

Toss-ups

1. This location once contained a suite of seven rooms named for the classical planets, and still houses a theater built of wood painted to resemble marble. A makeshift theater housed the Pleasures of the Enchanted Isle, performed for the opening of this site's gardens, where the Fountain of Latona can be found near the Grand Canal and the Orangerie designed by Mansart. André le Nôtre designed the gardens of this building, whose most famous room once contained the solid silver throne of Louis XIV. For 10 points, name this French palace complex, home to the Hall of Mirrors.

ANSWER: Palace of Versailles

2. This novel's protagonist discovers a gadget to remove dry cleaner tags in her luggage along with a knife grinder and a pair of scissors. That character's husband expresses disgust after seeing her unshaven legs. Gina and Nyiko play with kittens later drowned by a woman who chases after a helicopter at the end of this novel. Another character in this novel hunts warthogs, and has his shotgun stolen by Daniel, who teaches the title character to drive a bakkie owned by Maureen and Bam. For 10 points, name this novel by Nadine Gordimer in which the title ex-servant saves the Smales family by taking them to his village to escape a revolution.

ANSWER: July's People

3. This quantity is equal to either zero or infinity for a particle in an infinite square well, and if a force is conservative then it is equal to the negative gradient of this quantity. To calculate the Lagrangian of a system, this quantity is subtracted from a quantity symbolized T, and force is equal to the negative partial derivative of this quantity with respect to position. For a body in a gravitational field it is equal to mass times little g times height. For 10 points, name this quantity that is the stored energy within a system, contrasted with kinetic energy.

ANSWER: potential energy

4. A sermon by Richard Watson convinced this man to publish one work that claims that "It is wrong to say God made rich and poor" and advocates a property tax to provide pensions for British citizens. That work was "Agrarian Justice". This man attacked "African Slavery in America" in one pamphlet, and he wrote that "tyranny, like hell, is not easily conquered" and challenged Christianity in "The Age of Reason". For 10 points, name this man wrote "These are the times that try men's souls" in "The American Crisis" after penning "Common Sense."

ANSWER: Thomas Paine

5. Organization Consul perpetrated the Feme murders against ministers of this government, which signed the Treaty of Rapallo to normalize relations with the Soviet Union. Rosa Luxemburg's Spartacus League participated in revolts against this government, which Friedrich Ebert of the SDP led after the High Seas Fleet mutinied in Kiel. The November Revolution installed this government that quashed the Beer Hall Putsch. This government's President Paul von Hindenburg introduced the reichsmark to stop massive inflation. For 10 points, name this post-First World War German government overthrown by the Nazis.

ANSWER: Weimar Republic

6. Massoud Barzani proposed an independence referendum in response to the actions of this group, whose leader was once detained at Camp Bucca. People's Protection Units and the Peshmerga rescued Yazidis persecuted by this organization from Mount Sinjar. A shrine to Seth and the tomb of Jonah were destroyed by this organization, which is centered at Raqqa and controls Mosul. This group proclaimed its leader, Abu Bakr al-Baghdadi, to be the new Caliph of Islam. For 10 points, name this Sunni terrorist group, a splinter of al-Qaeda active in a namesake Middle Eastern region.

ANSWER: **Islamic State** of Iraq and the Levant [accept "**Islamic State** of Iraq and Syria", "**ISIL**", "**ISIS**", or "**Da'esh**"]

7. These compounds are synthesized in a reaction that uses hydrocyanic acid and ammonia; that synthesis is named for Strecker. These compounds react with reducing sugars in the Maillard reaction, and the dihedral angles present between them can be visualized on a Ramachandran plot. These compounds consist of a COO⁻ and a NH₃⁺ group, and are exemplified by tryptophan and glycine among their twenty standard forms. For 10 points, name these compounds, which are connected by peptide bonds and are the building blocks of proteins.

