

2020-2021 MOQBA Novice

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Packet 1

Tossups

1. In the epilogue of this novel, the author uses sums of infinitesimals to argue against the “Great Man” theory of history. A character in this novel regrets marrying Helene Kuragin due to rumors of an affair with her brother Anatole. Over one hundred historical figures appear in this novel, including Pyotr Bagration. In this novel, Andrei (\*) Bolkonsky breaks his engagement to Natasha after her suicide attempt, after which she marries Pierre Bezukov, one of Napoleon Bonaparte’s would-be assassins. For 10 points, name this novel set during Napoleon’s invasion of Russia, an extremely long work of Leo Tolstoy.

ANSWER: War and Peace [or Vonya i mir] <European/World Literature> <Jason Loy>/<ed. JO>

2. Keith Haring painted a 300 meter long mural of interlocking human figures on this structure. Deterrents placed in this location were nicknamed “asparagus beds” or “Stalin’s carpet.” The official name for this structure was the “antifascist protective rampart.” Upon its completion, residents could only cross at three points nicknamed Alpha, Bravo, and (\*) Charlie. Ronald Reagan implored Mikhail Gorbachev to “tear down” this structure. For 10 points, name this barrier separating the eastern and western sections of its namesake German city.

ANSWER: Berlin Wall [or Berliner Mauer] <European History> <Jason Loy>/<ed. DS>

3. This country’s Mount Ruapehu is an active volcano that last erupted in 2007. Niue and the Cook Islands are in states in free association with this nation. The now-extinct moa was endemic to this country, which is also home to the tuatara [“too-uh-taa-ruh”]. The Tasman Sea separates this country from its northern neighbor. The Southern Alps and the cities of Dunedin and (\*) Christchurch are on this country’s South Island. For 10 points, what country to the southeast of Australia is governed from Wellington?

ANSWER: Dominion of New Zealand [or Aotearoa] <Geography> <Jason Loy>/<ed. WG>

4. Examination of a patient nicknamed “Tan” allowed Paul Broca to determine the function of his namesake area in this organ, which is connected by the arcuate fasciculus to Wernicke’s area. This organ is connected to the spinal cord by the medulla oblongata, part of its namesake (\*) stem. This organ is divided into temporal, occipital, parietal, and frontal lobes, and connections in the prefrontal cortex in this organ are broken in a lobotomy. This is the central organ of the nervous system. The cerebellum and cerebrum are part of, for 10 points, what organ, surrounded by the cranium?

ANSWER: brain <Biology> <Aadi Karthik>

5. Suffragette activist Mary Richardson damaged a painting of this figure looking into a mirror held by her son; that painting was nicknamed for Rokeby Park and is a work of Diego Velazquez. A painting of this woman was originally a gift to Giulia [“Julia”] Varano and served as inspiration for Manet’s *Olympia*; that painting was “this woman” of (\*) Urbino by Titian [tee-shun]. Zephyr tries to blow this goddess to shore in another painting featuring her. For 10 points, name this goddess shown by Sandro Botticelli standing on a shell shortly after her birth.

ANSWER: Venus [or the *Rokeby Venus*; or *Venus of Urbino*; or *The Birth of Venus*] <Visual Fine Arts> <Jason Loy>/<ed. JO>

6. This element has the most solid allotropes of any element, the most common of which is an eight-membered ring. The first discovered natural semiconductor was a compound of lead and this element. Replacing the oxygen atom in a hydroxide ion with an atom of this element produces a (\*) thiol group. An anion containing this element and oxygen is a component of the most widely manufactured chemical. For 10 points, name this nonmetal with chemical symbol S, which in pure form smells like rotten eggs.

ANSWER: sulfur [or S until it is read] <Chemistry> <Jason Loy>/<ed. AK>

7. This writer popularized “Hun” as an anti-German insult in his poem “The Rowers.” His collection *Barrack Room Ballads* contains an elegy for a slain water-carrier whom the narrator asserts was “a better man than I am,” “Gunga (\*) Din.” The title character in another novel by this man befriends Teshoo Lama and spies against Russia for Britain after his Irish parentage is discovered; that novel is *Kim*. For 10 points, name this author who created Shere Khan and Mowgli in *The Jungle Book*.

