

1. This king's chief adviser was said to have "put [France] on a diet" and abolished the unpopular cinquantième tax imposed by the Duke of Bourbon. Rene de Maupeou's "triumvirate" tried to reduce the stalling power of the Parlements under this king, who married Marie Leszczynska after the death of Philippe d'Orleans. The founding of the Banque General and collapse of the Mississippi Bubble during the early reign of this king, served by Cardinal (*) Fleury, led to the fall of John Law. Those events took place during the eight-year regency of this king, who came to the throne at age five and was significantly influenced by his mistress, the Madame de Pompadour. For 10 points, name this French king whose successor was executed in the French Revolution.

ANSWER: <u>Louis XV</u> [or <u>Louis the</u> Well-<u>Beloved</u> or <u>Louis le Bien-Aime</u>]

<Bentley>

2. This place was home to "showbread," which was left continuously on a table. Both chapters of the Book of Haggai discuss this site, where a man quotes the line "From the lips of children and infants you have ordained praise" after children praise him, and a widow is praised for her gift of two copper coins here. Zerubabbel worked on creating this locale with the Biblical (*) Ezra. After Antiochus's defeat, a jug of oil in this place miraculously lasted eight days, and Hanukkah celebrates its rededication. For 10 points, name this holy site where Jesus drove out money-changers, whose only remaining portion is the "Wailing Wall" in Jerusalem.

ANSWER: Second <u>Temple</u> [or <u>Beit Ha-Mikdash</u> Sheni; or Herod's <u>Temple</u>; prompt on "Jerusalem"; prompt on the "Temple Mount"; do not accept "First Temple"]

<Cheyne>

3. A Supreme Court justice with this last name wrote the majority opinion in *Myers v. United States*, the case that officially overturned the Tenure of Office Act. One politician with this surname broke ranks to champion a 1949 act creating low-income housing. A senator with this last name co-sponsored legislation with a New Jersey congressman that Harry Truman called a "slave (*) labor" bill. That man with this surname was known as "Mr. Republican" and co-sponsored the 1947 Labor-Management Relations Act with Fred A. Hartley. It's also the last name of a president who engaged in Dollar Diplomacy and had his base split by the Bull Moose candidate in 1912. For 10 points, give this surname shared by a rotund US president and successor of Theodore Roosevelt.

ANSWER: Taft

<Bentley>

4. Iodine and Xenon lie at the base of a valley of stability in which this process does not occur. Neutron stars would degenerate in 10 minutes through this process if all electron states weren't filled in the core. This phenomenon was used to derive Fermi's Golden Rule. The NEMO-3 experiment searches for a variant of it that can only occur if the neutrino is its own antiparticle. This process uses an intermediate W boson to transform a (*) down quark into an up quark or vice versa. This phenomenon, which is responsible for changing carbon-14 to nitrogen-14 with a half-life of 5700 years, changes the atomic number by one but leaves the atomic mass constant. For 10 points, name this phenomenon in which a nucleus emits either a positron or an electron.

ANSWER: **beta** decay [accept **beta-plus** decay or **beta-minus** decay; prompt on "decay", "radioactive decay", or "nuclear decay"]

<Mukherjee>

5. In this piece, a bass *ostinato* of G-sharp played at a quarter - eighth rhythm in 6/8 runs throughout one entire movement. One movement in this piece ends with the depiction of an ox-cart gradually moving away from the listener. The opening measures of this piece alternate between 5/4 and 6/4 time and are part of an interlude that repeats after every few movements. This work includes movements like "Bydlo" and "The Old (*) Castle". This work was originally composed for piano, but Serge Koussevitsky commissioned an orchestrated version by Maurice Ravel. Containing "The Great Gate of Kiev" and interspersed with "Promenades", for 10 points, name this suite of piano pieces inspired by the artworks of Viktor Hartmann, composed by Modest Mussorgsky.

ANSWER: *Pictures at an Exhibition* [or *Kartinki s vystavki*]

<Lawrence>

6. This author declared that his nation was "rotting now, and quite soon you'll disappear" in his "Letter To My Fellow Countrymen". He savaged his mother Nellie in his autobiography, A Better Class of Person, and he wrote a play which ends with two characters reconciling by playing a game of "bears and squirrels". In another of his plays, Jean breaks her engagement with Graham and Mick dies as a P.O.W., while the decline of English (*) music halls ruins the career of Archie Rice. In his most famous play, Colonel Redfern comes to retrieve his daughter due to the machinations of Helena, who wants the pregnant Alison out of the way to have Jimmy Porter to herself. For 10 points, name this author of Look Back in Anger, a prominent Angry Young Man.

