

## **(This) Tournament is a Crime**

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Packet 1

Tossups

1. **The *Dead Christ* in Milan's Brera Gallery was signed in this material by Carlo Crivelli, who often made intricate floral and geometric patterns using it. This material was frequently applied to layers of red bole. This material was mixed up with honey or gum water in a "shell" technique favored by Botticelli, whose pseudonym may be a bastardization of "*battigello*", the term for Florentine craftsmen who worked with it. This is the dominant material of a portrait of a woman that the (\*) Nazis seized from the household of a Jewish industrialist. This material ornaments egg tempera paintings such as the *Rucellai Madonna*, the *Maesta*, and other Duccio artworks made in the vein of Byzantine icon tradition. For 10 points, Gustav Klimt often applied the thinly-beaten "leaf" form of what precious metal to his paintings?**

ANSWER: **gold** leaf [or **gilding**; or **gilt**; fuck off, Adolf Loos!]

<AG, Painting/Sculpture>

2. **A book by Clark Hull proposes that data from these things be arranged in "expectancy tables" and fed into a "prediction machine." In a 1915 article, Walter Dill Scott advocated for the usage of these things in the hiring process, so that *both* the "physical condition" and "native ability" of applicants can be ascertained. Many of these things, such as the Morrisby Profile, and the "Differential" one developed at Chicago, make the "Single-Classification Battery Assumption." Robert Yerkes created two of these things, dubbed "Alpha" and (\*) "Beta," to distinguish "fluid" and "crystallized" forms of a certain concept. After Claude Steele studied European-Americans and African-Americans undergoing these procedures, he proposed the concept of stereotype threat to try to explain the achievement gap. Aptitude is often measured by using, for 10 points, what procedures, examples of which include the Wonderlic and the SAT?**

ANSWER: aptitude **tests** [or achievement **tests**; accept intelligence **tests**]

<IJ, Social Science>

3. **The people of this city are told to beware a man with horns on his head by a man who uses a laurel wreath to cover up his own newly-sprouted horns. A ruler of this city is turned into a shooting star after his death is foretold by raining blood and weeping ivory statues. Its residents cure a plague when they travel to Epidaurus to retrieve a statue of Asclepius, but return home with Asclepius himself in the form of a snake. In the final book of the (\*) *Metamorphoses*, Pythagoras advises a ruler of this city who creates eleven identical copies of a shield that falls from the sky. This city's walls are protected by a flock of cackling sacred geese. After a botched assassination, a youth from this city demonstrates his bravery by throwing his right hand into a fire. This city is founded after a quarrel over consecutive omens of six flying birds and twelve flying birds. Afterwards, its men obtain wives by pillaging the nearby Sabine people. For 10 points, name this city founded by the twin brother of Remus.**

ANSWER: **Rome** [or **Roma**]

<EK, Legends>

4. **In a poem of this type, a man buries his sister and the child born through their incestuous union, who are respectively emblemized as a sheath and a knife. One of these poems, in which the abandonment of a slain knight by his hawk, hounds, and mistress enables two scavenger birds to make an easy meal of his corpse, is considered a cynical reply to another titled "The Three Ravens." Harvard's first Professor of English, Francis J. Child, catalogued 305 of these poems; Child No. 58 describes "the (\*) new moon, with the old moon in her arms," an ill omen quoted as the epigraph to Coleridge's "Dejection: An Ode." A diplomatic mission returning from Norway is killed in a shipwreck in one of these poems. Sir Walter Scott compiled a set of these poems popular along the Anglo-Scottish border. For 10 points, "Sir Patrick Spens" is an example of what traditional British poems, that were set to music?**

ANSWER: **ballads** [or **folk songs**; prompt on **songs**]

<AG, Short Fiction/Miscellaneous>

5. The “critical” properties found at this point are notated with superscript asterisks, and their ratios with their corresponding stagnation values equal the 2 over quantity 1 plus the heat capacity ratio all raised to some power. At an aperture near this point, when downstream pressure drops below a critical value, the flow rate becomes independent of downstream pressure, or “choked”, as can be seen in the convergent-divergent nozzle designed by Gustaf (\*) de Laval. Flows near this point are typically simplified by being treated as isentropic. The Rankine-Hugoniot conditions model a phenomenon that occurs above this point. Density fluctuations begin to be considered significant at around 30% of this value, above which flows are treated as compressible. Above this point, shockwaves begin to form. This point can be defined as the square root of bulk modulus over density. For 10 points, name this value found in the denominator of the Mach number, equal to about 340 meters per second for air.

