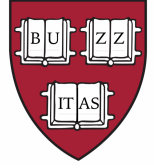


Harvard Fall Tournament XIII

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Special thanks to Will Alston, Jordan Brownstein, Robert Chu, Stephen Eltinge, and Olivia Murton



Round 11

Tossups

1. **This man executed Francesco Caracciolo of the Parthenopean Republic as a favor to Queen Maria Carolina of Austria. This man yelled, “Westminster Abbey or Glorious Victory!” while fighting at the Battle of Cape St. Vincent in Portugal. This man was entitled the Duke of Bronté by the Kingdom of Sicily, where he also met (*) Emma Hamilton, his longtime mistress. This man’s forces defeated the French at a battle in Aboukir Bay off the coast of Egypt. Before his most famous battle, the *HMS Victory* displayed the message “England expects that every man will do his duty.” For 10 points, name this naval commander who perished at the Battle of Trafalgar.**
ANSWER: Horatio Nelson, Duke of Bronté (prompt on Bronté until mention) <Suh>

2. **One of this author’s characters declares, “The full moon is not yet, but / The women cannot wait.” This author of *Season of Anomy* wrote a novel about five high school friends returning to their home country after independence and a play in which a “Dance of the Lost Traveller” honors a photographer from Lagos. A play by this author of *The Interpreters* describes conflict over the right to marry (*) Sidi, and in another Elesin’s son Olunde commits suicide after a ritual suicide is prevented by Simon Pilkings. For 10 points, name this Nigerian playwright of *The Lion and the Jewel* and *Death and the King’s Horseman*.**
ANSWER: Wole Soyinka (accept Akinwande Oluwole Babatunde Soyinka) <Levine>

3. **This man explained one of his results by describing a “cybernetic viewpoint” and an “agentic state.” This psychologist demonstrated social proof when he directed some of his students to look at the sky on a street corner. Mr. Walter Carnap was featured in one of his experiments, and the town of Sharon was central to another that started in (*) Omaha and Wichita. Another of his experiments featured four “prods” like “It is absolutely essential that you continue,” and featured “teachers” that delivered 15 to 450 volts in shocks to “learners.” For 10 points, name this psychologist behind the “lost letter,” “small world,” and obedience experiments.**
ANSWER: Stanley Milgram <Yue>

4. **In the game *Hearthstone*, paladins can use a silver one of these things that boosts the attack and health of all friendly minions after each use. In *Pokémon* games, Keldeo can learn moves named after Secret and Sacred types of these objects. In *Super Smash Bros. 4*, Kirby’s final smash utilizes one of these (*) weapons. In the *Final Fantasy* series, Cloud Strife uses the Buster type of this weapon. Other examples of these weapons include Frostmourne from *World of Warcraft* and the “Master” one from *The Legend of Zelda*. For 10 points, name these weapons, one of which is wielded by Sonic the Hedgehog in *Sonic and the Black Knight* and named Excalibur.**
ANSWER: swords <Duffy>

5. The *Altmark* incident occurred when British destroyers sank a German tanker in this country's neutral waters. A strike over milk rations led Josef Terboven to declare martial law in this country. The *Milorg* group in this country collaborated with Allied forces in Operation Gunnerside to sabotage facilities producing heavy (*) water. After surviving a bombing attack, the king of this country, Haakon VII, fled to England in 1940. Nazi Germany then installed a puppet government in this country which was nominally led by the leader of Nasjonal ["NAH-sho-nal"] Samling, Vidkun Quisling. For 10 points, name this country governed from Oslo.

ANSWER: Norway <Huang>

6. A form of this condition known as epistaxis is one of the side effects associated with the drugs rivaroxaban and dabigatran. Patients with mutations in the genes *F8* and *F9* experience extended episodes of this condition, which is *opposed* by a process involving the (*) von Willebrand factor. Microfibrillar collagen and emergency tourniquets are used to mitigate this condition, since untreated forms of this condition can lead to exsanguination. Internal forms of this condition are responsible for contusions, which are more commonly known as bruises. For 10 points, name this condition in which blood is lost.

