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Packet 7: "In space, where is the Samsung Galaxy?"

1. **This president's secret plans for Romulus Mitchell Sanders to buy Cuba from Spain failed when the press leaked them. This president's minister Benjamin Bidlack guaranteed Colombian sovereignty in exchange for U.S. right of way across the Isthmus of Panama. This president was challenged to "show the spot" of American blood before a conflict brought on when this president's advisor John Slidell triggered a military coup. Nicholas (*)** Trist ignored this president's letters of recall while negotiating peace for a war that began when militias crossed the Nueces ["noo-ay-sees"] River. This president championed the phrase "Fifty-Four Forty or Fight" in support of annexing the Oregon territory. For 10 points, name this president who oversaw the largest expansion of American borders through events like the Mexican-American War.
ANSWER: James K. **Polk** [or James Knox **Polk**]
<Erik Christensen, American History>

2. **In 2020, an experiment named for these particles detected a rare decay mode in which the Higgs decays into two of these particles. An April 2021 Borsanyi et. al. paper on these particles gives a more precise computation of the leading order hadronic vacuum polarization, or L·O·H·V·P, contribution to one of their properties. These particles' namesake "Compact Solenoid" is the followup to the ATLAS experiment at CERN ["Surn"]. A major issue for the Standard Model is the large (*)** discrepancy between the theoretical and experimental values of these particles' anomalous magnetic moment. Most cosmic rays that reach Earth's surface are secondary instances of these particles. For 10 points, name these leptons approximately 207 times as massive as electrons.
ANSWER: **muon**s
<Gerhardt Hinkle, Physics>

3. **A piano waltz by this composer ends with both hands simultaneously playing fully-voiced C major ninth chords three times before resolving to G major. This composer disavowed his hastily-written** *Introduction and Allegro***, which was commissioned to showcase the Érard company's new harp. Liszt's** *Années de pèlerinage* **[**"ah-NAY de pell-reen-AZH"**] inspired a virtuoso piano piece by this composer whose arpeggios evoke "the noise of (*)** water." Schubert inspired the title of this composer's collection of *Noble and Sentimental Waltzes*. In a work based on Baroque dance suites, this composer memorialized friends killed in World War I. A work by this composer has a repeating melody over a two-bar snare ostinato. For 10 points, name this composer of *Le Tombeau de Couperin* ["le tom-BO de koo-peh-RAN"] and *Boléro*.
ANSWER: (Joseph) Maurice **Ravel**
<Gerhardt Hinkle, Classical Music>

4. **This object names the plane used by Charles Kingsford Smith to complete the first trans-Pacific flight. Brazil used a currency named for this object from 1942 until the readoption of the** *real***. Carsten Borchgrevink led an 1898 expedition named for this natural feature that was the first to winter on the Antarctic mainland. This object is depicted to the right of a silver fern in a Kyle Lockwood flag design that lost a 2016 (*)** referendum. This feature contains the "Coal Sack," which Aboriginal Australians identified as the head of the "Emu in the Sky." The flags of Samoa, Australia, and New Zealand include this asterism due to its recognizability below the celestial equator. For 10 points, name this smallest IAU constellation, whose five stars resemble a Christian symbol.
ANSWER: **Southern Cross** [or **Crux**; or **Cruzeiro do Sul**; accept **cruzeiro** or **cruzado** or **cross** before "natural" and prompt afterwards]
<Jacob Augelli, Other>

5. **At the end of a story titled for one of these events, a member of a religious mob bashes Juan's skull into a church pillar after Don Fernando fails to protect him. In a novella, two women who do not eat bacon are hanged in order to prevent future occurrences of these events. After a sermon compares one of these events to God's destruction of Sodom and Gomorrah, Pedrillo clubs Josephe to death. One of these events titles a story by Heinrich (*)** von Kleist. In a novella, a ship sinks during one of these events, resulting in the death of an anabaptist who saves a sailor from falling overboard. After a man is supposedly hanged after claiming that one of these events is "for the best," another one of these events occurs, leading the title character of that novella to doubt that he lives "in the best of all possible worlds." For 10 points, name these events, one of which Voltaire depicted Candide witnessing in Lisbon.
ANSWER: **earthquake** [or "The **Earthquake** in Chile;" or the Lisbon **earthquake**]
<Andrew Hanna, European Literature>