ANSWER: John James Osborne

<Bentley>

7. These structures are flattened in order to form appressoria. The growth of these structures is directed by an aggregation of microtubules and endosomal vesicles called the spitzenkorper. Specialized ones with sharp tips used to penetrate hosts are called haustoria, and these structures can form Hartig nets during symbiosis. Coenocytic ones lack (*) septa, and those belonging to the causative agent of aspergillosis tend to branch at forty-five degrees. Generative ones are used for reproduction, which is accomplished by fusing cells together to form a heterokaryon. For 10 points, name these chitinous structures which interconnect to form a mycelium, small threads that make up the main body of a fungus. ANSWER: hyphae [sing. hyphae

<Mukherjee>

8. This author's poetry collections include *The Humble Administrator's Garden* and *All You Who Sleep Tonight*. In a novel by this author, Julia and Michael, a pianist and a violinist, meet in Vienna as children and later have an affair there. One of this author's protagonists uses a personal ad to meet Liz Donati. This author included drummer Janet Hayakawa and software engineer John Brown in a novel that uses (*) Onegin sonnets to tell the story of yuppies in San Francisco. This author of *An Equal Music* is currently writing a sequel to his extremely long novel about Rupa Mehra's quest to find a husband for her daughter Lata. For 10 points, name this Indian author of *The Golden Gate* and *A Suitable Boy*. ANSWER: Vikram Seth

<Mehigan>

9. This man wrote of the Symparanekromenoi, who hear a lecture on ancient tragedy. He said that "The Self is a relation which relates itself to its own self." This thinker wrote of a merman who escapes the demonic by refusing to seduce Agnes and called Agamemnon a "tragic hero" for his actions at Aulis. This thinker wrote that all people are in sin due to (*) despair, and said some men lose everything but believe they will get it all back "by virtue of the absurd." A man chooses aestheticism over the ethical life of Judge Vilhelm in this author's "Seducer's Diary," and he devised the knight of infinite resignation. For 10 points, name this man who supported an irrational "leap" to Christian faith through many pseudonyms, and wrote *Either-Or* in Danish.

ANSWER: Søren Aabye <u>Kierkegaard</u> [or Johannes de <u>Silentio</u>; or Victor <u>Eremita</u>; or William <u>Afham</u>; or Frater <u>Taciturnus</u>; or Constantin <u>Constantius</u>; or Vigilius <u>Haufniensis</u>; or Nicolaus <u>Notabene</u>; or A.B.C.D E.F. <u>Godthaab</u>; or A.B.C.D.E.F. <u>Rosenblad</u>; or <u>Inter et Inter</u>; or <u>Procul</u>; or Captain <u>Scipio</u>; or <u>Judge William</u>; or <u>A.F.</u>; or Hilarius <u>Bookbinder</u>; or Johannes <u>Climacus</u>; or <u>H.H.</u>; or <u>Anti-Climacus</u>; prompt on "A"; prompt on "B"]

<Iackson>

10. This artist adapted a photograph he took of a waterfall in Switzerland for the background of a work showing a prostrate naked woman holding a lamp. This artist returned from a chess-filled retirement to create his *Etant Donnes*. A shovel is featured in *In Advance of the Broken Arm*, a work by this alter ego of Rrose Selavy. An enigmatic piece created by this man contains two (*) glass rectangles respectively containing nine "Malic Molds" and the "Bride," and is sometimes called *The Large Glass*. He was accused of painting an "explosion in a singles factory" in a work displayed at the Armory Show, and signed another object as "R. Mutt". For 10 points, name this creator of *Fountain* and other readymades.

ANSWER: Marcel **<u>Duchamp</u>** [or R. **<u>Mutt</u>** before it is read; or Rrose **<u>Selavy</u>** before it is read]

<Bentley>

11. For finite difference methods applied to PDEs, this property is equivalent to stability according to the Lax equivalence theorem. The Weierstrass M-test can be used to test for this property. A sequence of real numbers has this property if and only if it is a Cauchy sequence. For a series with both positive and negative terms, the (*) "absolute" form of this property is stronger than the usual form, only requiring that the terms go to zero. This property is possessed everywhere by the Taylor series for the exponential function, while other power series may have some finite "radius of" this property. Common tests to determine this property include the ratio test and the root test. For 10 points, give this mathematical term for approaching a limit.

