

### Tossups

1. **Conspicuous concentrations of minerals much larger than the grain size in this type of rock are called phenocrysts. Colonnades and entablatures are two structures formed by this type of rock when it exhibits fractures along a vertical plane, giving a hexagonal shape, which is known as columnar jointing and exhibited by Devil's Tower and the Giant's Causeway. Rheomorphism is responsible for layers in this type of rock that differ in composition, texture, or geochemical make-up, which are called (\*) "flow bands". The formation of large provinces of it is associated with extinction events. It can form laccoliths, batholiths, and plutons. This type of rock can be extrusive or intrusive, and its most common types are granite and basalt. For 10 points, name this type of rock formed by the cooling of magma or lava.**

ANSWER: igneous rocks [anti-prompt on "basalt"] <SJ, ed.>

2. **After a prayer, a man appears in one of these buildings prostrating in mud and water while raindrops are leaking through that building's roof of date palm leaves. A religious ritual conducted between two hills found within one of these buildings commemorates a woman who ran between those hills seven times before a well sprang forth. If a location does not meet the requirements to be one of these places, it is called a *musalla*. A notable one of these buildings is named for its (\*) blue tiles. One of these buildings named for Babur was destroyed in religious riots in 1992. Semicircular niches in the walls of these buildings indicate the direction in which one should perform prayers, which are typically held here on Fridays. For 10 points, name these holy buildings that are frequently adorned with minarets.**

ANSWER: mosques [or masjids; accept Blue Mosque or Masjid al-Haram] <WA>

3. **The speaker of a poem by this author says "A man was starving in Capri; He moved his eyes and looked at me" and ends the poem by warning "he whose soul is flat" that "sky / will cave in on him by and by." This poet wrote of a time "when first the shaft into his vision shone / Of light anatomized!" in a poem that describes how "heroes seek release / From dusty bondage into luminous air". This author of the sonnet (\*) "Euclid alone has looked on beauty bare" wrote of rain washing away her grave in a poem that begins "All I could see from where I stood / Was three long mountains and a wood". In another of her poems, a mother uses a musical instrument with a woman's head to make clothes for her child. For 10 points, name this American poet of "The Ballad of the Harp Weaver" and "Renascence", as well as the collection *A Few Figs from Thistles*.**

ANSWER: Edna St. Vincent Millay <DF, ed.>

4. **Despite securing the execution of agents who extorted him in this country, James Flint was imprisoned here for three years. A political cartoon about this country shows Bismarck glaring at Queen Victoria as he stabs into a pie. This country agreed to tolerate the Orthodox Church by terms of the Treaty of Kyakhta. For a short time, this country lost territory to forces under Roman von Ungern-Sternberg, also known as the (\*) Bloody Baron. The failed Macartney embassy was sent to this country, much of whose northern border was fixed by the Treaty of Nerchinsk. During its "Century of Humiliation", this country was invaded by the forces of the Eight-Power Alliance and forced to accept numerous "unequal treaties." For 10 points, name this country where the anti-imperialist Boxer Rebellion took place.**

ANSWER: China [or the Qing dynasty; or Zhonghua Renmin Gongheguo; or The Middle Kingdom] <WA>

5. **Theodor Adorno referred to this symphony as "a giant symbolic shell" and panned it as the worst by its composer, who referred to it as "a gift to the entire nation." In this symphony, the four trombones play descending notes against the rhythm to accompany the words "hostem repellas longius." Similarly to its composer's second symphony, this symphony ends with singing in *piano pianissimo* "like a breath" as part of the "Chorus (\*) Mysticus." The primary motif of this symphony's first movement begins with the notes E-flat, B-flat, A-flat. This symphony's second part depicts the journey of Faust's soul, while the first part is a setting of the "Veni creator spiritus" hymn. For 10 points, name this Gustav Mahler symphony that calls for a very large number of performers.**

ANSWER: "Symphony of a Thousand" [or Mahler's Symphony No. 8 in E-flat major] <WA>

6. This book draws on a metaphor by Iris Marion Young to say that individual metal wires need not be designed to trap a bird for many to form a “birdcage with a locked door.” This book uses an ad for a driving job with a FedEx contractor while listing EEOC guideline violations in its fourth chapter, “The Cruel Hand.” This book’s title comes from an orange poster its author saw on a telephone pole which seemed “crazy” to ACLU employees. This book cites the work of Mauer et al. on a stage of “invisible punishment.” It opens by listing four male ancestors of convicted felon Jarvious Cotton who, like him, could not (\*) vote. This book argues that policies like Reagan’s escalation of the War on Drugs and mandatory minimum sentences have recreated a “caste system.” For 10 points, name this 2010 study by Michelle Alexander, which labels mass incarceration of African-Americans the direct successor to segregation laws.

