental theorem of algebra

- C. Sometimes a root of a polynomial is repeated, which is known by this term. For example, " $x^2 - 2x + 1$ " has 1 as its only root, but the root "counts" twice.

answer: multiplicity

<547178>

7. **Combining the Standard Model with a quantum mechanical explanation of this force would produce a "theory of everything." Curvature of light by this force causes its namesake "lensing." In 2016, the (*) LIGO ["LEE-go"] experiment announced the detection of waves named for this force produced by a black hole merger. Objects on Earth accelerate at 9.8 meters per second-squared as a result of—for 10 points—what attractive force?**

answer: gravity or gravitational force (accept gravitational lens(ing) or gravity waves or gravitational waves or gravitational radiation)

<530751>

7. The 1999 Kargil War between India and Pakistan challenged many theories of international relations. For 10 points each—
- A. The war violated this German philosopher's claim that democracies would not fight each other, made in his 1795 book *Perpetual Peace*.

answer: Immanuel Kant

- B. Both India and Pakistan had franchises of this fast food chain with a golden arches symbol, violating a theory similar to Kant's proposed by Thomas Friedman.

answer: McDonald's

- C. The war occurred despite both India and Pakistan having nuclear weapons, violating this theory with a three-word name that the threat of shared nuclear destruction prevents conflict.

answer: mutually assured destruction (or MAD)

<487037>

8. **This country contains the namesake type site of the Iron Age La Tène ["ten"] culture, which is along the coast of its Lake Neuchâtel [noo-shah-TELL]. This country's land corresponds to most of the ancient homeland of the Helvetii [hel-VEE-shee-"eye"] people. With its western neighbor, this country owns the (*) Jura [JOO-rah] Mountains, the namesake of the Jurassic Period and of this country's canton of Jura. Bern ["burn"] and Zurich [ZOO-rik] are cities in—for 10 points—what Alpine country?**

answer: Switzerland (or Swiss Confederation or Schweiz or Schweizerische Eidgenossenschaft or Confederation Suisse or Confederazione Svizzera or Confederaziun Svizra)

<550754>

8. This character describes a dream he had about being pursued by a shrouded traveler, whom he later realizes was Death. For 10 points each—
- A. Name this narrator of a 1957 novel whose opening section depicts a trip to San Francisco.
answer: Sal Paradise (accept either underlined portion)
- B. Sal's travels across the U.S. and Mexico, and his friendship with Dean Moriarty, are depicted in this novel.
answer: On the Road
- C. *On the Road* is by Jack Kerouac ["CARE"-uh-wak], an author from this "generation" of 1950s counterculture writers that also included William S. Burroughs and Allen Ginsberg.
answer: Beat Generation (or Beat movement or Beats; accept beatnik)
9. **Jean [zhahn] de Metz guarded this person on a journey to Chinon [shee-nahn] to meet with a king. In the siege of Compiegne [kom-p'yen], this commander was captured by Burgundians. This person carried no weapons except a banner during a campaign in which Charles VII ["the seventh"] retook (*) Rheims [rem] and lifted the siege of Orleans [or-lay-AHN]. At this age 16, this person received a vision telling her to "go to France." For 10 points—what female saint fought in the Hundred Years' War?**
answer: (Saint) Joan of Arc (or Jeanne d'Arc; prompt on "Joan" or "Jeanne")
9. For 10 points each—name these films featuring Anne Hathaway:
- A. In 2012 Hathaway starred as Fantine [fahn-teen] in a film adaptation of this musical about Jean Valjean [zhawn val-zhawn].
answer: Les Misérables [lay mee-zay-RAHB] (accept Les Miz)
- B. With Cate Blanchett and Sandra Bullock, Hathaway appeared in this 2018 heist movie about female criminals who steal a necklace at the Met Gala.
answer: Ocean's 8 (do not accept or prompt on answers mentioning any other number)
- C. Hathaway starred as a con artist who tries to scam a tech billionaire in this 2019 remake of *Dirty Rotten Scoundrels*.
answer: The Hustle
10. **This artist showed himself in a brown coat and black hat, holding a paintbrush, in his *Self-Portrait with Palette*. This painter created a scene in which a server seemingly stares at the viewer, creating an impossible image in a mirror behind her. In a canvas by this man, a (*) nude woman and two men sit beside a spilled basket. *A Bar at the Folies-Bergère* [foh-lee-bair-ZHAIR] is by—for 10 points—what French painter of *Luncheon on the Grass*?**
answer: Édouard Manet [ayd-WAR man-AY] (do not accept or prompt on "Monet")
10. These structures are composed of bundles called fascicles surrounded by an envelope known as epimysium [EP-ih-MISS-ee-um]. For 10 points each—
- A. Name these structures responsible for body movement, which include the triceps [TRY-seps].
answer: skeletal muscles (accept, but do not otherwise reveal, striated muscles; do not accept or prompt on "smooth muscle(s)" or "cardiac muscle(s)")
- B. In most cases, these tough bands of fibrous [FYE-brus] tissue connect muscles to bones.
answer: tendons (prompt on "sinew(s)"; do not accept or prompt on "ligament(s)") [Ligaments connect bone to bone, while tendons connect muscle to bone.]
- C. This term refers to the banding of skeletal muscle that occurs because of the alignment of its functional units, or sarcomeres [SAR-koh-meers].
answer: striations [stry-AY-shuns] (or striated muscle)