ANSWER: Rudyard Kipling <British Literature> <Jason Loy>/<ed. SB>

8. In a short cameo, a henchmen played by Jason Sudeikis punches this character after it bites his hand. After Greef Karga is mortally wounded by flying creatures, this character heals him, resulting in Karga revealing an ambush set by Moff Gideon. This character suspends a Mudhorn in mid-air, saving the life of the man who had destroyed the droid IG-11. At the beginning of a series, the Client hires a bounty hunter played by Pedro (\*) Pascal to track down this character. For 10 points, the title character of *The Mandalorian* protects what infant green alien, nicknamed for being of the same species as a Jedi Master who trained Luke Skywalker?

ANSWER: Baby Yoda [or Grogu; or The Child; do NOT accept or prompt on “Yoda” alone] <Popular Culture> <Ganon Evans>/<ed. SB>

9. As punishment for killing Amasa, this Biblical figure ordered his son to kill Joab, the former commander of this man’s army. This king’s son died when his hair got stuck in a tree, fulfilling a prophecy of Nathan. This man ordered Uriah the Hittite to the front lines of battle so he could marry Uriah’s wife (\*) Bathsheba. This son of Jesse, while a shepherd, gained Saul’s attention for his lyre playing. This best friend of Johnathan and father of Solomon is traditionally credited with writing the majority of the Psalms. For 10 points, name this second Biblical king of Israel who killed Goliath.

ANSWER: David <Religion> <Jason Loy>/<ed. LW>

10. **Following the Hittite sack of this city, the Kassite dynasty ruled this city for about 400 years. Sennacherib [“Sen-na-ker-ib”] was murdered by his own sons in 689 BCE because of his destruction of this city. A legendary location in this city was purportedly built for Queen Amytis, who missed the greenery of her native Media, by her husband Nebuchadnezzar II. (\*) Hammurabi’s law code governed this city that he ruled. For 10 points, name this Mesopotomian city on the Euphrates River, once home to its namesake Hanging Gardens.**

ANSWER: **Babylon** [or the Hanging Gardens of **Babylon**; or **Bab-ilu**; or **Bab-ilim**; or **Bavel**; or **Babel**; or Atlal **Babil**] <World History> <Jason Loy><ed. DS>

11. **Lake Agassiz was located on this continent, and during the late Cretaceous, the Western Interior Seaway split this modern-day continent in half. The Juan de Fuca plate is subducting under the plate named for this continent. Due to deposits of shocked quartz and iridium, Luis Alvarez hypothesized that an impact at the (\*) Chicxulub [“chik-su-loob”] crater near this continent led to the extinction of the dinosaurs. This continent is located at the northeast of the Ring of Fire. For 10 points, name this continent, home to the San Andreas fault, in which the Laramide orogeny created the Rocky Mountains.**

ANSWER: **North America** [accept **North American** plate] <Earth Science> <Aadi Karthik>

12. **The first one of these vehicles to attack an enemy vessel was David Bushnell’s *Turtle*. Ships sunk by these vessels include the *USS Indianapolis* and the *USS Housatonic*, the latter of which was sunk by the Confederate vessel *H.L. Hunley*. The first (\*) nuclear-powered one of these vessels became, during Operation Sunshine, the first watercraft to reach the North Pole; that craft, the *USS Nautilus*, was named after a fictional counterpart. For 10 points, name these military vehicles whose name indicates that they travel underwater.**

ANSWER: **submarines** <American History> <Jason Loy>/<ed. DS>

13. **A visit by Mike Pompeo convinced this country not to give the contract for its Sorek B desalination plant to a Chinese company. Four parties which represent a minority in this country make up its Joint List. In March 2020, the Likud and Blue and White political parties formed a coalition government after three inconclusive (\*) Knesset [“kuh-neh-suht”] elections. The BDS Movement opposes this country’s actions in its occupied territories, including the West Bank and Gaza Strip. For 10 points, name this Middle Eastern country whose current prime minister is Benjamin Netanyahu.**

ANSWER: **Israel** <Current Events> <Aadi Karthik>/<ed. SB>

14. **One character in this novel realizes that the spy Barstad is actually Solomon Pross, the brother of Lucie’s governess. Another character in this novel learned to make shoes in prison, which he does obsessively after his release. That character, Dr. Manette, mistakenly condemns Charles (\*) Darnay to death before Sydney Carton volunteers to take Darnay’s place. For 10 points, “It was the best of times, it was the worst of times” begins which novel by Charles Dickens whose title places are Paris and London?**

