

1. This city is home to a giant statue of General Thomas Hooker, and major streets in its center include Tremont Street. A dam on the river that runs through this city is home to its Science Center museum, and major subway stations include Downtown Crossing(*) and Park Street. This city contains a state capitol building on top of its richest neighborhood, Beacon Hill, its subway system is called the "T". Containing a large public park called this city's "common", for 10 points name this home of Fenway Park, the largest city in Massachusetts.

ANSWER: Boston

021-09-4-02102

2. In one story in this book, a poor farmer cooks his beloved pet falcon to demonstrate his affection for Monna. The third story in this book focuses on Melchizedek, a Jew who convinces Saladin of the importance of religious tolerance by telling a parable about three rings. Shakespeare's *All's Well That Ends Well* is based on a story in this (*) collection, whose narrators include Emilia, Paminea and eight others escaping the plague in Florence. For 10 points, name this Giovanni Boccaccio collection of one hundred stories set over ten days.

ANSWER: The **Decameron**

051-09-4-02103

3. In August 2009, a sixty billion dollar contract to harvest this substance in Australia, in an operation known as the "Gorgon Project," was signed by Japan, South Korea, and a US energy company. All cars sold in Iran can run on this (*) energy source, which also powers about a fifth of public buses in Washington, D.C. For 10 points, identify this substance, often found alongside petroleum deposits, which is comprised primarily of methane and provides a low-pollution energy source.

ANSWER: natural gas

019-09-4-02104

4. They are controlled by the PER and TIM proteins, and they can be lost if the pineal gland is removed from birds. In fungi and protists, they are a property of individual cells, and in mammals, they are controlled by the (*) suprachiasmatic nuclei. They can be either free-running or entrained by zeitgebers, such as a cycle of light and dark. For 10 points, name these "biological clocks" that govern activities that repeat roughly every 24 hours.

ANSWER: circadian rhythms

003-09-4-02105

5. He considered legal, traditional, and charismatic domination in his *The Three Types of Legitimate Rule*. A lecture by this thinker entitled *Politics as a Vocation* defined the (*) state as that entity with a monopoly on the legitimate use of violence. His best-known work refers to bureaucracy with a phrase that Talcott Parsons famously translated as an "iron cage" and tracks the urge to accumulate wealth to Ben Franklin and more directly to John Calvin. For 10 points, name this author of *The Protestant Ethic and the Spirit of Capitalism*.

ANSWER: Max Weber

6. This author declared "hence vain deluding joys" in a poem hailing the goddess Melancholy. This author of the companion poems "L'Allegro" and "Il Penseroso" wrote "Who kills a man kills a... creature, God's image; but he who destroys a good book...kills the image of God" in an essay arguing in favor of freedom of the (*) press. This author wrote an epic poem beginning "Of man's first disobedience, and the fruit / of that forbidden tree," which describes a meeting of devils like Beelzebub in Pandemonium where Satan resolves to tempt mankind. For 10 points, name this British author of Areopagitica and *Paradise Lost*.

ANSWER: John Milton

027-09-4-02107

7. Sections added to this ballet include a pas de deux for the prima ballerina Anna Sobeshchanskaya and a Russian dance for the ballerina Pelageya Karpakova. A "Dance of the Corps and the Dwarves" appears during a party in this ballet's third act, which contains a set of nationalist dances including a mazurka and a Neopolitan dance. At that ball, a prince accidentally vows his love to Odile thanks to the machinations of an evil magician and is forced to live without (*) Odette. For 10 points each, name this ballet about a woman forced by the sorcerer von Rothbart to live as the title bird during the day, composed by Tchaikovsky.

ANSWER: Swan Lake

032-09-4-02108

8. In one of this man's works, Madame von Satow and the bear-killer Ulfheim are among the visitors to a spa, and at the end of that work, Arnold Rubek and Irene von Satow die in an avalanche. In another of his works, Gregers Werle ruins the family of Hjalmar Ekdal. In addition to writing (*) When We Dead Awaken and The Wild Duck, this man also wrote about Nils Krogstad's blackmailing of Nora Helmer, who leaves her husband Torvald. For 10 points, name this Norwegian playwright of A Doll's House. ANSWER: Henrik Ibsen

030-09-4-02109

9. One part of this layer was discovered by Inge Lehmann, and just above this layer is the Gutenberg Discontinuity. S waves are completely absent in this region, which lies beneath the D-Double-Prime layer. Part of this layer is made of nickel-iron fluid whose (*) eddy currents are responsible for the Earth's magnetic field. The lowest part of this layer is solid because of intense pressure. It is divided into inner and outer parts. For 10 points, name this layer of the Earth that is beneath the mantle and forms the planet's center.

