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Tossups

1. The relativistic version of this quantity is represented as a second-order antisymmetric tensor, while its kinetic, gauge-invariant variety is determined by \mathbf{r} cross quantity \mathbf{P} minus electric charge times \mathbf{A} close quantity. The specific relative flavor of this quantity is always perpendicular to the instantaneous osculating (OS-kyuh-lay-ting) orbital plane and a relation based on this quantity can be used to explain the Law of (*) Areas, as it is an application where mass is held constant. The presence of this quantity explains why an already-spun bicycle wheel attached to a rope will precess about the axis of the rope after it is released, and it is often incorrectly believed only to exist in systems undergoing obvious rotation. For 10 points, name this physical property, denoted by \mathbf{L} , which is conserved in systems unless they are subject to external torque.

ANSWER: angular momentum [accept \mathbf{L} before mention]

2. The flattened scale degree of this number can be added to an Italian sixth chord to produce a German sixth chord.. The interval of this number characterizes the distance between the first two notes of the blues scale. A Phrygian ("FRIDGE-ian") mode scale has no sharps or flats in its key signature if it begins on this scale degree of C. In figured bass notation, it is the bottom number of a triad in first inversion. Each major key sits this interval above its (*) relative minor key. The scale degree of this number is called the mediant. Inverting this interval produces the sixth. Major and minor triads are differentiated solely by this scale degree. It is the number of flags on the stem of a thirty-second note, the number of movements in a traditional concerto, and the number of valves on a trumpet. This number of composers make up the namesake B's of classical music. For 10 points, give this number of musicians in a trio.

ANSWER: three [or third; or major third; or minor third]

3. A street gang that took their name from participants in this event was led by Nicky Cruz and documented in the book *Run Baby Run*. The latex of *Euphorbia grantii* (yu-FOR-bee-uh GRANT-ee) was used as a biological weapon during this conflict. Earl Wavell died during the "Christmas Eve Battle" in this conflict, air support for which was dubbed Operation Mushroom. Thomas Askwith's "pipeline" system sorted prisoners in this conflict into white, grey, and black based on their cooperation. George Erskine led one side's forces during this event, which created a series of gulag-like (*) detention camps as part of Operation Anvil. A group of people accused of leading rebels in this conflict were called the Kapenguria (kuh-pen-GOO-ree-uh) Six and tried under the government of Evelyn Baring; one of those tried was future president Jomo Kenyatta. For 10 points, name this revolt against the British by Kikuyu (ki-KOO-yoo) militants in Kenya.

ANSWER: Mau Mau Uprising [or Mau Mau Rebellion; or Mau Mau Revolt; or the Kenyan Emergency]

4. A inn in this novel only has an external liquor licence, so people have to drink on a ledge outside looking in the window. In a comic scene in this novel, a girl called the "Queen of Spades" spills treacle down her back and rolls around in the grass before attempting to fistfight the main character. After escaping that fight with Car Darch, the protagonist of this novel is taken to a grove in The Chase where she is raped in her sleep, later giving birth to a son named (*) Sorrow as a result. Its protagonist joins Marian and Izz at Flintcomb-Ash after her husband flees to Brazil upon finding out that she is not a virgin. In the last of the seven "phases" of this novel, Alec is stabbed to death by the protagonist, who is arrested at Stonehenge after ensuring that her sister Liza-Lu is looked after by Angel Clare. For 10 points, name this Thomas Hardy novel about a poor girl related to an ancient family.

ANSWER: Tess of the d'Urbervilles: *A Pure Woman Faithfully Represented* [accept a French pronunciation of "d'Urbervilles" with a silent "s"]

5. F-P-P tri-peptide activates one stage of this process, and the broadcast form of this process is used by coral and hydra. S-E-D-1 is an independently binding receptor which functions independently in this process alongside galacto-syl-transferase (guh-LACK-tuh-seal-TRANS-fur-ace), which binds to residues on ZP3. Bindin mediates this process and creates a namesake cone in sea urchins. A six-hour event in humans called capacitation is part of this process and occurs when bicarbonate ions activate adenyl cyclase. In that part of this process membrane changes resulting in waves of increased (*) calcium ions in the cytosol are sometimes explained by a "calcium bomb" hypothesis. As a part of this process, enzymes that break through the zona pellucida (pell-OO-sid-uh) are secreted from the acrosome. This process commonly occurs in the fallopian tube. For 10 points, name this biological process of gametes fusing to form an embryo.