ANSWER: speed of sound [accept Mach 1 before “Mach”]

<AW, Physics>

6. This man chose to pursue a political career after he observed that barnhouse rats were better fed than their outhouse counterparts, which he understood to mean that people of different social classes had differing values. Partly because he was a foreigner himself from the state of Chu, this man prevented the expulsion of all foreigners by explaining the many benefits of having foreigners, including the “sultry girls of Zhao.” With the eunuch (\*) Zhao Gao, this man forged a letter ordering crown prince Fusu to commit suicide and naming Huhai as the successor to the throne. This non-emperor proposed many unifying reforms, such as standardizing systems of weights, coinage, and writing, and suppressed dissent by burning all books not related to medicine or agriculture and burying hundreds of Confucian scholars alive. For 10 points, name this chancellor under Qin Shi Huangdi.

ANSWER: Li Si [prompt on just Li]

<BL, World History>

7. The opening to this structure sometimes features a membranous fold known as Gerlach’s valve. A “pseudo” form of damage to this structure may result from *Yersinia enterocolitica* infection. This structure may be damaged if palpating the left lower quadrant increases the pain in the right lower quadrant, in a positive Rovsing’s sign. When diagnosing an ectopic pregnancy, a beta-hCG test can rule out damage to this non-reproductive structure, for which it is often clinically mistaken. This structure is located roughly a third of the way from the anterior superior iliac spine to the (\*) umbilicus. Due to their similar presentation, diverticulitis is often referred to as a “left-sided” counterpart to the inflammation of this structure. These structures are often obstructed by lymphoid hyperplasia in children, and by fecaliths in adults. For 10 points, name this vestigial blind-ended tube connected to the cecum in the large intestine, which is surgically removed when inflamed.

ANSWER: appendix [or vermiform appendix; or cecal appendix; or vermix; or vermiform process]

<AG, Biology>

8. A piece in this genre begins with a 6/8 time introduction in which quick ascending scales from the flute and the piccolo alternate with quick descending scales from two solo violins. One of these pieces titled for a gramophone was written by Moldovan composer Eugen Doga. *The Merry Widow* includes one of these pieces that begins with the words “Lippen schweigen,” or “Lips stay silent.” These pieces comprise the bulk of the repertoire of an orchestra founded in 1984 by Dutch violinist (\*) André Rieu. Examples of this genre include “Over the Waves” by Juventino Rosas and one titled for skaters by Émile Waldteufel. Shostakovich’s Jazz Suite No. 2 includes his C minor “Second” of these pieces. “Voices of Spring,” “Wine, Woman and Song,” and “Vienna Blood” are examples of these pieces by the so-called “king” of this genre, Johann Strauss II. “On the Beautiful Blue Danube” is an example of, for 10 points, what ballroom dance in 3/4 time?

ANSWER: waltz [or Walz]

<EK, Music/Opera>

9. The speaker of a poem in this language asks that, only when you reclaim your soul, “which was left entangled / In all the bedrooms,” should you ask her to be chaste. The speaker snips colorless blossoms out of the wind to appease a fussy woman in a meadow in a poem written in this language titled “Airflower,” which appears in a 1938 volume alongside a poem that includes its subject in a “vast and holy symphony / Of old mothers” stretching back to “Ana, Isabel, Leah and Rachel.” The same year, a poet who wrote “You Want Me White” in this language (\*) waded into the ocean until she drowned. Twentieth century female poets writing in this language include Alfonsina Storni and an author who declared: “From the icy niche where men placed you / I lower your body to the sunny, poor earth,” in a poem about her lover’s suicide, the first of her three “Sonnets of Death.” For 10 points, name this language used by Gabriela Mistral, a poet from Chile.

ANSWER: Spanish [or Español]

<AG, Poetry>

10. Scipio Africanus Jones convinced governor Thomas McRae to issue indefinite furloughs to people arrested in the aftermath of this event mere hours before he left office. Twelve men sentenced to death for their role in this event were exonerated after *Moore v. Dempsey* ruled that the presence of a lynch mob outside the courthouse violated due process. This event began after a meeting of the Progressive Farmers and Household Union in Hoop Spur was disrupted by two white sheriffs, resulting in one of them being shot to death. The NAACP sent Field Secretary (\*) Walter White to investigate this event, during which hundreds were slaughtered by roving posses of whites seeking to put down the “black insurrection” in Phillips County. For 10 points, name this massacre of black sharecroppers in Arkansas during the “Red Summer” of 1919, the bloodiest incident of racial violence in American history.