ANSWER: the **core**

021-09-4-02110

10. Ethnarch Venizelos was appointed Prime Minsiter of this country after the 1909 Goudi coup. High ranking officials here faced the Trial of the Six after a 1922 coup. The 1832 Convention of London appointed the Bavarian prince Otto king of this country after a bloody revolution led by (*) Alexander Ypsilantis. In the 1960s the US backed "The Regime of the Colonels" in this country. During World War II, forces from this country pushed an Italian invasion back into Albania, forcing Hitler to intervene. For 10 points, name this country with capital at Athens.

ANSWER: Greece

11. The main character's Uncle Max appeared for a week in this comic strip. This strip features Mabel Syrup's classic work *Hamster Huey and the Gooey Kablooie*. Adventures had by the protagonist may be in the form of Spaceman (*) Spiff, or else triggered by his flying time machine or transmogrifier, both a cardboard box. That protagonist enjoys a game whose rules are redefined as he chooses, a luxury he does not enjoy in Miss Wormwood's classes. The main character's club Get Rid of Slimy GirlS, or GROSS, is targeted against Susie Derkins. For 10 points, name this comic strip by Bil Watterson about a boy and his stuffed tiger.

ANSWER: Calvin and Hobbes

022-09-4-02112

12. A sonnet by this author condemns the "squeamish and emasculate crusade" against the "grim dominion" of Emile Zola's art. This author's poem urging a man to "go to the western gate," "Luke Havergal," is set in this author's fictional village of Tilbury Town. The title character of one of this author's poems eyes a (*) "khaki suit with loathing," and instead loves the Medici and "the days of old. Another of this author's title characters is "admirably schooled in every grace" and "richer than a king," but "one calm summer night / Went home and put a bullet through his head." For 10 points, name this American poet of "Miniver Cheevy" and "Richard Cory."

ANSWER: Edwin Arlington Robinson

034-09-4-02113

13. This dynasty's Ferghana born founder defeated Lodhi at the first battle of Panipat. One ruler of this dynasty took the title Alamgir, or Conqueror of the Universe after fighting the Deccan Wars against Shivaji and the Marathas. Its last ruler was (*) Bahadur II, but it is better known for its auspicious beginnings under Babur and Akbar the Great, and for the construction of the Taj Mahal to honor Shah Jahan's wife. Its final ruler only controlled Delhi and was exiled by the British following the Sepoy Mutiny. For 10 points, name this largely Muslim Indian empire.

ANSWER: Mughal Empire

022-09-4-02114

14. At this condition, atmospheric pressure equals a quantity calculated for water by the Goff-Gratch equation. A Perkin triangle can be used to separate substances that differ in this condition, and that process is optimized by the Fenske equation and the McCabe-Thiel method. The addition of solute (*) raises this value for a solution. For 10 points, name this quantity achieved when the ambient pressure equals vapor pressure, equal for water to one hundred degrees Celsius.

ANSWER: **boiling point** [accept equivalents]

022-09-4-02115

15. In this work, the story of Gyges' ring is used to support Thrasymachus's formulation of justice as the "advantage of the strong." This work's third book discusses the need for a "noble lie" to support the title concept, and it outlines that concept's decline from (*) timocracy to tyranny. This work uses the metaphor of prisoners watching shadows on a wall to illustrate the Theory of Forms through the Allegory of the Cave. For 10 points, name this Platonic dialogue that states that philosopher-kings would be the ideal rulers of the titular state.

ANSWER: The Republic

16. A variety of one of these objects is named for Archimedes and usually used to transport water. One quantity especially relevant to these objects comes in "actual" and "ideal" forms and may be found as the ratio of (*) resistance force to force applied or input distance to output distance. These objects all have a mechanical advantage greater than one. For 10 points, name this set of six objects, including the wheel and axle, wedge, inclined plane, screw, pulley, and lever.

