

## Toss-ups

1. A decrease in the brightness of an object related to this body is known as the Metis notch, and in 2005 a feature of this body called Oval BA changed from white to red. The Greek Camp and the Trojan Camp occupy this planet's 4th and 5th Lagrange points respectively, and its tenuous rings mainly consist of dust from Metis and Adrastea. This planet's pull on the asteroid belt is responsible for Kirkwood gaps, and Shoemaker-Levy 9 collided with this planet in 1994. Callisto, Ganymede, Io, and Europa are the Galilean moons of this planet, which exhibits the Great Red Spot. For 10 points, name this fifth and largest planet in the solar system.

ANSWER: **Jupiter**

2. A river flowing from this lake includes tributaries like the Biryusa and the Chuna rivers, which merge to form the Taseyeva. On the northwest coast of this lake lies Cape Ryty, occupied solely by the indigenous Buryat and Evenks people. A namesake mountain group surrounds this lake, and it contains the island of Olkhon. This lake is fed by up to 330 rivers like the Selenga, but is only drained by one, the Angara, a tributary of the Yenisei. This lake contains exclusively freshwater seals. For 10 points, identify this Russian lake known for containing the most freshwater and being the deepest of any in the world.

ANSWER: Lake **Baikal** [accept "Ozero **Baykal**" or "**Baygal** nuur"]

3. This musician's band did a series of performances at the Congress Hotel, during which time his band recorded songs such as "Stompin' at the Savoy." He gave a wildly successful performance at the Palomar Ballroom early in his career, and performed with Martha Tilton at an event that saw Jess Stacy take an impromptu piano solo. This musician's namesake Quartet included Teddy Wilson, Gene Krupa, Lionel Hampton, and his 1938 Carnegie Hall Jazz Concert met with widespread acclaim. For 10 points, name this jazz clarinetist, the "King of Swing."

ANSWER: Benjamin David "Benny" **Goodman**

4. The war that ended this man's regime was sparked by a car accident involving this man's vice president, Mustafa Adrisi. One of this man's advisors, nicknamed "The White Rat", spent time in Makindye prison because he previously supported this man's predecessor. That advisor was Bob Astles. This man expelled Asians from his country, claiming that God told him to do it in a dream. After helping to suppress the Mau Mau revolt, this man was promoted to a warrant officer in the British Colonial Army. The United Kingdom supported his 1971 coup, which overthrew his predecessor, Milton Obote. For 10 points, name this Ugandan dictator.

ANSWER: Idi **Amin** Dada

5. In one work by this author, a professor receives the title condition after seducing his student, Melanie Isaacs. Another work by this author accounts the title character's journey to originally return his mother, later her ashes, to her birthplace. In a novel by this man, Colonel Joll leads the Third Bureau in torturing a member of the title group and later the Magistrate, who is hanged by his arms. For 10 points, name this South African author of *Disgrace*, *Life and Times of Michael K*, and *Waiting for the Barbarians*.

ANSWER: John Maxwell **Coetzee**

6. Along with volume and particle number, this quantity is held constant in canonical ensembles of statistical mechanics. At constant volume this quantity is equal to the derivative of internal energy with respect to entropy. Surface tension decreases due to an increase in this quantity according to the Eotvos rule. Average molecular kinetic energy is equal to  $3/2$  times Boltzmann's constant times this quantity, which is directly proportional to pressure by Gay-Lussac's Law. For 10 points, name this quantity measured in Kelvin and degrees Celsius.

ANSWER: temperature

7. Mātariśvan performs this action after the disappearance of Agni in the Rig Veda. In Polynesian myth, Māui succeeds in this action after turning into a hawk and fleeing from Mahuika. In Cherokee myth, Water Spider performs this action using a basket carried on her back, while other Native Americans believe that the events surrounding this action led to Frog losing his tail and Squirrel acquiring black spots in his fur. In Greek myth, this action was performed with a stalk of fennel by a figure punished by being chained to a mountain while an eagle ate his liver. For 10 points, name this action accomplished by Prometheus.