ANSWER: Elaine race riot

<BL, American History>

11. This book argues that it would be “very improper” to report that the story of “Nisus and Euryalus” is in Bodley’s library instead of saying it is “about the middle of the ninth book of his *Aeneid*” in a discussion about the relativity of “place.” It presents the example of a “gazing countryman” who is unable to understand the “great clock at Strasbourg,” since he “barely sees the notion of the hand” and thus observes only some “outward appearances.” Thus, this book distinguishes between (\*) nominal and real essences, holding that “scientific knowledge” is only gleaned when the two essences are the same. A distinction between complex and simple ideas, and the argument that the mind of newborns is a *tabula rasa*, or a blank slate, are presented in, for 10 points, what 1689 work of epistemology authored by John Locke?

ANSWER: An Essay Concerning Human Understanding

<IJ, Thought>

12. Horace Vere led a force of more than two thousand men to support this battle’s eventual losers, who were pushed back to the Star Palace by a cavalry charge and failed to establish defenses there. Pope Paul V gave a parade to celebrate victory in this battle, during which he abruptly suffered a stroke and died. Rene Descartes officially observed this battle as part of the winning side, which executed 27 prominent individuals afterwards in the Old Town Square. The losers of this battle lost the support of the (\*) Evangelical Union after it signed the Treaty of Ulm guaranteeing its neutrality. Winning this battle allowed the Habsburgs to reassert their control over Bohemia, which had elected Frederick V, the Winter King during a short-lived revolt. For 10 points, name this 1620 victory for the Count of Tilly near Prague, an early battle during the Thirty Years’ War.

ANSWER: Battle of White Mountain

<BL, European History>

13. This musician wrote an album whose third track and whose final track both end with all other instruments dropping out during the last twenty seconds, leaving only a solo alto saxophone. He gave the subtitle “(Soul Fusion) Freewoman and Oh, This Freedom’s Slave Cries” to a track which features Jay Berliner’s flamenco guitar solo. This bandleader collaborated with alto saxophonist Charlie Mariano on an album whose cover depicts this

**musician wearing a fur cap and lighting a cigarette against the backdrop of a white brick wall. Partially designed as a ballet, one of his albums comprises a single continuous recording divided into four tracks such as (\*) "Track A - Solo Dancer" and "Mode D - Trio and Group Dancers."** This composer of *The Black Saint and the Sinner Lady* paid tribute to saxophonist Lester Young in the ballad "Goodbye Pork Pie Hat." For 10 points, name this jazz bassist of a 1959 album titled for his name followed by the words *Ah Um*.

ANSWER: Charles Mingus [or Charles Mingus, Jr.]

<EK, Other Art>

**14. In a sexually charged scene from a novel titled for this place, the protagonist tries on bathing suits with the help of her work supervisor Miss Fortini, who comments on her unshaved pubic hair. In a novel set in this area, a woman shoots a serial rapist who ambushes her daughter in the stairwell of their home, but her third pregnancy drives her husband Johnny to drink until he dies of pneumonia on Christmas. The parish priest Father Flood encourages Eilis Lacey to emigrate from Ireland to this area in search of a better life, in a 2009 novel by (\*) Colm Tóibín. A character who works as a teletypist in this area falls in love with Lee Rhynor, a married soldier about to ship out to France. After reflecting on her brother Neeley's prowess as a jazz pianist, the protagonist of that novel set here watches the title object sprout in the yard of her tenement building, a symbol of her family's resilience. For 10 points, Francie Nolan is the protagonist of a Betty Smith novel titled for a tree that "grows in" what New York City borough?**

ANSWER: Brooklyn [accept Williamsburg, where *A Tree Grows in Brooklyn* is specifically set; prompt on New York City]

<AG, Long Fiction>

**15. Scott Aaronson at the University of Texas maintains an online "zoo" devoted to classifying these things. The spacing between these collections are both arbitrarily large and possible to calculate according to the Borodin-Trakhtenbrot Gap Theorem. Laszlo Kalmar coined the term ELEMENTARY for one of these sets, which is formed by taking the union of a group of sets that comprise the exponential hierarchy. Two spatial examples of these sets are equivalent according to (\*) Savitch's theorem. A specific one of these sets is defined as the group of problems whose solutions are verifiable using a nondeterministic Turing machine in polynomial time. The hardest problems in many of these sets are termed "complete." For 10 points, name these sets used to classify computational complexity, such as P and NP.**