ANSWER: ***A Tale of Two Cities*** <British Literature> <Jason Loy> /<ed. SB>

15. Gordon Allport attempted to quantify this concept by classifying 4500 adjectives into types of influences on this concept. INTJ and ESPF are opposite “types” of this thing, according to a doubly-eponymous indicator of this concept. The five-factor model of this concept includes degrees of conscientiousness and neuroticism. Disorders of this concept include (\*) “borderline” types. Ruth Benedict called culture “*this concept writ large.*” For 10 points, name this psychological concept studied by Myers and Briggs, the sum of traits, habits, and behaviors of an individual.

ANSWER: personality [or borderline personality disorder; or “personality writ large”] <Social Science> <Jason Loy>/<ed. WG>

16. The tongues of sacrificial animals were dedicated to this god in his role as the patron of orators. Deeds performed by this god for Zeus include killing Argus to rescue Io and chaining Prometheus to a mountain. This son of Maia gave Odysseus the herb moly to protect him from (\*) Circe. This deity used a tortoise shell to invent the lyre. This carrier of the caduceus stole Apollo’s sacred cattle, making him the god of thieves. For 10 points, name this wearer of winged sandals and messenger to the Greek gods.

ANSWER: Hermes <Mythology> <Jason Loy>/<ed. LW>

17. Erich Von Daniken claimed the sarcophagus of a king of these people depicts an astronaut riding a rocket. These people built the early observatory of El Caracol, and made human sacrifices in *cenotes*. King Pacal of these people was born on 9.8.9.13.0 in this people’s “Long Count” (\*) calendar. These people were the first to develop the idea of zero, and they wrote in a hieroglyphic language found at Palenque. Chichen Itza was built by, for 10 points, what pre-Columbian civilization of the Yucatán Peninsula and Guatemala?

ANSWER: Mayans [or the Maya] <Miscellaneous History> <Ganon Evans>/<ed. DS>

18. Fermi’s four factor formula describes this process. When the neutron multiplication factor is one, this process can occur. In one experiment, cadmium “control rods” and graphite bricks were used to control this process. This process was theoretically described by Lise Meitner and Otto Frisch, and a mass that can sustain this process is called a (\*) critical mass. This process can occur in breeder reactors, which can be used to produce plutonium-239 for this process. For 10 points, name this process, in which a larger nucleus, upon contact with a neutron, splits into two smaller nuclei.

ANSWER: nuclear fission [prompt on nuclear reaction, do NOT accept or prompt on “nuclear fusion”] <Physics> <Aadi Karthik>

19. *NOTE TO MODERATOR: Please read the notes in the second sentence slowly.*

Charles Ives wrote a parody of the second movement of a work by this man, penning the words “Nice little easy sugar plum sounds” under the first notes. That second movement by this composer opens with the notes C-C-E-E-G-G-E, a theme quoted in his oratorio *The Seasons*. A symphony by this man ends with the musicians one by one blowing (\*) out the candles on their stands. A different symphony by this man features a sudden fortissimo G major chord. For 10 points, name this “father of the string quartet,” the Austrian composer of the “Farewell” and “Surprise” symphonies.

ANSWER: Joseph Haydn [or Franz Joseph Haydn] <Auditory FA> <Aadi Karthik>/<ed. WG>/<ed. JO>

20. In a novel set in this city, Mary Dalton's murder is initially pinned on her boyfriend Jan [YAHN] by the culprit Bigger Thomas. In addition to Richard Wright's *Native Son*, a novel documenting Lithuanian immigrants' experiences working in meatpacking plants is set in this city. This city is the setting of Upton Sinclair's *The (\*) Jungle*, and Carl Sandburg calls it "City of the Big Shoulders" and "Hog Butcher for the World" in the first line of a poem which shares its name with this city. For 10 points, name this midwestern city, the largest in Illinois.

ANSWER: Chicago, Illinois <American literature> <Jason Loy>/<ed. SB>

Tiebreaker. This country fought the Ogaden War with its eastern neighbor under the communist Derg regime, under which this country suffered a devastating famine that the Live Aid concert tried to relieve. Benito Mussolini ordered an invasion of this country in 1936. Rastafarians view this country's last emperor, (\*) Haile Selassie, as the messiah. Eritrea broke away from this country after the fall of communism in 1993. For 10 points, name this East African country, the only country to avoid European colonization during the Scramble for Africa.