ANSWER: simple machines

022-09-4-02117

17. One movement in a symphony by this composer is based on his unfinished opera *The Free Judges*, and that symphony quotes the "Dies Irae" chant and uses an "idée fixe" to represent a woman the main character desires. This composer included the Rakoczi March in his opera *The* (*) Damnation of Faust. He was commissioned by Paganini to write a tone poem with a viola solo based on a Byron poem, *Harold in Italy*. This composer wrote a work that depicts and artist who attempts suicide by opium, takes a "March to the Scaffold." For 10 points, name this composer of *Symphonie Fantastique*.

ANSWER: Louis-Hector Berlioz

022-09-4-02118

18. This figure refuted Samuel Seabury in *The Farmer Refuted* and supported Alexander MacDougall's lobbying in the Newburgh conspiracy, ultimately calling for the revision of the Articles of Confederation while in Princeton. Madison objected strenuously to the general welfare clause in his (*) *Report on Manufactures*. This native of Nevis and founder of the New York Post was second in command of the army during the Quasi-War with France. For 10 points, name this first treasury secretary, a staunch Federalist murdered by Aaron Burr.

ANSWER: Alexander Hamilton

022-09-4-02119

19. This musician's constant practice of the song "Cherokee" led him to pioneer the use of higher intervals, such as sevenths, ninths, and elevenths, in jazz. This soloist's "classic quintet" featured Max Roach on drums and Miles Davis on trumpet. This musician's 1945 recording of "Ko-Ko" sparked the development of (*) bebop, a style he helped pioneer along with Dizzy Gillespie. For 10 points, name this composer of "Ornithology" and "Confirmation," an alto saxonphone player who was nicknamed "Bird." ANSWER: Charlie "Bird" <u>Parker</u> [accept <u>Bird</u> before mentioned]

004-09-4-02120

20. His coronation saw over a thousand people trampled to death when a rumor spread that there wasn't enough beer to go around at Khodynka Field. Sergei Zubatov of the secret police worked with Father Gapon to petition of this ruler, but the protesters were shot down by the Imperial Guard in (*) "Bloody Sunday." Shocked by an attack on Port Arthur, he declared war several days later, and a year later that war was ended by the Treaty of Portsmouth. Ruler of Russia during the first World War, he was succeeded by Karensky. For 10 points, name this last czar of Russia.

ANSWER: Czar Nicholas II [or Nikolay Alexandrovich Romanov]

022-09-4-02121

21. In one of this author's novels, Charles Holloway uses a wax bullet to kill the Dust Witch, and Jim Nightshade is saved from a sinister merry-go-round. In another of this author's novels, the protagonist is disquieted by the death of Clarisse McClellan, and tries to memorize Bible verses before meeting Faber and murdering his boss Beatty. This author of (*) Something Wicked This Way Comes wrote a novel about a character who is pursued by the Mechanical Hound after deciding to stop burning books. For 10 points, name this author who wrote about the fireman Guy Montag in Fahrenheit 451.

ANSWER: Ray **Bradbury**



- 1. She was locked in the red-room as a child by her abusive aunt and is soon after sent to the Lowood Institute. For 10 points each:
- [10] Name this title character who becomes governess at Thornfield for Edward Rochester.

ANSWER: Jane Eyre

[10] This author used the pseudonym Currer Bell to publish her novel Jane Eyre.

ANSWER: Charlotte Bronte [prompt on Bronte]

[10] Jane is unable to marry Mr. Rochester because he is still married to this insane woman. She tears Jane's wedding veil in half when Jane plans to marry Mr. Rochester, and she eventually burns down their house and commits suicide.

ANSWER: **Bertha** Mason [or Bertha **Mason**]

032-09-4-02201

- 2. This son of Aviz dynasty founder John I sponsored expeditions which rediscovered the Madeira Islands and colonized the Azores. For 10 points each:
- [10] Name this Portuguese prince who built a city on the Sagres Peninsula where he enlisted cartographers and navigators.

ANSWER: Prince **Henry the Navigator** [or **Infante Henrique**, Duke of Viseu]

[10] Almost thirty years after the death of Henry the Navigator, this Portuguese explorer sailed past the Cape of Good Hope. He was the first European to do so.

