

Tossups

1. Like a scene by Campin, the Deesis of this work is unusual in that it shows the Virgin Mary reading a book. Saint Cecilia is depicted playing the organ next to a naked Eve holding the citrus fruit in this work. This work's back shows a crown-wearing Mary with a haloed dove directly above her in an Annunciation scene. This work includes another image of the dove of the Holy Spirit surrounded by white and gold circles of light at the top of a scene that also includes an image of the (\*) fountain of life below a pedestal surrounded by fourteen angels in a circle; that pedestal holds a golden chalice, into which blood falls from the chest of the sacrificial Lamb of God. For 10 points, name this huge work of art designed by Hubert and painted by his brother, Jan van Eyck.

ANSWER: Ghent Altarpiece [or Adoration of the Mystic Lamb]

2. One author with this last name wrote about a man who jeopardizes his relationship with Marjorie Gray by working with his assistant, Bus, to fatten a bill to the point where it would certainly be vetoed by the president. Another author with this last name wrote a story in which a man takes his son into the woods where he will burn a lamb, but when he pulls out a knife his son, David, gets scared and runs away. An author with this last name created Alan McLean in (\*) *Both Your Houses*, while another author with this last name wrote “Terror” as part of “Godliness,” one of the many stories in a collection that describes a man who seduces Louise Truncheon and Helen White and is named George Willard. For 10 points, name this last name of the author of *Winesburg, Ohio*.

ANSWER: Anderson [or Maxwell Anderson, or Sherwood Anderson]

3. Fabiola and Chapman added a pair of angles to a potential modelling these phenomena, which are often modelled by the Dreiding equation. These phenomena are modelled by a 12-10 potential. Thiourea catalysis makes extensive use of these phenomena, and these phenomena are responsible for the dimerization of carboxylic acids. These phenomena occur between residue  $n$  and  $n$  plus four in a standard (\*) alpha helix. These phenomena commonly cause gross deviations from Raoult's law by inducing azeotropy, and these phenomena are responsible for the high boiling point and remarkable solvent properties of water. For 10 points, name this type of weak intermolecular interaction between a heteroatom and an atom of the namesake very light element.

ANSWER: hydrogen bonding

4. This figure once destroyed the fields of Jahnu, leading Jahnu to swallow this figure and eventually release her from his ears. One of this figure's epithets reflects the fact that she can traverse all three worlds. This figure descended to earth after the sage Kapila burned the sixty thousand children of Sagara to death, and she helped them ascend to heaven. In one story, this figure killed seven of her children until her husband questioned her actions with the eighth; that eighth child was Bhishma, who was the son of (\*) Shantanu. During her descent to earth, she landed on Shiva's hair, which he knotted in order to trap her and attenuate the flow of her water to the earth. For 10 points, name this personification of a sacred river in Hindu mythology.

ANSWER: Ganga [accept the Ganges]

5. One leader from this party ran with an election poster that stated “No Experiments!” and survived a bombing attempt by Eliezer Sudit, a member of the Irgun. In 1999, several members of this party were accused of accepting illegal donations from arms dealer Karlheinz Schreiber. The first leader of this party negotiated the “Return of the 10,000”, while a later leader negotiated the two plus four treaty, which led to the stepping down and (\*) arrest of Egon Krenz. One member of this party presided over the implementation of a

“social market economy”, which led to a period of low inflation and rapid growth called the “economic miracle”; that figure was Ludwig Erhard, who served as finance minister under the first Chancellor from this party, Konrad Adenauer. For 10 points, name this German political party whose members include Helmut Kohl and the current chancellor, Angela Merkel.