ANSWER: stealing fire [accept "bringing fire to humanity" or obvious equivalents]

8. In this work, an actor's snoring is jokingly compared to the sound of a foghorn that keeps his wife awake, who at this play's end descends down the stairs clutching her wedding gown. This work reveals that the death of their child, Eugene, was caused when another son of theirs entered the room with measles. Doc Hardy's diagnosis of Edmund's tuberculosis is willfully denied by his mother, Molly, whose relapse back into morphine addiction worries the central family of this play. For 10 points, identify this play centered on the Tyrone family, a work by Eugene O'Neill.

ANSWER: *Long Day's Journey Into Night*

9. The Swan River Colony was one settlement in this modern country, whose earliest European settlers arrived on the First Fleet. Willem Janszoon was the first European to sight this country, where Van Diemen's Land later became one of its states. In this country, the murder of James Scobie at Ballarat led to an insurrection of gold miners in the Eureka Rebellion. A penal colony was established here at Botany Bay, which grew into the capital of New South Wales, known for feuding about where the federal capital would be with Melbourne. For 10 points, name this Commonwealth realm governed from Canberra.

ANSWER: Commonwealth of Australia

10. This man designed a series of apartment buildings for a neighborhood located in Detroit, Lafayette Park. With Lily Reich, this architect designed two sets of cantilevered chairs for his Villa Tugendhat. Floor to ceiling glass walls and white painted steel features in this man's Farnsworth House. This architect also designed a chair for the German Pavilion at the 1929 International Exposition in Barcelona. Visible I-beams appear on a building this architect worked on with Philip Johnson at 375 Park Avenue, the Seagram Building. For 10 points, name this architect known for his aphorism "less is more", the last director of the Bauhaus.

ANSWER: Ludwig Mies van der Rohe

11. Kartasov unsuccessfully attempts to apologize to this character for his wife's actions at the opera. This character doesn't receive an answer to the letter she sent to Countess Lydia, which asked for her help in arranging a meeting with Seryozha. At the beginning of the novel in which this character appears, she successfully reconciles the Oblonskys' marriage and then goes to a ball where she dances with the man whom Kitty loves. For 10 points, name this title character who throws herself in front of a train after her affair with Count Vronsky in a Leo Tolstoy novel.  
ANSWER: Anna Arkadyevna Karenina [accept either]

12. This song's music video depicts its singer saving a dog from a fire and lifting a school bus off a pageant contestant. This song states that "Your brain gets smart, but your head gets dumb" and begins with its singer stating that he "ain't the sharpest tool in the shed" after claiming that "somebody once told me the world was gonna roll me." The lyrics "All that glitters is gold/ Only shooting stars break the mold" appear in this song after its singer advises the listener to "get the show on, get paid." For 10 points, name this song from the album *Astro Lounge* by the band Smash Mouth that tells its listeners that "Hey now," you're the title figure.  
ANSWER: "All Star"

13. The formation of a specific type of these entities is opposed by the gene TSIX, and that type is characterized by hypoacetylation of core histones. A mutation of this entity's FMR1 gene may cause mental retardation, and lyonization of this entity creates Barr bodies. Males with two copies of this entity suffer from Klinefelter syndrome. Webbed necks result from a condition in which females only have one copy of this chromosome; that condition is Turner syndrome. For 10 points, name this sex chromosome that is larger than its counterpart, the Y chromosome.  
ANSWER: X chromosome [accept "Barr bodies" before "FMR1"]

14. This man established the Wickersham Commission to investigate crime, and his administration formulated the Stimson Doctrine and used his predecessor's Clark Memorandum to withdraw soldiers from Nicaragua and Haiti. This president signed the Norris-LaGuardia Act to outlaw yellow-dog contracts and ran on a campaign of "a chicken in every pot and a car in every garage". This man, who defeated Al Smith, sent Douglas MacArthur to break up the Bonus Army, which built shanty-towns named for him. For 10 points, name this Republican president who served during the beginning of the Great Depression and lost to Franklin Roosevelt.  
ANSWER: Herbert Clark Hoover

15. This artist created portraits of a man wearing a black hat with a red tassel and a woman holding a crutch as part of a series that depicts the insane. A white pole appears on the right of one work that depicts four jockeys partaking in the title event, while in another a man riding a rearing horse wields a scimitar. A grey-haired figure wearing red sits among nude figures in another of his works in which men climb upon barrels to signal a coming ship. For 10 points, identify this artist of *The Derby at Epsom*, *the Charging Chasseur*, and *The Raft of the Medusa*.  
ANSWER: Jean-Louis André Théodore Géricault

16. James Frederick Ferrier was the first person to use this philosophical term in English. One paper concerning this specific discipline uses the example of a job applicant who has ten coins in his pocket as a refutation of the concept of justified true belief, a thought experiment that is now known as a Gettier problem. Two attempts to resolve the regress problem in this field include coherentism, as detailed by Harold Henry Joachim in *The Nature of Truth*, and foundationalism, which includes works such as John Locke's *Enquiry Concerning Human Understanding*. For 10 points, name this field of philosophy that is concerned with the nature of knowledge.