ANSWER: **amino acids**

8. One of this country's colonies was acquired despite its defeat by the Black Flag Army at the Battle of Paper Bridge. This country's empire acquired another territory after the Lambert Charter granted it the lands of the Merina rulers of Antananarivo. Tensions with Britain climaxed in the Fashoda Incident between this country's colonies of Djibouti and Congo-Brazzaville. Mauretania and Senegal are some of this country's former West African colonies, and Guiana and Martinique remain its overseas departments. For 10 points, name this European country that colonized Algeria and Québec.

ANSWER: **France** [accept "**French Empire**"]

9. In this play, one character tries to tell the Biblical story of the two thieves who hung beside Jesus, bewildering another character. The two main characters of this play discuss whether or not they are in the right place based on the appearance of a leafless tree. A character in this play exclaims "Of the same species as Pozzo! Made in God's image!" Pozzo and Lucky, blind and dumb respectively, visit the two main characters twice. For 10 points, name this play in which Vladimir and Estragon pass time expecting the arrival of an acquaintance who never shows up, a work by Samuel Beckett.

ANSWER: **Waiting for Godot** [accept "**En attendant Godot**"]

10. One man with this surname complains of "feel[ing] like a bird in a cage," which "fill[s] his body with rage." "Animators who voluntarily left their families" created a web video about another man with this name, his namesake "Adventures", in which he saves Veronica Mars from the Internet. One Sexiest Man Alive with this name is targeted for assassination in Seth Rogen's film *The Interview*, while another sometimes-"ronery" leader with this name unleashed panthers on Team America. Both men with this name frequently feature in blogs about them "Looking at Things". For 10 points, give this surname of a father and son pair of North Korean dictators.

ANSWER: **Kim**

11. The Adams-Williamson equation has to be modified for this region to include a corrective term that accounts for the thermal gradient between it and a neighboring region. The lowest portion of this region is much less viscous than the portions above; that portion is called the D double prime layer. This layer's lower and upper boundaries are the Gutenberg and Mohorovičić Discontinuities respectively. Convection plumes occur in this layer, which contains the asthenosphere. For 10 points, name this layer of the Earth located between the outer core and the crust.

ANSWER: **mantle**

12. The speaker of one of this man's poems feels "the ladder sway as the boughs bend" and is "overtired of the great harvest I myself desired." In another of his poems, "they who were not the one dead, turned to their affairs" after a young boy loses his hand to a buzz saw. This author of "After Apple-Picking" wrote that "One could do worse than to be a swinger of birches", and this poet described a "little horse" who "must think it queer to stop without a farmhouse near... The darkest evening of the year." For 10 points, name this American poet of "Stopping by Woods on a Snowy Evening" and "Mending-Wall".

ANSWER: Robert Lee **Frost**

13. This composer adapted a theme from Gabriel Fauré's *Tantum ergo* in the first movement of his second piano concerto, which "begins with Bach and ends with Offenbach". His unorthodox first cello concerto has only one movement, and his *Havanaise* was inspired by a Cuban habanera. One of this composer's pieces symbolizes midnight with twelve notes on the harp and Death with a scordatura violin. A suite by this man includes a parody, "Fossils", of that *Danse Macabre*, and the "Royal March of the Lion". For 10 points, name this French composer of *The Carnival of the Animals*.

ANSWER: Charles-Camille **Saint-Saëns**

14. John Murphy was relieved of command following this battle after his lackluster participation in the sinking of the cruiser *Mikuma*. George Gay was the only survivor of Torpedo Squadron 8 during this battle, and the codebreaking efforts of Station HYPO proved decisive for this battle's victor. One side during this battle lost the aircraft carrier *Yorktown*, but was able to sink all four enemy aircraft carriers. For 10 points, name this decisive World War II naval battle which took place near its namesake atoll.

ANSWER: Battle of **Midway**

15. In Aztec myth, the god of this object, Meztli, was hit in the face by a rabbit. In Hindu mythology, the deity of this object laughed at Ganesha, so Ganesha broke off one of his tusks and threw it at that deity. Tsukuyomi, the Shinto *kami* of this object, was born out of Izanagi's right eye. Thoth gambled with the Egyptian god of this place, Khonsu, in order to create five more calendar days, so Nut's children could be born. The Greek goddess of this celestial body drove her hunting chariot across the Heavens every night. For 10 points, name this celestial body associated with Artemis and Selene.