ANSWER: *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* <MJ>

7. This man developed a method using tetraphenylborate for determining the amount of potassium in seawater. One reaction named for him forms a carbanion next to an oxygen atom, which then rearranges into an alkoxide. An alkoxy-lithium salt is the intermediate in one reaction named for this man, in which an ether transforms into an alcohol under the influence of an alkyl-lithium compound. One reaction developed by this man has a four-membered-ring intermediate that collapses, releasing (\*) Ph-three-P oxide as a driving force; that reaction usually has an erythro betaine intermediate, which can be converted into the threo betaine using phenyl-lithium in a modification named for Schlosser. For 10 points, name this German chemist and namesake of a reaction which transforms a carbonyl into an alkene by the use of a phosphonium ylide.

ANSWER: Georg Wittig <EM>

8. Daniel Raymond published his “Thoughts on Political Economy” during this event, which the failed Baldwin Tariff Bill was put forward to resolve. The Frankfort Resolutions expressed Western discontent over the policies that led to this event. This event began after William Jones ordered a rejection of state bank notes and a dramatic fall in the price of cotton. “Stay laws” were introduced during this event which took place under Secretary of the Treasury William (\*) Crawford. The Debt Relief party was created in Kentucky in response to this crisis, which began a year before the sitting president received all but one electoral vote in his re-election bid. For 10 points, identify this first banking crisis in American history, which took place during the Era of Good Feelings.

ANSWER: Panic of 1819 <CC>

9. In this novel, questions like “Do ants get headaches?” are asked by schoolchildren in the care of Horrox, a preacher who believes in an ordered “ladder” of the races and sermonizes in favor of tobacco. Another character feels a “chain of firecrackers” explode in his head when he has a stroke. Three prophecies called “augurins” affect a sixteen-year-old shepherd in this novel, who possesses an egg-like video playback device called an (\*) orison. A ship called the *Prophetess* holds the fugitive slave Autua and the steadily-poisoned journal writer Adam Ewing in this novel, whose other settings include the HYDRA nuclear reactor investigated by Luisa Rey and a restaurant staffed by “fabricants” such as Sonmi-451 in a dystopic future Korea. For 10 points, name this novel whose six nested narratives stretch from 1850 to a post-apocalyptic far future, a 2004 novel by David Mitchell.

ANSWER: Cloud Atlas <JC/MJ>

10. According to a hymn found by a University of Pennsylvania excavation at Nippur, these things are made “anxious” by the gaze of Enlil, who receives an epithet calling him a “great” one. The real-life Xuanzang tried to identify one of these places in Tamil Nadu as the dwelling place of the bodhisattva Avalokiteshvara. A Minoan goddess of the hunt who was considered the “Mother of” these places was adapted by the Greeks into Britomartis. Vayu attacked one of these places for a full year as Garuda defended it from wind. Before Midas was brought in, the music contest between Apollo and Pan was judged by the god of one of these named Tmolus, who is sometimes identified as an (\*) oread. Sacred examples of them in Hinduism include Meru and Shiva’s abode Kailash. For 10 points, name these locales exemplified by the Muses’ home at Helicon, Trojan Ida, Cretan Ida, and the gods’ abode, Olympus.