ANSWER: Christian Democratic Union of Germany [or CDU; or Christlich Demokratische Union Deutschlands]

6. In one film directed by this man, a plan to select a martyr by putting a coin in a pudding is foiled by the cook putting a coin in every pudding. In one film directed by him, the protagonist plays with the toys in a department store after getting a job as a night watchman. In another film, this man’s character accidentally puts English mustard on his strawberries during a negotiation. In that film, this man’s character dances with a large (\*) inflatable globe, and looks identical to an amnesiac Jewish barber. This man plays a factory worker who is trapped in the gears of a giant machine before being sent to jail in another work. This man, who often appeared opposite Paulette Goddard, played Adenoid Hynkel in *The Great Dictator*. For 10 points, name this early 20<sup>th</sup> century actor and director whose films like *Modern Times* and *City Lights* featured his “Little Tramp” persona.

ANSWER: Charlie Chaplin

7. One work by this author pleads, “Stay, stay, Until the hasting day Has run But to the evensong;” that poem later says, “We die, As your hours do, and dry Away, Like to the summer’s rain” and is about flowers “we weep to see” and that “haste away so soon.” This author of “To Daffodils” wrote of a state that “Do more bewitch me than when art Is too (\*) precise in every part.” This author created a speaker who sees “how sweetly flows That liquefaction of her clothes” in one poem also wrote of “The glorious lamp of heaven, the sun” and how “The higher he’s a-getting, The sooner will his race be run.” This poet wrote *Noble Numbers* and the poem “Delight in Disorder” as well as a collection including many poems addressed to Julia. For 10 points, name this author of *Hesperides* who wrote “Gather ye rosebuds while ye may” in his “To the Virgins, to Make Much of Time.”

ANSWER: Robert Herrick

8. A 2008 report confirmed what historians had long suspected: that this person had ordered the poisoning of a ruler who died a day before this person’s own death. This ruler once shared power with a former colleague and the Prince of Gong in a government based in the Zongli Yamen. This ruler siphoned large amounts from the naval construction fund to expand the (\*) Summer Palace. The traditional civil service examinations were stopped under this person’s orders. Ronglu, a general loyal to this ruler led forces that forced Kang Youwei into exile and placed the Guangxu Emperor under house arrest to end of the Hundred Days’ Reform. This person publicly backed the Boxer Uprising. For 10 points, name this woman who had *de facto* control of China for half a century through her position as Empress Dowager during the late Qing dynasty.

ANSWER: Empress Dowager Cixi [or Empress Dowager Tzu-hsi; or Cixi Taihou; Tzu-hsi T’ai-hou; or The Current Divine Mother Empress Dowager *Xiao-Qin* Ci-Xi Duan-You Kang-Yi Zhao-Yu Zhuang-Cheng Shou-Gong *Qin-Xian* Chong-Xi Pei-Tian Xing-Sheng Xian of the Great Qing Empire; or Empress Xiao-Qin Xian; or really any Chinese answer with Cixi]

9. The creator of this experiment posited a form of adaptive gene loss in the Black Queen Hypothesis. In one instance, this experiment showed the contingency of *pykF* and *nadR* polymorphisms. By using a gene duplication of the *CitT* gene under the control of an *mk* promoter, several subjects of this experiment gained the ability to metabolize (\*) citrate. The setup of this experiment contains half Ara plus and half Ara minus strains and relies on daily 1:100 serial dilution in DM25 medium. The subjects of this experiment are contained in twelve flasks and have undergone over fifty thousand generations of reproduction. For 10 points, name this experiment in which a common laboratory strain of bacteria has been subjected to 20 years of evolution.

ANSWER: Lenski's longterm E. coli evolution experiment [accept anything mentioning the long term evolution of E. Coli]

10. This man's reputation as a philosopher was rehabilitated by Gilles Deleuze, who wrote a book titled "[This man and philosophy." In one work, this thinker asserted "the great wars of the present age are the effects of the study of history." That work ends by comparing like-minded philosophers to Argonauts of the Mind and spends numerous pages attacking Christian exegesis. This author collected his "thoughts on the prejudices of (\*) morality" into his book *Daybreak*. Another of his books has chapter headings like "Why I am a Fatality" and "Why I Write Such Good Books" and was published in 1888, the year he went hopelessly insane. For 10 points, name this author of the autobiographical *Ecce Homo*, a philosopher who asserted that "God is Dead".