6. **Andrew Moravcsik** ["more-av-chick"] **argued that societal ideas, interests, and institutions shape the behavior of these constructs in an article titled for "Taking Preferences Seriously." These constructs arise through competitive pressure in Charles Tilly's predatory theory of their formation. The design of society according to scientific laws, or "high modernism," is attacked in a James C. Scott book titled for (*)** *Seeing Like* [one of these constructs]. The collapse of redistributive or coercive capacity leads to this construct's "failure," meaning it no longer has a monopoly on the legitimate use of force. Westphalian, or sovereign, examples of these constructs are the main unit of analysis in International Relations. For 10 points, name these territorially defined polities often contiguous with nations.
ANSWER: **state**s [prompt on countries or governments; do NOT accept or prompt on "nations"]
<Henry Atkins, Social Science>

7. **They aren't B cells, but ibrutinib binds to these cells' glycoprotein VI** ["six"]**. Mutations in M·Y·H·9 cause the May-Hegglin anomaly, in which these cells become gigantic. One disease in which antibodies destroy these cells can be treated with romiplostim or I·V·I·G to spare steroid use. The precursors of these cells undergo endoreplication until they become 32-ploid. These cells are consumed in a disease in which antibodies inhibit ADAMTS13** ["Adam-tee-ess-13"]**, causing these cells to bind to multimers of von (*)** Willebrand factor. These cells express glycoprotein 2b/3a on their surface, are decreased in both I·T·P and T·T·P, and develop from megakaryocytes. Clopidogrel ["clo-PID-uh-grell"] and aspirin inhibit the function of these cells, which bind the fibrin mesh in one process. For 10 points, name these small cell fragments that aggregate during clotting.
ANSWER: **platelet**s [or **thrombocytes**]
<Eric Mukherjee, Biology>

8. **A theory of this activity which posits a tension between "fall" and "recovery" was described by its formulator as an "arc between two deaths." Noa Eshkol, a practitioner of this activity, co-created a notation system that describes it in reference to a system of spherical coordinates.** *American Lyric* **was created by a practitioner of this activity whose namesake "technique" emphasizes (*)** "contraction and release." A white Greek tunic and bare feet were the typical costume of the "mother" of this activity, Isadora Duncan. The Library of Congress hosted the premiere performance of a work in this art form with sets designed by Isamu Noguchi and music by Aaron Copland. For 10 points, name this art form exemplified by *Appalachian Spring*, a work by Martha Graham.
ANSWER: **dance** [or word forms like **dancing**; or **ballet**, or **choreography**, prompt on movement or motion]
<Chris Sims, Other Fine Arts>

9. **This author withdrew the dedication of one of his novels to John Pepper Clark over their support of different sides in a war. This author mused on Marco Polo's omission of the printing press in describing his travels to China in an essay which was critiqued by Cedric Watts. In that essay, this author claimed that while another author is "safely dead," he "plagues us still." At a 1962 writers conference, this author claimed that the "national literature of" his (*)** country "is, or will be, written in English." This author critiqued Joseph Conrad's novel *Heart of Darkness* in his essay "An Image of Africa." The protagonist of a novel by this author is forced into exile for seven years after accidentally disturbing the Week of Peace. For 10 points, name this Nigerian author who created the character Okonkwo.
ANSWER: Chinua **Achebe** (The first sentence is about the dedication of *A Man of the People*.)
<Chandler West, World Literature>

10. **The Nixon shift from the gold standard came after a president of this country announced in 1965 they would trade their reserve US dollars for gold. Distrusting the UK's "Special Relationship," a president of this country vetoed subsequent proposals by Harold MacMillan and Harold Wilson to enter into the E·E·C. A president of this country pioneered a hybrid economic system of state ownership and direction in a capitalist economy called (*)** "dirigism." 11 million workers in this country in unions like the CGT went on spontaneous wildcat strikes which almost toppled its UDR government and sparked the founding of Situationist International. That unrest, near the end of this country's "Thirty Glorious Years," began after universities in this country's capital were closed at the start of May 1968. For 10 points, name this country led during the 1960s by Charles de Gaulle.
ANSWER: **France** [or the **French Republic**; or la **République Française**]
<Erik Christensen, European History>

11. **Maximal subgroups of a group named for this property include "simple diagonal" and "twisted wreath"; those subgroups are classified by the O'Nan–Scott theorem. The alternating group is a commutator subgroup of a group named for this property. Cayley's theorem gives that every group is isomorphic to a subgroup of a group named for this property. Finite types of that group have order *n*-factorial and encode all possible (*)** permutations of *n* objects. An equivalence relation must have reflexivity, transitivity, and this property, exemplified by "*a* equals *b* implies that *b* equals *a*." For 10 points, name this property possessed by shapes that remain the same when reflected across an axis.
ANSWER: **symmetry** [or **symmetric**; or **symmetric** groups; or **symmetry** groups; or **symmetric** difference; or **symmetric** property]
<David Bass, Other Science>

