

TOSSUPS

1. Local legend holds that Muhammad safely landed in this country at a cove called the Prophet's Hole. During David Livingstone's exploration of this country, he discovered a native red-eyed megabat now called Livingstone's flying fox. In 2005, this country's capital was evacuated due to the eruption of Mount Karthala, one of the largest active volcanoes in the world. This country, which takes its name from the Arabic word for "moon", is the world's largest exporter of the flower which provides the primary scent in Chanel No. 5, the ylang-ylang (y'lahng'y'lahng). In the 20th century, it was discovered that natives of this country had long been salting and eating coelacanths while the rest of the world assumed that fish was extinct. This country gained its independence in a 1974 referendum in which its islands of Anjouan and Moheli voted for independence, while the nearby island of Mayotte voted to remain a French department (day-part-mahnt). For 10 points, name this archipelagic nation in the northern part of the Mozambique Channel whose capital is Moroni.

ANSWER: Union of the **Comoros** [or Udzima wa **Komori**, or Union des **Comores**, or al-Ittiḥād al-**Qumūrī**, or al-Ittiḥād al-**Qamarī**]

2. In a poem in this collection, the speaker recalls "how quivering and fierce we were, there snowbound together, simmering like wasps in our tent of books!" after asking, "Remember our lists of birds?" and describing to the addressee how the new owners have changed their old house in Maine. The poet inserted his precocious daughter Harriet's exclamation "But you can't love everyone, your heart won't let you!" into a poem in this collection adapted from the story *In the Village* by Elizabeth Bishop, whose trip with the author to the coast of Maine is recounted in this collection's opening poem. This collection, which includes "The Scream," "The Old Flame," and "Water," ends with a poem in which the speaker describes how his nose once "crawled like a snail on the glass" in a building that stands in "a Sahara of snow" in South Boston as "a savage servility slides by on grease." For 10 points, name this collection whose title poem describes the Robert Gould Shaw Memorial, a work of Robert Lowell.

ANSWER: ***For the Union Dead***

3. Four months after this battle occurred, *Popular Mechanics* used a football metaphor about running backs and defensive linemen to first describe it to the public. After participating in the first phase of this battle, the *Darter* ran aground on a reef and was unable to be scuttled. A message containing an excerpt from "The Charge of the Light Brigade" caused one commander to return to this battle without waiting for orders. The failure to capitalize on the Battle of the Sibuyan Sea nearly spelled disaster for one side at this battle. Ernest Evans was posthumously awarded the Medal of Honor for his actions during this battle, while the *Samuel B. Roberts* earned the moniker "the destroyer escort that fought like a battleship." One part of this battle in the Surigao Strait featured battleships that had been damaged or sunk at Pearl Harbor "crossing the T" against the enemy force, and it also featured the defense of "Taffy 3" off the island of Samar. For 10 points, name this battle which featured the destruction of much of the remaining Japanese carrier force, the largest naval battle of World War II.

ANSWER: Battle of **Leyte Gulf** [prompt on **Second Battle of the Philippine Sea**]

4. Scholars in this field include Anton Kaes, whose historicist analyses of the influence of collective memory on German culture include *From Hitler to Heimat*, which overlaps in subject matter with the major works of Thomas Elsaesser (ELL-zess-er). The Boston University professor and possibly insane hoarder Ray Carney was sued for stealing the property of one of his subjects in this field, Mark Rappaport. The essay "The Imaginary Signifier" developed a psychoanalytic, semiotic approach to this field and was written by Christian Metz. A standard introductory textbook in this field was written by the husband-and-wife team Kristin Thompson and David Bordwell. Influential early theorists in this field included Andre Bazin (bah-ZAHN), whose realist principles are sometimes contrasted with those of Sergei Eisenstein. For 10 points, name this field represented by the British magazine *Sight & Sound* and the French magazine *Cahiers du cinema* (kye-YAY doo SEE-nay-mah).

ANSWER: **film** criticism [or **film** studies; or **film** theory; or **film** history; or **cinema** studies before it is read; or obvious equivalents; prompt on **media** studies]

5. An essay titled for this question discusses a prior text as the possible origin of an ongoing “critical ontology of ourselves” and cites Baudelaire to sketch a four-point outline of the related “attitude of modernity.” That essay offers a provisional definition of “modern philosophy” as philosophy that is attempting to answer this question. Another essay responding to this question paradoxically argues for the necessity of restrictions on the private use of reason in civic posts while ensuring that public use of reason remains free. Moses Mendelssohn attempted to answer this question when it was posed by the *Berlinische Monatsschrift* (bair-LEE-nih-shuh moh-NAHT-“schrift”) two months prior to a more famous response that included the motto “Sapere aude!” and gave the summary answer “man’s exit from his self-incurred immaturity.” For 10 points, name this question addressed in a short essay by Immanuel Kant attempting to define the movement he represented.