ANSWER: mountains [or mountain peaks; or hills; do not accept “volcanoes”] <SJ, ed.>

11. This musician collaborated with Duke Jordan and Tommy Potter on several recordings for Dial Records which include the songs “Dewey Square” and “Drifting on a Reed.” This musician quoted a notoriously difficult clarinet solo from “High Society” in a song based on Ray Noble’s “Cherokee.” This musician lends his name to a Manhattan jazz club which in turn lends its name to a jazz standard written by Joe Zawinul for the album (\*) *Heavy Weather*. This musician collaborated with Dizzy Gillespie, Miles Davis, and Max Roach during a famous Savoy session which produced the tunes “Billie’s Bounce,” “Now’s the Time,” and “Ko-Ko.” Dizzy Gillespie and this man are often credited as the co-inventors of bebop. For 10 points, name this jazz saxophonist who composed “Ornithology” and “Bird of Paradise,” who was also known as “Yardbird”.

ANSWER: Charlie Parker [or Yardbird until it is read] <AR>

12. In this country, the so-called Kingdom of Traulitania was created by a brief restoration called the Monarchy of the North. Several bombings took place during a so-called “Hot Summer” in this country while it democratized during the “ongoing revolutionary process.” In this country, Freedom Day commemorates its first democratic elections and a military uprising that each took place on April 25th. For a while, this country’s government maintained an island-based prison camp at (\*) Tarrafal. The left-wing Armed Forces Movement was from this country, whose rule of one of its colonies was opposed by FRELIMO. This country’s Carnation Revolution deposed a government led by Marcelo Caetano, the successor of Antonio Salazar. For 10 points, name this European country where an Estado Novo was set up, much like in its former colony of Brazil.

ANSWER: Portugal [or the Portuguese Republic; or Republica Portuguesa] <WA>

13. The quality of a sample of this molecule is assessed using the RIN algorithm and Agilent’s Bioanalyzer. Lithium chloride is often used to precipitate this molecule out of ethanol solutions, and its concentration is measured by taking 40 times its optical density at 260 nanometers. It can be isolated in the aqueous phase if and only if acidic phenol-chloroform is used. Alwine, Kemp, and Stark developed a method of visualizing this molecule that uses a formamide-containing transfer buffer and a formaldehyde-containing agarose gel. This molecule can form pseudoknots, tetraloops, and (\*) stem loops or hairpins. This molecule is visualized in Northern Blots. This molecule’s two-prime hydroxyl group makes it both more reactive and more unstable than its counterpart. For 10 points, name this often single-stranded nucleic acid that uses uracil instead of thymine.

ANSWER: RNA [or ribonucleic acid; accept more specific answers like mRNA or tRNA; do NOT accept "DNA"]<SJ/EM>

14. This country’s Cuvette Centrale contains numerous swamps and habitat for the forest elephant. Conflict between the Lendu and Hema peoples in this country’s region of Ituri led to the first ever-conviction by the ICC. After Emmanuel de Merode was shot, the oil company SOCO announced in June 2014 it would stop exploring in this country’s first national park. That park in this country includes the world’s largest lava lake within the Nyiragongo Volcano among the Virunga Mountains. The success of the Playstation 2 led to a dramatic increase in conflict among Mai Mai militias over tantalum and (\*) coltan in this country’s North and South Kivu provinces. This country has hydroelectric potential west of the Malebo Pool along the Stanley Falls and major copper deposits in the province of Katanga. For 10 points, identify this country currently led by Joseph Kabila from Kinshasa.

ANSWER: Democratic Republic of the Congo [or DRC; prompt on “Congo”]<CC>

15. This author created a character who hoards money in his apartment walls and is known by the feminine form of his actual name, Vasily. In a novel by this author, the prisoner released from cell no. 666 turns out to be the revolutionary leader Petlyura. Another of this author’s characters suffers from continual headaches and counts among his subordinates the secret policeman Aphranius and the centurion Mark the (\*) Rat-Killer. This man’s novel about the Kievan family of Alexei, Elena, and Nikolka was adapted into the hit play *The Days of the Turbins*. A poet whose alias means “homeless” is sent to a lunatic asylum where he meets the author of a book about Yeshua ha-Notsri in a novel by this author in which Moscow is terrorized by the retinue of Professor Woland, who is Satan in disguise. For 10 points, name this Russian author of *The White Guard* and *The Master and Margarita*.