ANSWER: **convergence** [or other word forms of "**converge**"]

<Eltinge>

12. The blind beggars Mary and Martin Doul have their sight restored by a traveling saint in this man's *The Well of the Saints*. This author wrote a soliloquy whose speaker laments "they're all gone now, and there isn't anything more" the title location "can do to me," then asks Nora for some holy water. That speech is delivered by Maurya, who laments the (*) drowning of Bartley at the end of one of his plays. Riots broke out at the Abbey Theater premiere of a play by this man in which Shawn Keogh is distressed by the seduction of his fiancee Pegeen Mike by a man who claims to have killed his father. For 10 points, name this Irish author of *Riders to the Sea* who wrote about Christy Mahon in *The Playboy of the Western World*.

ANSWER: John Millington **Synge** [or Edmund John Millington **Synge**; accept *The Well of the Saints* until "this man" is read]

<Gupta>

13. In a painting of this man's death, he has been thrown to the ground by a headband-wearing furious youth wearing only a loincloth and drawing back his sword, while an angel on a cloud extends a palm to him. Francesco Maria Del Monte commissioned a painting of this saint's martyrdom. A different angel whispers in this man's ear to inspire his writing in a Rembrandt painting. In perhaps the best known painting of this man, light from an (*) unseen window to the right of the scene shines directly on him, and he points quizzically at himself. That same painting of this one-time tax collector shows Jesus extending his arm towards him and features prominent use of chiaroscuro. For 10 points, name this saint who is "called" in a Caravaggio painting.

ANSWER: Saint <u>Matthew</u> [or <u>Matthew</u> the Apostle]

<Bentley>

14. Six of these sites on a road around the Saronic gulf to Athens were guarded by Periphetes and other bandits who attacked Theseus. Xenophon claimed to see one of these on the Acherusian peninsula. In 2013, archaeologists at a temple in Hierapolis, Turkey, discovered a purported one that has high carbon dioxide levels. The Eleusinian mysteries helped Heracles discover one on Cape Taenarum, to which he carried a honey (*) cake. Another of these locales, a body of water which killed birds flying overhead, was Italy's Lake Avernus. At the Cumaean Sibyl's request, Aeneas acquires a golden bough to pass through one of these locations and see his father. For 10 points, name these places which connect the realms of the living and the dead.

ANSWER: <u>entrance</u>s to the <u>underworld</u> [accept <u>cave</u>s until "water" is read; accept <u>gate</u>s, <u>door</u>s, <u>portal</u>s, <u>exit</u>s, etc. in place of "entrances"; accept <u>Hades</u>, <u>Tartarus</u>, <u>Orcus</u>, <u>Dis</u>, or <u>hell</u> in place of "underworld"; prompt on partial answers]

<Jose>

15. A ruler of this name was ransomed for 200,000 florins after being captured fighting with Emperor Sigismund at Nicopolis. A man bearing this name and the surname "Comyn" was stabbed to death on an altar by Robert the Bruce, who succeeded another man with this name as King of Scotland. Before becoming king, a Count of Mortain with this name invaded England after his older brother recognized Arthur I of Brittany as his heir, and later lost the (*) crown jewels in the Wash. A Duke of Burgundy with this name was assassinated during a meeting with the future Charles VII of France and was known as the Fearless. An English king of this name was the youngest son of Henry II and was known as "lackland". For 10 points, give this name of the English king who signed the Magna Carta. ANSWER: John [or Jan or Jean]

<Bentley>

16. One theory of this concept notes that unjustified attention paid to small probabilities leads to a "fourfold pattern" of attitudes about this phenomenon. People's willingness to undergo this phenomenon is subject to a "reflection effect" based on the magnitude of its probability, according to the "prospect theory" developed by Kahneman and Tversky. The Arrow-Pratt coefficient measures the (*) "aversion" to this quantity, which can be considered identical to the valuing of certainty. The incentive to take on more of this quantity because costs are not borne by the same person who benefits is the moral hazard problem. For 10 points, identify this economic quantity representing the possibility of loss, which must be balanced with potential reward.

ANSWER: risk

<Weiner>

17. A mercenary force called the N'earin made a crucial late arrival at this battle. Prior to it, one commander got helpful intelligence from two wandering Shashu, but decided to torture them horribly in case they were spies. They actually were, and informed him that only this battle's namesake city separated his advance force from the entire enemy army. A grandson of Suppiluliuma I repelled an invasion in this battle, whose two major (*) sources are known as the "Poem" and the "Bulletin." A stele at the Temple of Amun contains the peace treaty signed after this clash, which saw the Ra and Ptah divisions engage in a massive chariot battle. Fought in 1274 BCE against Muwatallis II's Hittites, for 10 points, name this this battle fought by ancient Egypt under Ramses II.