ANSWER: computational complexity classes

<IJ, Math/Other Science>

**16. A character in this play declaims that if everybody "stay in one place I believe this would be a better world," an insight he gained from twenty-seven years working aboard trains. A dream in which he volunteers to lead a flock of sheep-men across a wolf-filled valley compels a preacher in this play to found the Good Shepherd Church. At the end of this play's first act, a fight breaks out about a botched timber-raid in which (\*) Crawley had died. In this play, after four men are burned to death in a boxcar, their spirits, known as the Ghosts of the Yellow Dog, retaliate by throwing their killer down a well. Lymon and Boy Willie are unable to haul off the central object of this play before Berniece is forced to play it to calm Sutter's ghost. For 10 points, name this play set in 1930s Pittsburgh, about a black family's musical heirloom, by August Wilson.**

ANSWER: *The Piano Lesson*

<AG, Drama>

**17. Opposition to the independence of this colony was often expressed by citizens honking their car horns five times: three short beeps followed by two long beeps. In response to a decree giving Jews, but not Muslims, citizenship, a tribal chief called Mokhrani led a massive revolt in this colony's Kabylie region. The Blum-Viollette proposal advocated giving citizenship to intellectuals and veterans in this colony. This colony was annexed after an invasion sparked by a local ruler hitting an ambassador with a (\*) fly whisk. A nuclear test named "blue jerboa" was carried out near this colony's town of Reggane. Soldiers called *harkis* fought against this colony's independence movement, whose success led to nearly a million *pieds-noirs* leaving**

this colony. The Evian Accords granted this colony its independence. For 10 points, name this large colony in North Africa that was ruled from 1830 to 1962 by France.

ANSWER: French Algeria [or Algerie française]

<BL, World History>

18. For an event held in this calendar year, Jean Drapeau infamously remarked that it "can no more lose money than a male birthing a baby." The mayor William McNichols Jr. called for a referendum about an event that would have been held in this year - those opposing that event adopted the slogan "Don't Californicate Colorado!" After numerous environmental protests, the city of Denver rejected hosting the Winter Olympics in this year. Julius Nyerere called for a (\*) boycott of an event held in this year after the newly elected Rob Muldoon allowed Billy Bush and the "All Blacks" rugby team to tour South Africa. Robert Bourassa helped organize the Olympics held in this year, whose cost overrun is estimated to be over 700%. Caitlyn Jenner won the gold medal for the Decathlon during, for 10 points, what calendar year in which the Montreal Summer Olympics were held, which took place four years after the ones in Munich.

ANSWER: 1976

<IJ, Geography/Current Events/Other>

19. Alate-stemmed examples of these objects were named for their resemblance to the ironclad *Monitor*. The place name "calumet" is derived from a Norman word referring to these types of objects. The Lakota people believe that the White Buffalo Woman bridged the earthly world and the Wakan Tanka, or Great Mystery, by bestowing humanity with the gift of the *chanunpa*, an object of this type. The colloquial name of the clay catlinite, quarries of which are abundant in a namesake (\*) National Monument in southwest Minnesota, reflects its use in making these objects. In the Sun Dance, a man offers one of these objects to the east, and then proceeds clockwise to every other cardinal direction, before pointing it to the earth and sky. These objects are typically stored in quilled bags, and usually consist of a bowl oriented perpendicularly to the main stem. For 10 points, peace treaties between Native American tribes were often sealed by smoking what objects?

ANSWER: ceremonial pipes

<AG, Religion>

20. One of these compounds can be formed through the use of HATU and Hünig's base. Synthesis of these compounds can be made more efficient with the use of triazoles to prevent racemization. RAM, also known as Rink resins are used to support these compounds. A compound of this type containing a methyl and methoxy substituent can react with organometallics to form ketones without overaddition. (\*) Carbo-di-imides and PyBOP are commonly used in coupling procedures that form these compounds. Cyclic examples of these compounds will form when an oxime is placed in acidic conditions. When preparing one of these compounds, Fmoc and boc can be used as protecting groups. A cyclic example of this functional group is found in the class of antibiotics that includes penicillin. Those cyclic examples of these compounds are lactams, while these compounds are formed in the Merrifield synthesis. These compounds form from the hydrolysis of nitriles or the reaction of acyl chlorides with amines. For 10 points, name these compounds, which contain a carbonyl next to an amine.

ANSWER: amides [accept peptides]

<AW, Chemistry>

Bonuses

1. This system experiences limit cycles called relaxation-oscillations. For 10 points each:

[10] Name this non-conservative oscillator whose damping term is proportional to  $\mu$  times the quantity 1 minus distance squared.