12. **Twelve rulers who are referred to by a title referencing these objects make up part of the 63 Illustrious Persons who are regularly reincarnated in Jainism. The position of torana gates and hallways at the Great Stupa at Sanchi makes the floorplan resemble a swastika within one of these objects. A term for an ideal monarch in Buddhist and Hindu tradition directly translates as (*)** "turning" these objects. Twelve features representing the stages of suffering and another twelve representing liberation from samsara appear on one of these objects which now appears on the flag of India. For 10 points, dharma is represented as an eight-spoked example of what object?
ANSWER: a **wheel** [or **chakra**; accept dharma**chakra**; prompt on circles by asking "What physical circular objects?"]
<Ganon Evans, Religion>

13. **Examples of these objects found across Europe from the Early Middle Ages are inscribed with the Frankish name Ulfberht** ["oolf-bairt"]**. A typology that classifies one part of these objects with twenty six letters was created by archeologist Jan Petersen, which was expanded upon by Ewart Oakeshott. A massive type of these objects produced in the Holy Roman Empire and carried on the shoulder is called a (*)** Zweihänder ["zvigh-hahnd-er"]. Carolingian and Norse designs of these objects grew out of the Roman *spatha*, which had replaced the shorter *gladius*. In the High Middle Ages, these objects began to be made with a crossguard and were often used alongside a buckler. For 10 points, name this weapon traditionally used by a monarch to knight someone.
ANSWER: **sword** [or **hilts**; prompt on weapons]
<Erik Christensen, Other History>

14. **The life of cabinet-maker Deacon Brodie inspired this book, as well as an earlier play written by this book's author with William Ernest Henley. A will in this book contains a provision having all of a character's possessions pass to the beneficiary in the case of any three month disappearance. Two characters in this book discover saucers filled with white salt after breaking down a door. In this book, (*)** Enfield receives 100 pounds from a "Juggernaut" who tramples a girl in the street. A character in this book beats Sir Danvers Carew ["carry"] to death with a cane, leading Gabriel Utterson to suspect a strange criminal is blackmailing one of his clients. For 10 points, name this novella about a scientist with an alternate personality by Robert Louis Stevenson.
ANSWER: *The Strange Case of **Dr. Jekyll and Mr. Hyde*** [or ***Jekyll and Hyde***]
<Bryanna Shao, British Literature>

15. **One book uses the term "lucky strike" or "lucky accident" to describe these people to distance them from Charles Darwin's theory of evolution. That book describes how these people "shall be the meaning of the earth" and tells them to let go of the "despisers of life." Translator Walter Kaufmann believed these people would remake the world in the transvaluation of values. In one book, these people are contrasted with the nihilistic and apathetic (*)** "last man" of moral culture. After the death of God, *Thus Spake Zarathustra* describes how these people will embrace the Earth and create new values to replace those of Christianity. For 10 points, name these people from Nietzsche's philosophy, an archetype of a higher level of being appropriated and distorted by the Nazi party.
ANSWER: **Übermensch** [or **Uberman**; or **Overman**; or other translated answers like **Superman**, **Beyond-Man**, or **Superhuman**; accept both singular and plural forms]
<Erik Christensen, Philosophy>

16. **This artist's drawings made at Rocca Fontanellato include a portrait of his patron Galeazzo Sanvitale next to his armor. During the Sack of Rome, this artist hid his painting in which John the Baptist wears a leopard's pelt and kneels next to a sleeping man. A painting by this artist depicts a column with an inscription detailing how Francesco Mazzola failed to finish it flanked by a miniature St. Jerome unfurling a scroll. This student of Correggio and artist of a vertical (*)** *Vision of St. Jerome* depicted himself wearing a gold ring under a curved mirror in a youthful self-portrait. In a painting by this artist, angels present a vase to a woman holding a gigantic baby Jesus with inaccurately long fingers. For 10 points, name this Mannerist painter of *Self-portrait in a Convex Mirror* and *Madonna with the Long Neck*.
ANSWER: **Parmigianino** [or Girolamo Francesco Maria **Mazzola**; or **Parmigiano**]
<Ganon Evans, Painting/Sculpture>