ANSWER: Mikhail Bulgakov [or Mikhail Afanasyevich Bulgakov] <DF, ed.>

16. Several participants in this event later became violent and suicidal after forming the Quaff distillery; that led to the death of Matthew Quintal. Peter Heywood and James Morrison were pardoned for their role in this event. A key account of this event was provided by John Fryer, who was removed from his position immediately before it. The instigators of this event were eventually captured by Edward Edwards and imprisoned on the *Pandora*. One of the leaders of this event had a child named (\*) Thursday October after marrying Mamiti. Several people involved in this event settled on Pitcairn Island, and it was allegedly triggered in part by the repeated floggings endured by Fletcher Christian and other crew members. For 10 points, name this event in which William Bligh was attacked by his crew onboard a Royal Navy ship.

ANSWER: the mutiny on the HMS Bounty [or obvious equivalents, such as mutiny against Captain Bligh until “Bligh” is read] <EM>

17. A character in this story apparently learned that American cars have steering wheels on the left side from the TV show *Dallas*. While contemplating a procession of topless women, a character in this story suddenly realizes that he has never seen his own wife fully naked. Another character in this story wears a shirt with a calico applique in the shape of a strawberry and continually eats (\*) puffed rice. That character in this story reveals a secret she'd kept for eight years, regarding the brief affair that led to the birth of her second son, during a trip to the Sun Temple at Konarak. At its end, Mrs. Das's son Bobby is rescued from an attacking gang of monkeys by Mr. Kapasi, a tour guide who also works in a doctor's office in the title occupation. For 10 points, name this title story of the first book by Jhumpa Lahiri.

ANSWER: "Interpreter of Maladies"

18. Members of this profession are shown at the bottom-left of the Seven Sorrows polyptych by Albrecht Dürer, who supposedly created another painting of men of this profession in only five days while in Venice. Jennifer Doyle argued that a painting depicting this profession contrasts heroic masculine power with a non-gendered victim and a cringing woman in black at the left. F.W. de Klerk and Jacob Zuma look at a dead Nelson Mandela in a parody of a different painting of people with this profession in which the (\*) thumb of a man's forearm is shown on the wrong side. An old man in a brown coat with bloody hands looks left in a painting of Philadelphians of this profession, one of whose members raises his hand in explanation in a different painting with an open textbook on the right. For 10 points, name this profession held by Samuel Gross and Nicolaes Tulp.

ANSWER: doctors [accept basically anything related to people who do medicine at all] <WA>

19. Twelve deforming tendencies of this activity were identified by an advocate of its "non-transparent" type named Antoine Berman. The difficulties of this activity when faced with non-disjunctive concepts, such as Homer's *chlores*, are discussed in an essay by Friedrich Schleiermacher. Eugene Nida contrasted the "formal equivalent" variety of this activity with the "dynamic equivalence" variety, which is essentially the same as its (\*) "sense-for-sense" implementation. Walter Benjamin argued that this activity is a form of art in his essay about the "Task" of people who do it. This activity is made difficult by the inscrutability of reference, as demonstrated by the example of "gavagai." The book *Word and Object* by William van Orman Quine discusses the "indeterminacy" of this practice. For 10 points, name this activity in which words are rendered in a different language.

ANSWER: translation <WA>

20. An equation named for this quantity is found by multiplying both sides of the Friedmann equation by the square of the scale factor, taking the derivative, and inserting the fluid equation, and this quantity also sometimes names the second of the Friedmann equations. The derivative of this quantity is multiplied by  $\mu$  sub not times  $q$  squared over six  $\pi$   $c$  in the SI version of the Larmor formula, which gives the force of the (\*) radiation reaction. It's not mass, but equivalence principle states that its gravitational and inertial forms are equal, and an instrument measuring this quantity will show a value of zero in an inertial reference frame. This quantity's time derivative is the jerk, and when it is multiplied by the mass it gives the force according to Newton's second law. For 10 points, give this quantity, which is the change in velocity over time.

ANSWER: acceleration [prompt on "a"] <EM>

## Bonuses

1. This system was instituted in the Heian period by the Emperor Shirakawa, and was followed until the advent of the Kamakura Shogunate. For 10 points each:

[10] Give the term for this system of government in which emperors retired to Buddhist monasteries, but still retained enough power and influence to counterbalance Fujiwara regents and the nobility.