11. **This play ends by warning “we cannot call a mortal being happy / before he’s passed beyond life free from pain.” The title character of this play uses gold pins taken from the clothes of his dead wife to (*) blind himself.** In this play, Creon reports an oracle told him a plague ravages Thebes because Laius’s killer is unknown. For 10 points—name this Sophocles [SAH-fuh-kleez] tragedy about a king who killed his father and married his mother.

answer: Oedipus Rex [EH-duh-puss “wrecks”] (or Oidipous Tyrannos or Oedipus the King)

<543379>

11. Although this novel’s title residence has a “dreary name,” it becomes the beloved home of the narrator Esther Summerson. For 10 points each—

A. Name this 1853 novel that describes a decades-long legal dispute over the Jarndyce [JARN-diss] estate.

answer: Bleak House

B. *Bleak House* is a novel by this British author, who was paid by the installment to publish serial novels such as *David Copperfield* and *Oliver Twist*.

answer: Charles Dickens (or Charles John Huffam Dickens)

C. Dickens followed *Bleak House* with this novel set in the industrial city of Coketown, where Sissy Jupe [jooop] attends a school run by the “facts”-obsessed Thomas Gradgrind.

answer: Hard Times(; For These Times)

<551735>

12. **While this politician was minister of finance in 2020, his ministry was plagued by the Wirecard scandal. This politician formed the most recent “traffic light” coalition involving the Free Democratic Party and the Greens. This member of the (*) Social Democratic Party took office on December 8, 2021, succeeding a woman who had led her country since 2005.** For 10 points—who succeeded Angela Merkel [AHN-geh-lah MAIR-kul] as chancellor of Germany?

answer: Olaf Scholz

<552476>

12. Antonio de Mendoza served as the first viceroy [“vice”-roy] of this territory. For 10 points each—

A. Name this administrative unit created in 1535 that included modern-day Mexico and other colonies north of Panama.

answer: Viceroyalty of New Spain (or Virreinato de Nueva España)

B. Toward the end of New Spain’s existence, 20 of these institutions were founded in what is now California. Junipero Serra [hoo-NEE-“pair”-oh “sarah”] established nine of these religious centers.

answer: (Spanish) missions (or misiones)

C. Mexico became independent when the Spanish Empire began to disintegrate in this decade. Napoleon’s brother Joseph was driven out of Spain in the *previous* decade.

answer: 1820s (prompt on “20s”)