ANSWER: fertilization

6. These figures live in a land where everything is the exact opposite of the earth and which is accessed through the *poteau mitan* (*puh-TOW mee-TAN*). One of these figures presides over the chanting done during ordeal by fire, or the *canzo*. These figures are often split into the “Rada” types, which are more benevolent, and the “Petro” types, which are more aggressive. Another one of these figures, whose name means “great wood,” forms a trinity with two others whose names refer to graveyards and (*) crossroads. One of these figures wears three wedding rings representing her three husbands; those husbands include one called “Shell of the Sea” and “Golden Shell,” and are Agwe (*UG-way*), Ogoun (*OH-goon*), and Damballa (*dum-BALL-uh*). Another one of these figures is the leader of the Guédé (*guh-WAY-day*) and is the husband of Maman Brigitte (*muh-MAN bruh-JEET*); that one of these figures is depicted in a top hat and tuxedo and named Baron Samedi (*suh-MAY-dee*). For 10 points, name these spirits from Voodoo mythology.

ANSWER: Loas [or Lwas]

7. The Earl of Shaftesbury argued that this concept is imbued in the Earth by an “angelic spirit” since the Earth is both a “Mansion-Globe” and “Man-Container.” Noble diction and elevated composition are said to comprise this quality in the first known treatise on it, which was written by Longinus (*lon-JAHY-nus*). Immanuel Kant argued that this concept is possibly “formless,” “counter-purposive” and does “violence” to the senses in a set of (*) “Observations” partly named for it. Arthur Schopenhauer (*SHOW-pen-HOW-ur*) claims that the “weakest feeling” of this quality was caused by nonthreatening objects devoid of life, like light reflected off stones, while its “fullest feeling” was caused by oneness with Nature. According to Edmund Burke, this subject causes “negative pain” due to a combination of fear and delight. For 10 points, name this quality contrasted with the beautiful.

ANSWER: the sublime

8. The narrator of this book finds a 322-page report in the flooded Palace of Justice, a building that had once been visited by Francis Drake. A character in this novel confuses the bad omen of birds and the good omen of trees in one of her son’s dreams. Father Amador serves as an incompetent replacement for Dr. Dionisio Iguaran (*dee-oh-NEE-see-oh ee-GWAR-un*) in this novel, which also contains a character who buys all the raffle tickets available in order to win a music box for a woman. Another character in this novel is advised to stain some (*) sheets with merbromin and ends up spending 17 years writing unanswered letters to Bayardo San Roman. After the butcher Faustino sharpens their knives, two characters in this novel leave Clotilde Armenta’s milk bar in search of their sister Angela’s former lover. For 10 points, name this Gabriel García Márquez novella titled for the Vicario brothers’ inevitable murder of Santiago Nasar.

ANSWER: Chronicle of a Death Foretold [or Crónica de una muerte anunciada]

9. One leader in this conflict, who ordered the construction of a trench and stakewall to defend his navy, was captured, then released on the incorrect assumption that he would negotiate peace. Following a siege at a city surrounded by the Hypsas (*HIP-sass*) and Akragas rivers, one side in this conflict built one hundred ships based on the design of a captured enemy ship. Those ships were then used to defeat an enemy fleet arranged in the “long line” formation after being outfitted with (*) *corvi* (*CORE-vii*). Following that battle, the losing commander was allegedly executed by his own men; that commander was Gisco. The losing side of this war could not pay their soldiers, leading to the Mercenary or Truceless War. Hanno’s forces were repelled by the Mamertines and Syracuse sued for peace after a short siege during this war. For 10 points, name this conflict between Carthage and Rome that ended in 241 BC when Hamilcar withdrew from Sicily.