<Bentley>

18. Julio Popper recruited Croatian immigrants to found Porvenir during this archipelago's gold rush, in which its Selknam people were massacred. Because these islands are exempt from VAT, they have recently become a hub for laptop manufacturing. It is not in Greece, but this archipelago's Navarino Island is home to a midden created by its native Yagán people. This archipelago's highest point, Mt. (*) Darwin, was so named because it was surveyed by the HMS Beagle. Ushuaia is the capital of a province on this archipelago northwest of the Scotia Sea. These islands lie north of the Drake Passage, and they are separated from the mainland by the Strait of Magellan. For 10 points, name these islands shared by Chile and Argentina.

ANSWER: **Tierra del Fuego** [or **Land of Fire**]

ANSWER: Battle of **Kadesh** [or Battle of **Qadesh**]

<Wasserman>

19. A member of this family buys a little Italian girl some bread and is briefly arrested for kidnapping her. One member of this family is often referred to by another as smelling of trees after a scene in which she climbs a tree to look in on a funeral, revealing her "muddy drawers". That one later marries Herbert Head. Another member of this family, which employs (*) Dilsey Gibson, enjoys watching golfers at a nearby golf course because it reminds him of his sister, Caddy. Members of this family include alcoholic patriarch Jason, the mentally disabled Benjy, and the suicidal Quentin, who narrates most of *Absalom*, *Absalom!*. For 10 points, name this family created by William Faulkner, who also appear in *The Sound and the Fury*.

ANSWER: the **Compson** family

<Cheyne>

20. This process can be combined with a DART source, and that type uses Ultramark 1621 to calibrate. During one stage of this procedure, compounds with a gamma hydrogen will rearrange to form an enol radical, and compounds can also undergo retro-Diels-Alder reactions while undergoing it. This procedure follows gas chromatography in many setups. The first stage of this procedure creates a radical cation called the (*) molecular ion, which fragments into the base peak. In this procedure, if the m-over-z ratio is odd, then the molecule usually has an odd number of nitrogen atoms. In this process, ions are deflected by an external magnetic field into the detector. For 10 points, name this method of spectrometry which measures the namesake quantity's ratio to charge.

ANSWER: **mass spec**trometry [or **MS**]

<Silverman>



21. The sd-1 "green revolution" rice mutant has a defect in the production of these hormones. The synthesis of these compounds requires the cyclization of geranylgeranyl disphosphate to kaurene. These hormones facilitate the action of PIFs during the etiolation response by triggering the degradation of DELLA proteins. They were originally discovered due to fungal infections in rice causing chlorosis, a condition called (*) foolish seedling disease or bakanae. These hormones trigger the synthesis of amylase in the aleurone layer when water is available, antagonizing the function of abciscic acid. Spraying one of these hormones on grapes causes them to become seedless. For 10 points, name these plant hormones responsible for seed germination.

ANSWER: gibberelins

<Mukherjee>

22. One character in this novel repeats phrases like "the flag is America" and "Mexico is the walnut" while reading off his own hand. Another of its characters has hallucinations in which he imagines his companions being placed on meat hooks. That character offers this novel's protagonist some Juicy Fruit, revealing that he can speak. After being found in bed with the prostitute Candy following a fishing trip in this novel, (*) Billy Bibbit commits suicide. Its narrator refers to forces of authority as "the Combine" and, at its end, throws a control panel through a window in order to escape the control of Nurse Ratched, who had lobotomized Randle McMurphy. For 10 points, name this 1962 novel set in a mental hospital and written by Ken Kesey.

ANSWER: One Flew Over the Cuckoo's Nest

<Kothari>

23. This man helped publish a book attacking the Food and Drug Administration titled, *The Chemical Feast*. Patti Smith and Michael Moore joined this man for a "Super Rally" at Madison Square Garden where he delivered a speech about "Tweedledee and Tweedledum". This subject of the documentary *An Unreasonable Man* was joined in one political campaign by Ojibwe activist (*) Winona LaDuke. He attacked the FTC in a scathing 1968 report issued by his namesake "Raiders," who were financed by a harassment lawsuit this man won against GM after attacking the Chevrolet Corvair in *Unsafe At Any Speed*. For 10 points, name this Lebanese-American consumer advocate who ran on the Green Party ticket in the 2000 Presidential election.

ANSWER: Ralph Nader

<Bentley>

24. Components of this type developed in Ruby often make use of the Shoes toolkit. XAML is used to create these parts of a program in WPF for .NET applications; WPF replaced the older WinForms paradigm for creating these parts of programs. This part of a program comprises the "V" portion of the MVP design pattern. Libraries to create these parts of applications in Java include (*) AWT and Swing. Most libraries for these entities include widgets like labels, radio buttons and text boxes. Command-line applications do not have these. For 10 points, name these parts of programs that use images rather than text to handle user interaction.