ANSWER: epistemology

17. When dipped in a super cooled helium-3 Fermi liquid, one of these objects sped up rather than slowed down due to the effect of quasiparticles. The Rossby number can be used to predict the number of lobes per rotation period of one of these objects. The period of motion for a simple one of these devices equals two pi times the square root of length divided by the gravitational constant. Christiaan Huygens first suggested the addition of one of these objects to a grandfather clock. A double one of these exhibits chaotic motion. For ten points, name this device, a point mass suspended on a string or rod of negligible mass.

ANSWER: pendulum

18. The tenth and eleventh sections of this document regard repaying one's debts to a Jew if the borrower has died. Other articles of this document require that the son of Llewelyn the Great be immediately released from captivity, and that the kinsmen of Gerard de Athee be removed from their offices. This document prohibited the king from levying scutage without consent, and it codifies the use of habeas corpus in common law. One of only clauses of this document remaining in effect preserves the ancient liberties of the City of London. For 10 points name this document reluctantly signed in 1215 by King John at Runnymede.

ANSWER: Magna Carta

19. This man wrote a play whose cast calls for a Hebrew, a Greek, a Syrian, and Christ. That play is *The Resurrection*. A poem by this man describes a "form such as Grecian goldsmiths make". The narrator of that poem says "gather me into the artifice of eternity", and that poem was included in a book of this man's poems titled *The Tower*. One of this man's poems describes a sphinx with a gaze "as blank and pitiless as the sun" and a beast that "slouches toward Bethlehem to be born." For 10 points, name this Irish poet who wrote "the falcon cannot hear the falconer" in his poem "The Second Coming."

ANSWER: William Butler Yeats

20. In this book, an angel tells Cornelius, a captain of a Roman army regiment, to send men to Joppa. Other people in this book include tentmakers named Aquila and Priscilla, who offer a recurring person in this book a room in their home. This book sees villagers from Iconium chase two men from their city. Earlier, these two men had been chosen out of a group of prophets and teachers from Antioch to spread the word of God. These men were Barnabas and Paul. This book describes the Day of Pentecost. For 10 points, name this book of the Bible that details the formation of the church by Jesus's followers after his death.

ANSWER: Acts of the Apostles

TB: Late in his career, this military leader commanded the Army of the Vosges during the Franco-Prussian War. This leader defended the town of Caserta from Giosuè Ritucci during the Battle of Volturnus, and he ordered a successful uphill bayonet charge at the Battle of Calatafimi. After a meeting at Teano, this leader agreed to give all of his territorial gains, including most of the former Kingdom of the Two Sicilies, to Victor Emmanuel II. For 10 points, name this Italian patriot, the leader of the Expedition of a Thousand, whose men wore distinctive red shirts.

ANSWER: Giuseppe **Garibaldi**

## Bonuses

1. For 10 points each, name some things about a president nicknamed “Old Hickory”.

[10] This first president from the Democratic Party was elected in 1828, defeating his predecessor John Quincy Adams.

ANSWER: Andrew **Jackson**

[10] Jackson led American troops at this battle fought after the Treaty of Ghent in which he fended off Edward Pakenham from a coastal city with the help of the pirate Jean Lafitte.

ANSWER: Battle of **New Orleans**

[10] After the ruling in *Worcester v. Georgia*, Jackson forced the passage of this treaty with the Cherokee Nation, compelling them to leave their territory and move west on the Trail of Tears.

ANSWER: Treaty of **New Echota**

2. An old man and a boy say “this court of common pleas is now in session” in the scene “Trial” from this opera, which contains scenes like “Train” and “Spaceship”. For 10 points each:

[10] Name this opera whose four acts are connected by five “knee plays”, an opera centered on the title physicist.