ANSWER: bleeding (or hemorrhaging; accept answers involving the loss of blood before it is mentioned) <Park>

7. In this work, when a nymph's brother drops his sword in an important duel, she takes the shape of a charioteer and returns it to him. The main character of this work leaves the underworld through a "polish'd ivory" gate of false dreams. This work abruptly ends after the protagonist recognizes his friend (*) Pallas's belt and viciously slaughters Turnus. In this work, Venus entraps a Carthaginian queen into falling in love with the title character. The title character's encounter with Dido ["DYE-doe"] appears in this poem that describes how a Trojan ventured to Italy, ultimately leading to the founding of Rome. For 10 points, name this epic poem by Virgil.

ANSWER: The Aeneid <Cohen>

8. A case involving one of these places originated the "substantial disruption" precedent. *Morse v. Frederick* originated from a sign reading "BONG HiTS 4 JESUS" that was held up across the street from one of these places. A case involving these locations was influenced by Kenneth and Mamie Clark's research involving (*) dolls. People wearing black armbands in one of these places to protest the Vietnam War were protected in the case *Tinker v. Des Moines*. A case concerning these locations overturned the "separate but equal" precedent set in *Plessy v. Ferguson*. For 10 points, name these places that were integrated by the decision in *Brown v. Board of Education*.

ANSWER: public schools (accept high school or middle school or elementary school, but do NOT accept or prompt on "colleges" or "universities" because none of these cases involve higher education) <Chu>

9. This work's three-part structure inspired another in the same genre by Michael Tippett, but many performances include only the first part and the finale of the second. An aria in this work repeatedly accentuates the word "incorruptible" incorrectly, and that aria is "The trumpet shall sound." One movement follows a (*) *pifa* interlude, while another declares that this work's subject "was despised and rejected." King George II supposedly rose from his seat while the words "He shall reign for ever and ever" were sung during this work's "Hallelujah" Chorus. For 10 points, name this oratorio commonly performed at Christmas by George Frideric Handel.

ANSWER: Messiah (begudgingly accept The Messiah) <Minton>

10. The “left-pad” controversy referred to a package written in this language. Google developed the V8 engine for use with this language, and toolkits like Grunt and Gulp can be used along with transpilers to help “bundle” files written in this language. Microsoft wrote a “superscript” of this language to address its loose typing, and (*) Node is an adaptation of this language for server-side use, though it’s usually executed client-side. Facebook’s React framework and the JQuery library augment this language. For 10 points, name this programming language used with CSS and HTML to make websites interactive, not to be confused with the similarly named Java. Answer: **Javascript** (do NOT accept or prompt on “Java”; anti-prompt [ask for less specific] on Node until mention) <Deutsch>

11. A sculpture named for this city consists of a concrete base topped with a vaguely fork-like shape, and is an abstract feminine figure originally named *The Sun, the Moon, and One Star*. Iron bars stabilize a sculpture in this city inspired by either Sylvette or an Afghan Hound dog. Abstract sculptures by Joan Miró and Pablo Picasso, as well as a bright red (*) *Flamingo* sculpture by Alexander Calder, appear in this city. Two bronze lions sculpted by Edward Kemeys stand outside an art museum in this city, and Anish Kapoor sculpted a curved stainless steel form for this city. A namesake Art Institute is located in, for 10 points, what site of *Cloud Gate*, or the “Bean?” ANSWER: **Chicago**, Illinois <R. Li>

12. This is the last numerical digit of Graham’s number, and it is the lowest number of dimensions of a known exotic sphere. While a plane can be colored with four colors, this is the smallest number needed to color a torus. The cross product in this many dimensions does not satisfy the Jacobi identity, and the cross product is only (*) defined in three and this many dimensions. There are this many Millennium Prize Problems. In increasing number of sides, this is the first polygon that cannot be constructed with compass and straightedge. This number is the most frequent sum if two six-sided dice are rolled. For 10 points, give this number of sides in a heptagon. ANSWER: **seven** <Huang>

13. In a poem by this author, the speaker addresses the title heavenly body and begs it to “say something” before it responds, “I burn.” Besides “Choose Something Like a Star,” this author wrote another poem in which he recounts how “one luminary clock against the sky / Proclaimed the time was neither wrong nor right.” In another poem (*) by this author of “Acquainted With the Night,” the speaker announces that he has “promises to keep” before noting that he has “miles to go before I sleep.” For 10 points, name this American poet of “Stopping by Woods on a Snowy Evening.” ANSWER: Robert Lee **Frost** <Cohen>