<551824>

13. **This period titles a book by historian Diarmaid MacCulloch [dee-AR-mayd muh-KULL-uh] that won the 2004 Wolfson Prize. This period was launched in part by conflict over the illegitimacy of the Treasury of Merit and the *sola scriptura* doctrine that (*) biblical text is the only source of religious truth.** The 1517 posting of the 95 Theses by Martin Luther is generally said to start—for 10 points—what period during which Protestantism began?

answer: Protestant Reformation (accept The Reformation: A History; do not accept or prompt on “Reform (Period)”)

<551824>

13. For 10 points each—answer these questions about the chemistry of mayonnaise:

- A. As a stable mixture of oil and water, mayonnaise is what kind of suspension made of two immiscible [ih-MIH-sih-bul] liquids?

answer: emulsion(s) (prompt on “colloid(s)” or “colloidal (suspension)”); do not accept or prompt on “emulsification”)

- B. Mayonnaise’s stability comes from the emulsifying agent lecithin [“LESS-uh-thin”], an example of what double-tailed compounds that often form “bilayers”?

answer: phospholipids [foss-foh-LIP-idz] (prompt on “lipid(s)”) <550327>

- C. Mayonnaise is flavored by either vinegar or lemon juice, which are what type of substance whose solutions have pHs less than 7?

answer: acid(s) (or acidic substance(s))

14. **Irving Wardle suggested that this category of plays has a subtype filled with “menace” in a review of Harold Pinter’s play *The Birthday Party*. This term appears in the title of a Shakespeare play about two pairs of twins, whose similarities lead to many (*) “errors.” The “Old” type of this play includes *The Clouds* and other plays by Aristophanes [air-ih-STAH-fuh-nee]. For 10 points—what type of theater is defined by happy endings and humor?**

answer: comedy (or comedies; accept comedy or comedies of menace or The Comedy of Errors or Old Comedy) <546946>

14. This author’s plays include *The Rules of the Game*, which one of his later works featured as a play within a play. For 10 points each—

- A. Name this 20th-century author who wrote a play in which a rehearsal for *The Rules of the Game* is disrupted by the arrival of the title group.

answer: Luigi Pirandello [loo-EE-jee peer-un-DEL-oh]

- B. The fraught relationship between a Father and a Stepdaughter is re-enacted in a Pirandello play about this many “Characters in Search of an Author.”

answer: six (or sei; accept Six Characters in Search of an Author or Sei personaggi in cerca d’autore) [*Six Characters in Search of an Author* begins as actors are rehearsing Pirandello’s *The Rules of the Game*.]

- C. In another Pirandello play, a group of actors led by Doctor Hinkfuss perform this title action, which involves making up scenes and dialogue without a script.

answer: improvise (or recitare a soggetto; accept improvisation or improvising or improvised; accept Tonight We Improvise or Questa sera si recita a soggetto) <551904>

15. **In machine learning, models that fit test data *too* closely have low values of bias and high values of this property in a namesake “tradeoff.” For a Poisson [pwah-sawn] distribution, this property is equal to both the expected value and mean. In general, this property is the (*) expected value of the squared differences from the mean. This property equals the standard deviation squared. For 10 points—name this measure of spread.**

answer: variance (prompt on “sigma squared”; do not accept or prompt on “sigma”) <551904>

15. For 10 points each—answer the following about failed attempts to assassinate U.S. presidents:

- A. The first presidential assassination attempt was made in 1835 against this seventh president and signer of the Indian Removal Act, who beat his assailant with a cane.

answer: Andrew Jackson

- B. This president was targeted twice in the same month, including by “Squeaky” Fromme [frohm], a follower of Charles Manson.

answer: Gerald Ford (or Gerald Rudolph Ford Jr. or Leslie Lynch King Jr.)