ANSWER: Friedrich Nietzsche

11. These entities can be used in a form of interpolation called *slERP*ing. Every finite p-group that has every abelian subgroup cyclic is either itself cyclic or is a generalized group of these entities, and the dicyclic group of order two is isomorphic to the group of them. The factor group of the group of these entities with their center is isomorphic to the Klein four-group. Those with norm one are called *versors*, and these entities follow the complex numbers in the (\*) Cayley-Dickson construction. Symbolized by a blackboard H, they are often used to implement three-dimensional rotations. They consist of three elements, i, j, and k, whose square is negative one and whose products with each other are anticommutative. For 10 points, name this four-dimensional number system created by Hamilton.

ANSWER: quaternion

12. This man was told to only keep in his army those that lapped water with their tongues like a dog. The son of this man was criticized in a story about trees trying to anoint a thorn bush; that son of this leader was later killed when a woman in Thebez threw a millstone on his head. Using earrings taken from plunder, he created an ephod that the people worshipped. This man was the father of the villainous dictator (\*) Abimelech. He first attracted attention by destroying his father's altar to Baal. In order to be assured of God's promises, this person "put out a fleece" and asked God to keep the dew only on it, not the ground. This man's forces used trumpets in their victory over the Midianites. For 10 points, name this Biblical Judge, who lends his name to an organization that provides Bibles.

ANSWER: Gideon [or Jerub-Baal]

13. This work describes one event as a "Platonic concept of hate". One section of this work notes that for this work's subjects, incest is far more palatable than bestiality, and states that clumsiness is frowned upon because it makes people appear beast-like. The author notes that he and his wife were initially "invisible" until they ran from a police raid, and also explicates the double meaning of the word "sabung". The events described in this work are divided into (\*) 21 second periods, and are divided into ones with high stakes and large wagers and those without. The participants in the title event have razors tied to their legs before being set against each other. For 10 points, name this essay, an example of "thick description" that analyzes the role of the title illegal sporting events, by Clifford Geertz.

ANSWER: "Deep Play": Notes on the Balinese Cockfight" [prompt on "*Interpretation of Cultures*"; do not prompt on "Notes on the Balinese Cockfight"]

14. This author wrote a work in which a young boy is gifted a dog named "Lindy," which is short for "Lindbergh," which is said to be "A high-grade imported name;" later in that novel, a woman starts sobbing at night like she used to when she first got married and reveals her affair with Aso. Another of this author's novels ends with a girl getting diarrhea from seeing her wedding attire because she is so disgusted by the bastard son (\*) Sachiko found for her to marry. One of this author's novels involves the safeguarding of Hiroshi

from the impending divorce of his parents Misako and Kaname, while another involves a secret birth given by Taeko and the search for a suitor for Yukiko. For 10 points, name this author of *Some Prefer Nettles* and *The Makioka Sisters*.

ANSWER: Jun'ichiro Tanizaki

15. St. Clair McKelway, who did public relations for this event's planner, called the perpetrators of this event "the thousand kids." This March 9-10 event was codenamed Operation Meatinghouse and it proved the value of a series of tactical innovations such as (\*) flying at low elevations at night in order to avoid clouds and destroy the cottage industries located in wooden homes. This event that led to more than 100 000 deaths was the deadliest conventional air raid in history. It was the first in a campaign planned by Curtis Lemay that later targeted Nagoya, Osaka and Kobe. About a dozen of the 334 B-29s at this event were downed because of columns of heat. For 10 points, name this 1945 US Army Air Force air raid that led to a firestorm consuming much of the Japanese capital.