ANSWER: the **Moon**

16. In the novel *L'Oeuvre*, Emile Zola wrote about controversy surrounding a work inspired by this painting, whose arrangement may have been inspired by a Raimondi engraving of Raphael's *The Judgment of Paris*. In this painting, a yellow hat with a blue bow and a basket sit atop a blue dress, whose owner appears to the left of a rowboat drawing water from a stream. A man on the right holds a cane and wears a tasseled hat while conversing with a man and a nude woman. For 10 points, name this painting that depicts the title activity in a forest, a work by Edouard Manet.
ANSWER: *The Luncheon on the Grass* [accept "*Le Déjeuner sur l'herbe*"]

17. In one of this author's novels, the shoemaker Thibault seeks vengeance on the Lord of Vez and is aided by a bipedal wolf. This author of *The Wolf Leader* penned a work in which Cornelius Van Baerle grows the title flower, *The Black Tulip*. In another of his works, the title character is imprisoned at the Chateau d'If, but he escapes by hiding in the body bag of his dead neighbor, the Abbé Faria. In that novel by this author, Edmund Dantès finds treasure with Faria's map, and seeks revenge against Danglars while assuming a certain noble title. For 10 points, name this French author of *The Count of Monte Cristo*.
ANSWER: Alexandre Dumas

18. Dr. Curtis Ward cautions members of the Pentacostal Church to avoid undertaking the "black" version of this practice for longer than three days. Chapter 58 of Isaiah states that this activity should also involve charity for the poor. In Jainism, *sallekhana* is the term for this action performed until death. In Judaism, all able-bodied persons are required to undertake this act on Yom Kippur, while in Islam this activity is performed during the month of Ramadan. For 10 points, name this religious practice in which people refrain from consuming food.
ANSWER: fasting

19. Artemisia, Queen of Halicarnassus, was one subordinate of this man at a battle he lost because of the deception of the slave Sicinnus. Aspamithres helped this ruler's bodyguard, Artabanus, assassinate him. He removed a statue of Bel from Babylon to prevent revolts there, and built the Gate of All Nations in his capital, Persepolis. Despite lashing and chaining the Hellespont while crossing it to invade, and watching the defeat of the 300 from his throne at Thermopylae, this ruler was crushed at the battles of Salamis and Plataea. For 10 points, name this son of Darius, a King of Kings who failed to defeat Greece in the Persian Wars.
ANSWER: Xerxes I [accept "Xerxes the Great"]

20. Trouton's rule states that the increase in this quantity that occurs during vaporization is approximately the same for many liquids. The Gibbs paradox involves a decrease in this quantity, and it is equal to Boltzmann's constant times the natural logarithm of the number of microstates. Gibbs free energy is calculated as the change in enthalpy minus temperature times the change in this quantity. The Second Law of Thermodynamics states that this quantity is always increasing. For 10 points, name this measurement of the disorder of a system.
ANSWER: entropy

TB. One playwright from this country wrote of a family's inability to collect an inheritance due to Bentham's failure to specify the names of a will's beneficiaries. In a novel from this country, the sight of a girl wading convinces its protagonist to not become a priest and leave this country. That work begins with a story of a "moocow" that meets the protagonist, Stephen Daedalus. A satirical essay from this country suggests that its poor should sell their children to the rich as food, and was written by the author of *Gulliver's Travels*. For 10 points, name this homeland of Sean O'Casey and Jonathan Swift, the setting of James Joyce's *Dubliners*.

ANSWER: Republic of **Ireland**

Bonuses

1. This work examines guilt cultures and shame cultures. For 10 points each:

[10] Name this study written for the US Office of War Information to predict the behavior of the Japanese command in World War II.

ANSWER: *The Chrysanthemum and the Sword: Patterns of Japanese Culture*

[10] This American anthropologist wrote *The Chrysanthemum and the Sword*.