- C. In 1981 John Hinckley Jr. shot and wounded Ronald Reagan in an attempt to impress this actress who appeared in *Taxi Driver*.

answer: Jodie Foster (or Alicia Christian Foster) <502358>

16. In a 1995 film, this actor's character is called "Sonny Jim" by a villain who resembles Samuel Parrish, the hunter Van Pelt. In a 1992 film, his character's first line is announcing that 10,000 years gives you "such a crick in the neck." This actor played the adult version of Alan, who grows up while trapped in a (*) board game in the film *Jumanji* [joo-MAHN-jee]. For 10 points—what comedian voiced the Genie in the animated film *Aladdin*?

answer: Robin (McLaurin) Williams

<535992>

16. For 10 points each—answer the following about organisms found near hydrothermal vents:
- A. This term refers to organisms that thrive in conditions inhospitable to most life. Many of these organisms live in the high-temperature environments near vents.

answer: extremophiles ["extreme-uh-files"] (accept thermophiles or hyperthermophiles)

- B. A so-called "city" of these animals lives among vents in American Samoa. Moray ["MORE"-ay] and conger [rhymes with "longer"] are varieties of these snake-like fish.

answer: eels (or Anguilliformes; accept Eel City)

- C. Many extremophiles use this process of carbon fixation powered by the oxidation of inorganic compounds rather than sunlight.

answer: chemosynthesis [KEE-moh-"synthesis"]

<552544>

17. This city's "Soccer City" stadium hosted the final match of the 2010 World Cup. In the 1950s this city's majority-Black suburb of Sophiatown was destroyed and rebuilt as "Triomf" [TREE-ahmf]. It is the most-populous city in the Witwatersrand [VIT-vah-turz-rahnd] region. In 1976 this city's suburb of (*) Soweto [soh-WAY-toh] was the site of an uprising protesting the use of Afrikaans [af-rih-KAHNZ] in education. For 10 points—what most-populous city in South Africa is nicknamed "Jo'burg"?

answer: Johannesburg [joh-HAH-nuss-burg] (or eGoli; accept Jo'burg before "Jo'burg"; prompt on "Jozi")

<552530>

17. While a man inspects this object, Pip plays a tambourine. For 10 points each—

- A. Identify this object from a 19th-century novel that is created for a Polynesian harpooner, and to which another character clings to survive after he is cast adrift.

answer: Queequeg's coffin (or casket)

- B. Queequeg's [KWEE-kweg's] coffin saves Ishmael following the sinking of the *Pequod* [PEE-kwahd], a ship commanded by this obsessive captain.

answer: Captain Ahab

- C. Queequeg, Ishmael, and Captain Ahab appear in this Herman Melville novel about the hunt for a white whale.

answer: Moby-Dick(; or, The Whale)

<542688>

18. Robert Bellah used this adjective to group many American social rituals as a type of "religion." This adjective partly titles an 1849 essay claiming "That government is best which governs not at all," which recounts a night spent in jail for refusal to pay (*) taxes. Torts are legal wrongs in this type of law. Henry David Thoreau praised—for 10 points—what form of "disobedience," which also names a type of equalizing "rights"?

answer: civil (accept Civil Religion in America; accept Civil Disobedience; accept civil law; accept civil rights; accept American before "American")

<550249>

18. For 10 points each—answer the following about disappearances in southeast Asia:

- A. In April 2021 the submarine *Nanggala II* [nahn-"GALA" "two"] disappeared in waters north of this Indonesian island. Beaches near its city of Denpasar [den-PAH-sar] are a major tourist destination.

answer: Bali

- B. Flight 370, which departed from this country's capital of Kuala Lumpur [koo-AH-lah lum-POOR], disappeared in March 2014.

answer: Malaysia (accept Malaysia Airlines Flight 370)

- C. Many disappearances of Tamil People on this island over the past 20 years have been linked to unmarked white vans—presumably connected to this island country's Sinhalese-dominated government.

answer: Sri Lanka [shree LAHN-kuh] (or Democratic Socialist Republic of Sri Lanka or Shri Lamka Prajatantrika Samajaya di Janarajaya or Ilankai Jananayaka Choshalichak Kutiyarachu)

<536078>

19. **Pencil and paper ready. Miranda needs to know the tenth term of the arithmetic ["air"-ith-MET-ik] sequence whose fourth term is 8 and whose sixth term is 16. She can either write out the entire sequence up to the tenth term, or realize that the sequence must increase by 8 every (*) two terms.** For 10 points—find the tenth term of the arithmetic sequence whose fourth term is 8 and whose sixth term is 16.

answer: 32 [Since the sequence went up by $16 - 8 = 8$ between the fourth and sixth terms, it must have a similar increase between the sixth and eighth terms, and the eighth and tenth terms, respectively—yielding a tenth term of $16 + 8 + 8 = 16 + 16 = 32$.]