17. **After acquiring this object, a priest planted three Kum trees to determine an empire's capital. Two bells on this object ring to alert its owner of danger, who previously would be raised and lowered over it in ceremonies. This object appears in a black line in between yellow and green lines on the flag of an ethnic group otherwise represented by a red porcupine. Before being exiled to the Seychelles, Prempeh I owned this object which appeared after the fall of the Denkyira. This sunsum-possessing object descended in a dust cloud from heaven at the command of Okomfo Anokye and landed in the lap of King (*)** Osei Tutu I near Kumasi. Queen Yaa Asantewaa fought Frederick Hodgeston over this object in a war that began when Hodgeston attempted to sit on it. For 10 points, name this colorful ceremonial Ashanti throne.
ANSWER: the **Golden Stool** [or **Sika Dwa Kofi**]
<Ganon Evans, World History>

18. Edgar Allen Poe's essay "The Poetic Principle" praises the rhythmic flow of a poem by this author in which "Through the long, long summer hours / The golden light should lie," titled "June." Richard Henry Dana first thought that another poem by this author was a hoax, exclaiming "That was never written on this side of the water!" This author meditates on "He, who, from zone to zone / Guides through the boundless sky thy certain (*) flight" in a poem which asks where "dost thou pursue / Thy solitary way?" Another of this author's poem's lists "patriarchs of the infant world," "kings," and "the powerful of the earth" as part of an "innumerable caravan" and advises the reader on how to "approach the grave." For 10 points, name this poet of "To A Waterfowl" and "Thanatopsis."
ANSWER: William Cullen **Bryant**
<Will Alston, American Literature>

19. **The Raimondi Stele ["stel-uh"] depicts a fanged deity holding what is generally interpreted to be these objects, as does the central carving of Tiwanaku's Gate of the Sun. After it glows for several days, a figure obtains one of these objects from the underwater court of Ao Guang. Viracocha usually appears holding two of these objects, which give the conventional name of a central pre-Incan Andean deity. Manco Capac was told by Inti to found a capital city where a (*)** golden one of these objects sank into the ground. Ruyi Jingu Bang is the name of a size-changing one of these objects that belongs to Sun Wukong. One of these objects called the caduceus is carried by messengers like Iris and Hermes. For 10 points, Asclepius holds what sort of walking aid entwined with a snake?
ANSWER: **staff**s [or **stave**s or **wand**s or **rod**s or **baton**s or walking **stick**s; accept **staff god**; accept an iron **pillar**; accept Ruyi Jingu **Bang** before mentioned]
<Henry Atkins, Mythology>

20. **One generalization of this equation encodes the temperature-dependence of one quantity with an exponent of 0.38. A magnetic version of this equation is used to determine the temperature shift in relation to the H field in terms of the changes in entropy and magnetization in a superconductor with no external field. This equation predicts a namesake rate of about seven percent per inverse celsius for the water holding capacity of air. This equation is derived by applying the Gibbs-Duhem equation after noting that two (*)** phases in contact have equal chemical potential. It states that the derivative of pressure with respect to temperature equals latent heat over temperature times change in specific volume. For 10 points, name this equation that gives the slope of coexistence curves on a phase diagram.
ANSWER: Clausius-**Clapeyron** equation
<Eric Mukherjee, Chemistry>

1. *Description acceptable.* This chapter's author acknowledged that he drew on Dostoevsky's phrase "I am a sick man, I am a spiteful man" for its opening sentence. For 10 points each:
[10h] Name or describe this chapter of a novel. In this chapter, the narrator slips into a vision of a chanting congregation while listening to a Louis Armstrong record.
ANSWER: The **prologue** to ***Invisible Man*** [accept answers indicating the **beginning** of ***Invisible Man*** such as the word "**preface**"; do NOT accept or prompt on "Chapter One (of *Invisible Man*)."]
[10e] This American author drew on sources like Dostoevsky, Eliot, and jazz music to write *Invisible Man*.
ANSWER: Ralph **Ellison**
[10m] Ellison appeared in a 1965 book of interviews with civil rights activists compiled by this friend of his. This co-founder of *The Southern Review* wrote a novel in which Jack Burden embraces the "Great Twitch."
ANSWER: Robert Penn **Warren**
<Henry Atkins, American Literature>