ANSWER: “**What Is Enlightenment?**” [or “**Was ist Aufklärung?**”]

6. A textbook titled for these entities was written by Philip J. Kocienski. Ian Young and Phil Baran suggested bio-mimetic methods as a way of avoiding the decrease in yield caused by having to use these entities. Norrish type II reactions can be used to append nitro-benzyl examples of these entities which have the advantage of being photolabile (“photo”-lay-“bile”). In the first step of a Favorskii reaction, a prop-*ar*-gyl alcohol is generated to serve as one of these entities. Pi-per-i-dine and tri-fluoro-acetic acid are used in peptide synthesis to remove examples of these entities known as B-O-C and F-M-O-C. Ethylene glycol can be used as one of these reagents by converting a carbonyl group into an acetal, thus preventing reduction of the carbonyl by a hydride or Grignard reagent. For 10 points, name these chemical reagents which are reversibly added to a particular functional group to prevent it from reacting in a multi-step organic synthesis.

ANSWER: **protecting** group

7. According to eyewitness accounts, members of this group were forced to prove their loyalty by eating pieces of Murad Beg’s body off a skewer. Ali al-Karaki forced this group to give up its oral tradition of legends about Abu Muslim. This group was motivated by poems proclaiming “I am Alexander” and “I am God’s mystery” written under the pen-name Khata’i. Its power diminished thanks to dissension between its constitutive tribes, such as the Ustajlu (ooh-stahj-loo) and Rumlu. This group was established under Sheikhs Junayd and Haydar, who proselytized among the Black Sheep Turkomans of Uzun Hasan. Their administrative dominance was undermined by Georgian and Armenian slaves converted to Islam in the 17th century, after Shah Abbas decided to replace them with a *ghulam* army. These horse-mounted *murid* warriors wore turbans around an item gored twelve times for the twelve imams. For 10 points, name these “red-headed” holy warriors under Shah Ismail who helped found the Safavid Empire.

ANSWER: **Qizilbash** (kih-zihl-bahsh) [or the **Redheads**; prompt on **Safavids**; prompt on **Sufis** or **Turks** or **Turkomans**]

8. In 2005, FEANTSA (fee-ahnt-sa) developed the ETHOS (“ethos”) typology in order to standardize the definition of this condition throughout the European Union. A book by Peter Rossi traces the demographic shift of Americans with this condition from primarily older white men before World War II to a younger and more diverse group after it. Until the 1980s, the dominant academic explanation for this condition was disaffiliation theory, until it was supplanted by displacement theory. In the United States, the McKinney-Vento act provides federal money for people with this condition, who are the subject of Elliot Liebow’s ethnography *Tell Them Who I Am*. San Francisco mayor Art Agnos popularized the term “compassion fatigue” to describe the gradual desensitization towards people with this condition. Communities use point-in-time counts to estimate the number of people with this condition, who are often victimized by sweeps of their encampments. For 10 points, name this condition in which a person does not have a stable residence.

ANSWER: **homelessness** [or being **homeless**; or **living on the streets**; or any indication that someone does not have a stable home]

9. This character is compared to “a bunny-rabbit sewn up in the carcass of an ox” in the escape fantasy of a man who addresses a letter to this character calling him “a stick insect...whose sole defence against a universe of predators is its bizarre shape.” This man loses his virginity to a woman in a silver wig on a pile of driftsand in a public toilet at the bidding of a mysterious man who promises to fetch him for a party “where you will see how Sea Point lives.” This character spent his childhood at a boarding school for institutionalized children called Huis Norenus (“HOUSE” nor-AY-nee-us). In a rehabilitation camp, an unnamed doctor takes an obsessive interest in this character, who had earlier built a makeshift rickshaw from a wheelbarrow in which to transport his mother to the farm where she grew up. Before this character is captured, he spends a long time in a state of inactive delirium, surviving on strips of pumpkin. For 10 points, name this hare-lipped South African gardener, whose “life and times” title a novel by J. M. Coetzee.

ANSWER: **Michael** K [or Michael **K**; or **Michaels**]

10. Global mutagenesis using these entities was used to determine the minimal genome for the first synthetic organism *Mycoplasma laboratorium*. The most common example of these entities in humans is evolutionarily derived from the 7-S-L RNA encoding the signal recognition particle. The Mu bacteriophage relies on these entities to integrate into the host genome. The replicative forms of these entities require the action of a re-solv-ase for separation. Helitrons are examples of these entities that replicate with a rolling-circle mechanism. The *Sleeping Beauty* system utilizes these elements in vertebrates. Hybrid dysgenesis in *Drosophila* is a result of the action of one of these entities known as the P element. They can be used for gene insertions and knock-ins. Class I (“one”) of these entities use reverse transcriptase for replication and include LINEs and SINEs (“lines and sines”). For 10 points, Barbara McClintock used corn to discover what DNA sequences that can change positions within a genome?