ANSWER: **Einstein on the Beach**

[10] *Einstein on the Beach*, a part of the *Portrait Trilogy*, is a work by this American composer. Other works in that series includes his *Akhmatov* and *Satyagraha*.

ANSWER: Philip Morris **Glass**

[10] Glass is a member of this musical movement that uses repetitive patterns and phrases. Other members of this movement include Steve Reich and the composer of *In C*, Terry Riley.

ANSWER: **minimalism**

3. Like mirrors, these objects can be either convex or concave and converging or diverging. For 10 points each:

[10] Name these optical devices that are found in eyeglasses.

ANSWER: **lenses**

[10] The optical power of a lense is equal to one divided by this quantity, which is often found using the lens-maker’s equation.

ANSWER: **focal length**

[10] For a plane mirror the focal length is equal to this value.

ANSWER: **infinity**

4. In this novella, one establishment serves milk laced with drugs that are supposed to “sharpen you up”. For 10 points each:

[10] Alex and his Droogs are frequent patrons of that bar, the Korova Milkbar. They visit that bar before beating up a scholar and causing other sorts of mayhem in this dystopian novella.

ANSWER: **A Clockwork Orange**

[10] This man wrote *A Clockwork Orange* in three weeks. The teenage slang this man created for *A Clockwork Orange*, Nadsat, was heavily inspired by the Russian language.

ANSWER: John Anthony **Burgess** Wilson

[10] One adverse effect of the Ludovico technique undergone by Alex is his involuntary aversion to this music piece, one of his favorites before the therapy.

ANSWER: **Beethoven’s Symphony No. 9** in D minor, Op. 125 [accept “**Beethoven’s Ninth**”]

5. This religion reveres Marcus Garvey as a prophet, and Emperor Haile Selassie as the Messiah. For 10 points each:

[10] Identify this religion whose important scriptures include *The Promise Key*. Adherents of this religion follow the *ital* diet.

ANSWER: **Rastafarianism** [accept “**Rastafari** movement”]

[10] The Rastafari movement arose in this Caribbean island country. Adherents celebrate Haile Selassie’s visit to this country on Grounation day.

ANSWER: **Jamaica**

[10] This term refers to the various sects of Rastafarianism. They include the Bobo Ashanti, the Twelve Tribes of Israel, and the Nyabinghi.

ANSWER: **Mansions** of Rastafari

6. This general led the Free French from exile in London. For 10 points each:

[10] Name this President of the Fifth French Republic who oversaw Algeria’s independence.

ANSWER: Charles André Joseph Marie **de Gaulle**

[10] De Gaulle nearly resigned in May of this year, in which he faced massive student protests and a wildcat general strike of 22% of the French population.

ANSWER: **1968**

[10] De Gaulle imposed an embargo on Israel, which used French Mirage jets, during this brief war in which Syria retreated behind the “purple line” at the Golan Heights.

ANSWER: **Six-Day** War [accept “**June** War” or “**Third Arab-Israeli** War”]

7. Its inner folds surround the matrix. For 10 points each:

[10] Name this organelle that conducts respiration, the powerhouse of the cell.

ANSWER: **mitochondrion** [accept “**mitochondria**”]

[10] The electron transport chain relies on maintaining the trans-membrane gradient of these particles using namesake “pumps”. In chemiosmosis, they pass through ATP synthase.

ANSWER: **hydrogen ions** [accept “**H<sup>+</sup>**”, “**protons**”, or “**hydrons**”; prompt on “**hydrogen**”]

[10] The electron transport chain also relies on this mobile electron carrier, an iron-containing pigment that ferries electrons between Complexes III and IV.

ANSWER: **cytochrome c**

8. These people signed the Treaty of Waitangi, permitting British sovereignty over their islands. For 10 points each:

[10] Name these native inhabitants of New Zealand.

ANSWER: **Māori**

[10] This series of wars resulted from the acquisition of European weapons by the Māori. They used their experience with those new weapons in the later Land Wars against the British.

ANSWER: **Musket** Wars

[10] Māori mutineers invaded this archipelago to the east of New Zealand in 1835, massacring and enslaving its native Moriori people. It is now known for endemic species like a rare robin.