ANSWER: Fire**bombing** of Tokyo [or Operation Meatinghouse before mention; or Great Tokyo air raid; prompt on "firebombing of Japan" and equivalents]

16. The *nobilmente e semplice* first movement of one work by this composer has a long thematic introduction in A flat, but then shifts to D minor; that is this composer's *Symphony No. 1*, one of very few symphonies in A flat major. This composer who often composed at the Brinkwells country house wrote a *Serenade for Strings* in E minor. This composer wrote a long choral work based on text by (\*) John Henry Newman, and another of his works uses the song "Land of Hope and Glory" for its trio section; that work is the first in a set of five marches by this composer who wrote sections like "Dorabella" and "Nimrod" for another work. For 10 points, name this composer of the *Enigma Variations* and the marches in *Pomp and Circumstance*.

ANSWER: Sir Edward William Elgar, 1<sup>st</sup> Baronet

17. He created a system of military rule by major generals, and his French alliance ended up giving his country Dunkirk. This ruler, whose death was called for in the pamphlet "Killing no Murder", was given his highest position by a document drafted by James Lambert and based partly on the "Heads of Proposals". This leader passed the Penal Laws during a campaign in which he gave no quarter to the defeated garrison of (\*) Drogheda; that campaign was his invasion of Ireland. He carried out a purge of the Rump Parliament to create the Barebones Parliament. This leader was disinterred and posthumously beheaded for his part in a war during which he served under Lord Fairfax. His son was so incompetent that Parliament voted to restore Charles II. For 10 points, name this Puritan general of the New Model Army and Lord Protector of the Commonwealth of England.

ANSWER: Oliver Cromwell

18. This value appears in both terms of the definition of the Lagrange invariant. Whether this value is in the numerator or the denominator of the expression for momentum is the focus of the Abraham-Minkowski controversy. The square of this value minus one all over the square of this value plus two is equal to four pi over three times number of molecules per unit volume times polarizability. The square of this value is equal to one plus a series of terms with B times lambda squared over lambda squared minus C according to the (\*) Sellmeier equation. The difference between its ordinary and extraordinary versions gives birefringence. This value is on both sides of a law which relates the angle of incidence to another angle; that law is named for Snell. For 10 points, name this value symbolized n that is used to measure how much light bends when it moves between media.

ANSWER: index of refraction [or refractive index, accept n before mention]

19. In 2012, this country's military carried out Operation Sledgehammer to seize Kismayu. The Lotikipi Basin and Lodwar Basin aquifers were two of the five discovered in this country in September 2013. This country's parliament voted to being disassociating itself from the International Criminal Court over charges against men such as deputy president William Ruto. Those charges are over claims of creating death squads

**during this country's contentious (\*) 2007 presidential elections, which like this country's 2013 presidential elections was lost by former Prime Minister Raila Odinga. This country's current president, Uhuru, is the son of its first president and succeeded Mwai Kibaki. For 10 points, name this East African country that was the site of a September 2013 attack on the Westgate Mall by Al-Shabab.**

ANSWER: Republic of Kenya [or *Jamhuri ya Kenya*]

**20. In one story by this author, a man orchestrates a love triangle, but he is chased down and killed by a stone thrown by Fransine; that story is about the title councilor and struggling writer. Another of this author's stories includes a smaller tale, "The Wine of the Tetrarch," which is told by a cardinal who is actually an actor in disguise; that story by this author begins a collection that also tells of the ghost of (\*) Morton who speaks to his sisters, Fanny and Eliza. This author of "The Poet" wrote of Prince Potenziani who asks Count Nino to impregnate his wife in "The Roads Round Pisa" and also wrote of Calypso and Miss Malin in a story of a huge flood as part of a collection that includes "The Supper at Elsinore" and "The Deluge at Norderney." For 10 points, name this author of *Seven Gothic Tales* as well as a memoir about time spent in Kenya titled *Out of Africa*.**

ANSWER: Isak Dinesen [or Karen von Blixen-Finecke or Karen Christenze Dinesen]