ANSWER: Van der Pol oscillator

[10] At driving frequencies near that of the limit cycle, the response shifts its frequency near that of the driving signal, a phenomenon given this name. Van der Pol was interested in how this phenomenon could be used to stabilize a heart's arrhythmias with a pacemaker.

ANSWER: entrainment [or injection locking or injection pulling]

[10] An unforced system with no damping function would effectively be a simple harmonic oscillator, whose motion can be described in terms of these two periodic functions.

ANSWER: sine and cosine

<AW, Physics>

2. For 10 points each, answer the following about what critic Vincent Scully has called "paramilitary dandyism" in American architecture.

[10] "Paramilitary dandyism" describes the "dramatic patience" and "willful forcing" of large 1960s buildings, such as this Finnish architect's CBS Building and TWA Flight Center at JFK International.

ANSWER: Eero Saarin

[10] Scully also used the term "paramilitary dandyism" to describe the "science-fiction" designs of Kevin Roche, whose most famous project may be three massive, imposing, pyramid-shaped office buildings for the College Life Insurance Company in this state capital.

ANSWER: Indianapolis

[10] Many buildings of the paramilitary dandy style, such as the Knights of Columbus Building, make use of this building material, whose tensile strength is increased by the addition of rebar.

ANSWER: reinforced concrete

<IJ, Other Art>

3. A pair of dragons of these two colors are defeated by trapping them in a mead-filled trench at the exact centre of the island on which they live, and then burying them in a stone chest. For 10 points each:

[10] Identify these two colors that also title a pair of closely related 14th-century manuscripts of mythology, one from Hergest and the other from Rhydderch.

ANSWER: red and white [or coch and gwyn; accept in any order]

[10] This character reveals that the nightly destruction of Vortigern's castle is caused by a pair of red and white dragons living underneath. In a later account, this character is forever sealed inside either a cave or a tree.

ANSWER: Merlin [or Myrddin]

[10] Geoffrey of Monmouth's *Historia regum Britanniae* equates Vortigern and the red dragon to the people of this modern-day country, where tales of the bard Taliesin are recounted in the *Mabinogion*.

ANSWER: Wales [or Cymru; prompt on U.K.; prompt on Britain; prompt on United Kingdom of Great Britain and Northern Ireland]

<EK, Legends>

4. Answer some questions about the very quotable Pierre Cambronne, for 10 points each.

[10] While commanding this group, Cambronne supposedly declared that "[this group] dies, it does not surrender!" These elite bearskin-wearing soldiers of Napoleon's Grande Armee had a reputation of invincibility.

ANSWER: Imperial Guard [or Garde Imperiale; accept more specific answers like Old Guard or Vieille Garde]

[10] Cambronne uttered that quote during this battle, the first time the Imperial Guard had retreated without being ordered to. The retreat of the Guard caused panic in the French, leading to this final defeat for Napoleon.

ANSWER: Battle of Waterloo

[10] Instead of saying "The Guard dies, it does not surrender," Cambronne may have said this one-word exclamation, which was subsequently sometimes dubbed "the word of Cambronne." Give the exact French word, no translations.

ANSWER: "Merde!" [do not accept or prompt on other answers]

<BL, European History>

5. A character created by this author sells sausages out of his suitcase to finance his trip from New York to Argus, North Dakota. For 10 points each:

[10] Name this half-German-American, half-Chippewa author of *The Master Builder's Singing Club*, who described a love triangle between Mary Lazarre, Lulu Lamartine, and Nector Kashpaw in her episodic debut novel, *Love Medicine*.

ANSWER: Louise Erdrich [or Karen Louise Erdrich]

[10] Like much Native American fiction, Erdrich's *Love Medicine* is set in one of these areas allotted to the Chippewa people. Sherman Alexie wrote about Spokane Indians who live in one of these places, in a novel titled for their *Blues*.

ANSWER: Native American **reservations**

[10] Erdrich and her husband Michael Dorris co-wrote a novel in which two academics try to recover this historical figure's crown. In a 1987 novel, a young couple scheme to win a government prize by conceiving a son exactly on the anniversary of one of this man's accomplishments.

ANSWER: Christopher **Columbus** [or Cristoforo **Colombo**; those books are *The Crown of Columbus* and *Christopher Unborn*]

<AG, Long Fiction>

6. Taking advantage of the target's usage of Sudanese waiters, the leader of this event disguised himself as a Sudanese waiter carrying milk cans stuffed with explosives to carry out this event. For 10 points each:

[10] Name this terrorist attack, carried out by Irgun, on the headquarters of the British authorities in Mandatory Palestine.