ANSWER: Bartholomew Dias

[10] This other Portuguese explorer and hero of *The Lusiads* was the first European to sail to India.

ANSWER: Vasco da Gama

035-09-4-02202

- 3. In August 2009, this island was hit badly by Typhoon Morakot. For 10 points each:
- [10] Name this island where the Democratic Progressive Party was defeated in 2008 elections for the Legislative Yuan.

ANSWER: Taiwan or Republic of China or Chinese Taipei

[10] This president of the Republic of China from 2000 to 2008 received a life sentence for corruption in September 2009.

ANSWER: Chen Shui-bien

[10] In 2008, Chen's DPP was defeated by this party led by Ma Ying-jeou. This was also the political party of Chiang Kai-shek during the Chinese Civil War.

ANSWER: Chinese Nationalist Party or Kuomingtang or Guomingdang

036-09-4-02203

- 4. In *Drosophila*, this chromosome governs inheritance of eye color. For 10 points each:
- [10] Name this sex chromosome that, in humans, contains the *DAX1* gene, which codes for an anti-testis factor and thus inhibits maleness.

ANSWER: X chromosome

[10] The only active gene on this chromosome is *Xist*, which inactivates the rest of this glob of heterochromatin that functions as an inactive X chromosome.

ANSWER: **Barr** body

[10] *Xist* works similarly to this method of gene regulation, in which RNA silences a gene. Andrew Fire and Craig Mello won the 2006 Nobel Prize for their discovery of this technique.

ANSWER: **RNAi** [or **RNA interference**]

- 5. Name these bright yellow sodas, for 10 points each.
- [10] Code Red, Voltage, and Game Fuel varieties of this notoriously high-caffeine Pepsi product are now on the market.

ANSWER: Mountain Dew

[10] In 1979, Coke introduced this competitor to Mountain Dew. Despite heavy NASCAR promotion, it has been dropped in many Western and Northeastern markets in favor of Vault.

ANSWER: Mello Yello

[10] In the late 1990s, Coke heavily promoted this now-discontinued Mountain Dew competitor with commercials featuring people fighting to obtain a can after the product's name was yelled.

ANSWER: Surge

019-09-4-02205

- 6. This man founded the party Nasjonal Samling. After the abolishment of monarchy in his nation, he was appointed Minister President. For 10 points each:
- [10] Name this Nazi collaborator.

ANSWER: Vidkun Abraham Lauritz Jonssøn Quisling

[10] Quisling was a puppet ruler of this Scandinavian nation, which Denmark lost during the Napoleonic Wars.

ANSWER: Kingdom of **Norway**

[10] The seventh king of this name played a key role in the Norwegian resistance movement. The fourth ruler of this name reunified Norway and conquered Iceland and Greenland.

ANSWER: Haakon

034-09-4-02206

- 7. It is a small, fifth-magnitude flare star. For 10 points each:
- [10] Name this star that, at about 4.2 light years away from Earth, is the closest star to the sun.

ANSWER: **Proxima Centauri** [or **Alpha Centauri C**; do not accept or prompt on "Alpha Centauri"]

[10] Proxima Centauri is part of the Alpha Centauri system. The other two stars are part of this kind of system, in which two stars orbit a common center of mass.

ANSWER: binary star system

[10] Another binary star system is this star, the brightest in the night sky. With Betelgeuse and Procyon, it forms the Winter Triangle.

ANSWER: Sirius

003-09-4-02207

- 8. This event was made possible by the Treaty of New Echota, signed by a minority faction opposed to Chief John Ross. For 10 points each:
- [10] Name this 1838 movement of Cherokee from Georgia to Oklahoma, which was overseen by Winfield Scott after John Wool resigned in protest.

ANSWER: the **Trail of Tears**

[10] Many of the displaced Native Americans ended up in this state. It was the site of Timothy McVeigh's 1995 bombing.

ANSWER: Oklahoma

[10] Jackson scoffed at the Supreme Court's attempts to stop Cherokee removal in this 1832 case, legendarily proclaiming, "John Marshall has made his decision, now let him enforce it."