ANSWER: **Chatham Islands** [accept “**Rekohu**” or “**Wharekauri**”]

9. Joshua Wong leads the Scholarists in protests in this city. For 10 points each:

[10] Name this city that has seen protests about China's decision to vet candidates in its promised elections.

ANSWER: **Hong Kong**

[10] This current General Secretary of the Chinese Communist Party, the leader of the Fifth Generation, has given support to Chief Executive C.Y. Leung during the pro-democracy protests.

ANSWER: **Xi Jinping**

[10] Hong Kong's protests are sometimes named for these objects, which were used by protesters to defend against the Hong Kong police force's tear gas.

ANSWER: **umbrellas**

10. This poem describes how "the venerable woods" and "Old Ocean's gray and melancholy waste are but the solemn decorations all of the great tomb of man". For 10 points each:

[10] Name this poem that advises its subject to "approach thy grave" not "like a quarry slave at night", but as one that "lies down to pleasant dreams", written as a "Meditation upon Death."

ANSWER: **"Thanatopsis"**

[10] "Thanatopsis" was written by this poet who asks the title bird, "Far, through their rosy depths, dost thou pursue thy solitary way?" in his poem "To a Waterfowl".

ANSWER: William Cullen **Bryant**

[10] In "Thanatopsis", Bryant describes this entity as having "a voice of gladness" and addresses "him who in the love of" this entity "holds Communion with her visible forms".

ANSWER: **Nature**

11. A criticism of this school is the tyranny of the majority, which posits that citizens in a democracy may choose what seems most comfortable over what is right. For 10 points each:

[10] Name this school of philosophy based around achieving the most good for the most people, founded by Jeremy Bentham.

ANSWER: **utilitarianism**

[10] This British philosopher and follower of Bentham wrote a work titled *Utilitarianism*, along with *Considerations on Representative Government* and *On Liberty*.

ANSWER: John Stuart **Mill**

[10] This other work by Mill is commonly thought to have been written in collaboration with his wife, Harriet Taylor Mill, for it provides a strong argument for gender equality and freedoms.

ANSWER: *The* **Subjection of Women**

12. This artist installed 100 million handcrafted ceramic sunflower seeds on the floor of the Tate Gallery and made a list of student casualties from the Sichuan Earthquake. For 10 points each:

[10] Name this artist and political dissident who went missing for almost three months in 2011 after being arrested on the charges of unpaid taxes.

ANSWER: **Ai Weiwei**

[10] Ai Weiwei is from this country, the site of the 2008 Sichuan Earthquake. Ai Weiwei jumped to fame for documenting himself dropping an authentic Ming Dynasty vase from this country.

ANSWER: People's Republic of **China**

[10] Ai Weiwei helped design this building that features intersecting steel beams for the 2008 Summer Olympics. Li Ning ran on this building's walls to light the Olympic Cauldron.

ANSWER: **Beijing National Stadium** [accept "**Bird's Nest**"; prompt on "**National Stadium**"]



13. This son of King John I used revenue from the Order of Christ to fund expeditions. For 10 points each:

[10] Name this prince of the House of Aviz who patronized the discoverers of the Azores.

ANSWER: **Henry the Navigator**

[10] Henry the Navigator was a prince from this country, which sent Pedro Álvares Cabral from Lisbon to colonize Brazil.

ANSWER: **Portugal**

[10] Afonso de Albuquerque conquered this city on India's west coast in 1510. It remained a Portuguese possession until India annexed it in Operation Vijay.

ANSWER: **Goa**

14. In this novel, the Children of Ham are relocated to the National Homelands. For 10 points each:

[10] Name this novel set in the Republic of Gilead, where Econowives wear multicolored dresses.

ANSWER: *The **Handmaid's Tale***

[10] This Canadian author received the first Arthur C. Clarke Award for her novel *The Handmaid's Tale*.

ANSWER: Margaret Eleanor **Atwood**

[10] In the Republic of Gilead, these women service the state-operated brothels wearing clothing from the past like Playboy bunny costumes. They are guarded by Aunts, and Moira becomes one.

ANSWER: **jezebels**

15. This scientist was awarded the 1906 Nobel Prize in Physics for discovering the electron. For 10 points each:

[10] Name this scientist who proposed the plum pudding model of the atom.

ANSWER: Joseph John **Thomson**

[10] Thomson discovered the electron while experimenting with these streams of electrons in their namesake tubes. These streams can be deflected by magnetic fields.