ANSWER: **Graphical User Interface** Programs [or **GUI** ("gooey"); prompt on partial answers like "User Interface" or "UI"]



- 1. In one of this man's novels, an anti-government man and woman adopt the title collective identity to oppose a project to build a tower to heaven. For 10 points each:
- [10] Name this author who used Abruria as the setting of his novel *Wizard of the Crow* and urged writers to use their native languages in his essay *Decolonizing the Mind*.

ANSWER: Ngugi wa Thiong'o [or James Ngugi]

[10] *Decolonizing the Mind* justified Ngugi's own decision to abandon the use of this Western language in favor of Gikuyu, which he did shortly after writing *A Grain of Wheat*. As a result, a 1977 Ngugi play was published as *Ngaahika Ndeenda*, rather than *I Will Marry When I Want*.

ANSWER: English

[10] Ngugi took the title *Petals of Blood* from "The Swamp," a poem by this writer from St. Lucia better known for his transposition of the *Iliad* to the Caribbean, an epic poem titled *Omeros*.

ANSWER: Derek Alton Walcott

<Gupta>

- 2. In this artist's version of *The Judgment of Paris*, Mercury rests his arm on a tree branch and an indistinct female form is visible in the clouds. For 10 points each:
- [10] Identify this Flemish painter, who included many voluptuous nude women in paintings like *The Three Graces*.

ANSWER: Peter Paul Rubens

[10] Rubens executed a cycle of 24 paintings on the life of this French queen, including one where she walks down a gangplank, *The Disembarkation at Marseilles*, and one where she reconciles with her son Louis XIII.

ANSWER: Marie de Medici

[10] In one of his several hunt scenes, Rubens depicted three mounted hunters taking on two aquatic animals simultaneously as their companion tries to escape from harm. Name either of the animals targeted by the hunting party.

ANSWER: a hippopotamus [or a crocodile]

<Rosenberg>

- 3. One way of performing this process is done with a positive-convex lens, because light rays from a larger collection of directions will converge onto a smaller region. For 10 points each:
- [10] Name this process of image enlargement that can also be achieved with a microscope.

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

[10] For telescopes, the angular magnification is determined by the negative of the ratio of this quantity for the objective lens and the eye-piece.

ANSWER: focal length

[10] For these other devices, the resolution and magnification of an image is dependent upon how much light falls per unit area on a surface. Taking the focal length and dividing by the aperture diameter yields the f-number, which characterizes the lenses of these devices.

ANSWER: cameras

<Iose>

- 4. Answer these questions about Pentecostal Christianity, for 10 points each.
- [10] The works of this aspect of God are emphasized greatly by Pentecostal Christians. This person of the Trinity is one with the Father and Son.

ANSWER: Holy **Spirit** [or **Holy Ghost**; or **Paraclete**]

[10] Pentecostals believe that this phenomenon can occur when a person is baptized or filled by the Spirit. The messages it produces are often incomprehensible to witnesses.

ANSWER: speaking in tongues [or glossolalia; or xenoglossy]

[10] Like other Christians, Pentecostals practice this ordinance as modeled by Jesus in John 13. Practiced by many on Maundy Thursday, it involves kneeling down and humbling yourself by performing a potentially degrading task.

ANSWER: <u>washing</u> the <u>feet</u> of another person [accept answers which clearly indicate <u>foot-washing</u>; prompt on less specific answers such as "washing" or "bathing"]

<Cheyne>

- 5. Its stories are told by a group of pilgrims who stop at the Tabard Inn on their way to visit the grave of St. Thomas à Becket. For 10 points each:
- [10] Name this collection of stories by Geoffrey Chaucer, one of which, told by the Knight, describes Arcite and Palamon's competition to marry Emily.

ANSWER: The Canterbury Tales

[10] The host's dissatisfaction with the Physician's Tale leads to the telling of this tale, in which three young men set out to find and kill Death, but instead find gold underneath an oak tree and kill each other.

ANSWER: The **Pardoner**'s Tale

[10] The Nun's Priest's Tale stars this rooster, who is outwitted and captured by the fox Reynard. This character then promptly uses a similar ruse to regain his freedom.

ANSWER: <u>Chanticleer</u> [or <u>Chauntecleer</u>]

<Nutter>

- 6. In addition to writing one of the first books on modern chess theory, Luca Pacioli is credited with coming up with this invention. For 10 points each:
- [10] Identify this invention, subject of a recent book by Jane Gleeson-White. It revolutionized accounting by storing debits and credits in different columns.

ANSWER: **Double-Entry** Bookkeeping System

[10] Luca Pacioli taught this Renaissance artist, whose own inventions included a crank-powered tank for Ludovico il Moro and a flying machine inspired by the wings of a bat.