ANSWER: Ruth Fulton Benedict

[10] Ruth Benedict studied under this German-born anthropologist. His work on skeletal anatomy disproved the claim that head shape is a heritable racial trait.

ANSWER: Franz Uri Boas

2. For 10 points each, answer some questions about animal development.

[10] This developmental stage results from the growth of the zygote. Stem cells derived from it are pluripotent, unlike adult stem cells.

ANSWER: embryo

[10] This model organism's studied genetic defects include sepia or white eyes, folded wings and lack of antennae.

ANSWER: fruit fly [accept "*Drosophila melanogaster*"; prompt on "fly"]

[10] Fruit flies are used to study these highly conserved developmental genes shared by all bilateral animals. These genes code for the development of segment structures like limbs.

ANSWER: hox genes

3. Name some anime characters who use lightning to attack, for 10 points each:

[10] This character uses pouches in its cheeks to generate electric attacks. This electric mouse is the starter Pokémon of Ash Ketchum.

ANSWER: Pikachu

[10] This S-Class Mage of Fairy Tail is a second-generation Dragon Slayer. Despite being the grandson of Makarov, the Guild Master, he once tried to take over Fairy Tail by force.

ANSWER: Laxus Dreyar

[10] In this anime, the raikages that lead the Village Hidden by Clouds use the Lightning Release. Kakashi Hatake uses *chidori*, a lightning-based S-rank technique, in this anime.

ANSWER: Naruto

4. This ethnic Albanian established a namesake dynasty that ruled from Cairo. For 10 points each:

[10] Name this Ottoman viceroy of Egypt and the Sudan who resisted the sultan's control.

ANSWER: Muhammad Ali Pasha al-Mas'ud ibn Agha

[10] This country supported Egyptian autonomy but often invaded Egypt to install sympathetic rulers. It financed the Suez Canal, used to reach its colonies in India and Australia.

ANSWER: United Kingdom [accept "Great Britain"]

[10] Muhammad Ali awarded himself this title as viceroy of Egypt. It was officially recognized in 1867 and used by his descendants until 1914, when Hussein Kamel became Egypt's sultan.

ANSWER: khedive

5. This poem's speaker says that "the wind crosses the brown land, unheard." For 10 points each:
[10] Name this poem, which begins "April is the cruellest month."

ANSWER: "The **Waste Land**"

[10] This man wrote "The Hollow Men", the final stanza of which includes a repetition of "This is the way the world ends," in addition to "The Waste Land".

ANSWER: **Thomas Stearns Eliot** [prompt on "**Eliot**"]

[10] This set of poems by Eliot, written during the Blitz, includes "The Dry Salvages" and "Little Gidding", which claims that "all shall be well".

ANSWER: **Four Quartets**

6. Jura, the newest one of these entities, joined a certain confederation in 1979. For 10 points each:

[10] Name these once-sovereign member states, like Neuchâtel and Zürich, of a federation in the Alps.

ANSWER: **cantons**

[10] The twenty-six cantons make up this officially neutral Alpine country, whose official languages are French, German, Italian, and Romansh.

ANSWER: **Switzerland** [accept "**Swiss Confederation**"]

[10] Switzerland has no official capital, but this city is where its Federal Assembly meets. This non-Geneva city is also home to the Universal Postal Union.

ANSWER: **Bern**

7. For 10 points each, answer these questions about religion in the New England colonies.

[10] This "city on a hill" was populated by Puritans and governed at one point by John Winthrop.

ANSWER: **Massachusetts Bay** Colony

[10] This midwife was banished from the Massachusetts Bay colony for holding Bible sessions in her house. She joined Roger Williams in Rhode Island.

ANSWER: Anne **Hutchinson**

[10] Hutchinson belonged to this movement, whose namesake "Controversy" involved John Cotton and other "free grace" advocates' challenging church authority.

ANSWER: **Antinomianism**

8. In binary logic, this value is denoted "1". For 10 points each:

[10] Name this value possessed by propositions that are not false.

ANSWER: **truth** [accept "**true**"]

[10] If 'p' implies 'q', then this statement reads 'not q' implies 'not p'. This type of statement is always true if the original conditional statement is true.