2. People with this title were separated into "great" and "minor" during the Second Bulgarian Empire. For 10 points each:
[10m] Name this Slavic noble title held by Boris Gudonov before becoming regent. Upon coming of age in 1547, a Grand Prince of Muscovy cracked down on people with this title as revenge for their machinations during his youth.
ANSWER: **boyar** [or **bolyar**]
[10e] To suppress the boyars, this ruler launched a policy of state terror called *oprichnina*, which included public executions and land confiscation. This Tsar murdered his own heir in a fit of rage and conquered Kazan.
ANSWER: **Ivan the Terrible** [or **Ivan IV** Vasilyevich; or **Ivan Grozny**; prompt on Ivan]
[10h] 80% of the nobles in this city were purged during Ivan's first wave of boyar persecutions. This city formed an important principality with Vladimir during Russia's early history.
ANSWER: **Suzdal**
<Erik Christensen, European History>

3. Samuel Mayer founded the Free and Open Church Association to discourage the Anglican practice of renting out these objects to replace the tithe. For 10 points each:
[10m] Name these objects which evolved from stone *sedilia*. Their absence in Orthodox churches can be explained by a prescription that kneeling is penitential in the First Council of Nicaea.
ANSWER: **pew**s [or box **pew**s]
[10e] Alternating pews are one adaptation in churches during the COVID-19 pandemic. Another change has been using squirt guns to perform this ritual in which an infant has holy water dripped over their head.
ANSWER: **baptism**
[10h] Members of this Methodist-influenced denomination do not practice water baptism or communion. Its early doctrine was promulgated by the book *Helps to Holiness*, written by its member Samuel Brengle.
ANSWER: the **Salvation Army**
<Ganon Evans, Religion>

4. The "hit to lead" stage of developing these compounds involves improving binding constants and metabolism. For 10 points each:
[10m] Name these compounds whose kinetics are described by the abbreviation "A·D·M·E." Designing these compounds requires high-throughput screening to identify hits prior to lead optimization.
ANSWER: **drug**s [or **pharmaceutical**s or **medications**]
[10h] Drug discovery utilizes these regression models that predict the relationship between biological activity and a compound's properties. Matched molecular pair analysis is used to interpret non-linear versions of these models.
ANSWER: **Q·S·A·R** [or **quantitative structure-activity relationship**; prompt on structure-activity relationship or SAR]
[10e] This technique is utilized in drug screening to study ligand-target binding. Rosalind Franklin used this technique to discover the structure of DNA.
ANSWER: **X-ray crystallography** [or **X-ray diffraction**; or **XRD**; or **XRC**; prompt on crystallography. Reject "X-ray"]
<Vishal Puppala, Chemistry>

5. An artist subtitled an exhibition as "an homage to the unpaid and overworked artisans who have refined our" tastes for this substance. For 10 points each:
[10h] Identify this substance, which was used to cover a sphinx-like sculpture depicting the stereotypical "mammy" caricature. The installation *A Subtlety* was exhibited in a building that was formerly a factory for producing this substance.
ANSWER: **sugar** [or Domino **Sugar**; or *the Marvelous **Sugar** Baby*]
[10m] *A Subtlety* is an art installation by this contemporary African American artist. She is best known for her black cut-paper silhouettes placed against white backgrounds, often depicting scenes from the Antebellum South.
ANSWER: Kara Elizabeth **Walker**
[10e] In 2019, Walker's fountain *Fons Americanus* was installed in Turbine Hall of the Tate Modern, a museum in this city. The Elgin Marbles reside in another museum in this city.
ANSWER: **London**, England (The Elgin Marbles are in the British Museum.)
<Chandler West, Painting/Sculpture>

6. Floquet theory examines differential equations of the form x-prime equals A-of-t times x, where A has this property. For 10 points each:
[10e] Name this property possessed by functions whose outputs repeat at fixed intervals, like the sine function.
ANSWER: **periodic**ity
[10h] The Floquet theorem states fundamental matrix solutions to linear, periodic, first-order O·D·Es can be written as a periodic function times *this* function of some matrix multiplied by time. Via Liouville's formula, the determinant of a fundamental matrix solution is proportional to this function of the integral of the trace of A-of-t.
ANSWER: **exponential** [or **e to** the power of **x**; accept any variable in place of "x"]
[10m] This more general method of solving inhomogeneous linear ODEs involves finding fundamental solutions to the corresponding homogeneous ODE, then using the Wronskian to find solutions for the original equation.
ANSWER: method of **variation of parameters** [or **variation of constants**]
<David Bass, Other Science>