ANSWER: Leonardo da Vinci [accept either underlined answer]

[10] Benedetto Cotrugli, an ambassador to this city, likely predated Luca Pacioli in using the double-entry system. Masaniello led an abortive revolt against the Hapsburg rulers of this city in 1647, where Charles of Anjou erected the Castel Nuovo in 1279.

ANSWER: Naples [or Napoli or Neapolis]

- 7. One painting of this man was destroyed during an air raid on Bremen during World War II; fortunately, the second version of that work survived and is now at the Met. For 10 points:
- [10] Identify this patriot who is shown crossing the Delaware River in a painting by Emmanuel Leutze.

ANSWER: George Washington

[10] This earlier American artist never finished his so-called "Athaneum" portrait of Washington, but that version of Washington's face still adorns the one-dollar bill.

ANSWER: Gilbert Stuart

[10] This contemporary of Gilbert Stuart painted several other portraits of Washington, including one where he resigns his commission. However, he may be better known for a massive canvas which depicts the signing of the Declaration of Independence.

ANSWER: John Trumbull

<Rosenberg>

- 8. Answer these questions about deontology, the school of ethics which believes that right and wrong derive from absolute duties, for 10 points each.
- [10] Many deontologists follow this moral principle. As first stated in the 18th century, it says that each rational being may only act by maxims which that being could will to hold as universal law.

ANSWER: the <u>categorical imperative</u> [or the <u>fundamental law of pure practical reason</u>; or <u>Kategorischer Imperativ</u>]

[10] This Enlightenment-era Prussian, a pioneer deontologist, defined the categorical imperative in his *Groundwork of the Metaphysics of Morals*.

ANSWER: Immanuel Kant

[10] A deontologist can never flip the switch or push a fat man in this thought experiment devised by Philippa Foot. It presents a choice to kill one person so as to stop the title object and save five.

ANSWER: **trolley** problem

<Jackson>

- 9. The conversion of pyruvate to PEP at the beginning of this process cannot just reverse the glycolytic step converting PEP to pyruvate. For 10 points each:
- [10] Name this process in which pyruvate is converted back into glucose. It often occurs in the liver.

ANSWER: gluconeogenesis

[10] Because pyruvate cannot be converted directly into PEP, it must first be converted to this four-carbon molecule that is added to acetyl CoA to form citrate in the first step of the Krebs cycle.

ANSWER: <u>oxaloacetate</u> [or <u>oxaloacetic acid</u>]

[10] Converting oxaloacetate to PEP releases this gas. The reverse of that step "fixes" carbon in C4 and CAM photosynthetic plants by adding this gas to oxaloacetate.

ANSWER: **carbon dioxide** [or $\underline{CO_2}$]

<Wynne>

- 10. This man paid six hundred fifty thousand dollars to Harold Courlander for plagiarizing portions of Courlander's novel *The African*. For 10 points each:
- [10] Identify this African-American historian who ghostwrote *The Autobiography of Malcolm X*.

ANSWER: Alexander Palmer "Alex" Halev

[10] Alex Haley is best known for this work, which retraces the life of a possible ancestor named Kunta Kinte. It was made into a wildly popular ABC miniseries.

ANSWER: **Roots**: The Saga of an American Family

[10] Another probable example of historical ghostwriting, John F. Kennedy's *Profiles in Courage*, was almost certainly the work of this close adviser. He helped write Kennedy's famed inaugural address.

ANSWER: Theodore "Ted" Sorensen

- 11. Characters in this play repeatedly interrupt asides to the audience to demand to know who is being spoken to, and its main character laments "My poor money, my poor money, my dear friend". For 10 points each:
- [10] Identify this French-language comedy about Harpagon, the spendthrift father of Cleante and Elise.

ANSWER: The Miser [or L'Avare]

[10] The Miser is a comedy by this French playwright, who also wrote The Misanthrope and Tartuffe.

ANSWER: Molière [or Jean-Baptiste Poquelin]

[10] *The Amorous Flea* is a musical adaptation of this Moliere play, whose main character Arnolphe names himself "Monsieur de la Souche" after a tree stump on his estate.

ANSWER: The <u>School for Wives</u> [or L'<u>Ecole des Femmes</u>]

<Bentley>

- 12. This effect was first observed experimentally by Heinrich Hertz in 1887. For 10 points each:
- [10] Name this effect in which electrons are ejected from a metal surface when light is shone on it. Einstein won the Nobel Prize in Physics not for relativity but for explaining this effect.

ANSWER: **photoelectric** effect

[10] Einstein plotted electron kinetic energy against light frequency and found a straight line with a slope equal to this constant, independent of its namesake's theoretical development of it.