ANSWER: **contrapositive**

[10] This logical operator asserts that at least one element of a domain satisfies the proposition that follows it. It is negated by applying the universal quantifier to its proposition's negation.

ANSWER: **existential quantifier**

9. This composer's waltz *Bethena* memorializes his late wife Freddie. For 10 points each:

[10] Name this African-American composer of popular rags like "The Entertainer".

ANSWER: Scott **Joplin**

[10] Joplin's first great success was this wildly popular arboreally-titled rag, possibly named for a club in Sedalia, Missouri. Joplin recorded it on a player-piano roll near the end of his life.

ANSWER: "**Maple Leaf** Rag"

[10] Joplin's only extant opera is this one named for its heroine, a young black teacher who is kidnapped by magicians but rescued by Remus.

ANSWER: **Treemonisha**

10. This poem by Edgar Allan Poe is titled for a figure who lies "in the sepulcher there by the sea, in her tomb by the sounding sea." For 10 points each:

[10] Name this poem, set "in a kingdom by the sea," about the title maiden who "lived with no other thought than to love and be loved by me."

ANSWER: "**Annabel Lee**"

[10] This other poem by Poe begins "once upon a midnight dreary" and tells of the title bird "perched upon a bust of Pallas" that cries "nevermore".

ANSWER: "The **Raven**"

[10] Poe also wrote this poem that begins "Lo! Death has reared himself a throne" in the title location, "where the good and the bad and the worst and the best have gone to their eternal rest."

ANSWER: "The **City in the Sea**"

11. Hannskarl Bardel collaborated on this structure, whose visitor center can be accessed by trams located on both of its ends. For 10 points each:

[10] Name this 630-foot stainless steel structure located in St. Louis, Missouri that overlooks the Mississippi River.

ANSWER: St. Louis **Gateway Arch**

[10] This Finnish modernist architect of the Gateway Arch also designed a simple brick cylinder topped by an aluminum spire for his MIT Chapel, located next to his Kresge Auditorium.

ANSWER: Eero **Saarinen**

[10] Saarinen also designed this family home in Columbus, Indiana for his friends Xenia and Irwin. It features a sunken conversation pit and a cylindrical fireplace.

ANSWER: **Miller** House

12. This religion's Shwetambar and Digambar sects separated when they could not agree upon the gender of Mallinath, the 19th Tirthankara. For 10 points each:

[10] Name this religion, some of whose adherents go "sky-clad", or nude.

ANSWER: **Jainism**

[10] Jainism's focus on non-violence leads many of its believers to follow this dietary restriction, which prohibits the consumption of any animal product. It is stricter than vegetarianism.

ANSWER: **veganism**

[10] The *Kalpa Sutra* details where this figure stayed during his 42 rainy seasons. He later became the 24th Tirthankara and founder of Jainism.

ANSWER: Jina **Vardhamana Mahavira** [accept either underlined part]

13. The protagonist of this novel uses his ability to shatter glass with his voice to guard his most prized possession. For 10 points each:

[10] Name this novel in which Oskar Matzerath decides to stop growing after receiving the title instrument on his birthday.

ANSWER: *The Tin Drum*

[10] *The Tin Drum* is part of this German author's Danzig trilogy, along with *Cat and Mouse* and *Dog Years*.

ANSWER: Günter Wilhelm Grass

[10] Oskar Matzerath plays at this nightclub with his friend Klepp in *The Tin Drum*.

ANSWER: The Onion Cellar

14. This phenomenon is found in direct and alternating forms. For 10 points each:

[10] Name this flow of electric charge.

ANSWER: electric current

[10] This law, one of Maxwell's equations, states that the line integral of the magnetic field around a closed loop is proportional to the current passing through it.

ANSWER: Ampère's law

[10] This quantity is proportional to the time derivative of the electric flux and was added to Ampere's original law by Maxwell.

ANSWER: displacement current

15. This conference established the United Kingdom of the Netherlands. For 10 points each:

[10] Name this meeting in a namesake European capital that rebuilt Europe after Napoleon's fall.