ANSWER: Federal Democratic Republic of Ethiopia [or It'op'iya; or YeEtiyop'iya; or YeEtyop'iya] <World History> <Doug Simons><ed. DS>

## Bonuses

1. This force is the reason why hurricanes rotate counterclockwise in the Northern hemisphere but clockwise in the Southern hemisphere. For 10 points each:

[10] Name this fictitious force, which causes the deflection of objects travelling in straight-line paths.

ANSWER: Coriolis force [accept Coriolis effect]

[10] Fictitious forces like the Coriolis force and centrifugal force are only present in reference frames undergoing this type of motion. Reference frames undergoing this type of motion have a non-zero angular velocity, and in this type of motion, an object moves in a circle around an axis.

ANSWER: rotational motion [accept rotating reference frames, accept uniform circular motion]

[10] The Coriolis force is equal to twice the mass times the result of this operation on the angular velocity and the velocity of the object. As a result, the Coriolis force acts perpendicular to the direction of both.

ANSWER: cross product [accept vector product, but do not accept or prompt on “dot product” or “scalar product”] <Physics> <Aadi Karthik>

2. Answer the following about NPR’s Tiny Desk Concerts. For 10 points each:

[10] This artist performed “To Be So Lonely” in a Tiny Desk Concert released during the coronavirus quarantine. This former One Direction member’s album *Fine Line* contains the single “Adore You.”

ANSWER: Harry Styles

[10] This rapper, who died in September 2018, performed his album *Swimming* live during his Tiny Desk performance. Ariana Grande wishes she could say “thank you” to this rapper because “he was an angel” on the song “thank u, next.”

ANSWER: Mac Miller [accept either underlined; accept Malcolm James McCormick or Larry Fisherman; prompt on Malcolm]

[10] Lizzo finished her performance of “Juice” on NPR with a solo on this instrument. Future’s “Mask Off” features a prominent sample of this instrument.

ANSWER: flute <Ganon Evans> <Popular Culture>/<ed. SB>

3. This character drops out of secretarial school due to her anxiety, and her prized unicorn breaks when Jim kisses her. For 10 points each:

[10] Name this character from a play by Tennessee Williams, who collects animal figurines and lives with her mother Amanda and brother Tom.

ANSWER: Laura Wingfield [prompt on Wingfield]

[10] Laura Wingfield appears in this Williams play, which ends with Tom abandoning Amanda and Laura.

ANSWER: *The Glass Menagerie*

[10] *The Glass Menagerie* is set in this Midwestern city. Most of Jonathan Franzen’s novels are set in this city, and Jabari Asim called it “Gateway City” in *A Taste of Honey*.

ANSWER: St. Louis, Missouri <American Literature> <Jason Loy>/<ed. SB>

4. Glenn Gould once asked, “So you want to write a fugue?” Answer some questions about them, for 10 points each:

[10] If you want to write a fugue, you should start by studying fugues, such as the one at the end of Act 2 of this composer’s *The Mastersingers of Nuremberg*. This man also composed *The Ring Cycle* of operas.

ANSWER: Richard Wagner

[10] But never be clever for the sake of being clever; one of these in inversion is a dangerous diversion. By far the most famous piece of this type is Pachelbel’s one in D, and Bach wrote a Crab one of these.

ANSWER: canon [or Pachelbel’s Canon; or Canon in D; or the Crab Canon]

[10] “So You Want To Write A Fugue?” is a satirical fugue by Glenn Gould, a Canadian virtuoso of this keyboard instrument. This instrument names an ensemble consisting of it, a violin, and a cello.

ANSWER: piano [accept piano trio] <Auditory FA> <Aadi Karthik>/<ed. WG>

5. This man, the successor of Gregory VII, carried on his predecessor's legacy of fighting against the sale of church offices after his 1088 election. For 10 points each:

[10] Name this pope best known for a rousing speech given at the Council of Clermont in 1095, in which he urged Christians to reclaim the Holy Land.

ANSWER: **Urban II** [prompt on **Urban**]

[10] Urban's speech at Clermont sparked the first of these military campaigns by Christians against Muslim controllers of Jerusalem and the Holy Land.