ANSWER: cloistered rule [or insei; prompt on translations like “monastery administration”]

[10] The Heian period is probably most famous for being a period of Chinese-inspired cultural flowering. During it, Murasaki Shikibu wrote this novel about a philandering prince who marries the Lady Aoi.

ANSWER: *The Tale of Genji* [or *Genji monogatari*; prompt on “Genji”]

[10] The Heian period came to an end when this family’s member, Kiyomori, set up his grandson as the emperor Antoku. This family’s forces were defeated in the Battle of Dan-no-Ura, as told in the Tale of the Heike.

ANSWER: Taira clan [prompt on “Hei-shi”] <WA>

2. This man’s work allowed him to divide the Chinese world into nine provinces. For 10 points each:

[10] Name this man, who devised a system of controls that allowed Chinese agriculture to flourish. He left home to control the waters four days into his marriage and labored for thirteen years without returning home.

ANSWER: Da Yu [or Yu the Great; or obvious equivalents mentioning Yu]

[10] Unlike his father, Da Yu was able to control this event that lasted two generations by dredging the Yellow River riverbeds, and enlisted the help of mythical creatures such as mud-dragging tortoises and channel-digging dragons.

ANSWER: Great Flood

[10] Da Yu established this dynasty, initially set up under the Abdication system, after he received the throne from the last of the Five Emperors. The concrete existence of this dynasty has yet to be proven by archaeological data.

ANSWER: Xia Dynasty <CH, ed.>

3. Polymerization often follows a condensation mechanism, in which two molecules combine to form a larger molecule, with the loss of a smaller molecule. For ten points each:

[10] Name this class of condensation reactions, used to form proteins and polysaccharides, in which two monomers are bonded through the loss of a water molecule.

ANSWER: dehydration synthesis

[10] In this type of dehydration reaction, an enol reacts with a carbonyl to form a beta-hydroxy-aldehyde or beta-hydroxy-ketone through the formation of a carbon-carbon bond.

ANSWER: aldol condensation

[10] A Michael addition followed by aldol condensation comprises the Robinson annulation, a reaction that forms six-membered rings by the creation of this many new carbon-carbon bonds.

ANSWER: three [because of the double bond] <CW, EM>

4. This author’s brother discovered that silver iodide could be used for cloud seeding, which isn’t really literarily relevant but is a pretty neat fact. For 10 points each:

[10] Name this author of satirical science fiction-inspired novels like *Slaughterhouse-Five* and *Cat’s Cradle*.

ANSWER: Kurt Vonnegut, Jr.

[10] In this Vonnegut novel, Midland City Pontiac dealer Dwayne Hoover goes nuts after an encounter with the author Kilgore Trout convinces him that everyone but him is a robot.

ANSWER: *Breakfast of Champions*, or *Goodbye Blue Monday* [or *Breakfast of Champions*, or *Goodbye Blue Monday*]

[10] In this novel’s introduction, Vonnegut tells the reader that its moral is “We are what we pretend to be, so we must be careful about what we pretend to be”. This novel follows the playwright Howard Campbell, who reluctantly becomes an American spy during World War II.

ANSWER: *Mother Night* <NH/RC>

5. Answer some questions about musical films. For 10 points each:

[10] Name this film about a silent film star who is forced to publicly enter a relationship with his co-star, Lina Lamont. That star, Don Lockwood tries to create a hit to compete with the Jazz Singer called the Dancing Cavalier.

ANSWER: **Singing in the Rain**

[10] *Singing in the Rain* was directed by this man, who also choreographed the musical film *An American in Paris*. He's credited with making ballet dance *mainstream*.

ANSWER: Gene **Kelly**

[10] This Jean-Luc Godard musical-comedy centers on an Anna-Karina-played woman who wants to get pregnant despite her husband's reservations. This film features a scene of said couple having an argument only using book titles.

ANSWER: **Une femme est une femme** [or **A Woman is a Woman** – the underlined "A" is not a mistake] <DF, ed.>

6. This poet wrote of how “my window contains peaks with a thousand years of ice” and “my gate harbors boats from ten thousand miles downriver” in one of his many poems written at and about his thatched hut. For 10 points each:

[10] Name this author of the “Autumn Meditations” and such war poems as “The Song of the Wagons”. He has the most entries in standard editions of *Three Hundred Tang Poems*, with 39.