14. As a child, this man turned the children of lying parents into swine. Some accounts say a man named Sergius died in this man’s place. At the request of his followers, this man brought down a table of food from heaven. This man created birds from clay and breathed life into them. He is the most mentioned person in the Quran by reference, and this man will join with the (*) Mahdi on the Day of Judgment and kill the false messiah. This man, also known as Isa, was conceived while his mother Maryam was a virgin. For 10 points, name this prophet that, according to Islam, did not *actually* die on the cross. ANSWER: **Jesus** (or **Isa** until mention) <Suh>

15. A map designed by Harry Beck for this city only uses horizontal, vertical, and 45 degree lines. Though Norman Foster designed the never-built Millennium Tower in this city, he did eventually design a replacement with a tapering ellipsoid shape nicknamed for its resemblance to a certain (*) pickled vegetable. A derogatory comment about how a building would “pierce the heart” of this home of the Gherkin inspired that Renzo Piano-designed building’s common name, the Shard. The Charing Cross Bridge in this city can be seen from the top of Europe’s tallest Ferris Wheel, its namesake “eye.” For 10 points, name this home of Big Ben.

ANSWER: London <Chu>

16. The curl theorem in vector calculus is named after George Stokes and this scientist. This man made one of the first predictions of the age of the Earth by calculating the time it would take the surface of a molten ball to cool down to room temperature. With Joule, this scientist describes the relationship between (*) temperature and pressure during adiabatic [“AD-ea-BAD-ik”] expansion of a gas, an effect used in refrigerators. A unit named after this scientist is defined using a fractional value of the triple point of water, and indicates total lack of vibrational energy at zero. For 10 points, name this scientist who names an absolute temperature scale.

ANSWER: William Thomson, 1st Baron Kelvin (accept either underlined part) <K. Li>

17. Several lions that escaped this city’s zoo following an invasion were fictionalized in a graphic novel titled *Pride of [this city]*. A leader based in this city led the construction of the “Glory River” canal. The destruction of a statue in Firdos Square of this city was broadcast live on television. The “Mission Accomplished” (*) speech was given shortly after the United States took this city. The leader of the Ba’ath Party who fled from this city was found in an underground hole in December 2003. George H.W. Bush was criticized for failing to remove Saddam Hussein from this city at the end of Operation Desert Storm. For 10 points, name this capital of Iraq.

ANSWER: Baghdad <Suh>

18. While this character is stranded in Lisbon, she “inspect[s] the royal stables” and takes a picture of Henry Fielding’s grave. The title garment of a short story embodies Mabel Waring’s insecurity about attending an event hosted by this character. In addition to appearing in *The Voyage Out* and “The New Dress,” this character quotes *Cymbeline* and is friends with (*) Hugh Whitbread in another novel. This character reminisces about kissing Sally Seton in a stream-of-consciousness novel depicting a day in her life as she prepares to host a party. For 10 points, name this British housewife who titles a Virginia Woolf novel.

ANSWER: Mrs. Dalloway (accept Clarissa Dalloway; prompt on just Dalloway) <R. Li>

19. A temple to this deity can be found in the city of Edfu. This deity’s consort was either Serqet or Hathor, and this deity’s sons protect the canopic jars. Sobek used a fishing trap to retrieve this god’s hands from the Nile. This god tricked his brother into eating contaminated (*) lettuce and cheated to win a race by sailing a boat made of wood rather than stone. In another conflict with Set, one of this god’s eyes was gouged out, which explains why the moon is not as bright as the sun. Pharaohs were said to be a manifestation of this god on earth. For 10 points, name this falcon-headed Egyptian god of the sky.

ANSWER: Horus (or Hor or Har or Her or Heru) <Duffy>

20. Amazon subsidiary Zappos is headquartered in this city’s former city hall, while this city’s current city hall is near the Fremont Experience. The second-tallest freestanding structure in the Western Hemisphere is in this city and is named after a layer of the atmosphere. The unincorporated community of Paradise is the location of this city’s (*) McCarran International Airport. Bugsy Siegel was a key figure in the development of this city, which includes attractions such as the Stratosphere, The Bellagio, and Caesars Palace. For 10 points, name this largest city in Nevada, famous for its casinos along the Strip.