ANSWER: **Crusades** [or First **Crusade**]

[10] This Crusade, prompted by Saladin's capture of Jerusalem, was led by Richard I of England, Philip Augustus of France, and a Holy Roman Emperor who died during a river crossing, Frederick Barbarossa.

ANSWER: **Third** Crusade [do NOT accept or prompt on any other numbered crusade, such as the "Second Crusade"] <European History> <Jason Loy>/<ed. DS>

6. *Twilight of the Idols* includes a section titled "The Problem Of" this thinker. For 10 points each:

[10] Name this ancient Greek philosopher who equated sin and ignorance and was put on trial for corrupting the youth of Athens.

ANSWER: **Socrates** [or *The Problem of Socrates*]

[10] Socrates claimed that he was knowledgeable because he knew this amount of definite information. Parmenides was one of the first western philosophers to consider this quantity as a real concept.

ANSWER: **nothing** [or clear knowledge equivalents, such as **zero**]

[10] Another, later philosopher who explored nothing as a concept was this German idealist, who discussed dialectics in *Science of Logic*.

ANSWER: Georg Wilhelm Friedrich **Hegel** <Philosophy> <William Grossman>

7. An English example of this type of document was passed following the 1689 Glorious Revolution. For 10 points each:

[10] Name this type of document, whose American version refers to the first 10 amendments to the U.S. Constitution. That American example of this type of document also protects the right to free speech and the right to bear arms.

ANSWER: **Bill of Rights**

[10] Many of the rights defined in the English Bill of Rights, such as the right of habeas corpus, derive from this earlier document, signed in 1215. This document placed legal limits on the actions an English king could take against English lords.

ANSWER: **Magna Carta**

[10] The Magna Carta was signed by this king, the brother of Richard the Lionheart, at Runnymede. Nicknamed "Lackland," his failure to implement it led to the First Barons' War.

ANSWER: King **John** <Miscellaneous History> <Doug Simons>/<ed. DS>

8. A state park in this state is larger than any National Park in the contiguous United States. For 10 points each:

[10] Name this state, whose "Upstate" area includes counties such as Westchester and Rockland, as well as the Catskill Mountains.

ANSWER: **New York** [or Upstate **New York**]

[10] That aforementioned largest state park in New York is named for these mountains, whose highest peak is at Mount Marcy.

ANSWER: **Adirondack** Mountains

[10] This river originates in the Adirondacks and flows through its namesake valley, which includes Albany. This river is named for an Englishman who sailed for the Dutch East India Company.

ANSWER: **Hudson** River [or Henry **Hudson**] <Geography> <William Grossman>/<ed. JO>

9. These substances facilitate the saponification of esters. For 10 points each:

[10] Identify this kind of substance, examples of which include ammonia and sodium hydroxide.

Substances of this type have a pH value above 7.

ANSWER: **base** [or **basic** or **alkaline**].

[10] This American chemist defined a base as an electron pair donor as part of the most general definition of acids and bases. This man also developed namesake “dot structures” that depict electron configurations.

ANSWER: Gilbert **Lewis** [or a **Lewis** base; or **Lewis** dot structures]

[10] In this lab technique, a base of known concentration is added to an acidic solution to determine the pH of the solution.

ANSWER: acid-base **titration** [or **acidimetry**, do NOT accept or prompt on “alkalimetry”] <Chemistry>

<Jason Loy>/<ed. AK>

10. The Quaker narrator John Dowell opens a novel titled for one of these people by Ford Madox Ford stating it is “the saddest story I have ever heard.” For 10 points each:

[10] Name these people; one of these people appears drowning “under a green sea” as blood gargles from “froth-corrupted lungs.”

ANSWER: **soldiers** [Accept synonyms like **warrior**, **fighter**, **trooper**, or other general answers indicating someone serving in the army, accept *The Good **Soldier***]

[10] The narrator witnesses a gas attack on soldiers “bent double, like old beggars under sacks” in this poem, whose Latin title is derided as “the old Lie.”

ANSWER: “**Dulce et Decorum Est**”

[10] This British poet of “Dulce et Decorum Est” and “Anthem for Doomed Youth” died one week before the end of World War I.