<50866>

19. For 10 points each—name these baseball teams who had first-year managers in the 2018 season:

- A. Alex Cora—who began managing this team in 2018—parted ways with this team in 2020 but rejoined as its manager in 2021 after serving a suspension for his role in the Astros sign-stealing scandal.

answer: Boston Red Sox (accept either underlined portion; prompt on "Sox")

- B. Dave Martinez joined this team as manager in 2018, and led it to the 2019 World Series title over the Astros.

answer: Washington Nationals (accept either underlined portion; accept Nats)

- C. In 2018 Mike Shildt [shilt] took over for Mike Matheny [muh-THÉE-nee] in managing this NL team.

answer: St. Louis Cardinals (accept either underlined portion; accept Cards)

<464691>

20. **A ship named for this state was sunk by the USS *Kearsarge* [keer-SAR-jee] near Cherbourg [shair-borg] and was a commerce raider that took 65 Union ships. Before moving to Richmond, the capital of the Confederacy was this state's capital city. During a battle in this state, David (*) Farragut shouted "Damn the torpedoes, full speed ahead!" while capturing a port on the Gulf of Mexico.** For 10 points—in what state did the Battle of Mobile Bay take place?

answer: Alabama (accept AL ["A-L"])

<550610>

20. For 10 points each—answer the following about oaks in American history:

- A. This Quaker founder of Philadelphia negotiated the purchase of lands from Lenape [LEH-nuh-pee] natives with a treaty signed under an oak tree in Graystones Forest.

answer: William Penn

- B. A royal charter given to this colony in 1662 was supposedly hidden from Governor Edmund Andros inside of an old oak tree that became known as the "Charter Oak."

answer: Connecticut Colony

- C. The extremely large Emancipation Oak is on the campus of this Virginia university. Booker T. Washington attended this school when it was an agricultural institute.

answer: Hampton University (or Hampton Agricultural and Industrial School or Hampton Institute)

<514463>

21. **Aaron Director founded a “journal of law and” this other field whose frequent contributors have included Richard Posner and Gary Becker. This field provides the name of the most popular textbook by Paul Samuelson. David (*) Card won half of the 2021 Nobel Memorial Prize given in this field. The “dismal science” is a nickname of—for 10 points—what field whose grounding concepts include supply and demand?**

answer: economics (accept economic science or econ; accept Journal of Law and Economics; accept Nobel Memorial Prize in Economic Science)

<551711>

21. For 10 points each—answer the following about the philosophy of free will:

A. In contrast to determinists, believers in free will sometimes are known by this label, shared with a third party in the U.S. political system.

answer: libertarians (or libertarianism; accept Libertarian Party)

B. This theologian, the author of *City of God*, asked how free will can coexist with God’s foreknowledge in his 5th-century dialogue *De libero arbitrio* [DAY lee-BEAR-oh ARR-bee-tree-oh].

answer: St. Augustine [aw-GUS-tin (or) AW-guh-steen] of Hippo (or Aurelius Augustinus Hipponensis; accept Saint Austin)

C. Free will results from an unpredictable “swerve” of these objects, according to Lucretius’s [loo-KREE-shus’s] poem *On the Nature of Things*. Their name was coined by Democritus [deh-MAH-kri-tuss].

answer: atoms (or atomoi)