ANSWER: **Du** Fu [or **Tu** Fu]

[10] This other famous Tang Dynasty poet, who has 34 poems in that collection, was a friend of Du Fu. He wrote “Drinking Alone Under the Moon” and “The Hard Road to Shu”.

ANSWER: **Li** Bai [or **Li** Bo or **Li** Po]

[10] The speaker of this Li Bai poem lifts his head to gaze at the August Moon from his bed and feels nostalgia for his hometown. Patrick Liao wants you to know that it is prized for its Confucian values.

ANSWER: “**Quiet Night Thought**” [or “**Lamentations in the Tranquility of Night**”; or “**Jing ye si**”] <SJ, ed.>

7. This man shared power with his brother Carloman and later engaged in military campaigns to spread Christianity, conquering the Lombards, Saxons, and Bavaria. For 10 points each:

[10] Identify this Frankish king who was crowned Emperor of the Romans in 800 AD by Pope Leo III.

ANSWER: **Charlemagne** [or **Charles the Great**; or **Charles I**; or **Carolus Magnus**; or **Karl der Grosse**]

[10] Charlemagne commissioned the construction of the octagonal Palatine Chapel in this city. This city's cathedral also contains the cross of Lothair as well as Charlemagne's Throne as was used for many later coronations.

ANSWER: **Aachen** [or **Aix-La-Chapelle**]

[10] Charlemagne put down several revolts of these Germanic peoples who had earlier martyred St. Boniface. Pepin of Herstal defeated their king Radbod at Dorestad though Charles Martel suffered his only defeat to them at Cologne.

ANSWER: **Frisians** <AL/PL?>

8. Acemoglu, Johnson, and Robinson used settler mortality rates as this kind of variable to explain the effect of political institutions on economic growth. For 10 points each:

[10] Identify this type of statistical variable that must satisfy the exclusion restriction of being uncorrelated with the dependent variable yet informative in affecting the explanatory variable.

ANSWER: **instrumental** variable

[10] Instrumental variables can be used to overcome the lack of this property in observational data. In experiments, this practice is used to ensure the both the treatment and control groups are approximately equal.

ANSWER: **random** assignment to treatment [accept variants that mention **random** ness]

[10] Instrumental variables are often used by employing a two-stage least-squares version of this type of statistical analysis. Other versions of this type include logistic and linear.

ANSWER: **regression** <CC>

9. Langton's ant and termite are two rule-based constructs that are equivalent to these constructs. For 10 points each:

[10] Name this construct that consists of a tape that contains symbols, which can be read or written by a head. A state register stores the state of the computation and a transition function describes what action to take.

ANSWER: **Turing machine**

[10] These limited-memory constructs also have a transition function describing their transitions. Their deterministic and nondeterministic types are divided based on whether an input can result in multiple possible transitions.

ANSWER: **FSMs** [or finite-**state machines**; or deterministic/nondeterministic **finite-state automata**; or even **finite automata**; or **finite automaton**s; or **FSA**s; or **DFA**; or **NFA**]

[10] This kind of machine is different from an ordinary automaton because it has two tapes for input and output. It accepts a string from language, and outputs a string in another,

ANSWER: finite-state **transducer** <DX>

10. This prophet used the enigmatic phrase “Urim and Thummim” to refer to two stones which helped him make his revelations accessible, and also made use of “seer stones.” For 10 points each:

[10] Name this prophet attested to by the Three Witnesses and the Eight Witnesses, who moved to Nauvoo after receiving visions on Hill Cumorah.

ANSWER: Joseph Smith

[10] According to the Book of Mormon, the Jaredites made this archaeologically-unverified journey after the Tower of Babel fell. Later, Lehi made this type of journey from Arabia with his sons Nephi and Laman.

ANSWER: sailed to the Americas [accept any answer indicating that they moved to the New World; or to the Western hemisphere; or across the Atlantic; prompt on “left Israel” or “left Mesopotamia”]

[10] This Mormon scripture compiles revelations Joseph Smith had while President of the Church. It lays out practices such as tithing, and has had two Official Declarations added, including a revelation allowing blacks to become priests.