ANSWER: Las Vegas <Oberhaus>

21. **Because the safety factor was less than one in Z-pinch machines, Kruskal–Shafranov kink instabilities resulted in the retraction of this kind of result at ZETA in England. Because of the increase in density, the muon-catalyzed type of this process allows for the reduction of temperature to reach ignition according to the** (*) Lawson Criterion. Bremsstrahlung losses can limit efficiency of this process. Graphite electrodes are used in Langmuir probes to measure plasmas that participate in this process and a magnetic field holds plasmas in a torus shape to achieve this in a tokamak. For 10 points, name this process that combines the nuclei of atoms together.
ANSWER: **nuclear fusion** (prompt on just fusion; do NOT accept or prompt on “nuclear fission” or “fission”)
<Owen>

Bonuses

1. Before going in front of a king, this woman says, “If I perish, I perish.” For 10 points each:

[10] Name this Jewish queen of the Persian king Ahasuerus and the cousin of Mordecai. Her story is told in her eponymous book in the Bible.

ANSWER: **Esther** (or **Hadassah**; accept Book of **Esther**)

[10] This Jewish holiday celebrates the deliverance of Jews by Esther and Mordecai. On this day, there is a public reading of the Book of Esther as well as an exchange of gifts known as *mishloach manot*.

ANSWER: **Purim**

[10] A triangular pastry known as this man’s “ears” or “pockets” is eaten during Purim to symbolize the defeat of this adversary of Esther, who unsuccessfully tried to massacre all Jews in Persia.

ANSWER: **Haman** <Suh>

2. An attempted replication of an experiment involving these objects in 2018 failed to support the behavioral conclusions of that experiment, but affirmed the correlation with achievement tests. For 10 points each:

[10] Name these objects which were placed in front of children at the Bing Nursery school to test the age that control of delayed gratification develops in an experiment by Walter Mischel.

ANSWER: **marshmallows**

[10] Mischel’s marshmallow test was conducted at this university, the site of a Philip Zimbardo experiment involving “guards” and “prisoners” that was abandoned after six days and has not yet been successfully reproduced.

ANSWER: **Stanford** University

[10] Another experiment involving children conducted by Jane Elliott investigated the effects of discrimination by dividing them up into two groups based on having either of these two traits. Name both.

ANSWER: **blue**-eyed and **brown**-eyed (accept anything indicating **blue** and **brown** eye color) <Yue>

3. For 10 points each, answer the following about central banks setting negative interest rates.

[10] The European Central Bank instituted negative interest rates in 2014 as a measure to deal with an economic crisis in this country, in which the Syriza Party was elected to oppose austerity programs.

ANSWER: **Greece**

[10] Negative interest rates were implemented as part of this policy guided by “three arrows” including a rise in the consumption tax. It is named for the current Prime Minister of Japan.

ANSWER: **Abenomics**

[10] After the Swiss experiment, the first country to use negative interest rates was this one, in which the Social Democratic Party has led for decades due to strong bases of support in cities like Malmö and Stockholm.

ANSWER: **Sweden** <Myers>

4. After experiencing the Great Disappointment in 1843, this woman distanced herself from her Millerite friends.

For 10 points each:

[10] Name this woman who became an abolitionist after an intense religious experience, saying “The Spirit calls me, and I must go.”

ANSWER: Sojourner **Truth** (or Isabella **Baumfree**)

[10] Sojourner Truth is perhaps best known for this speech she gave in Ohio, which has been titled after a question that often appeared in a paraphrased version of this speech.

ANSWER: “**Ain’t I a Woman?**”

[10] This other African American abolitionist woman, nicknamed “Moses,” helped hundreds of slaves escape via the Underground Railroad.

ANSWER: Harriet **Tubman** <Suh>

5. Paul D is shocked in this novel to find that Sethe killed her oldest child to protect her from slavery. For 10 points each:

[10] Name this novel that follows Sethe, Denver, and the title character as they escape from the Sweet Home plantation.

ANSWER: **Beloved**

[10] This author of *Beloved* focused on the African-American community of Bottom in *Sula* and wrote of Pecola's desire for the title object in *The Bluest Eye*.

ANSWER: Toni **Morrison**

[10] In this other Morrison novel, Pilate and First Corinthians receive their names from a randomly selected spot in the Bible. The protagonist, Milkman, travels to the South to find his ancestral home.