ANSWER: Planck's constant

[10] Photoelectron spectroscopy is a form of spectroscopy based on the photoelectric effect. It uses high-energy photons to measure this property of electrons in a substance.

ANSWER: binding energy [or ionization energy; or ionization potential]

<Eltinge>

- 13. This man's concern for diverse kinds of culture influenced the science-fiction works of his daughter, Ursula K. LeGuin. For 10 points each:
- [10] Name this American author of the pioneering textbook *Anthropology*, who did extensive archaeological work in New Mexico and Peru.

ANSWER: Alfred Louis Kroeber

[10] Kroeber was the first student of this man's anthropology program at Columbia. This author of *The Mind of Primitive Man* also taught Margaret Mead and Edward Sapir.

ANSWER: Franz Boas

[10] Kroeber's wife Theodora wrote about this man "in two worlds." This "last of the Yahi" was extensively studied by Kroeber, who became his caretaker after he emerged from the wild in 1911.

ANSWER: Ishi

<Weiner>

- 14. The first section of this work, which opens with the line "And then went down to the ship", is a version of the *nekyia* scene from the *Odyssey*, rewritten using the meter and syntax of an Anglo-Saxon poem called "The Seafarer". For 10 points each:
- [10] Identify this lengthy, incomplete poem in 120 sections. The "Pisan" subdivision of this work was was written during its author's internment in occupied Italy.

ANSWER: The Cantos

[10] This Imagist author of *The Cantos* and "Hugh Selwyn Mauberley" used the so-called "ideogrammatic method" to produce *Cathay*, a collection of loosely-translated Chinese poems.

ANSWER: Ezra Weston Loomis Pound

[10] Four years after Pound's arrest for treason, his *Pisan Cantos* controversially won the inaugural edition of this literary award, funded by Paul Mellon and named for Carl Jung's country retreat.

ANSWER: the **Bollingen** Prize for Poetry

<Morlan>

- 15. Name some things related to continental drift, for 10 points each.
- [10] This geologic concept, similar to the theory of continental drift, states that Earth's continents and oceans are each their own moving, independent section of the lithosphere.

ANSWER: **plate tectonics** [prompt on "tectonics"]

[10] This German meteorologist, who died exploring Greenland in the 1930's and helped coin the term "Pangaea," proposed continental drift and supported it with fossil evidence.

ANSWER: Alfred Lothar **Wegener** (VEG-ner)

[10] This term refers to the phenomenon in which reversals of Earth's magnetic field and poles are recorded in the alignment of spreading seafloor rocks. This has been used as evidence for continental drift.

ANSWER: paleomagnetism

∠Wasserman

- 16. This fanged deity was often depicted holding a serpent and a jade tomahawk, and he reserved a pleasant afterlife for victims of drowning or water-borne disease. For 10 points each:
- [10] Name this storm god. He and Huitzilopochtli each had a shrine at the Templo Mayor.

ANSWER: Tlaloc

[10] Tlaloc was a god of these people, who sacrificed children to him. This people's other gods include the feathered serpent Quetzalcoatl.

ANSWER: **Aztec**s [or **Nahua**tl]

[10] Tlaloc's chief shrine was located at one of these places far outside Tenochtitlan. One of these named Meru is central to Hindu cosmology.

ANSWER: mountains [accept Mount Tlaloc; accept Mount Meru]

<Bentley>

- 17. One ruler of this city, Abimilki, corresponded with Egypt in the Tell al-'Amarna letters. For 10 points each:
- [10] Identify this Phoenician city in modern day Lebanon known for its purple dye industry.

ANSWER: **Tyre** [or **Sour** or **Sur** or **Surru**]

[10] This general built a causeway across the water in order to conquer Tyre in 322 BCE. This legendary conqueror later defeated Darius III at the Battle of Gaugamela.

ANSWER: Alexander the Great [or Alexander III]

[10] An archbishop of Tyre with this name wrote the *Historia*, one of the major primary sources on the Crusades. A ruler with this given name fought Malcolm III at the Battle of Alnwick ("annick") and put down a rebellion by Robert de Mowbray.

ANSWER: William [or Willem; accept "William Rufus," but certainly not just "Rufus!"]

- 18. The second movement of this work is a series of variations on a theme introduced by the french horn. For 10 points each:
- [10] Name this orchestral work that incorporates folk melodies from the title country, as in the Alborada sections that make up its first and third movements.

ANSWER: Capriccio Espagnol, Op. 34 [or Capriccio on Spanish Themes]

[10] Capriccio Espagnol is by this Russian composer and member of The Mighty Handful, who used *The Arabian Nights* as the basis for his symphonic suite *Scheherazade*.