ANSWER: **transposons** [or **transposable elements**; accept retro**transposon**]

11. Frederick de Armas argues that a fanciful description of this character with two maids is an *ekphrasis* of Botticelli’s *Primavera*. A poet commissioned to write an acrostic poem about this character protests that seventeen letters cannot be divided regularly between stanzas. In a subsequently-reported dream sequence, a maid for this character offers a petticoat as collateral for a six-coin loan in a cave housing a dried-up salted heart cut from a castrated corpse. A man dressed as Merlin claims that this character can be saved if another character is whipped on the buttocks thirty-three hundred times in a prank orchestrated by the Duke and Duchess. After addressing a request to this character, a man bloodies the mouth of a mule-rider armored with a pillow. Despite never appearing in person, this character is repeatedly invoked by the novel’s protagonist before fighting characters like Sanson Carrasco. For 10 points, name this peasant girl, actually named Aldonza Lorenzo, who serves as the title character’s muse in *Don Quixote*.

ANSWER: **Dulcinea** del Toboso [or Aldonza **Lorenzo** before it is read; or **Aldonza** Lorenzo before it is read]

12. This entity’s establishment on the feast day of a saint from Antioch reflected its organizer’s birth in prison. This entity entered a defensive alliance with England after its first leader married a non-Portuguese Philippa of Lancaster; that marriage was part of an unsuccessful plan to also marry its first leader’s sister to the Prince of Wales. One of this body’s leaders was nicknamed the “Bark King” after a series of bad harvests; that figure, Christopher of Bavaria, became this body’s leader after its first head’s overthrow. The nickname “King Pantsless” was given to this polity’s organizer by Albert of Mecklenburg, whose defeat allowed this body’s creation by the regent for the child king Olav IV. This entity’s first ruler changed his name from Bogislav to lead this organization, which was founded to counter the power of the Hanseatic League. For 10 points, name this combination of three kingdoms set up to be ruled by Erik of Pomerania by the connivances of Margaret I of Denmark.

ANSWER: **Kalmar Union** [or **Union of Kalmaris**; or **Kalmarunionen**; or **Unio Calmariensis**]

13. Per Baltzer Overgaard analyzed this type of action as a signaling game whose objective is to show possession of resources. A spin on the “rational actor framework” was developed by anthropologist Scott Atran in his fieldwork on this phenomenon, whose prevalence among women has gradually increased according to Mia Bloom. Max Abrahms applied psychological correspondent-inference theory to his phenomenon to show why it “doesn’t work.” The “strategic logic” of this action was examined by a University of Chicago professor who compiled a complete database on one form of its expression, concluding that it was fundamentally about territory; that scholar of this phenomenon is Robert Pape. In the late 19th-century, this activity often followed Mikhail Bakunin’s doctrine of “propaganda of the deed.” For 10 points, identify this type of violence by non-state actors that incites fear in service of political goals.

ANSWER: **terrorism** [or **suicide bombing**; or Islamic **terrorism**; prompt on **Islamism** or **Islamic radicalism**]

14. Atmospheric models of these stars have two key parameters: a “transformed radius” that is proportional to the radius at which Rosseland optical depth equals twenty, and an effective temperature that is computed iteratively while accounting for line blanketing. Local thermodynamic equilibrium and plane-parallel geometry are not valid assumptions for these stars’ atmospheres. The centers of about ten percent of planetary nebulae contain one of these stars. So-called “slash” stars are spectroscopically intermediate between these stars and O-type stars. At low metallicity and high rotation rate, the inner core of one of these stars becomes a hypernova in the “collapsar” model of long-duration gamma-ray bursts. Broad emission lines of helium and either carbon or nitrogen characterize these stars, which evolve from luminous blue variables. For 10 points, identify these doubly-eponymous stars that have extremely high rates of mass loss.

ANSWER: **Wolf-Rayet** (“wolf”-ray-et or “wolf-rye”-ay) stars [or Class **WR** stars; or Class **WN** stars; or Class **WC** stars]

15. In a composition written for this time period, *Fürchtet euch nicht* (FERSH-tet oish NISHT) is the first of eight set pieces labeled *Intermedium*. The final piece in Francesco Manfredini’s Opus 3 was written for this time period. Heinrich Schütz’s SWV 435, his third published *Historia*, was composed for this time period. The D major chorus *Jauchzet, frohlocket* (YOWK-zet fro-LOCK-it) opens another piece in six parts written for this time period. The instruction *Arcate, sostenuto e come sta* appears in the first of six movements of a piece composed for this time period that concludes with a 12/8 *Pastorale ad libitum*. Pieces written for this time period include Giuseppe Torelli’s Opus 8, No. 6, a concerto grosso in G minor, the same key as the Opus 6, No. 8 of Arcangelo Corelli, another concerto grosso composed for this time period. For 10 points, name this holiday, the subject of Baroque oratorios that depict events such as the adoration of the Magi.