ANSWER: **Song of Solomon** <Horton>

6. For 10 points each, answer some questions about the French physicist Léon Brillouin.

[10] Brillouin zones are used to describe the reciprocal space corresponding to these highly ordered solids. They can be described by Miller indices and feature a namesake lattice.

ANSWER: **crystals**

[10] Crystal lattice waves interacting with electromagnetic waves results in Brillouin scattering, similar to this other scientist's namesake elastic scattering, which causes the sky to appear blue.

ANSWER: John William **Strutt**, 3rd Baron **Rayleigh** ["RAY-lee"] (accept either underlined part)

[10] Brillouin also partially names the WKB approximation, which can calculate the rate of this process through an arbitrary potential barrier. This process occurs when the energy of the wavefunction is lower than the potential barrier.

ANSWER: quantum **tunneling** (accept word forms) <Yue>

7. The acerbic reaction to a statue of this man, including the comment that it resembled a "snowman in a bathrobe," led to it being rejected by its commissioner, the Société des Gens de Lettres. For 10 points each:

[10] Name this man who is depicted in a *Monument* to him sculpted 40 years after his death wearing a long robe and without the pen, desk, or other accoutrements that would have defined him as a writer.

ANSWER: Honoré de **Balzac**

[10] The *Monument to Balzac* was sculpted by this French creator of *The Thinker*.

ANSWER: Auguste **Rodin** (or François Auguste René **Rodin**)

[10] *The Thinker* was included at the top of this Rodin sculpture group meant to be the entrance to the Directorate of Fine Arts. It was inspired by Dante's *Inferno*.

ANSWER: *The **Gates of Hell*** (or *La **Porte de l'Enfer***) <Chu>

8. In one story, one of these objects is of "Perfection" because its "size was that of [an] Empire, and which coincided point for point with it." For 10 points each:

[10] Name this subject of Jorge Luis Borges' "On Exactitude in Science," aptly produced by the "Art of Cartography."

ANSWER: a **map**

[10] This English poet described doctors as "Cosmographers, and I their map" in "Hymn to God, my God, in My Sickness." He compares lovers to "stiff twin compasses" in "A Valediction: Forbidding Mourning."

ANSWER: John **Donne**

[10] This American author depicted the Revolutionary-War-era exploration of the two title cartographers as seen through the eyes of Reverend Wicks Cherrycoke in his novel *Mason & Dixon*.

ANSWER: Thomas **Pynchon** <Yue>

9. Even rocks can fold under pressure. For 10 points each, answer these questions about geologic folds:

[10] Name these large geologic depressions that are formed when rock strata fold and dip towards the center from all directions. A system of watersheds in the western United States is called the “Great” one of these structures.

ANSWER: **basin** (accept Great **Basin**)

[10] Large collections of geologic folds can comprise the “belts” named for this process in which mountain ranges form. Its name is Greek for “mountain creation.”

ANSWER: **orogeny** (accept word forms)

[10] This is the term for a geologic fold in which the rock strata dip downwards towards the axial plane.

ANSWER: **syncline** <Duffy>

10. For 10 points each, answer the following questions about secret police organizations in European history.

[10] This dictator conducted his Great Purge through the secret police NKVD. He also led the Soviet Union through World War II.

ANSWER: Josef **Stalin** (or Ioseb Besarionis dze **Jughashvili**)

[10] One of this country’s espionage missions caused Willy Brandt to resign in the Guillaume Affair. Markus Wolf was a longtime leader of its secret police, the Stasi.

ANSWER: **East Germany** (or **German Democratic Republic**; or **GDR**; accept **DDR**; do NOT accept or prompt on “West Germany” or “Germany”)

[10] The PIDE was the secret police of this regime that once operated a prison camp in Tarrafal in its colony of Cape Verde. This regime assassinated the dissident Air Force general Humberto Delgado.

ANSWER: **Estado Novo** (or **Second Republic of Portugal**; prompt on partial answer; prompt on descriptive answers mentioning António de Oliveira **Salazar**) <Suh>

11. The Egyptian underworld, or Duat, was full of more than just dead people. For 10 points each, answer the following about creatures and things in the Duat.

[10] These animals guard the gate to the Duat. One of these animals named Babi stands next to a lake of fire.