ANSWER: Doctrine and Covenants <MJ>

11. This composer memorialized Richard Wagner in his sublime *La lugubre gondola*. For 10 points each:

[10] Name this composer who used a Paganini theme as the basis for *La Campanella* and wrote 12 *Transcendental Etudes*.

ANSWER: Franz Liszt

[10] The third of this set of three Liszt solo piano works has two cadenzas and was called a nocturno by its creator because it is modeled after Chopin’s nocturnes.

ANSWER: Liebesträume No. 3 [or Dreams of Love]

[10] Liszt also composed this piece featuring an *alla zingarese* section in A minor for piano and orchestra based on his Hungarian Rhapsody No. 14 for solo piano.

ANSWER: Hungarian Fantasy [or Fantasia on Hungarian Folk Melodies] <SJ, ed.>

12. Cornudet whistles the Marseillaise near the end of this story, during which a group of people traveling from Rouen to Le Havre convince the title character to sleep with an officer. For 10 points each:

[10] Name this short story titled for the nickname of the prostitute Elizabeth Rousset.

ANSWER: “Ball of Fat” [or “Boule de Suif”; or “Ball of Lard”; or “Butterball”; or “Dumpling”]

[10] “Boule de Suif” was written by this French naturalist, whose other stories include “Mademoiselle Fifi” and “The Necklace”.

ANSWER: Guy de Maupassant [or Henri René Albert Guy de Maupassant]

[10] “Boule de Suif” was among the six stories by different Naturalists collected in *Evenings at Medan*. Another author with a story in that collection was this man, who wrote about the aesthete Jean des Esseintes in his novel *Against the Grain*.

ANSWER: Joris-Karl Huysmans [or Charles-Marie-Georges Huysmans] <NH, ed.>

13. This man’s own attempts at prose works, such as *In Octaviam*, were met with ridicule. For 10 points each:

[10] Name this wealthy patron of the arts from the late 1st century BC, known for sponsoring the works of Horace and Vergil, who wrote the *Georgics* in his honor.

ANSWER: Gaius Cilnius Maecenas

[10] Maecenas also served as an advisor to this first Roman emperor, the adopted son of Julius Caesar. Maecenas defeated the conspiracy of Lepidus the Younger when viceregent this future emperor was at Actium.

ANSWER: Emperor Caesar Divi Filius Augustus [or Gaius Julius Caesar Octavianus; or Gaius Octavius; or Gaius Julius Caesar Divi Filius; or Imperator Caesar Divi Filius]

[10] Maecenas had a famous one of these attractions built on the Esquiline Hill. A legendary example of these attractions was supposedly built by a ruler for the Median woman Amytis, who missed her homeland.

ANSWER: Gardens of Maecenas [or Horti Maecenatis; or hortus; or Hanging Gardens] <WA>

14. This architect designed the sustainable travelling “Nomadic Museum” for an exhibition by CANADIAN artist Gregory Colbert titled *Ashes and Snow*. For 10 points each:

[10] Name this Japanese architect, who is best known for constructing a transitional Cathedral partially out of cardboard for the Anglican Diocese of Christchurch after a 2011 earthquake.

ANSWER: Ban Shigeru [or Shigeru Ban]

[10] New York Times art critic Michael Kimmelman referred to Ban as an “accidental” one of these activists, who are exemplified by the director of *An Inconvenient Truth*, Al Gore. They generally support “green” policies.

ANSWER: environmentalists [or obvious equivalents, such as environmentalism advocates]

[10] This iconic photograph of the Earth taken by the crew of Apollo 17 became iconic in the environmentalist movement. Its name has been used as both byword for the Earth and the name of a series of NASA photographs.

ANSWER: The Blue Marble [prompt on partial answer] <WA>

15. For diamond, this value is around 0.34 because covalent bonds don't take up much space. For 10 points each:

[10] Name this value, which is equal to the number of particles times the volume of each particle over the volume of the unit cell. For a body-centered cubic structure, it is equal to 0.68.

ANSWER: atomic packing factor [or packing efficiency; or packing fraction; or apf]

[10] A close-packed structure achieves an atomic packing factor of this number. You need two decimal places to get points.

ANSWER: 0.74 [or 74%]

[10] The atomic packing factor is used to describe these substances, which are solids with repeating unit cells in an ordered pattern.