**TB. Mooren names a type of these entities that occur in the cornea. A disease named for these entities is linked to SNP rs5771069 in the IL-17 rel gene. Pyoderma gangrenosum causes them to appear over the skin, and primary sclerosing cholangitis is associated with a form of colitis named for them that is continuous and usually isolated to the large intestine. Crohn's disease is associated with aphthous ones appearing in the (\*) mouth, and they are also caused in one organ by excessive consumption of NSAIDs or by infection with an anaerobic urease positive organism treated via triple therapy. For 10 points, name these breaks or discontinuities in a membrane, whose gastric variety can be caused by *Helicobacter pylori*.**

ANSWER: ulcers [or sores]

## Bonuses

1. This ballet tells the story of the drunkard Giko who burns down a cotton warehouse and attempts to kill his wife, the title character, and participates in a smugglers' plot. For 10 points each:

[10] Name this ballet that also includes a song with loud timpani ostinato that alternates beats with the orchestra.

ANSWER: Gayane [or Gayne]

[10] This Armenian composer of *Gayane* is most famous for the final act, "Sabre Dance", from that ballet.

ANSWER: Aram Khachaturian

[10] Khachaturian also wrote incidental music to a play of this name by Lermontov. Five pieces from the incidental music were used to create a suite that includes a famous first movement waltz.

ANSWER: Masquerade [accept *Incidental music to* Masquerade or Masquerade Suite]

2. This movement gained popularity after Oswald Ducrot edited four essays that championed it in the fields of psychoanalysis, poetics, linguistics and anthropology. For 10 points each:

[10] Name this movement which argues that a system of unit symbols are necessary to interpret human culture. The book *Mythologies* uses the example of fish and chips reflecting patriotism and homeliness to argue for it.

ANSWER: structuralism

[10] *Mythologies* was written by this theorist, who also analyzed the "codes" of Balzac's *Sarrasine* in his work *S/Z*.

ANSWER: Roland Barthes

[10] This other structuralist wrote works like *The Raw and the Cooked* in his *Mythologiques* and also wrote *Tristes Tropiques*.

ANSWER: Claude Levi-Strauss

3. A chapel named for this artist in Houston includes fourteen of his black hued paintings. For 10 points each:

[10] Name this artist who wrote a manifesto with Adolph Gottlieb and created *Rust and Blue*. He broke a commission for forty paintings because he felt a restaurant was an inappropriate venue for his works.

ANSWER: Mark Rothko [or Marcus Yakovlevich Rothkowitz]

[10] Mark Rothko rejected his designation as a member of this art movement that also included Jackson Pollock.

ANSWER: Abstract Expressionism [or Abstract Expressionists]

[10] This other "action painter" denied the connections to Japanese calligraphy in his works like *Mahoning* that often consisted of many large black lines.

ANSWER: Franz Jozef Kline

4. This organization publishes a Blue Book which lists every single rule for nomenclature in organic chemistry. For 10 points each:

[10] Name this organization headquartered in Zurich, which was created by a committee headed by August Kekule. This organization's Gold Book is more formally called the *Compendium of Chemical Terminology*.

ANSWER: IUPAC [or International Union of Pure and Applied Chemistry]

[10] A major IUPAC project currently underway is finding an appropriate nomenclature for polymers composed of these substances. These substances are complexes of ligands attached to a central transition metal.

ANSWER: coordination compound

[10] This is the IUPAC term for a polymer in which all of the substituents are on the same side of the backbone.

ANSWER: isotactic

5. One poem in this book states, "I crack a grain between my teeth," and, "I am a reaper whose muscles set at sundown." For 10 points each:

[10] Name this book that includes "Harvest Song" as well as sections titled "Karintha" and "Kabnis."

ANSWER: Cane

[10] Besides Jean Toomer, the author of *Cane*, another Harlem Renaissance author was this one who wrote “Seven Negro Sermons in Verse” in one book and also wrote about a ragtime-playing Ex-Colored Man in another.

ANSWER: James Weldon Johnson

[10] This other Harlem Renaissance author wrote, “will my page be colored that I write?” in “Theme for English B” and wrote “My soul has grown deep” in “The Negro Speaks of Rivers.”