ANSWER: **baboon** (prompt on **monkey**)

[10] In the Duat, this sun god changes forms from the old Atum to the reborn Khepri. This god and his attendants also battle the serpent Apophis.

ANSWER: **Ra**

[10] In the Hall of Judgment, Anubis will weigh the hearts of the deceased against one of these objects. If the heart is heavier, it will be devoured by the beast Ammit.

ANSWER: **feather** of Maat <Duffy>

12. Answer some questions about how you might edit a photograph in post-processing, for 10 points each:

[10] If you’re posting the photo to Instagram, you may add one of these adjustments that differentially modifies tones in the image, often to create certain moods. Examples on Instagram include Clarendon and Gingham.

ANSWER: **filters**

[10] If your photo is too dark, you may want to increase the exposure by one or two of these units, each of which represents a doubling of the amount of light. When preceded by the letter “f”, this four-letter term denotes the size of the lens aperture.

ANSWER: **stops** (accept f-**stops**)

[10] More selective edits can be made by using a brush tool to selectively brighten areas of the image in this technique. When combined with “burning,” or selective darkening, it can add contrast to the photograph.

ANSWER: **dodge** (accept word forms; accept **dodge** and burn) <Chu>

13. For 10 points each, answer these questions about celebrities who each have a certain gimmick that makes them memorable.

[10] This British celebrity chef is known for his expletive laden appearances on shows like *Hell's Kitchen* and *Kitchen Nightmares*. This man's oft-quoted lines include "It's raw!"

ANSWER: Gordon James **Ramsay** Jr.

[10] This African American actor is famous for creating and playing the Madea character, a tough, elderly black woman. Oprah Winfrey has praised this actor, while Spike Lee criticized this man's work as "coonery buffoonery."

ANSWER: Tyler **Perry**

[10] This American magician almost never speaks during his performances. He is often paired with fellow magician and outspoken atheist Penn Jillette.

ANSWER: Raymond Joseph **Teller** <Suh>

14. Your lit editor is currently planning a trip to London and wants to see a show on the West End. Help him out, for 10 points each:

[10] The longest running musical in West End history is this one, based on a Victor Hugo novel about Jean Valjean and some star-crossed lives during a brief Parisian revolution.

ANSWER: **Les Miserables**

[10] The longest running show overall, however, is the play *The Mousetrap*, by this British author. This author's novel *And Then There Were None* ends with a postscript revealing the identity of the killer.

ANSWER: Agatha **Christie**

[10] The theater named after this playwright is currently hosting Matthew Lopez's *The Inheritance*. This playwright's own shows to run in the West End include *Private Lives* and *Blithe Spirit*.

ANSWER: Sir Noël (Peirce) **Coward** <Kuang>

15. Lice are unpleasant to have. For 10 points each, answer some questions about methods to control their spread:

[10] Lice were historically targeted with this widely-banned non-pyrethroid insecticide. It functions by opening sodium channels, causing continuous neural firing accompanied by the inability to control muscular contractions.

ANSWER: **DDT** (or **dichlorodiphenyltrichloroethane**)

[10] The sklice medication contains the compound ivermectin ["**EYE-ver-MECK-ten**"], which causes death by binding to chloride channels gated by this neurotransmitter. This neurotransmitter is by far the most abundant neurotransmitter in the human brain, and is a precursor to GABA.

ANSWER: **glutamate** (accept **glutamic** acid)

[10] Unlike the chemical mechanisms of most insecticides, silicone-based oils prevent lice from expelling this liquid eventually leading to rupture from osmotic stress. This compound freezes into ice at 0 degrees Celsius.

ANSWER: **water** <K. Li>

16. For 10 points each, answer some questions about sirens as instruments in classical music.

[10] This French composer used sirens in his 1917 *Parade*, though he is more famous for writing sets of three *Gymnopédies* and *Gnossiennes*.

ANSWER: Erik **Satie**

[10] George Antheil included sirens and other unique percussion in a landmark piece titled for a “mécanique” one of these works. Sergei Diaghilev commissioned many of these works like Satie’s *Parade* and Stravinsky’s *Rite of Spring* for his dance company.

ANSWER: **ballet**

[10] The composer of many early works with sirens, Edgar Varèse, is sometimes known as the father of this type of music due to a namesake 1958 “poème.” Karlheinz Stockhausen produced many works of this type at WDR Cologne.