ANSWER: **bombing** of the **King David Hotel**

[10] The bombing of the King David Hotel was in retaliation for this British crackdown on Zionist extremists. British authorities confiscated weapons and arrested many Irgun and Lehi members during this operation.

ANSWER: Operation **Agatha** [accept **Black Saturday**; accept **Black Sabbath**]

[10] This future prime minister of Israel was leader of Irgun at the time of the bombing. During his prime ministership, Israel signed the Camp David Accords with Egypt.

ANSWER: Menachem **Begin**

<BL, World History>

7. The *Mellon* cases, in which the court ruled that the plaintiff did not have some "direct injury" caused by a statute that might have violated the 10th amendment, are often said to have introduced this concept. For 10 points each:

[10] Give this legal concept, the doctrine that a prospective plaintiff must have some legal interest that is sufficiently connected to a defendant's actions before the plaintiff can take action.

ANSWER: **standing**

[10] The three requirements of standing are injury-in-fact, causation, and this third one, which holds that a ruling by a court is likely to resolve the plaintiff's injury.

ANSWER: **redressability** [accept word forms]

[10] Parties that do not have standing may file these documents, which are meant to help the courts make an impartial decision. Their name means "friend of the courts."

ANSWER: **amicus curiae** briefs [or **amicus** briefs]

<IJ, Social Science>

8. Aristotle's *Poetics* asserts that this man incorporated "scene-paintings" into his plays, and enlarged the chorus from 12 to 15 people. For 10 points each:

[10] Name this ancient Greek tragedian whose play *Oedipus Rex* took second place at the 427 BC City Dionysia.

ANSWER: **Sophocles**

[10] Aristotle's *Poetics* also credits Sophocles with this dramatic innovation, which scaled up reforms by Thespis and Aeschylus. This development relieved some of the burden on the chorus, but also reduced its importance.

ANSWER: introducing a **third actor** [or a **third character**; or a **tritagonist**; prompt on adding an actor or other answers that don't mention the total number of actors; Thespis and Aeschylus introduced the first and second actors, respectively]

[10] Three different actors played Odysseus, Neoptolemus, and the title archer, whom Odysseus had abandoned on Lemnos due to his crippling snakebite, in the 409 BC City Dionysia-winning performance of this late Sophocles play.

ANSWER: **Philoctetes**

<AG, Drama>

9. For 10 points each, identify the following about philosophers who forayed into the realm of fiction.

[10] Much of this author's unpublished *Philosophy of Music* was incorporated verbatim into Thomas Mann's *Doctor Faustus*. This man and Max Horkheimer considered the "Enlightenment as Mass Deception" in *Dialectic of Enlightenment*.

ANSWER: Theodor Wiesengrund **Adorno** [or Theodore Ludwig **Wiesengrund**]

[10] Jean Hippolyte, a French translator of this 1807 book, called it a "philosophical novel" in which the characters of "Lord" and "Bondsman" struggle over questions of "recognition."

ANSWER: The **Phenomenology of Spirit** [or The **Phenomenology of Mind** or **Phänomenologie des Geistes**]

[10] In a biography, Francis Wheen argues that this philosopher's line "Every giant ... presupposes a dwarf, every genius a hidebound philistine," which appears in this philosopher's novel *Scorpion and Felix*, inspired this author's treatise calling the government a "giant parasitic body."

ANSWER: Karl **Marx** [Specifically, it's a parodic way of saying "History Repeats Itself First as Tragedy, Then as Farce."]

<IJ, Thought>

10. The linkers in these structure most commonly consist of bi- or tridentate carboxylic acids. For 10 points each:

[10] Name these coordination polymers consisting of ions connected with carbon containing ligands. They are typically designed to be porous, and are inspired by studies of zeolites.

ANSWER: **metal-organic frameworks** [or **MOFs**]

[10] Metal-organic frameworks and zeolites are both part of this class of porous substances whose pores range from 20 to 500 Angstroms. Their pores allow them to serve many roles such as desiccants and catalysts for cracking.

ANSWER: **molecular sieves**

[10] A commonly used molecular sieve is silica beads formed of this kind of substance. Size-exclusion chromatography exclusively uses this sort of material as a stationary phase and polyacrylamide or agarose based substances of this type serve as a matrix for electrophoresis.