ANSWER: <u>Worcester</u> v. Georgia [or Georgia v. <u>Worcester</u>]

- 9. This figure's father was slain by his future friend Goll MacMorna at Castleknock. For 10 points each:
- [10] Name this figure from Irish mythology, the father of Ossian, who became leader of the Fianna Erinn.

ANSWER: Finn MacCumhaill [or Finn MacCool]

[10] While learning the art of poetry from the sage Finegas, Finn MacCumhaill accidentally tasted this creature, and the wisdom he gained from it allowed Finn to become the leader of the Fianna.

ANSWER: Salmon of Knowledge

[10] This other figure from Irish myth was the greatest of the Knights of the Red Branch. The son of Lugh of the Long Arm, this figure had seven toes and fingers on each hand and foot and in *The Cattle Raid of Cooley*, he defended Ireland against Queen Medb.

ANSWER: <u>Cu Chulainn</u> [or <u>Cuchulain</u>; or <u>Cuchulinn</u>]

030-09-4-02209

10. His poetical works include "The Birds of Killingworth" and "The Saga of King Olaf," while his romantic novel Hyperion was inspired by miscarriage of his first wife Mary Potter. For 10 points each: [10] What poet wrote about the title character standing "under a spreading-chestnut tree" in "The Village

Blacksmith"?

ANSWER: Henry Wadsworth **Longfellow**

[10] In this Longfellow work, Priscilla asks "Why don't you speak for yourself, John?" when John Alden woos her on behalf of a Plymouth hero.

ANSWER: The **Courtship of Miles Standish**

[10] The Acadian expulsion is the background of this work, whose title character becomes separated with her lover Gabriel Lajeunesse.

ANSWER: Evangeline

034-09-4-02210

- 11. Its sections include "Buckaroo Holiday," "Saturday Night Waltz," and "Ranch House Party." For 10 points each:
- [10] Name this ballet which was choreographed by Agnes De Mille and concludes with a "Hoedown."

ANSWER: Rodeo

[10] This American composer of *Rodeo* and *Billy the Kid* included themes from his piece *Fanfare for the Common Man* in his Third Symphony.

ANSWER: Aaron Copland

[10] Parts of Camptown Races are sampled in a Copland work named for this politician, which ends with a narrator quoting this man's words "government of the people, by the people, and for the people shall not perish from the earth."

ANSWER: Abraham Lincoln

015-09-4-02211

12. This compound is colorless in acid, but turns pink when the pH exceeds around 8.2. For 10 points each: [10] Name this compound, also used in the Kastle-Meyer blood test.

ANSWER: phenolphthalein

[10] Phenolphthalein is an example of this class of compound, which includes Congo red and methyl orange. This class of compounds is used to detect pH changes in a solution.

ANSWER: indicators

[10] As carbon dioxide is added, solutions of this compound turn green, then yellow; it is also used as an indicator for particularly weak acids and bases.

ANSWER: bromthymol blue

- 13. The author of Animal Intelligence and formulator of the law of recency, Edward Lee Thorndike was an important psychologist. For 10 points each.
- [10] Thorndike developed the law of effect, which became the basis of this psychological technique, performed by Skinner on rats. It uses reinforcement and punishment to change the frequency of a behavior.

ANSWER: **operant conditioning** [prompt on conditioning]

[10] Thorndike was a precursor of behaviorism, whose founder is said to be this Hopkins professor, who worked with Rosalie Rayner in an ethically ambiguous experiment on Little Albert.

ANSWER: John Broadus Watson

[10] After asking army officers to rate their soldiers, Thorndike identified this effect, which is the bias that one positive aspect has on the judgment of other aspects.

ANSWER: Halo effect

034-09-4-02213

- 14. Cauchy generalized this equation to three dimensions, and another generalized form of it must be used to model anisotropic materials. For 10 points each:
- [10] Name this relationship from classical mechanics, which states that for a spring, force is equal to negative k x.

ANSWER: Hooke's Law

[10] This modulus refers to the response of a material to linear stress.

ANSWER: **Young**'s modulus

[10] This quantity is often paired with stress, and refers to the physical response to stress. It is expressed as change in length over original length.

ANSWER: strain

022-09-4-02214

- 15. Identify the following about world architecture, for 10 points each:
- [10] The paraboloid cathedral, congress hall, and city center in this city were designed by Lucio Costa and Oscar Niemayer. This capital of Brazil was built from 1956 to 1960.