ANSWER: **cathode rays**

[10] He determined this value for the electron, the quotient of two more fundamental quantities. The quantity in the numerator of this value names a type of spectrometry based on this value.

ANSWER: **mass-to-charge** ratio [accept "**m/Q**"]

16. This artist organized the exhibit *Freeze!* that led to the development of the movement which he leads, the Young British Artists. For 10 points each:

[10] Name this artist who immersed a tiger shark in formaldehyde for his piece *The Physical Impossibility of Death in the Mind of the Living*.

ANSWER: Damien **Hirst**

[10] Hirst's *For the Love of God* features one of these objects encrusted with 8,601 diamonds. An anamorphic one of these body parts appear on the bottom of Holbein's *The Ambassadors*.

ANSWER: **skull**

[10] Another Young British Artist is Tracy Emin, who gained fame for her piece featuring this furniture of hers with its strewn sheets and rumpled pillows.

ANSWER: **bed**

17. At the same time as this man was born, a horse gave birth to two colts. For 10 points each:  
[10] Name this hero who defended his native land from Queen Medb in the Cattle Raid of Cooley. His battle frenzy required three barrels of water to cool him down.

ANSWER: **Cuchulainn** [accept "Sétanta"]

[10] Cuchulainn and Finn MacCool appear in the Ulster Cycle of the mythology of this island.

ANSWER: **Ireland**

[10] This other figure of the Ulster Cycle, a green-eyed woman, brought grief to all of Ireland with her intense beauty.

ANSWER: **Deirdre** of the Sorrows [accept "**Derdriu** of the Sorrows"]

18. This story's title object is lent by Madame Forestier for a ball. For 10 points each:

[10] Name this story in which Madame Loizel pays 36,000 francs to replace a lost piece of jewelry.

ANSWER: "The **Necklace**" [accept "La **Parure**"]

[10] This Realist French author of "The Necklace" wrote of Elisabeth Rousset, the title "Ball of Fat", who sleeps with a Prussian officer.

ANSWER: Henri René Albert Guy de **Maupassant**

[10] In this Maupassant short story, the title Brazilian vampire torments a man who waved to the ship that carried it, causing him gradually to go insane.

ANSWER: "The **Horla**" [accept "Le **Horla**"]

19. This work's title comes from a conversation in Shakespeare's *Julius Caesar* between Cassius and Brutus. For 10 points each:

[10] Name this young adult novel about Hazel Grace Lancaster, a cancer patient who falls in love with Augustus Waters. It received a film adaptation in 2014.

ANSWER: **The Fault in Our Stars**

[10] This man wrote *Paper Towns* and *Looking for Alaska* in addition to *The Fault in Our Stars*. He also runs a vlog channel on Youtube with his brother, Hank.

ANSWER: John **Green**

[10] John and Hank Green are credited with making this phrase popular. This phrase is also the name of the record label that Hank manages, and is often followed by the Nerdfighter salute.

ANSWER: "**D**on't **F**orget **T**o **B**e **A**wsome"

20. This geometrical figure is the set of all points that are equidistant from its center. For 10 points each:

[10] Name this shape whose circumference is given by  $2\pi$  times its radius.

ANSWER: **circle**

[10] Circles have a zero value for this measure of conic sections. This value is between 0 and 1 for an ellipse and greater than one for a hyperbola.

ANSWER: **eccentricity**

[10] Taking the cartesian product of two circles results in one of these three dimensional figures.

ANSWER: **torus**

TB: During the White Terror, this man persecuted his political opponents. For 10 points each:  
[10] Name this successor of Sun Yat-sen who became the leader of the Kuomintang in 1925.

Mao Zedong's Long March was a retreat from the armies of this man.

ANSWER: **Chiang** Kai-shek [accept "**Jiang** Jieshi" or "**Jiang** Zhongzheng"]

[10] Chiang re-established this city as the capital of the Republic of China in 1927. During the Second Sino-Japanese War, the Japanese massacred the inhabitants of this city.

ANSWER: **Nanjing** [accept "**Nanking**"]

[10] During this event, a Manchurian warlord arrested Chiang and his entourage. This incident united the KMT and the Chinese Communist Party on the eve of the Second Sino-Japanese War.

ANSWER: **Xi'an incident**