7. In one essay, a thinker uses the example of losing a fortune, an insult from a rival, and encountering one of these things to argue that bodily changes "follow directly from the perception of the exciting fact." For 10 points each:
[10h] Name these things. According to "What is An Emotion," we do not run from these things because we fear them, but we fear them because we are running.
ANSWER: **bear**s [prompt on animals]
[10m] That bear scene was used by this thinker to explain his theory of emotion, developed independently of Carl Lange. This thinker also imagined a person moving around a tree, trying and failing to catch sight of a squirrel.
ANSWER: William **James**
[10e] William James delivered a lecture about the *Will to* [*this concept*], which discusses a non-canine Clifford's Rule. Edmund Gettier argued that knowledge is not simply this concept combined with truth and justification.
ANSWER: **belief** [accept word forms]
<Erik Christensen, Philosophy>

8. Answer the following about the Serbian poet Desanka Maksimović ["Mack-SIM-oh-vitch"]. For 10 points each:
[10e] A Maksimović poem titled for a "Bloody" work in this genre repeats "a troop of students died martyred on one single day." Alexander Afanasyev collected 600 stories for a work in this genre modeled after the Brothers Grimm.
ANSWER: **fairy tale**s [or **folk tale**s; or **folklore**; or **household tale**s; or **children's tale**s; or "Bloody **Fairy Tale**"]
[10h] The title "Warning" of a Maksimović poem is to "never leave me alone" while somebody does this action. After watching someone perform this action, Akhmatova wrote a poem describing "something miraculous burns brightly / its facets form before my eyes."
ANSWER: playing **music** [accept obvious synonyms, such as somebody **playing a song** or **playing an instrument**; accept playing specific instruments, such as **playing** the **piano**; accept **composing** music; or "when **music** plays"]
(The unmentioned performer is Shostakovich.)
[10m] Maksimović was one of many Serb poets to justify the Milošević regime by using this author's depiction of Ottoman cruelty. This Bosnian poet described centuries of Višegrad history in his novel *The Bridge on the Drina*.
ANSWER: Ivo **Andrić**
<Ganon Evans, European Literature>

9. Wal-Mart and other companies sued companies in this industry over price-fixing of their interchange fees. For 10 points each:
[10e] Name this industry, a common example of a two-sided platform. In 2018 the Supreme Court found it was not an antitrust violation for firms in this industry to discourage merchants from accepting competitors' products.
ANSWER: **payment card** [or **credit card** or **charge card** or **debit card**]
[10m] Because a payment card becomes more valuable to a consumer the more other consumers and merchants use it, the industry displays this kind of externality.
ANSWER: **network** effect [or **network** externality]
[10h] Rochet and Tirole showed two-sided platforms will choose markups equal to the inverse of this quantity of each side. The Lerner formula says markups are equal to the inverse of this quantity when firms maximize profits.
ANSWER: **elasticity** of **demand** [or negative of the **elasticity** of **demand** as sometimes it's reported as absolute value]
<Sam Bailey, Social Science>

10. Nadia Maria El Cheikh argues that gendered metaphors used to describe *jahl* in this empire degraded the status of women. For 10 points each:
[10m] Name this empire which secured a copy of Ptolemy's *Almagest* for an institution that began as a library for either Al-Mansur or Al-Ma'mun.
ANSWER: **Abbasid** Caliphate [or *al-Khilāfah al-ʿ**Abbāsīyah***]
[10e] The Abbasid Caliphate's Golden Age was centered around this city in modern-day Iraq. The Tigris River turned black from ink after the House of Wisdom in this city was destroyed by the Mongols in 1258.
ANSWER: **Baghdad**
[10h] After conflicts arose between residents of Baghdad and his Turkish slave-soldiers, Al-Mu'tasim founded this city up the Tigris in 836 to serve as a new capital. Al-Mutawakkil ruled from this city, where he constructed a "Great Mosque" whose minarets have spiral ramps.
ANSWER: **Samarra**
<Erik Christensen, World History>