ANSWER: Brasilia

[10] Argentine architect Cesar Pelli designed this structure that was the tallest in the world before Taipei 101. The twin towers of this structure are similar to towers found in Malaysian mosques.

ANSWER: Petronas Twin Towers

[10] A tube-frame structural design was used by Minoru Yamasaki for this New York City structure consisting of two towers of 110 feet each.

ANSWER: World Trade Center [or WTC]

020-09-4-02215

- 16. One of the central characters of this story is freed from prison by Pirithoos. For 10 points each:
- [10] Name this story centering on Arcite and Palamon, who both fall in love with Emily.

ANSWER: The Knight's Tale

[10] The Knight's Tale is the first of many stories from this collection. The Canon and the Yeoman, not mentioned in the prologue, eventually catch up with the other pilgrims to tell their stories.

ANSWER: The Canterbury Tales

[10] The Canterbury Tales were written by this Middle English author of The Parliament of Fowles.

ANSWER: Geoffery Chaucer

- 17. A zinc sulfide sheet was set up around the subject of this experiment, since it would light up when hit. For 10 points each:
- [10] Name this experiment that concluded that the positive charge of an atom was concentrated in a ball less than one three thousandth of its radius.

ANSWER: Rutherford **gold foil** experiment [or **Geiger-Marsden** experiment]

[10] The result of the gold foil experiment was a death knell for this early model of the atom, whose negative corpuscles, embedded in positive charge, could not explain the strong deflection observed.

ANSWER: plum pudding model

[10] The radiation used in bombarding the gold foil consisted of these particles, which are merely helium nuclei.

ANSWER: alpha particles

022-09-4-02217

- 18. This play opens in the Caucasus, where Cratus and Bia appear followed by Hephaestus. For 10 points each:
- [10] Name the play whose title character refuses to give in to the gods despite the threat of having his liver eaten out by an eagle.

ANSWER: Prometheus Bound

[10] *Prometheus Bound* was written by this Greek Father of Tragedy, whose play *The Suppliants* focuses on the fifty daughters of Danaus.

ANSWER: Aeschylus

[10] Aeschylus may be best known for this trilogy consisting of the plays *Agamemnon*, *The Libation Bearers*, and *The Eumenides*. It is named after its central character, the brother of Electra.

ANSWER: The Orestia

034-09-4-02218

- 19. After her husband left her for Creusa, this woman poisoned her with a dress and killed her children Pheres and Mermeros. For 10 points each:
- [10] Name this sorceress from Colchis who helped her future husband escape from her father, Aeetes, by chopping up her brother Apsytrus.

ANSWER: Medea

[10] Medea was the first wife of this hero who stole the Golden Fleece with his Argonauts and later became the king of Corinth.

ANSWER: Jason

[10] Jason was sent on the quest for the Golden Fleece by this uncle of his who had stolen the throne of Thessaly from Aeson, Jason's father.

ANSWER: Pelias

005-09-4-02219

- 20. He wrote the Cartagena Manifesto after the surrender of Francisco de Miranda. For 10 points each:
- [10] Name this victor at Boyaca, who became the leader of Gran Colombia after liberating most of northern South America.

ANSWER: Simon Jose Antonio de la Santísima Trinidad Bolívar y Palacios Ponte Blanco

[10] This chief of staff of Bolivar was key in winning the Battle of Junin. He served as the second president of Bolivia, where a capital was later named for him.

ANSWER: Antonio Jose de **Sucre** y Alcala

[10] Sucre led the Independentists at this 1824 battle in Peru that saw the surrender of Jose de Canterac, ending Spanish rule in South America.

ANSWER: Battle of **Ayacucho**

21. Name these Italian writers, for 10 points each.

[10] The Maniac is interrogated by Bertozzo and impersonates a judge in this author's play *Accidental Death* of an Anarchist.

ANSWER: Dario Fo

[10] This author referred to his plays as naked masks. He questioned the nature of identity in his plays *Henry IV* and *Six Characters in Search of an Author*.

ANSWER: Luigi Pirandello

[10] This author of *Foucault's Pendulum* wrote about an investigation in a monastery led by William of Baskerville in his novel *The Name of the Rose*.

ANSWER: Umberto **Eco**