ANSWER: **Christmas** [or **Christmas Eve**; or **Christmas Day**; or **Christmastide**; or **Christmas season**; or **Twelvetide**]

16. One painting by this artist has shafts of light from the top left corner cross the body of a sword-wielding entertainer performing on a rug. Another painting by this artist has a man on the left hand side looking at a figure lying face down in the mud and who has lost his top hat after being executed by firing squad. A third work by this painter shows the title figure bowing as he ascends a staircase adorned with laurel wreaths to gain the favour of Louis XIV. This painter of *Sabre Dance in a Café*, *The Execution of Marshal Ney*, and *The Reception of the Grande Condé at Versailles* painted a shield with five studs hanging above a group of men being entertained by a nude boy with a snake wrapped around him in another work. Another of his paintings shows the central figure facing six vestal virgins and performing the title gesture, implying that he should kill his defeated opponent, a fellow gladiator. This painter’s *Snake Charmer* was used for the cover of Edward Said’s *Orientalism*. For 10 points, name this French Academic painter of *Pollice Verso* (poh-lee-chay vair-so).

ANSWER: Jean-Léon **Gérôme** (zhahn-lay-ohn zheh-rohm)

17. This writer concluded, “There we leave you in that blessed dependency, to hang upon him that hangs upon the cross,” in a text that elaborates the meanings of the line “And unto God the Lord belong the issues of death.” This writer defended propositions “That a Wise Man Is Known By Much Laughing” and “That Nature Is Our Worst Guide” in his early set of *Paradoxes and Problems*. In a work divided into 23 tripartite sections, each containing an “expostulation” and a “prayer,” he wrote that “all mankind is of one Author, and one volume,” with each chapter to be “translated into a better language.” This man’s delivery of “Death’s Duel” prompted Izaak Walton to observe that he had “preached his own funeral sermon.” He wrote that “every man’s death diminishes me, because I am involved in mankind” in a passage asserting “no man is an island.” For 10 points, name this Dean of St. Paul’s whose *Meditation XVII* (“seventeen”) advises “ask not for whom the bell tolls,” and whose poetic works include the *Holy Sonnets*.

ANSWER: John **Donne**

18. The tension associated with these objects’ annihilation instability exactly balances the negative energy density at the minimum potential of their corresponding tachyonic fields. In p-form electrodynamics, these objects are the source of Ramond-Ramond fields. These objects are classified based on whether they exist at the Planck or tera-electron-volt energy scales in the Randall-Sundrum model. In ekpyrotic cosmology, the interaction of two of these objects separated by a “bulk” results in the creation of a new universe. These objects belong to the derived category of coherent sheaves on a Calabi-Yau manifold. The Neveu-Schwarz (neh-voo-shvahrts) class of these objects carries a magnetic charge. If these objects satisfy the Dirichlet boundary conditions, they are prefixed with a capital letter D. For 10 points, name these mathematical objects used in M-theory that generalize the concept of a string to higher dimensions.

ANSWER: mem**branes** [do not accept “strings” – all of the clues refer to branes with more than one dimension]

19. According to English popular tradition, the weather on St. Swithun’s Day will persist for this length of time. In Islam, Adam is said to have received his life-breath this long after he was formed from clay. Before getting killed by Jesus, it is prophesied that the Islamic false messiah figure Al-Masih ad-Dajjal will spend this length of time corrupting the earth. A journey which retrieved grapes from the brook of Eshcol lasted for this length of time, after which a favorable report was given by Caleb and Joshua. In Jewish tradition, an embryo receives its soul this long after conception. In a New Testament story, Jesus refuses to throw himself from the top of a tower or to create bread out of stones despite spending this much time being tempted by the devil, inspiring the observance of Lent. For 10 points, name this running time of the deluge which flooded the world in the Book of Genesis.

ANSWER: **forty days** and nights

20. This group notoriously killed victims with a repurposed wheat-sheaf knife protruding sideways out of a copper plate on a leather glove. This group subscribed to the ideas of the assassinated author of the science fiction novel *On the Pacific in 2255*. The leader of this party was a member of the militant wing of the Party of Rights. A unit called the Handschar swore joint oaths of loyalty to the leader of this party and a foreign ruler, and members of this party saluted with the greeting “For home!” and the reply “Ready!” Despite the support this party won from religious leaders such as Bishop Stepinac (step-EE-nahts), it recognized Sunni Islam as a state religion. This group tried to kill, expel, or convert to Catholicism the Serbs it ruled over at locations like the Jasenovac (yah-say-no-vahts) Concentration Camp, the “Auschwitz of the Balkans.” For 10 points, Ante Pavelic (ahn-tay pah-veh-litch) led what Nazi-aligned party that ruled Croatia during World War II?