ANSWER: Wilfred **Owen** [Accept Wilfred Edward Salter **Owen**] <British Literature> <Ganon Evans>/<ed. SB>

11. It's not in Indonesia, but this island was nicknamed the “Spice Island” after Said bin Sultan mandated that its citizens grow cloves or lose their property. For 10 points each:

[10] Name this island, where the Sultanate of Oman built its Stone Town in the 1710s. This island’s House of Wonders was the ceremonial palace of the Al Said family.

ANSWER: **Zanzibar** [or **Zinjibār**]

[10] Zanzibar was a center for Indian Ocean trade for people in this barbaric system of African forced labor. The Middle Passage was the journey for people in this trade from Africa to the Americas.

ANSWER: the **slave** trade [accept **slavery**]

[10] The Zanzibari merchant Tippu Tip led massive expeditions into central Africa to acquire this commodity. Richard Leakey and Daniel arap Moi burned large quantities of this commodity in the 1980’s.

ANSWER: **ivory** [prompt on elephant **tusks**] <World History> <Ganon Evans>/<ed. DS>



12. Peter and Rosemary Grant have studied the beak sizes of these organisms on Daphne Major for over forty years. For 10 points each:

[10] Name these organisms that may be in the genus *Geospiza*. Though Charles Darwin neglected them at first, they eventually played a large part in his creation of a theory of natural selection.

ANSWER: **Galapagos Finches** [prompt with "From where?" on Finches or Darwin's Finches]

[10] During his voyage to the Galapagos Islands, Darwin called the marine type of this animal an "Imp of Darkness." The marine type of this lizard is only found in the Galapagos Islands.

ANSWER: **iguanas**

[10] The Galapagos Islands also name the only species of this flightless bird found north of the equator. Other species of this bird include the Adelie and Emperor, both of which are found in Antarctica.

ANSWER: **penguins** <Biology> <Aadi Karthik>

13. This artist's studies of Flemish Renaissance art influenced the depiction of his sister Nan and dentist Byron McKeeby in one painting. For 10 points each:

[10] Name this artist, who painted a pitchfork-wielding man and his wife standing in front of the Dibble house in his painting *American Gothic*.

ANSWER: Grant **Wood** [or Grant DeVolson **Wood**]

[10] A pulled-back curtain reveals this man holding an axe in Wood's painting *Parson Weems' Fable*. Gilbert Stuart's *Athenaeum Portrait* of this man is on the one dollar bill.

ANSWER: George **Washington**

[10] Copies of this other portrait of Washington by Gilbert Stuart intentionally misspell "United States" on a book in the lower right.

ANSWER: the **Lansdowne Portrait** <Visual Fine Arts> <Ganon Evans>/<ed. JO>

14. This religion's ethical teaching can be summarized by the Three Treasures: compassion, frugality, and humility. For 10 points each:

[10] Name this religion mainly practiced in China whose namesake concept refers to the "unplanned rhythms of the universe." The writing of Laozi and Zhuangzi are central to this religious tradition.

ANSWER: **Daoism** [or **Taoism**]

[10] One Daoist principle that has caught on in the West is the balance between these two complementary concepts. The balance of these two things is represented by a half-white, half-black circle.

ANSWER: **yin** and **yang**

[10] Daoists use the *I Ching* for symbolic moral advice, but the Chinese Classic was originally used for this purpose. Hexagrams in the *I Ching* were used to interpret results of rituals performed with yarrow stalks.

ANSWER: **divination** [or **prophesying** or **telling the future**] <Jason Loy> <Religion>/<ed. LW>

15. At the end of this novel, Holgrave is revealed to be a descendant of Matthew Maule, and thus the rightful heir of the title building. For 10 points each:

[10] Name this novel about Hepzibah Pyncheon and her brother Clifford, who live in the title New England mansion.

ANSWER: *The **House of the Seven Gables**: A Romance*

[10] This other novel by the author of *The House of the Seven Gables* follows the aftermath of Hester Prynne's affair with Arthur Dimmesdale in 17th-century Puritan Massachusetts.

ANSWER: *The **Scarlet Letter***

[10] This author of *The House of the Seven Gables* and *The Scarlet Letter* also wrote "Young Goodman Brown" and *The Blithedale Romance*.