ANSWER: **gels**

<AW, Chemistry>

11. Samuel Johnson proclaimed "nauseous and superfluous" a subplot added in the second edition of this poem, following a shoe shiner born to the goddess Cloacina and a mortal "Scavenger." For 10 points each:

[10] Name this three-book topographical city poem which describes how to avoid pickpockets and emptied chamber pots, and cautions against wearing foreign shoes and overcoats.

ANSWER: **Trivia**, or *The Art of Walking the Streets of London*

[10] Samuel Johnson himself wrote this poem, which substitutes Charles XII of Sweden for Hannibal as a case study in the folly of ambition.

ANSWER: "The **Vanity of Human Wishes**"

[10] Gay's *Trivia* and Johnson's "The Vanity of Human Wishes" are Augustan examples of the "Juvenalian" type of this literary genre, which attacks society and the times in a more abrasive manner than in the more light-hearted, witty "Horatian" type.

ANSWER: **satire**

<AG, Poetry>

12. After this tree was toppled during a storm in 1857, its wood was collected as souvenirs, making its way into gun handles, chairs, cufflinks, and almost everything imaginable. For 10 points each:

[10] Name this tree whose interior was used to hide its namesake artifact to prevent its confiscation by Edmund Andros.

ANSWER: **Charter Oak**

[10] The Charter Oak was used to hide the charter of this colony, which was governed by the Fundamental Orders. Thomas Hooker is known as the "Father of" this colony.

ANSWER: **Connecticut** Colony

[10] The charter of Connecticut placed New Haven in its jurisdiction, supposedly because New Haven was sheltering three people accused of this crime. Two of those people, William Goffe and Edward Whalley, hid in Judges' Cave while on the run.



ANSWER: **killing Charles I** [accept **signing the death warrant of Charles I**; accept **condemning Charles I**; prompt on **regicide**; prompt on **regicidal** judges; do not accept or prompt on just murder]  
<BL, American History>

13. This organism possesses an unusual pre-RC that includes Sap1, which is required for Cdc18 binding. For 10 points each:

[10] Name this organism established as a model system by Urs Leupold in the 1950s. This model organism is commonly used in cell cycle studies, because mutating its *wee1* gene produces tiny cells that can bypass a mitotic checkpoint.

ANSWER: **Schizosaccharomyces pombe** [or **fission yeast**; prompt on **yeast**]

[10] In normal, unmutated *S pombe*, this phase, in which the cell has double the DNA and is awaiting the transition to mitosis, is extra long.

ANSWER: **G2** phase [prompt on **G**; prompt on **interphase**]

[10] The pre-RC forms at the site of origin for this process, which occurs during the S phase of the cell cycle, and results in the formation of two identical strands of DNA from a parent strand.

ANSWER: DNA **replication**

<AG, Biology>

14. The "imperfect" form of this concept is found in those who sin for a reason other than God's love, such as fear or a human motivation. For 10 points each:

[10] Identify this concept, said to be "repentance" for the state of sin that one is in. The Council of Trent ruled that this quality is first in the hearts of those who repent.

ANSWER: **contrition**

[10] Contrition is a key component of penance, which is one of the concepts that comprises this group of seven "sacred mysteries." Baptism and extreme unction are two of its other components.

ANSWER: Seven **Sacraments**

[10] Most Christians believe that contrition is necessary even if they only commit these kinds of sins, which do not concern a grave subject matter. Lying on your tax returns is definitely this kind of sin.

ANSWER: **venial** sin

<IJ, Religion>

15. This composer's violin concerto begins with the harp quietly arpeggiating perfect fifths up and down, after which the soloist enters and does the same thing on open strings. For 10 points each:

[10] Name this composer of "Der Wein," a concert aria for solo soprano with text from a translation of *Les fleurs du mal*.

ANSWER: Alban **Berg** [or Alban Maria Johannes **Berg**]

[10] Much of Berg's music employs this compositional technique in which motifs are based on predefined "rows" comprising each note in the chromatic scale.

ANSWER: **twelve-tone** technique [or **serialism**]

[10] This composer expanded the idea of twelve-tone composition to rhythm and dynamics in the second of his *Four Rhythm Studies*. After World War II, this composer wrote the *Turangalila-Symphonie*.

ANSWER: Olivier **Messiaen** [or Olivier-Eugène-Prosper-Charles **Messiaen**]

<EK, Music/Opera>

16. In a particularly short story of this type by this author, the habitual intrusion of three leopards into a temple ceremony is gradually incorporated into the ritual. For 10 points each:

[10] Name these sketches by a certain author. In the best-known one, a Tartar spends most of his life trying to bribe a gatekeeper to let him through, only to be told as he is dying: "No one else could ever be admitted here, since this gate was made only for you. I am now going to shut it."