ANSWER: **Ustaše** (oo-STAH-sheh) [or **Ustasha**; or **Ustaša**-Croatian Revolutionary Movement]

TB. The herald Lichas lies to this character about why King Eurytus’s city was sacked. This character realises she has made a mistake when a piece of used wool crumbles when exposed to sunlight. This woman’s son vows to marry the princess Iole at the end of the work they appear in. The first words this woman speaks are a retelling of the maxim that no man should be called lucky until he is dead. In that work, she was likely played by the same actor who portrayed her husband. This woman tries to use a love charm to win her husband’s affections back, and kills herself when that plan fails. This woman’s actions cause the fulfillment of a prophecy that her husband would be killed by someone already dead; that someone is the centaur Nessus. For 10 points, identify this character, the co-protagonist of Sophocles’s *The Women of Trachis*, in which she accidentally murders her husband, Heracles.

ANSWER: **Deianira** (day-ah-NYE-rah)

1. The history of political parties in the United States has not been smooth. For 10 points each:

[10] This political party system began in 1828 following the “corrupt bargain” of 1824. This system saw the rise of the Jacksonian Democrats and the Whigs after the fracturing of the Democratic-Republicans.

ANSWER: **Second** Party System

[10] This man succeeded William Henry Harrison and was later expelled from his own party, becoming a pro-slavery Democrat who pursued annexing Texas.

ANSWER: John **Tyler**

[10] This major document defining Jacksonian democracy was authored by either Roger Taney or Amos Kendall. It praises government that, “as Heaven does its rains, shower[s] its favors alike on the high and the low,” and warns of \$8.5 million in shares held by Great Britain.

ANSWER: Andrew Jackson’s **veto message** regarding the Second Bank of the United States [or Jackson **vetoing** extending the charter of the Second Bank of the United States; or equivalents that mention a **veto**]

2. This artist’s *Eleven Minute Line* is an earthwork located in Sweden inspired by the Great Serpent Mound. For 10 points each:

[10] Name this artist who had tens of thousands of names inscribed on two black stone slabs in her design for the Vietnam Veterans Memorial.

ANSWER: Maya (Ying) **Lin**

[10] Maya Lin won the competition to design the Vietnam Veterans Memorial while an architecture student at this university. Louis Kahn used an innovative mix of concrete and light-colored wood for its Center for British Art.

ANSWER: **Yale** University

[10] In 2016, a travelling half-size replica of the Vietnam Veterans Memorial was displayed at this building on the campus of UT-Austin. This rectangular, marble, monolith with a smooth, unornamented exterior and an overhanging roof was designed by Gordon Bunshaft of S.O.M.

ANSWER: **Lyndon Baines Johnson Presidential Library** [accept any answer with **LBJ** and **Library**; prompt on **Johnson Presidential Library**]

3. Answer the following about the Islamic philosopher Al-Farabi, for 10 points each.

[10] Al-Farabi was known as the “second master” of philosophy, following this other philosopher whose works on logic are known as the *Organon*. Al-Farabi introduced the poetic syllogism in a commentary on this man.

ANSWER: **Aristotle**

[10] In Al-Farabi’s cosmology, God serves as the “formal” and “efficient” types of this entity. Aristotle identified four of them, including “material” and “final.”

ANSWER: **causes**

[10] Al-Farabi may be best known for this work, whose title entity is headed by a philosopher. Al-Farabi describes the title place as where people aim for mutual assistance, and is contrasted with misguided locations.

ANSWER: *Treatise on the Views of the Residents of The* **Virtuous City** [or *al-Madinah al-fadilah*]

4. Answer the following about anthropological methods, for 10 points each.

[10] Franz Boas pioneered the “salvage” form of this method, which more commonly refers to field research on the everyday lives of a tribe, people, or subculture.

ANSWER: **ethnography**

[10] Kenneth Pike coined, and Marvin Harris promoted, these two terms for two perspectives analyzing a social group. One refers to the perspective of the observer, while the other refers to that of the observed subject.

ANSWER: **emic** and **etic**

[10] This influential essay collection, edited by James Clifford and George Marcus, criticizes Boas’ scientific pose in favor of a more “literary” approach in which, like Hermes, the ethnographer self-consciously constructs truth.

ANSWER: **Writing Culture**: *The Poetics and Politics of Ethnography*

5. Rhythmic cardiac muscle contraction is a complicated process. For 10 points each:

[10] This structure functions as as the heart's intrinsic pacemaker by spontaneously generating electrical impulses that eventually de-polarize the cardiac myo-cytes.