ANSWER: **electronic** music (accept *musique concrète*, *Poème électronique*, *Elektronische Musik*, or music for electronic **tape**) <Yue>

17. This empire’s ruler’s concubines lived in the Imperial Harem, which was also known as the seraglio. For 10 points each:

[10] Name this empire whose namesake style of architecture was influenced by Seljuk and Byzantine architecture. This empire also built the Blue Mosque and converted an Eastern Orthodox cathedral into the Hagia Sophia.

ANSWER: **Ottoman** Empire

[10] The Fatih Mosque and Tiled Kiosk were built during the reign of this Ottoman sultan, who took Constantinople in May 1453 to earn the epithet “Conqueror.”

ANSWER: **Mehmed II** (or **Mehmed the Conqueror**)

[10] This palace with a name meaning “Cannon Gate,” was constructed shortly after Mehmed II’s conquest of Constantinople and today stands as a museum.

ANSWER: **Topkapi** [“tope-KAH-pee”] Palace <Suh>

18. Computers have become vital tools to model and solve physical systems. For 10 points each, answer some questions about numerical methods.

[10] Performing this task numerically is sometimes known as quadrature, and Monte Carlo and Simpson’s rule algorithms perform this task by finding the area under a curve. It can be thought of as the reverse of differentiation.

ANSWER: numerical **integration** (prompt on *antidifferentiation*)

[10] With Isaac Newton, this scientist names an algorithm to solve non-linear least-squares problems, and also names a common quadrature method. He also names the normal distribution.

ANSWER: Carl Friedrich **Gauss**

[10] Many numerical methods to solve partial differential equations using a meshed geometry begin with this adjective. Examples of such methods include the [this adjective] Element Method and the [this adjective] Volume Method.

ANSWER: **finite** <Yue>

19. This character refutes the notion that “saying is inventing,” remarking that “you think you are inventing, you think you are escaping, and all you do is stammer out your lesson.” For 10 points each:

[10] Name this paralyzed Irish writer who beats a “young old man” and is pursued by the private detective Jacques Moran in the first of a trilogy of novels.

ANSWER: **Molloy**

[10] In a play, this character possibly has a white beard and beats a boy’s brother who “minds the sheep.” That boy tells Vladimir and Estragon that this character “won’t come this evening but surely tomorrow.”

ANSWER: **Godot** (accept *Waiting for Godot*)

[10] Both the trilogy consisting of *Molloy*, *Malone Dies*, and *The Unnamable* and the play *Waiting for Godot* are by this Irish author.

ANSWER: Samuel **Beckett** <Yue>

20. The narrow passage of a referendum in France of this treaty was called the “*petite oui*” [roughly “we”]. For 10 points each:

[10] Name this treaty signed in 1992 that founded the European Union. The treaty is named after a city in the Netherlands where it was signed.

ANSWER: **Maastricht** Treaty (accept **Treaty on European Union** if they jump the gun and say it before mention)

[10] The European Union was preceded by a “Community” that regulated the production of these two commodities. Name either.

ANSWER: **coal** or **steel** (accept European **Coal** and **Steel** Community)

[10] The aforementioned European Coal and Steel Community was founded by a treaty signed in this city. A “Peace Conference” held in this city produced the Treaty of Versailles [“**ver-SYE**”] which ended World War I.

ANSWER: **Paris** <Suh>

21. For 10 points each, answer these canine literary questions.

[10] In a Mikhail Bulgakov novel titled for this organ, the dog Sharik morphs into an uncivilized human following an operation by Dr. Preobrazhensky. Edgar Allen Poe wrote a short story about a “Tell-Tale” one.

ANSWER: **heart**

[10] Dmitri Gurov encounters his lover Anna Sergeyevna and her “white Pomeranian” while visiting Yalta in this author’s short story “The Lady with the Dog.” In a play by this author, Olga, Maria, and Irina form the titular ensemble of siblings.

ANSWER: Anton **Chekhov**

[10] Poprishchin’s revelation that two dogs are writing letters to each other reveals his decline into insanity in a short story with this title. In another short story with this title, the narrator sees the words “EAT PEOPLE” in his books and begins to suspect that his townspeople are cannibals.

ANSWER: “**Diary of a Madman**” (accept “A **Madman’s Diary**”) <R. Li>