ANSWER: First Punic War [prompt on “Battle of Tunis” before “Hypsas”; prompt on “Punic war”]

10. This artist’s landscapes include *Opening in the Woods*, which may have been painted from his home on Richmond Hill. He argued that painters should not portray the defects of Alexander the Great or Agesilaus (*ag-uh-SEEL-owse*) in a lecture series on history painting. He used himself to model the facial expressions of the figure allegorizing Pity in a painting where the figure allegorizing Terror clutches a dagger in the background. A woman wears a string of pearls, a diamond diadem, and a gold dress with scalloped leaves in a (*) portrait of a Welsh tragedienne. This man articulated the “grand style” in his lecture series *Discourses on Art*. This artist featured an actress sitting on a throne in his portrait *Sarah Siddons as the Tragic Muse*. For 10 points, name this first president of the Royal Academy of the Arts, an artistic rival to Thomas Gainsborough.

ANSWER: Joshua Reynolds

11. One set of sayings of this man includes “the more flesh, the more worms” and “the more women, the more witchcraft.” At the beginning of his training, this man sat on the roof and listened to lessons through the skylight, and almost froze to death doing so. In one dispute, this man asserted that a woman could remarry even if her husband’s death was uncertain, and also stated that one should tell an ugly bride she is beautiful on her wedding day. This man stated “what is hateful to you, do not do to your fellow” while (*) standing on one foot to explain the

Torah. This man's sayings include the admonition "if not now, when?" in regards to duty. This scholar is best remembered today for his debates with Shammai (shah-MY), and for his namesake sandwiches eaten on Passover. For 10 points, name this Rabbi who lends his name to college campus Jewish organizations.

ANSWER: Rabbi Hillel the Elder

12. In this show, one character takes her crush to see an "alien" which is actually just a cow fetus in a jar. One character on this show says "Mercy is the mark of a great man" before stabbing Atherton Wing and concluding "Guess I'm just a good man." This show's main character threatens, "I swear by my pretty floral bonnet, I will end you" before defending a town and being rewarded with a wife, Saffron, who turns out to be a con artist. This show's episode "Out of Gas" uses flashbacks to show the origins of several characters, including taciturn second-in-command (*) Zoe, cheerful engineer Kaylee, and wisecracking pilot Wash. The protagonists try to keep the fugitives Simon and River Tam out of the hands of the Alliance while smuggling cargo on the *Serenity*, captained by Malcolm Reynolds. For 10 points, name this short-lived Joss Whedon "space western" TV series.

ANSWER: Firefly

13. One paper on this topic posits the existence of a chemical that can cause kittens to develop into creatures with human-like brains. That paper by Michael Tooley argues for the "moral symmetry principle" to justify this action, arguing that if it is permissible to refrain from doing an action, it is also permissible to stop it from happening. One work about this practice divides objections to it into the "derivative" and "detached"; that work is Ronald (*) Dworkin's *Life's Dominion*. In paper about this practice, a person is forced by the Society of Music Lovers to give life support for a violinist with kidney disease; that article is by Judith Jarvis Thomson. For 10 points, name this controversial practice protected in *Roe v. Wade*.

ANSWER: abortion [accept infanticide until "derivative"]

14. This story is set in a house decorated with homemade embroidery of the Romeo and Juliet balcony scene and the princes in the tower. One man in this story quotes Mrs. Cassidy in order to justify "medicinal" whisky and praises a tenor's singing of *Let Me Like a Soldier Fall*. The protagonist of this work tells a story about a mill-horse that walked around King William's statue in circles and is insulted by Miss Ivors for writing for the (*) unionist *Daily Express*, prompting that man to give a speech criticizing a new "hypereducated" generation. Mr. Browne argues with Bartell D'Arcy about music at Aunt Kate, Aunt Julia, and Mary Jane's party in this story, in which hearing *The Lass of Aughrim* causes Gretta to reminisce about Michael Furey, distressing her husband Gabriel Conroy. For 10 points, name this final short story in James Joyce's *Dubliners*.