11. For 10 points each, answer the following about unusual Catalan customs at festivities:
[10e] On the festival of Saint Jordi, Catalans customarily purchase these objects for one another. The original Amazon website was built for selling these objects online.
ANSWER: **book**s [accept any type of book, such as **novel**s]
[10m] At Christmas, Catalan children ask a log to produce gifts in this unusual manner and put up Nativity scenes with a *caganer* ["kah-gah-NAIR"], a figure named for this activity. An expensive Indonesian coffee called *kopi luwak* is made from products of this non-bean-grinding, non-manufacturing activity.
ANSWER: **poop**ing [accept equivalent answers such as **defecating**, or making a **deuce**, or taking a **dump**, or **excretion**; accept civet **poop** or coffee beans that have been **pooped** out; prompt on digestion]
[10h] Catalan examples of these structures called *castells* are built by participants in many festivals, much like the neighboring Valencian tradition of *muixeranga* ["moo-EESH-er-AN-ga"]. A description is acceptable.
ANSWERr: **human towers** [accept anything indicating **towers** or **pyramids** or **castle**s formed from **people**; prompt on just towers or castles]
<Jacob Augelli, Other>

12. The Mandelstam variables s, t, and u describe these processes when they begin and end with two particles. For 10 points each:
[10e] Name these processes in which particles deflect other particles. A type named for Rayleigh makes the sky blue.
ANSWER: **scattering** processes [or Rayleigh **scattering**]
[10h] The Mandelstam variable s equals the square of the sum of these vector quantities for the two incoming particles of a scattering process. The first element of this quantity for a particle equals its energy divided by c.
ANSWER: **four-momentum** [or **four-momenta**; prompt on momentum]
[10m] Rayleigh scattering and Thompson scattering are both this kind of scattering process, whose coefficient of restitution is much closer to one than zero.
ANSWER: **elastic**
<David Bass, Physics>

13. Patrick Cariou sued another artist over a series of works with this quality which was exhibited at the Gagosian Gallery as *Canal Zone*. For 10 points each:
[10h] Identify this quality, which *Spiritual America*, a photograph of a young Brooke Shields in a bathtub, has. The first photograph to sell for over $1 million at auction, *Untitled (Cowboy)*, also has this quality.
ANSWER: **rephotography** [or **appropriation** art; accept descriptive answers mentioning that the photographs depict **other photographs** or depict **other artists' work**; accept answers indicating that the artworks are **copies**]
[10e] Richard Prince created a series titled for *Covering* [this artist] based on photographs of him. This Abstract Expressionist known as "the Dripper" served as an inspiration for Prince.
ANSWER: Jackson **Pollock**
[10m] Appropriation artist Sherrie Levine is known for a series of rephotographs titled *After* [this artist]. This artist's many photographs of the Great Depression include those in the book *Let Us Now Praise Famous Men*.
ANSWER: Walker **Evans**
<Chandler West, Other Fine Arts>

14. This name, given to a group included among the *dongyi* in the *Twenty-Four Histories*, was written with a character literally meaning "distant" and "dwarf." For 10 points each:
[10h] Identify this name, which was given to a realm where thirty kings paid homage to emperors of China. Himiko paid tribute to Cao Rui ["tsao ray"] during the Three Kingdoms period after she became queen of a place called this.
ANSWER: **Wa** [or **Wo**; or **Wōrén**; prompt on Japan or Nippon]
[10m] Wa was the Chinese name for Japan during the time of this kingdom, whose rule is divided into the Kofun and Asuka periods. This kingdom's name is also customarily used by the Japanese royal family.
ANSWER: **Yamato**
[10e] During the Yamato period, this religion was introduced to Japan after Empress Suiko dispatched an embassy to the Sui dynasty. This religion would soon after become the predominant religion in Japan along with Shintoism.
ANSWER: **Buddhism**
<Erik Christensen, Other History>

15. During an event in this play, Tom Quarlous impersonates another man and steals a marriage license. For 10 points each:
[10h] Name this play in which puppets lift up their clothes to reveal they have no genitals, refuting the Puritan Reverend Overdo's accusations of cross-dressing.
ANSWER: *Bartholomew Fair*
[10e] *Bartholomew Fair* is a play by this English author, who also wrote a play about the Sly Fox *Volpone*.
ANSWER: Ben **Jonson** [or Benjamin **Jonson**]
[10m] The last Jonson play performed during his life had this title. A Jonathan Swift satire with this title uses the three brothers Peter, Martin, and Jack to allegorize the three primary branches of Western Christianity.
ANSWER: *A **Tale of a Tub***
<Chandler West, British Literature>

16. This clause works in tandem with the Free Exercise Clause. For 10 points each:
[10m] Name this clause of the First Amendment to the U.S. Constitution which prevents Congress from creating laws promoting a religion.
ANSWER: **Establishment** Clause
[10h] This 1971 Supreme Court case established the standard of "excessive government entanglement with religion" when declaring reimbursement for Pennsylvania Catholic schools for using public materials to be unconstitutional.
ANSWER: ***Lemon** v. Kurtzman* [or the **Lemon** test]
[10e] Defense of the Establishment Clause often cites this man's description of a "wall of separation between church and state" in a letter to Danbury Baptists. He also wrote the Declaration of Independence.
ANSWER: Thomas **Jefferson**
<Ganon Evans, American History>