ANSWER: crystal lattice <EM>

16. This painter made frequent use of a heightened form of *chiaroscuro* called tenebrism. For 10 points each:

[10] Name this painter, whose three-part series on the life of Saint Matthew, depicting his *Inspiration*, *Calling*, and *Martyrdom*, are found in the Contarelli chapel.

ANSWER: Michelangelo Merisi da Caravaggio

[10] This painting by Caravaggio shows a man in a white skullcap and a bearded man with his arms outstretched looking at Jesus, who closes his eyes and extends a hand forward to bless a meal.

ANSWER: Supper at Emmaus

[10] St. John screams in horror and flees at the left of this Caravaggio painting, in which a man holds a lantern while a soldier anachronistically clad in Renaissance armor grabs Jesus.

ANSWER: *The* Taking of Christ [or Presa di Cristo nell'orto; or Cattura di Cristo] <AL, ed.>

17. This organ contains the glomerulus and calyx, as well as its own pyramid and pelvis. For 10 points each:

[10] Name this organ located in the retroperitoneum that primarily filters water soluble waste into urine from the blood.

ANSWER: kidney

[10] This thicker segment of the nephron is also called the distal straight tubule and functions in removing sodium from the filtrate, a main factor in water resorption.

ANSWER: ascending loop of Henle [prompt on partial answers such as "loop of Henle"]

[10] This most common protein in urine creates urinary casts in diseases like acute tubular necrosis and nephritic syndrome and is generated in the ascending loop of Henle.

ANSWER: uromodulin [or Tamm-Horsfall protein] <SJ, ed.>

18. Anyone, even Chris Ray, can write great literature while using opium. Answer the following regarding those who merely wrote about it, for 10 points each.

[10] An opium den run by "Old Fung-Tching" is the title edifice of "The Gate of the Hundred Sorrows", the first published story by this English author of *Captains Courageous* and "Danny Deever".

ANSWER: Rudyard Kipling [or Joseph Rudyard Kipling]

[10] John Jasper leaves an opium den in the opening scene of this unfinished final novel by Charles Dickens, which leaves the identity of the title character's murderer unrevealed.

ANSWER: *The* Mystery of Edwin Drood

[10] Isa Whitney is discovered in an opium den at the beginning of "The Man with the Twisted Lip", one of Sir Arthur Conan Doyle's 56 short stories about this fictional detective.

ANSWER: Sherlock Holmes [or Sherlock Holmes] <NH, ed.>

19. One faction of this political party reacted to a reptilian nickname by cutting the head of liberty out of pennies and wearing them. For 10 points each:

[10] Identify this party that included the Copperhead faction during the Civil War and saw a split between Northern and Southern wings in the 1860 election, which allowed the Republicans and Abraham Lincoln to win instead.

ANSWER: Democratic Party [or the Democrats]

[10] This Democratic representative was a prominent leader of the Copperheads and ran for governor of Ohio in 1864 despite being expelled to the Confederacy in 1863 after delivering a speech at Mount Vernon.

ANSWER: Clement Laird Vallandigham

[10] Some Copperheads also belonged to this secret society that wanted to annex slavery-friendly territory surrounding the Caribbean. They sold fake coupons promising protection from Confederate raiders to Pennsylvania farmers.

ANSWER: Knights of the Golden Circle [prompt on "KGC"] <DF, ed.>



20. This book contains a number of traditional Dionysian hymns known as dithyrambs. For 10 points each:

[10] Name this book, in which a man who encounters an eagle and a snake describes the process one undergoes in order to become a master of himself - the *übermensch* - and satisfy the will to power.

ANSWER: *Thus Spake Zarathustra* [or *Also Sprach Zarathustra*]

[10] This philosopher used the phrase “god is dead” in both *Thus Spake Zarathustra* and *The Gay Science*.

ANSWER: Friedrich Nietzsche

[10] This German-American translator of Nietzsche translated Zarathustra’s use of the verb *untergehen* as “go under.” He included his dissertation as a chapter of his book, *Nietzsche: Philosopher, Psychologist, Antichrist*.

ANSWER: Walter Arnold Kaufmann <NH, ed.>