ANSWER: Nathaniel **Hawthorne** <American Literature> <Jason Loy>/<ed. SB>

16. A red ball on the roof of this building drops daily at 1pm for time-setting purposes. For 10 points each:

[10] Name this building in Greenwich, England, which recently installed a powerful green laser to visually demarcate the Prime Meridian.

ANSWER: **Royal Observatory**, Greenwich [or **ROG**]

[10] The Royal Observatory was designed by this famed British architect, who also drew up the plans for the rebuilt St. Paul's Cathedral.

ANSWER: Sir Christopher **Wren**

[10] Wren is purported to have designed the Wren Library at the College of William and Mary in this U.S. state. This state is also home to Thomas Jefferson's massive estate at Monticello.

ANSWER: Commonwealth of **Virginia** <Other Fine Arts> <Max Shatan>/<ed. JO>

17. Salman Rushdie's *The Ground Beneath Her Feet* is a modern retelling of the myth of these two people set against the evolution of rock music in the mid-to-late 20th century. For 10 points each:

[10] Name this Greek legend, in which a musician is allowed to rescue his wife from the underworld as long as he leads her out of Hades without looking at her. Both names are required.

ANSWER: **Orpheus** and **Eurydice**

[10] The story of Orpheus and Eurydice ["you-RID-iss-ee"] is recounted in Book Ten of this Latin narrative poem by Ovid.

ANSWER: **Metamorphoses**

[10] "The Metamorphosis" is also the title of a novella by Franz Kafka in which Gregor Samsa is transformed into this creature. A description is acceptable.

ANSWER: an **insect** [accept **bug** or **vermin** (since that's the word used in most English translations.)] <European/World Literature> <Sadie Britton>/<ed. JO>

18. This deity's association with Mars led to his status as the namesake of a day of the week in English. For 10 points each:

[10] Name this one-handed Norse god of war and justice. His name was identical to the Old Norse common noun for "god."

ANSWER: **Tyr** [or **Tiw**]

[10] Tyr lost his hand to this monster when he realized that he could not free himself from the chain Gleipnir. This wolf was the son of Loki and the brother of Jormungandr.

ANSWER: **Fenrir** [or the **Fenris** wolf]

[10] These residents of Svartalfheim ["s-vart-elf-heim"], the most skilled craftsmen of the nine realms, used ingredients such as the roots of a mountain and the breath of a fish to construct Gleipnir.

ANSWER: **dwarves** [or a **dwarf**] <Mythology> <Jason Loy>/<ed. LW>

19. Answer the following about discrete calculus, which involves extending the framework of calculus to sequences of real numbers, as opposed to functions. For 10 points each:

[10] This theorem from calculus has a discrete analogue in the Stolz-Cesaro theorem. This theorem allows one to determine limits of indeterminate forms such as zero divided by zero.

ANSWER: **L'Hôpital's rule** [or **L'hospital's rule**]

[10] The discrete analogue of this operation from calculus obeys many of the same rules, including the product, quotient, and power rules. This operation gives the slope of the tangent line to a function.

ANSWER: **derivative** [accept **differentiation**; accept word forms]

[10] The discrete analogue of integration by parts is named for this operation, as the discrete integral is in a way equivalent to this operation. This operation can be denoted with a capital sigma or a plus sign.

ANSWER: **addition** [or **summation**, accept word forms, but prompt on **plus** or word forms] <Math> <Aadi Karthik>/<ed. CT>

20. Senator Ted Kennedy claimed that Robert Bork's "America" was one in which women were forced to undergo this practice in "back-alleys." For 10 points each:

[10] Name this practice, which was upheld in the Supreme Court case *Roe v. Wade*.

ANSWER: **abortion** [or answers indicating having an **abortion**]

[10] This activist coined the term "birth control" in her pamphlet "What Every Girl Should Know." She founded the first birth control clinic in America and is considered the founder of Planned Parenthood.

ANSWER: Margaret **Sanger** [or Margaret Louisa **Higgins**]

[10] Anti-abortion terrorist Eric Rudolph detonated a nail bomb in Atlanta's Centennial Park during one of these events in 1996. Tommie Smith and John Carlos were photographed making a black power salute during one of these events in Mexico City.

ANSWER: **Olympic** Games [or the **Olympics**; or **Olympian Games** or **Olympiads**; or the Summer **Olympics**; do NOT accept or prompt on Winter Olympics] <American History> <Ganon Evans>/<ed.

DS>