<550769>

22. **In June 2021 thousands of pages of this person’s emails were released after *The Washington Post* and *BuzzFeed News* made FOIA [F-O-I-A] requests. Marjorie Taylor Greene sponsored a 2021 act to reduce this person’s salary to \$0. Since (*) 1984 this man has served as the director of NIAID [NYE-ad], the National Institute of Allergy and Infectious Diseases. For 10 points—name this doctor who serves as chief medical advisor to Joe Biden.**

answer: Anthony (Stephen) Fauci

<552174>

22. For 10 points each—answer the following about the Statue of Liberty:

A. The Statue of Liberty’s interior framework was designed by this French engineer, who also designed an iron lattice tower in Paris.

answer: Gustave Eiffel (or Alexandre Gustave Eiffel; accept Alexandre Gustave Bönickhausen)

B. This French sculptor designed the statue’s exterior. He never realized his plans to design a massive lighthouse on the Suez Canal.

answer: Frédéric Auguste Bartholdi [fray-day-reek-oh-goost bar-tohl-dee]

C. The green exterior of the Statue of Liberty comes from this pigment created by the weathering of copper. It can be artificially created by applying acetic acid [uh-SEE-tik acid] to bronze.

answer: verdigris [VUR-duh-grees]

<543491>

23. **U.S. victory in this battle is an attributed miracle of Our Lady of Prompt Succor. Edward Pakenham [PAY-ken-ham] died leading one side in this battle. U.S. allies at this battle included the Choctaw [“CHALK”-taw] chief Pushmataha [“push”-MAH-tuh-HAH] and the pardoned pirate Jean (*) Lafitte [zhawn lah-FEET]. This battle was fought weeks after the Treaty of Ghent formally ended the War of 1812. For 10 points—in what battle did Andrew Jackson defeat a British attack on a Louisiana city?**

answer: Battle of New Orleans

<551251>

23. This territory's indigenous Kanak people called for a boycott of a 2021 referendum due to an ongoing period of mourning for local COVID deaths. For 10 points each—

A. Name this island territory that rejected independence in that referendum.

answer: New Caledonia (or Nouvelle-Calédonie)

B. New Caledonia is a territory of this European country, whose overseas regions include Guadeloupe [gwah-duh-LOOP].

answer: France (or French Republic or République française)

C. The Kanak independence movement advocates a "Melanesian" form of this political philosophy, whose "democratic" type is often contrasted with Marxism-Leninism.

answer: socialism (accept Melanesian socialism or democratic socialism)

<551436>

24. **These proteins attack surface molecules on red blood cells during the autoagglutination**

[ˈauto-uh-GLOO-tuh-NAY-shun] **triggered by blood transfusion rejection. During a type I** [ˈone] **hypersensitivity reaction, the IgE** [ˈI-G-E] **isotype** [ˈEYE-suh-type] **of these proteins binds to (*) allergens** [AL-ur-jens]. These proteins are secreted by plasma B cells as part of the adaptive immune system. For 10 points—name these Y-shaped proteins that trigger an immune response by binding to antigens.

answer: antibodies or antibody (or immunoglobulins)

<549006>

24. Pencil and paper ready. Event *A* has a 30 percent chance of occurring, [pause] while event *B* has a 50 percent chance of occurring. For 10 points each—

A. What is the probability that event *A* does *not* occur?

answer: 70% or 0.70 or 7/10 or 7 in 10 [100% - 30% = 70%]

B. If *A* and *B* are independent events, what is the probability that *both A and B* do occur?

answer: 15% or 0.15 or 3/20 or 3 in 20 [$P(A \text{ AND } B) = P(A) \times P(B) = 30\% \times 50\% = 0.3 \times 0.5 = 0.15 = 15\%$]

C. If, instead, *A* and *B* are mutually exclusive events, what is the probability that *exactly one* of *A* and *B*, but *not both*, occur? You have 10 seconds.

answer: 80% or 0.80 or 4/5 or 4 in 5 [Mutually exclusive events cannot both occur, so the probability that exactly one occurs is just 50% + 30% = 80% (leaving a 100% - 80% = 20% chance that neither occurs).]

<550801>