ANSWER: **sino-atrial node** [or **SA node**]

[10] This technique, in which one exhales forcefully against a closed airway, causes an increase in intra-thor-acic pressure leading to a sharp rise in blood pressure, followed by a sharp drop and then a second sharp rise. You probably use this technique when you're trying to hit a PR on your bench press.

ANSWER: **Valsalva** maneuver

[10] Perhaps the most notable part of an EKG is this combination of elements that corresponds to the depolarization of the right and left ventricles. Wolff-Parkinson-White syndrome can be diagnosed by the appearance of a delta wave slurring part of this feature.

ANSWER: **QRS** complex

6. During this event, which involves characters described as "two stupid children," the narrator asks his girlfriend Quima for a lighter, only to learn that she has quit smoking. For 10 points each:

[10] Name this event which puts the narrator into a state of "superlucidity." It pits Belano against a literary critic on a windy beach in Barcelona.

ANSWER: the **sword fight** in *The **Savage Detectives*** [or the **duel** in *The **Savage Detectives***; or obvious equivalents]

[10] In *The Savage Detectives*, Belano belongs to this group of renegade poets from Mexico City who fund a magazine called *Lee Harvey Oswald* and are led by Ulises Lima (yoo-LISS-eez LEE-mah).

ANSWER: the **visceral realists**

[10] *The Savage Detectives* was written by Roberto Bolaño (boh-LAHN-yoh), an author from this country, which also produced the novelist José Donoso (doh-NOH-soh) and the poet of *Twenty Love Poems and a Song of Despair*.

ANSWER: **Chile** [or Republic of **Chile**; or Republica de **Chile**]

7. The second Byzantine emperor of this name was deposed by Leontius in 695, sparking a period of unrest known as the Twenty Years' Anarchy. For 10 points each:

[10] Give this name. The first Byzantine emperor with this name married his mistress Theodora and employed the able generals Belisarius and Narses.

ANSWER: **Justinian**

[10] Justinian II earned his cognomen when Leontius inflicted this punishment on him. With the help of a gold prosthetic, Justinian II later ruled again despite a general proscription against mutilated emperors.

ANSWER: **nose amputation** [accept equivalents involving a **nose** being **slit** or **cut off**]

[10] Justinian II was the son of this emperor, who is best known for using Greek fire to fend off an epic 674-678 siege of Constantinople by an Umayyad force led by Yazid I.

ANSWER: **Constantine IV** [prompt on partial answer]

8. Alternating low and high background current in this technique can be used to perform Smith-Hieftje background correction. For 10 points each:

[10] Name this technique in which a sample is atomized and excited by incident light, which then allows one to determine its elemental composition.

ANSWER: **atomic absorption spectroscopy** [or **AAS**]

[10] A particular form of atomization used to detect arsenic and antibodies uses this anion (ANN-"ion"). Ketones are often converted to alcohols using reducing agents containing this ion, such as DIBAL ("dye"-bal) and a lithium aluminum compound.

ANSWER: **hydride** [accept **H-minus**]

[10] This law is used to convert the radiation flux of the sample over the blank to the concentration. It relates the attenuation of a ray of light to the molar absorptivity, path length, and concentration.

ANSWER: **Beer**-Lambert Law [or **Beer's** Law]

9. David Mitchell wrote the libretto for this composer's *Sunken Garden*, a stage piece that incorporates 3-D film. For 10 points each:

[10] Name this contemporary Dutch composer of the opera *After Life*, whose multimedia works include his interactive song cycle *The Book of Sand* and his chamber opera *Blank Out*.

ANSWER: Michel **van der Aa**

[10] Janine Jansen premiered Van der Aa's concerto for this string instrument, which is also played by Hilary Hahn and Itzhak Perlman.

ANSWER: **violin**

[10] In 2014, Van der Aa's concerto *Up-Close* was performed at one of this orchestra's Green Umbrella concerts. Its current music director also directs the Simon Bolivar Symphony Orchestra.

ANSWER: **Los Angeles Philharmonic** [or **LA Phil**harmonic; prompt on **LAP**]

10. The feud over this issue is finally resolved when Padre Lucero repents and dies after exclaiming, "Comete (koh-MAY-tay) tu cola, Martinez, comete tu cola!", supposedly upon witnessing his accomplice's torments in hell. For 10 points each:

[10] Name this issue over which Padre Martinez feuds with Jean-Marie Latour, eventually founding his own schismatic church.

ANSWER: priestly **celibacy** [accept anything about priests not being allowed to have **sex** or **father child**ren]

[10] The feud between Padre Martinez and Jean-Marie Latour occurs in this 1927 novel by Willa Cather.

ANSWER: ***Death Comes for the Archbishop***

[10] Earlier in the 20s, Cather was awarded a Pulitzer Prize for this notoriously bad novel about Claude Wheeler, who discovers a sense of meaning and purpose by joining the army during World War I.