ANSWER: James Mercer Langston Hughes

6. One key engagement during this war was the Siege of Humaita. For 10 points each:

[10] Name this 1864-1870 South American war named for the alliance comprising Brazil, Argentina, and Uruguay that devastated Paraguay.

ANSWER: War of the Triple Alliance [prompt on “Paraguayan War”]

[10] This was the President of Paraguay during the War of the Triple Alliance. He died fighting during the Battle of Cerro Caro.

ANSWER: Francisco Solano Lopez

[10] The War of the Triple Alliance began when Solano Lopez successfully invaded this Brazilian state that borders Paraguay.

ANSWER: State of Mato Grosso

7. Hook echoes are a classic sign of supercells that eventually form these phenomena, which originate from cumulonimbus clouds. For 10 points each:

[10] Name this weather phenomenon common in the Midwest, which are large rotating destructive columns of air.

ANSWER: tornado [accept cyclone or twister]

[10] The intensity and destructive power of a tornado is measured using this scale, which goes from F0 to F5. The US now uses its enhanced variety.

ANSWER: Enhanced Fujita-Pearson scale

[10] This other scale used to characterize tornados is solely based on wind speed, unlike the Fujita scale. It is an extension of the Beaufort scale that goes from T0 to T11.

ANSWER: TORRO scale

8. The “conceptual” types of these constructs are mappings from the source domain to the target domain in such a way that helps us think about, speak about, and understand the target domain. For 10 points each:

[10] Name these linguistic constructs that were discussed in a work by George Lakoff and Mark Johnson.

ANSWER: metaphors

[10] The “Linguistic Wars” were a series of academic disputes between people like Lakoff and John Ross and this man. He is the author of *Syntactic Structures*.

ANSWER: Avram Noam Chomsky

[10] This other thinker also got into a fight with Lakoff over the book *Whose Freedom?* He is the author of works like *Words and Rules* and *The Blank Slate*.

ANSWER: Steven Arthur Pinker

9. One leader of this location issued the decree that “he who does not work, shall not eat”. For 10 points each:

[10] Name this settlement that was razed during Bacon’s Rebellion. This first English settlement in the New World was the home of people such as John Smith and Pocahontas.

ANSWER: Jamestown, Virginia

[10] This governor of Virginia ordered the settlement of the Bermuda Hundred. He is better known for a namesake code of “Articles, Lawes, and Orders Divine, Politique, and Martiall” that was pretty harsh.

ANSWER: Sir Thomas Dale [accept Dale’s Code]

[10] John Ratcliffe was killed by Powhatan while negotiating trade during this period in Jamestown's history that was ended by the arrival of the resupply fleet of Thomas West, 3<sup>rd</sup> Baron de la Warr.

ANSWER: the **Starving Time**

10. The play in which this character appears begins in her house as she talks with a sidekick, Snake, about a rumor involving Lady Brittle and Captain Boastall. For 10 points each:

[10] Name this gossiping widow who plots to break up Charles and Maria so that she can have Charles to herself. Lady Teazle eventually turns Snake against this woman.

ANSWER: Lady **Sneerwell**

[10] Lady Sneerwell is one of the main characters in this comedy that tells of Benjamin Backbite's pursuit of Maria despite Maria's love for Charles Surface.

ANSWER: *The* **School for Scandal**

[10] *The School for Scandal* was written by this playwright who wrote *A Trip to Scarborough* and *The Rivals*.

ANSWER: Richard Brinsley Butler **Sheridan**

11. Along with its country's security forces, this organization is prominently represented in the Ergenekon. For 10 points each:

[10] Name this organization whose Counter-Guerrilla was part of Operation Gladio. It has a record of launching coups to impose the secularism of the Six Arrows.

ANSWER: **Turkish army** [or **Turkish military**, **Turkish armed forces**; antiprompt on answers with a "non-army branch of the Turkish armed forces"; do not accept "Turkish secret police", "Turkish police", Turkish ]

[10] The special operations units of the Turkish Army are often thought of as being part of this secret, Turkish behind-the-scenes political movement that's the bogeyman for conspiracy theorists.