ANSWER: "The Dead"

[NOTE TO MODERATOR: alkyne rhymes with fine]

15. In one palladium-catalyzed allylation between an allyl bromide and a nucleophile (NEW-klee-oh-file), this parameter determines whether the nucleophile attacks the allyl bromide directly or coordinates to the palladium catalyst. That is the Tsuji-Trost (SOO-jii-trost) reaction. Cross-coupling reactions involving sp³-hybridized carbons experience an increase in reaction rate when this parameter decreases. Due to the shape of sp orbitals, terminal alkynes have a value of this around 25. Averaging this variable for some pair of the side chain, the amine group, or the (*) carboxyl group is used to calculate the isoelectric point of an amino acid. This value increases for every successive de-protonated species of a poly-protic acid. At the half-equivalence point on a titration curve, this value is equal to the pH. For 10 points, name this parameter used to measure acidity, the negative log of the dissociation constant.

ANSWER: pKa [prompt on things like "acid strength" or "acidity," accept Ka until "parameter decreases"]

16. A duke of this region called Henry II the Pious was killed in a battle fought against invading Mongols at Legnica (leg-NIT-zuh). During one uprising in this region, a group called the "Werewolves" under Peter von Heydebreck (high-duh-BRECK) captured the Annaberg. A Russian-imposed import embargo and the mechanization of the British industry led to a cotton weaver uprising in this region in 1844. The Treaty of Versailles stipulated that the inhabitants of the (*) Upper part of this region had to hold a plebiscite, involving an invasion of the southeastern Cieszyn (SEE-zin) subregion before being resolved by the Spa Conference. This region became a Prussian territory after it was seized by Frederick the Great in an invasion that started the War of Austrian Succession. For 10 points each, name this region mostly located in Poland that borders Germany and the Czech Republic, and is centred around the city of Wroclaw.

ANSWER: Silesia [or Upper/Lower Silesia; prompt on "Poland" before "Poland" is read]

17. Index minerals found in this material are sillimanite, kyanite, and andalusite. The discovery of an unusual form of this type of material embedded in the Kokchetav (cok-SHET-av) massif of Kazakhstan as well as several coesite

belts in Europe provided evidence for UHP production of this material. Francis John Turner refined Pentti Eskola's theories about the different facies of this specific material, which may be produced in Barrovian (buh-ROVE-ee-an) zones and along the edge of (*) plutons. During the creation of this material, the protolith cannot melt into liquid magma, because that is a solid-state change instead. Reaching over 200 degrees Celsius and 1500 bars of pressure causes a protolith to become one of these. Examples of this type of rock include schist, marble, and gneiss. For 10 points, name this type of rock that arises from transformation of existing sedimentary or igneous rock.

ANSWER: metamorphic rock [prompt on "rock" until "type of rock"]

18. One studio album by this man employed Stan Hasselgard as part of a septet, who died the year it was released; that album is *Swedish Pastry*. This man based a theme song for a radio show on Karl Maria Von Weber's *Invitation to the Dance*. This man briefly studied the classical form of his instrument under Reginald Kell, and this man made a recording of a piece originally written for Woody Herman with the composer, Stravinsky's (*) *Ebony Concerto*.

This man's band regularly played on the NBC show *Let's Dance*, and he formed a trio with pianist Teddy Wilson and drummer Gene Krupa (CROO-puh). This man's band recorded the first ever Double Album at a 1938 Carnegie Hall Concert, which included a rendition of Louis Prima's *Sing Sing Sing*. For 10 points, name this clarinetist known as the "King of Swing."