ANSWER: ***One of Ours***

11. This poem's easily impressed speaker describes a woman whose cloth-making skill surpasses the makers of "Ypres (EE-pruh) and Gaunt" and expresses pity at the irrelevant detail that she is somewhat deaf. For 10 points each:

[10] Name this poem that also describes a dainty woman who wears a golden brooch inscribed "Amor vincit omnia." Near the end of this poem, a man exclaims "welcome be the cut, a Goddes name!" (WEL-"comb" BAY "the cut," ah GOD-us NAHM-uh), and rides away with his party.

ANSWER: The **General Prologue** to *The Canterbury Tales* [prompt on *The Canterbury Tales*]

[10] This bawdy poem from *The Canterbury Tales* describes a naïve carpenter who is cuckolded by Nicholas, whose bottom is branded with a red-hot iron.

ANSWER: The **Miller's Tale**

[10] Almachius orders the decapitation of a woman in a bathtub in *The Second Nun's Tale*, which is a rhyme royal poem in this genre. Jacobus da Voragine (voh-rah-ZHEEN) compiled works of this type.

ANSWER: **saint's life** [or **hagiography**; or **biography** of a **saint**]

12. A 2016 constitutional referendum in this country sought to reform the makeup and procedures of the Senate and Chamber of Deputies. For 10 points each:

[10] Name this country where the failure of that referendum led to the resignation of prime minister Matteo Renzi.

ANSWER: **Italy** [or **Italia**; or **Italian** Republic; or Repubblica **Italiana**]

[10] This man largely left the Italian cabinet and leadership structure intact after becoming Prime Minister of Italy following Renzi's resignation.

ANSWER: Paolo **Gentiloni** Silveri

[10] Gentiloni and Renzi belong to this center-left Italian political party that was founded in 2007 from a collection of other social-liberal and centrist parties, such as the European Republicans Movement.

ANSWER: **Democratic** Party [or **PD** or **Partito Democratico**]

13. This British Prime Minister once foiled a kidnap attempt by left-wing university students by explaining that the Conservatives would win a majority by 200 or 300 seats if they did. For 10 points each:

[10] Name this Conservative prime minister who resigned his earldom shortly after succeeding Harold Macmillan. He was the last PM to sit in the House of Lords, and was defeated in the 1964 general election.

ANSWER: Alec **Douglas-Home**

[10] As Secretary of State for Commonwealth Relations, Douglas-Home dealt with the fallout from this international crisis in which Anthony Eden's government collaborated with Israel and France to invade Egypt.

ANSWER: **Suez** Crisis [or the **Tripartite Aggression**; or the **Kadesh Operation**; or the **Sinai War**]

[10] During his short-lived premiership, Douglas-Home's major domestic legislative accomplishment was the passage of a bill outlawing RPAs, a type of this practice. In the U.S. its "vertical" type was allowed under the ruling *State Oil Co. v. Khan*, though its "horizontal" type remains illegal.

ANSWER: **price fixing** [or maintaining a **price floor**; or (resale) **price maintenance**; or equivalents indicating the maintenance of a minimum **price** on goods]

14. The second half of a poem in this collection consists entirely of rhetorical questions suggesting possible origins of the dazzling skin-color of a swan-woman on the Rhine. For 10 points each:

[10] Name this French poetry collection, a favorite of Oscar Wilde's, which includes "Symphony in White Major" and ends with "Art." After murdering Basil Hallward, Dorian Gray reads and rhapsodizes over some stanzas from this collection's "Variations on the Carnival in Venice."

ANSWER: **Enamels and Cameos** [or **Émaux et Camées**]

[10] *Enamels and Cameos* was written by this French poet and novelist who preached "art for art's sake" in the preface to *Mademoiselle de Maupin* ("mow"-PAHN).

ANSWER: Theophile **Gautier** (TAY-oh-feel GOH-tee-ay) [or Pierre Jules Theophile **Gautier**]

[10] Gautier was deeply influenced by this contemporary, also a poet and novelist, who created Inspector Javert and Jean Valjean.

ANSWER: Victor **Hugo** [or Victor Marie **Hugo**]

15. Here are some questions about the Eight Immortals that don't require you to say any of their names, although your moderator isn't quite so lucky. For 10 points each:

[10] Lu Dongbin decided to study the Dao under Zhongli Quan (JONG-lee CHWAN) after one of these events took place while his yellow millet was cooking. The second chapter of the *Zhuangzi* (JWANG-zuh) contains a famous passage describing one of these events.

ANSWER: **dreams**

[10] Both Zhang Guo (JAHNG GWOH) and Han Xiangzi (SHEEANG-zuh) possess a tool of power that is this type of object. Other examples of these objects include the *biwa* owned by the Japanese goddess Benzaiten (ben-zye-ten) and the *gusli* used by Slavic heroes like Sadko.