ANSWER: the Turkish **Deep State** [or **derin devlet**]

[10] The Turkish army sees itself as one of the main defenders of the Six Arrows ideology of this father of modern Turkey.

ANSWER: Mustafa Kemal **Ataturk** [or **Mustafa Kemal** Ataturk]

12. This author wrote of a man with a cleft lip who builds a rickshaw to carry his mother to Prince Albert. For 10 points each:

[10] Name this author of *The Life and Times of Michael K* who wrote of David Lurie's seduction of Melanie Isaacs in *Disgrace*.

ANSWER: John Maxwell **Coetzee**

[10] Both of those Coetzee works won the Man Booker Prize, as did this novel about a man who writes a letter to Wen Jiabao about his struggle to escape the rooster coop by killing Pinky Madam's husband, Ashok.

ANSWER: *The* **White Tiger**

[10] Like Coetzee, this author won the Booker Prize twice, and his novel *Parrot and Olivier in America* was shortlisted for the award. One of his prizes was given for *Oscar and Lucinda*.

ANSWER: Peter Philip **Carey**

13. This section of a larger composition begins with the horn sounding an F-sharp after which the cellos and basses begin a pizzicato melody that they pass back and forth with the bassoons. For 10 points each:

[10] Name this final piece in the first section of a suite made up of incidental music to a play. This short piece gradually gets louder and faster until its dramatic end.

ANSWER: "**In the Hall of the Mountain King**" [or **I Dovregubbens hall**]; prompt on "*Peer Gynt*" or "*Peer Gynt Suite No. I*" ]

[10] Name the Norwegian composer who included an "Arabian Dance" and "In the Hall of the Mountain King" in his *Peer Gynt Suite*.



ANSWER: Edvard Hagerup **Grieg**

[10] One of Grieg's most popular pieces is a piano concerto in this key that begins with a crescendoing timpani roll that leads to the full orchestra playing a "one" chord before a section for the pianist.

ANSWER: **A minor** [do not accept or prompt on "A"]

14. A subtype of these cells expressing the gamma-delta receptor are found in the gut mucosa. For 10 points each:

[10] Name this type of lymphocyte, whose helper variety is depleted in patients with AIDS. Their cytotoxic variety is responsible for killing cancerous or virally-infected host cells.

ANSWER: **T** cells

[10] This protein is expressed on the surface of helper T cells, and serves as the receptor for HIV. As such, the count of cells with this protein on the surface is used to monitor AIDS treatment.

ANSWER: **CD4**

[10] This immunoglobulin isotype is the most important in mucosal immunity. It is a dimer held together by a J chain.

ANSWER: Immunoglobulin **A** [or Ig**A**]

15. Identify the following elements of a Shinto shrine, for 10 points each.

[10] Shinto shrines contain an inner sanctuary known as a honden, wherein these spirits are enshrined. For example, Amaterasu, one of these spirits, is housed at the Ise Shrine.

ANSWER: **kami**

[10] With the exception of Inari shrines, which are guarded by foxes, Shinto shrines are protected by komainu, a pair of statues resembling a hybrid between two animals. Name either.

ANSWER: **lions** or **dogs**

[10] Several of these plaques, on which worshippers write wishes, are hung up at shrines for kami to receive them.

ANSWER: **ema**

16. One war between these two countries was ended by the 1812 Treaty of Bucharest just 13 days before the winner was invaded by Napoleon. For 10 points each:

[10] Name these two countries that fought wars in the Ukraine, Balkans, Black Sea, and Caucasus, including a 1787-92 one between Catherine the Great and Selim III.

ANSWER: Imperial **Russia** and **Turkey** [or **Russo-Turkish** Wars; or **Russian** Empire and the **Ottoman** Empire]

[10] During the 1768-1774 Russo-Turkish war, a Russian admiral encouraged this failed attempt at a Greek uprising. This was also the name of Catherine the Great's lover who helped her overthrow Peter III.