ANSWER: Benny Goodman

19. Characters in this novel include a violinist wearing a vest with golden horseshoes over a pink shirt and a woman who sings in a way that is both tragic and looks like a horse. The protagonists of this novel are described as "one of those incongruous and impossible married couples," and the husband urges his wife not to work the day after their wedding. Tommy Hinds helps the main character of this novel, who goes to jail after assaulting his wife's rapist, and gets drunk for the first time when Madame Haupt can't help his wife. This novel's author claimed that (*) "I aimed for the public's heart, and by accident I hit it in the stomach". This novel ends with the all-caps declaration "CHICAGO WILL BE OURS!" at a Socialist meeting. Awful events in this novel include Phil Connor's rape of Ona and Antanas drowning in a mud puddle. For 10 points, name this inadvertent exposé of meatpacking plants, a novel about Jurgis Rudkus by Upton Sinclair.

ANSWER: *The Jungle*

20. Returning veterans in this state after World War II sparked the "GI Revolt" in Garland County. The notably biracial Southern Tenant Farmers Union was founded at Tyronza in this state during the Great Depression, and Governor Frank White allowed state utility rates to dramatically rise to pay for nuclear power plants in the Grand Gulf Affair. A shooting at Hoop Spur sarked the killing of black sharecroppers in a series of massacres documented by NAACP Field Secretary Walter White near this state's town of (*) Elaine in 1919. Senators from this state included Dale Bumpers and J. William Fulbright. One attempt to call out this state's National Guard was overridden by Dwight Eisenhower, who sent in the 101st Airborne instead. Orval Faubus governed--for 10 points--what state where in 1957 nine black schoolchildren attempted to enroll in Central High in Little Rock?

ANSWER: Arkansas

Bonuses

1. One of the characters in this film desperately wants to attend a ball game instead of being stuck in a room with the other title characters. For 10 points each:

[10] Name this film, in which Henry Fonda's character deduces and convinces his fellow jurors that a Hispanic defendant may not have killed a man. It is almost entirely set in a jury room.

ANSWER: *12 Angry Men*

[10] This director of *12 Angry Men* also made the film *Before the Devil Knows You're Dead*, which was filmed on high definition video because this director felt shooting on film was a "pain in the ass."

ANSWER: Sidney Lumet

[10] Beatrice Straight won the Academy Award for Best Supporting Actress despite only appearing for one scene in this other Sidney Lumet film about newsman Howard Beale starring Peter Finch, Faye Dunaway and William Holden.

ANSWER: *Network*

2. Spin-flips occur before these events, whose final stages are not yet well-modeled due to the "Final Parsec Problem." For 10 points each:

[10] Name these events which follow an inspiral-plunge-ringdown sequence according to the effective one-body formalism.

ANSWER: black hole mergers [accept equivalents; accept black hole collisions or equivalents; prompt on "galaxy mergers"]

[10] Black hole mergers are among the strongest sources of these hypothetical phenomena, whose detection is the goal of the LIGO experiment. They can only be emitted by quadrupole sources.

ANSWER: gravitational waves [or gravity waves]

[10] The Hulse-Taylor pulsar, which has this configuration, is decaying due to its emission of gravitational waves.

“Spectroscopic” examples of these systems can only be confirmed by periodic changes in spectral lines.

ANSWER: binary

3. This branch of a larger language family is subdivided into Ingvaemonic, Istvaeonic, and Irminonic. For 10 points each:

[10] Name this branch of Germanic languages that includes Frisian and English. The southern parts of the dialect continuum containing this branch underwent the High German consonant shift.

ANSWER: West Germanic

[10] This High German language is the source of many fun loanwords like *chutzpah* and *goy*. It is historically spoken by Ashkenazi Jews.

ANSWER: Yiddish

[10] This Scandinavian language uses a 29-letter orthography and is not mutually intelligible with Danish, Norwegian, or Swedish. This language supplanted Danish in its home area in the mid-20th century in its namesake “language conflict.”

ANSWER: Faroese

4. This poem ends with the line, “a savage servility slides by on grease.” For 10 points each:

[10] Name this poem which describes the old South Boston Aquarium and a statue of Colonel Shaw and his black regiment. Images from this poem include a photograph of Hiroshima and “yellow dinosaur steamshovels.”