ANSWER: musical **instruments** [or **lutes**; or **flutes**; or **drums**]

[10] This legendary mountain in the Bohai Sea is the home of the Eight Immortals and the wizard Anqi (AHN-CHEE) Sheng. The sorcerer Xu Fu (SHOO FOO) may have discovered Japan while on an expedition to find this mountain at the behest of Qin Shi Huang (CHIN SHER HWANG).

ANSWER: Mount **Penglai** [or Mount **Horai**]

16. One of these events in 2013 in Prayag, near Allahabad, was one of the largest peaceful gatherings in history. For 10 points each:

[10] Name these Hindu mass gatherings which occur every three years in four different locations. Worshippers at these gatherings cleanse their sins by bathing in sacred rivers.

ANSWER: **Kumbh Mela** (KOOMB may-lah) [or **Kumbha Mela**]

[10] The Prayag Kumbh Mela occurs at the place where the Yamuna River and the invisible Sarasvati River meet this river. This sacred Indian river also runs through the most important of Hinduism's seven sacred cities, Varanasi.

ANSWER: **Ganges** River [or **Ganga** River]

[10] According to the mythological origin story of Kumbha Mela, a heavenly war caused four drops of amrita to fall on Prayag and three other sacred cities. Name any one of those other cities.

ANSWER: **Haridwar** [or **Hardwar**; or **Nashik**; or **Nasik**; or **Ujjain**]

17. J. J. Sakurai proposed the "dominance" of a subset of these particles to explain hadron-photon interactions. For 10 points each:

[10] Name this class of particles that includes the J-psi particle. The spin-zero subset of these particles forms a nonet in which both charge and strangeness can take values of either zero, one, or negative one.

ANSWER: **mesons** [or vector **meson** dominance]

[10] Rho and omega vector mesons carry the residual strong force in atomic nuclei along with these particles that have the lowest mass of any mesons. Their plus and minus varieties most commonly decay into a muon and muon neutrino.

ANSWER: **pions** [or **pi** mesons]

[10] The second-most common decay mode of a neutral pion is the Dalitz decay into these three particles. Name all three.

ANSWER: **photon**, **electron**, and **positron** [accept in any order]

18. This program's history was revealed to the public in 1997 by the Truth and Reconciliation Commission, whose evidence suggested it may have been responsible for a 1980 anthrax outbreak in Rhodesia. For 10 points each:

[10] Name this program administered by Wouter (VOW-ter) Basson, known as "Dr. Death," to develop biological weapons like botulinum-laced chocolate and thallium-contaminated whiskey for use against anti-apartheid activists.

ANSWER: Project **Coast**

[10] Project Coast was discontinued by this last apartheid-era president of South Africa who shared a Nobel Peace Prize with Nelson Mandela.

ANSWER: Frederik Willem **de Klerk**

[10] A joint South African-Israeli nuclear test may have been the origin of this mysterious "double flash" off of the Prince Edward Islands detected by an American satellite in 1979.

ANSWER: **Vela** Incident [or the **South Atlantic** Flash]

19. Images in this painting include a dead canary on top of a gnarled tree, a naked woman being choked by a rope, and a skyscraper rising out of the mouth of a volcano. For 10 points each:

[10] Name this autobiographical painting that shows the artist's bare legs in a bathtub where macabre images are floating on the surface.

ANSWER: **What the Water Gave Me** [or **What I Saw In the Water**; or **Lo Que el Agua Me Dio**]

[10] *What the Water Gave Me* was painted by this Mexican artist, whose many surreal self-portraits often depict her iconic unibrow. She was married to Diego Rivera.

ANSWER: Frida **Kahlo** de Rivera

[10] Clare Boothe Luce commissioned Kahlo to paint a portrait commemorating the suicide of this mutual friend. The painting is full of cottony clouds and shows this woman falling from Hampshire House onto the sidewalk.

ANSWER: Dorothy **Hale**

20. Answer the following about successively more powerful automata in the context of the theory of computation, for 10 points each.

[10] Deterministic finite automata are five-tuples that read an input string and either accept or reject the string. The set of languages that can be accepted by a DFA is this set, which are often written using namesake “expressions”.

ANSWER: **regular** languages [or **rational** languages]

[10] The non-deterministic versions of this automaton precisely accepts the set of context-free languages. These machines can be thought of as non-deterministic finite automata that also have access to a stack.

ANSWER: generalized **pushdown** automata [or **GPDA**]

[10] These automata accept strings of infinite length, and are named after the Swiss mathematician who devised them. The set of languages accepted by these automata are precisely the omega-regular languages.

ANSWER: **Büchi** (BUU-hshi) automata [or **Büchi** automaton]