17. Wagner cited this composer as a predecessor of his own idea of the *Gesamtkunstwerk* ["geh-ZAMT-kunst-verk"] because of the changes to operatic norms that this composer advocated in an essay. For 10 points each:
[10m] Name this composer who attacked the artificiality of opera seria and laid out his own ideals for opera in the preface to the score of his opera *Alceste* ["al-CHES-te"]. He first used those reform principles in his earlier opera *Orfeo ed Euridice* ["or-FAY-oh ed yoo-ree-DEE-chay"].
ANSWER: Christoph Willibald **Gluck**
[10e] Gluck attacked opera seria's use of the often overly-long "da capo" form of these passages. Gluck sought to reduce the distinction between these virtuosic solo vocal passages and their more speechlike counterpart, recitatives.
ANSWER: **aria**s
[10h] Gluck's reforms were most extensive in this Euripides-based opera, which has a scene in which the orchestral accompaniment shows that the singer is lying. This opera opens with a short passage depicting calm turning into a storm that leads directly into the first act.
ANSWER: ***Iphigénie en Tauride*** ("ee-fee-zhay-NEE on toh-REED") [or ***Iphigenie auf Tauris**; or **Iphigenia in Tauris**]*
<Gerhardt Hinkle, Classical Music>

18. This man notes that "Tonight the moon is very bright" after claiming to have not seen it for thirty years. For 10 points each:
[10h] Identify this character, who ends the story in which he appears by saying "save the children . . ." This character fears that the people of his village are trying to get him to commit suicide so that they can eat him.
ANSWER: the **madman** [accept any answers referring to the narrator of the story "A **Madman**'s Diary"]
[10m] "A Madman's Diary" is a short story by this author. A character famous for his "spiritual victories" is the subject of this Chinese author's "The True Story of Ah Q."
ANSWER: **Lu** Xun [or **Zhou** Shuren; or **Lu** Sun; or **Lu** Hsün; or **Zhou** Zhangshou; accept names in either order]
[10e] A civil servant's descent into insanity is chronicled in this author's "Diary of a Madman." This author set his stories "The Nose" and "The Overcoat" in St. Petersburg.
ANSWER: Nikolai **Gogol**
<Chandler West, World Literature>

19. Ecological niche modeling is commonly used to map the spread of these organisms. For 10 points each:
[10e] Give this name for an organism that is introduced into and disrupts a new ecosystem. A classic example are zebra mussels in the American Great Lakes.
ANSWER: **invasive** species
[10m] Australia's numerous issues with invasive species include these amphibians, which were originally introduced to help control beetles. These amphibians tend to kill a marsupial called the northern quoll.
ANSWER: **cane toad** [or **giant neotropical toad**; or **marine toad**; or *R*hinella *marina*; prompt on toad]
[10h] This invasive species, with scientific name *Agrilus planipennis*, is a green jeweled beetle that's highly dangerous to trees in the genus *Fraxinus*. The wasp *Cerceris fumipennis* is used to surveil for this pest.
ANSWER: **emerald ash borer** [or **EAB**]
<Eric Mukherjee, Biology>

20. Household fires in this religion were worshiped with the invocation, "Fire, you are our mother with thirty teeth, you are our mother-in-law with forty teeth." For 10 points each:
[10m] Name this Turkic religion practiced across Mongolia and Central Asia. This religion's namesake sky god takes the form of a white goose flying over the water, who is told to "Create" by Ak Ana.
ANSWER: **Tengri**sm [or **Tengri**ism; or **Tenger**ism; or **Tengrian**ism]
[10h] This hero defeats enemies "of the four directions" and conquers 18 forts. This ruler of Ling kills a black-striped tiger in one tale, and wins a horse race to marry Brugmo.
ANSWER: King **Gesar**
[10e] Per one myth, this Mongolian hero was descended from a wolf and a doe and was born with a blood clot in his hand. This real-life conqueror's rescue of his wife Borte is mythologized in *The Secret History of the Mongols*.
ANSWER: **Genghis** Khan [or **Temujin**; or **Chingis** Khan]
<Jaimie Carlson, Mythology>