ANSWER: **Orlov** Revolt of 1770

[10] After the Turkish defeat at Kozludzha in the 1768-74 war, this treaty was signed. It gave Kerch, the northern Caucasus, and Southern Ukraine to Russia and made the Crimean Khanate a Russian satellite. It also made Russia the protector of Orthodox Christians in the Ottoman Empire.

ANSWER: Treaty of **Kucuk-Kaynarca** [or Treaty of **Kuchuk Kainarji**]

17. This author wrote the four-part *Joseph and His Brothers* and wrote about the relationship between Goethe and Charlotte Kestner in *Lotte in Weimar*. For 10 points each:

[10] Name this author who is more famous for writing about Gustav von Aschenbach in *Death in Venice*.

ANSWER: Thomas **Mann**

[10] This novel by Thomas Mann is initially set on Meng Strasse in Lubeck where the children Tom, Christian, and Tony enjoy the commercial success of their father Johann.

ANSWER: **Buddenbrooks**: *The Decline of a Family*

[10] This other novel by Mann centers on the adventures of a boy who can feign illnesses as a child and later avoids the draft. The protagonist of this novel takes on the identity of Louis Venosta and starts a relationship with Zouzou.

ANSWER: *The Confessions of **Felix Krull**, Confidence Man: The Early Years [or *Bekenntnisse des Hochstaplers **Felix Krull**, Der Memoiren, erster Teil]**

18. He joined Marcus Cocceius Nerva in the 37 CE trip to Brundisium to patch up relations in the Second Triumvirate. For 10 points each:

[10] Name this Roman who crushed the conspiracy of Lepidus the Younger. He was a patron of the arts who was the dedicatee of Vergil's *Georgics* and many of the works of Horace.

ANSWER: Gaius Cilnius **Maecenas**

[10] The most famous work written under the patronage of Maecenas was Vergil's *Aeneid*, which glorified the exploits of Aeneas, the supposed ancestor of this emperor whom Maecenas served.

ANSWER: Imperator Caesar Divi Filius **Augustus** [or Gaius Julius Caesar **Octavianus**; or **Gaius Octavius**; or **Imperator Caesar Divi Filius**; or **Gaius Julius Caesar Divi Filus**; prompt on "Octavius"; prompt on "Caesar"; prompt on "Gaius"; don't prompt on "Julius Caesar" or "Gaius Julius Caesar"]

[10] Vergil's *Eclogue* 10 was dedicated to this poet and prefect of Egypt who was recalled and disgraced when erecting a triumphal monument to himself in the emperor's personal province.

ANSWER: Cornelius **Gallus**

19. These particles are not found alone due to their property of confinement. For 10 points each:

[10] Name these particles that come in three different colors and six flavors, including up, down, top, bottom, charm, and strange. Three of them comprise protons and neutrons.

ANSWER: **quark**

[10] This theory that describes the strong force describes how strongly-interacting particles are subject to both confinement and asymptotic freedom.

ANSWER: **QCD** [or **quantum chromodynamics**]

[10] This physicist came up with a non-perturbative variant of QCD called lattice QCD, in which quark fields are placed on the points of a lattice while gluon fields are on the links. He also applied the theory of the renormalization group to the Kondo problem.

ANSWER: Kenneth G. **Wilson**

20. This city was the center for the cult of the Mnevis bull, and Atum and Shu were two other deities worshipped here. For 10 points each:

[10] Name this ancient city, in which a nonet of gods called the Ennead were worshipped. The only remaining part of this city is an obelisk honoring Atum.

ANSWER: **Heliopolis**

[10] Heliopolis gets its name from the fact that this Egyptian sun deity and enemy of Apep was worshiped there. This god was syncretized with Amun by the pharaoh Akhenaten.

ANSWER: **Ra**

[10] The *ba* of Ra takes the form of this avian, whose titles include "Lord of Jubilees". This creature was supposedly the inspiration for the phoenix.

ANSWER: **Bennu** bird