ANSWER: Congress of Vienna

[10] This Austrian nobleman and Foreign Minister chaired the Congress of Vienna. He was forced to resign as Chancellor of Austria during the revolution of 1848.

ANSWER: Klemens Wenzel Nepomuk Lothar von Metternich

[10] The Congress of Vienna also established a kingdom in this country to be in personal union with the Russian monarchy. It had previously been part of the Duchy of Warsaw.

ANSWER: Poland

16. One of this playwright's Theban Plays ends with the title character's gouging his eyes out and Jocasta's committing suicide. For 10 points each:

[10] Name this Greek tragedian, whose other works include *Electra* and *Philoctetes*.

ANSWER: Sophocles

[10] In this play, the title character, Ismene's sister, defies Creon's orders not to bury her dead brother Polynices.

ANSWER: Antigone

[10] In this play, Antigone and her father, who had married his mother Jocasta, wander to the Furies' sacred ground during their exile.

ANSWER: Oedipus at Colonus

17. This quantity is equal to the negative log of hydrogen ion concentration. For 10 points each:
[10] Name this quantity which typically ranges from 0 to 14 and is greater than 7 for bases.

ANSWER: **pH**

[10] This doubly-eponymous equation, derived from the acid dissociation constant equation, finds pH given the ratio of the concentrations of undissociated acid and its conjugate base.

ANSWER: **Henderson-Hasselbalch** equation

[10] pH is equal to the sum of this quantity and the log of conjugate base concentration over acid concentration. This quantity is equal to the negative log of the acid dissociation constant.

ANSWER: **pKa**

18. One painting of this man depicts him addressing a crowd as he distributes the Eagle Standards. For 10 points each:

[10] Name this man painted next to a throne in his study in the Tuileries Palace.

ANSWER: **Napoleon** I [accept “Napoleon **Bonaparte**”]

[10] Napoleon was painted in his study and crossing the Alps by this French artist, who also painted *The Death of Socrates* and the *Oath of the Horatii*.

ANSWER: Jacques-Louis **David**

[10] David’s painting of Napoleon in his study depicts the imperial throne embroidered with these insects. Ingres’s portrait of Napoleon on his throne shows his robe covered with them.

ANSWER: **bees**

19. He navigated the Labyrinth of King Minos with the aid of Ariadne. For 10 points each:

[10] Name this Athenian hero who slew the Minotaur.

ANSWER: **Theseus**

[10] This man, the father of Theseus, hurled himself from his palace roof into a sea that would later bear his name when Theseus forgot to put up white sails to show that he was safe.

ANSWER: **Aegeus**

[10] Theseus killed this bandit, who would trick travellers into lying onto iron beds where he stretched them or chopped off their legs to make them fit.

ANSWER: **Procrustes**

20. The smell of fish hid the stink this man’s corpse as it was secretly returned to his capital. For 10 points each:

[10] Name this first ruler of a unified China, who buried many scholars alive.

ANSWER: **Qin Shi Huangdi** [accept “**Shi Huangdi**”, “Ying **Zheng**”, or “Chao **Zheng**”]

[10] Qin Shi Huang’s enormous tomb contains this group of sculptures, each of which is unique.

ANSWER: **Terracotta Army**

[10] His early death was caused in part by his consumption of mercury and arsenic to achieve this status. He sent ships to the East Sea to find someone who could grant this to him, but failed.

ANSWER: **immortality** [accept equivalents like “**eternal life**”]

TB. Pope Martin V was elected following this ecumenical council, which also condemned Jan Hus as a heretic. For 10 points each:

[10] Name this 15th century council, which ended the Western Schism.

ANSWER: Council of Constance

[10] The Council of Constance retroactively illegitimized several popes who ruled from this location. The relocation of the papacy to this French city is called the “Babylonian captivity.”

ANSWER: Avignon

[10] This German monk and theologian wrote a treatise *On the Babylonian Captivity of the Church*, and is probably better known for nailing his ninety-five theses to a door.

ANSWER: Martin Luther