ANSWER: Nikolai (Andreyevich) Rimsky-Korsakov

[10] This other composer of the Mighty Handful wrote an opera containing the "Polovtsian Dances" and depicted caravans of different nationalities in his *In the Steppes of Central Asia*.

ANSWER: Alexander (Porfiryevich) Borodin

<Lawrence>

- 19. This city's Fort Klapperkop contains a nine-seat bicycle that the British used to inspect railroads for bombs. For 10 points each:
- [10] Name this administrative capital of South Africa, located to the north of Johannesburg and named for a one-time president of the Orange Free State.

ANSWER: Pretoria

[10] Pretoria namesake Andries Pretorius defeated over 12,000 Zulu warriors at this battle in December 1838. It led to to the deposition of Dingane. two years later.

ANSWER: Battle of **Blood River** [or Battle of **Ncome River**]

[10] Pretoria also served as capital of a province of this name, which lay north of the Orange Free State and stretched between the Limpopo and its namesake river to the south.

ANSWER: The **Transvaal**

<Bentley>

20. In the 2013 Knesset elections, the new Yesh Atid party promised to end this policy, which was extended on a temporary basis following the 2012 expiration of the Tal Law. For 10 points each:

[10] Identify this special exemption, which is enjoyed by part of the Israeli population.

ANSWER: exemption of the <u>Orthodox</u> from mandatory <u>military</u> service [or exemption of <u>Yeshiva</u> <u>students</u> from mandatory <u>military</u> service; or equivalents for "military service" such as service in the <u>IDF</u> or the <u>armed forces</u>]

[10] After Yesh Atid finished second in the Knesset elections, it formed a coalition with this first-place party led by incumbent prime minister Benjamin Netanyahu.

ANSWER: Likud

[10] Another plank in the Yesh Atid platform is to fight corruption by eliminating this position from the Israeli cabinet. In parliamentary systems, this position is held by a person who is elevated to the Cabinet without any designated responsibility for a particular office or department.

ANSWER: minister without portfolio

<Weiner>



21. In mammals other than marsupials, this process is selected for randomly, leading to the unique coats of calico cats. For 10 points each:

[10] Name this type of gene expression modification in which a specific chromosome is converted to heterochromatin.

ANSWER: X chromosome inactivation [or lyonization]

[10] This is the common name for that inactivated X chromosome.

ANSWER: **Barr body** [accept **drumstick**]

[10] X-inactivation requires the expression of this long non-coding RNA, which is encoded by the

X-inactivation center.

ANSWER: XIST ("exist")

<Wynne>

22. This man's *Memoirs for Catherine the Great* earned him a lifelong pension even though none of his proposed reforms were enacted. For 10 points each:

[10] Name this author of *Jacques, the Fatalist* who collaborated with Jean Le Rond d'Alembert on a major project of the 18th century.

ANSWER: Denis **Diderot**

[10] Diderot is best known for this aforementioned work dedicated to the Comte de Weil-Argenson. Intended as a compendium of all human knowledge, it became the namesake of a type of reference book.

ANSWER: The <u>Encyclopedia</u>, or Rational Dictionary of the Sciences, Arts and Trades, by a Society of Men of Letters [or <u>Encylopedie</u>, ou Dictionnaire raissone des Sciences, des Arts et des Metiers, par une Societe de Gens de Lettres]

[10] Rousseau and d'Alembert feuded over an *Encyclopedia* article d'Alembert wrote defending Voltaire's right to stage private plays in this city. The *Mayflower* pilgrims took a Bible named for this city with them to America.

ANSWER: Geneva

<Bentley>

- 23. Identify the following elements of Golden Age Spanish literature, for 10 points each.
- [10] Tirso de Molina's *The Trickster of Seville and the Stone Guest* is the first written appearance of this legendary seducer, whose womanizing adventures were parodied in a mock epic by Lord Byron.

ANSWER: **Don Juan** [or **Don Giovanni**]

[10] This man succeeded Lope de Vega as the leading light of Golden Age theater on the strength of such plays as *The Surgeon of His Honor*, *The Mayor of Zalamea*, and *Life is a Dream*.

ANSWER: Pedro <u>Calderon</u> de la Barca [or Pedro <u>Calderón</u> de la Barca y Barreda González de Henao Ruiz de Blasco y Riaño]

[10] Golden Age poetry was long dominated by a conflict between Francisco de Quevedo's *conceptismo* and the *culteranismo* movement, led by this poet of the *Soledades*. His death was commemorated by the Generation of '27.

ANSWER: Luis de **Gongora** y Argote [accept **Gongorism**o]

<Carson>