ANSWER: **parables** by Franz **Kafka** [both parts required, prompt on partial answer]

[10] The parable "Before the Law" is told by a priest to Josef K, who is arrested on his thirtieth birthday for unspecified reasons, in this novel by Kafka.

ANSWER: *The **Trial*** [or *Der **Prozess***; or *Der **Process***]

[10] A parable in which an emperor addresses a message to a lowly subject, which will never be delivered because the messenger cannot navigate his way out of the palace, is sometimes excerpted from this Kafka story, which is set in a country that values architecture and masonry as the highest intellectual pursuits.

ANSWER: "The **Great Wall of China**" [or "Beim Bau der **Chinesischen Mauer**"]

<AG, Short Fiction/Miscellaneous>

17. Consider the following differential equation which you are trying to solve: [read slowly] “ $\frac{dy}{dx} + q(x)y = r(x)$ .” For 10 points each:

[10] What is the name given to the function of the form “ $e^{\int q(x) dx}$ ,” with which one multiplies both sides of the differential equation so that it is now solvable?

ANSWER: **integrating factors**

[10] Integrating factors are most commonly used to solve differential equations with an order of this number. Unlike PDEs, ordinary differential equations have this many independent variables.

ANSWER: **one**

[10] Integrating factors can also transform second-order differential equations into this form. Equations in this form have an operator  $L$  that transforms the associated equation into  $0$ , and a corresponding operator “ $L$  dagger” that is equal to the operator  $L$ .

ANSWER: **self-adjointness** [do not accept or prompt on “adjoint”]

<IJ, Math/Other Science>

18. Magnificent rock formations called “fairy chimneys” can be found in this region's city of Göreme. For 10 points each:

[10] Name this region of Anatolia, whose name may come from the Old Persian word *Haspaduya*, meaning “the land of the beautiful horses.”

ANSWER: **Cappadocia**

[10] Cappadocia is a region that is part of this country, which, like Russia, spans the boundary of Europe and Asia. The land that comprises this country makes up most of ancient Asia Minor.

ANSWER: Republic of **Turkey**

[10] One of the most magnificent cities in Cappadocia was Derinkuyu, which was large enough to accommodate at least 20,000 people, and had this bizarre characteristic. Other cities in Cappadocia that had this trait include Kaymakli.

ANSWER: they are entirely **underground** [accept they are **built in stone**, prompt on answers that are less specific, such as they are hidden; prompt on connected by tunnels]

<IJ, Geography/Current Events/Other>

19. Answer the following about Wilma Mankiller, who despite her name, was not a serial androcidal maniac. For 10 points each:

[10] Mankiller was the first female chief of this American Indian nation, whose bilingual newspaper, the *Phoenix*, used a script invented by Sequoyah.

ANSWER: **Cherokee** Nation

[10] Mankiller was a candidate to replace this president on the \$20 bill. This president signed the Indian Removal Act, which forced the Cherokee to relocate to the Indian Territory.

ANSWER: Andrew **Jackson**

[10] Mankiller limited membership in the Cherokee Nation to those who could claim an ancestor classified as “Cherokee by Blood” on this census of the Five Civilized Tribes living in the Indian Territory from 1898-1914. As a result, Cherokee Freedmen were excluded from being part of the Cherokee Nation.

ANSWER: **Dawes** Rolls

<BL, American History>

20. This man is a “chaos engineer” and an “unauthorized reality designer” according to Timothy Leary's essay found in the book *Views from a Tortured Libido*, a volume that collects this man's paintings inspired by comics and quantum mechanics. For 10 points each:

[10] Name this founder of the *Juxtapoz* art magazine and “lowbrow” art movement. He also created the painting *Appetite for Destruction*, which appears on the Guns N' Roses album of the same name.

ANSWER: Robert **Williams**

[10] The first retrospective on the Lowbrow Art movement also showed the work of this artist, who created the “Portrait of the Artist as a Young %@&\*!” in *Breakdowns*. That happened before this artist wrote *Maus*.

ANSWER: Art **Spiegelman**

[10] Lowbrow is said to have begun in this state, which was also home to the pop artist David Hockney. A swimming pool in this state inspired Hockney's *A Bigger Splash*.

ANSWER: State of **California**  
<IJ, Painting/Sculpture>