ANSWER: “For the Union Dead”

[10] This founder of confessional poetry wrote “For the Union Dead.” His other works include “Skunk Hour,” the prose piece “91 Revere Street,” and the collection *Lord Weary’s Castle*.

ANSWER: Robert Lowell [or Robert Traill Spence Lowell IV]

[10] This poem from Lowell’s *Life Studies* details his life in the “house of the ‘mentally ill.’” It laments “What use is my sense of humor?” before describing mental patients such as the ex-football player Stanley and the obese Bobby.

ANSWER: “Waking in the Blue”

5. For 10 points each, answer some questions about species containing unpaired electrons.

[10] In one method of halogenating unactivated aliphatic (AL-uh-PATH-ick) species, UV light is used to homolytically split a diatomic halogen atom into two species of this type. These can also cause DNA damage.

ANSWER: free radical

[10] Free radical halogenation (HAL-uh-gen-ay-shun) proceeds more quickly on highly substituted carbons due to this effect, in which sigma bonds overlap with nonbonding p-orbitals, lending electron density and stabilizing them.

ANSWER: hyperconjugation

[10] This compound is often used as a bromine source in free-radical bromination (BRO-min-AY-shun) reactions because it reacts with the HBr side product to regenerate a low, constant supply of bromine.

ANSWER: NBS [or N-bromosuccinimide]

6. One member of this political party is opposed by the Yo Soy 132 social movement. For 10 points each:

[10] Name this longtime dominant political party whose predecessor was founded by staunch anti-Catholic Plutarco Calles (plu-TARK-oh cay-EZ). Ernesto Zedillo (zay-DEE-oh) was also a leader from this party.

ANSWER: PRI [or Institutional Revolutionary Party; or Partido Revolucionario Institucional]

[10] Another member of the PRI was Lazaro Cardenas (luh-ZAR-oh CAR-de-nas), who nationalized this industry in Mexico by creating the company PEMEX. The OPEC cartel consists of countries that export it.

ANSWER: oil [or petroleum]

[10] The PRI’s Ernesto Zedillo lost to the Alliance for Change Candidate Vicente Fox in an election held in this year.

ANSWER: 2000

7. This substance was originally harvested from plants in Ethiopia near towns like Yirgachefe (irga-CHEF-ay) and some regions of Yemen where it was shipped from ports like Mocha. For 10 points each:

[10] Identify this plant whose berries are often roasted by companies like Stumptown and Intelligentsia.

ANSWER: coffee [or coffea arabica; do not accept other subspecies]

[10] The world’s largest coffee producer by volume is this country, where it is grown in large plantations in the state of Minas Gerais (MEE-nas GER-eyes) and, with milk, names a period of this country’s history.

ANSWER: Brazil

[10] Kopi Luwak, from Vietnam, and Black Ivory, from Thailand, are both varieties of coffee beans that have undergone

this unusual process before being roasted.

ANSWER: **digested** by animals [accept clear equivalents]

8. Three virtuous ladies offer educational lessons for women in the sequel to this author's most famous work. For 10 points each:

[10] Name this court writer for several Dukes of Burgundy, including John the Fearless. The aforementioned Reason, Rectitude, and Justice help her collect historical women in her most notable work, *The Book of the City of Ladies*.

ANSWER: **Christine de Pizan** [accept either underlined portion]

[10] *The Book of the City of Ladies* was Christine's response to this medieval French courtly poem on the art of love. Begun around 1230 by Guillaume de Lorris (gi-UM-de-lo-REE), it was massively expanded 40 years later by Jean de Meun.

ANSWER: *The **Romance of the Rose*** [or *Le **Roman de la Rose***]

[10] Christine's final written work was a poem dedicated to the memory of this woman. A Friedrich Schiller play and a Voltaire poem about this woman are both titled "The Maid of Orleans."

ANSWER: **Joan of Arc** [or **Jeanne d'Arc**; prompt on "La **Pucelle**"]

9. An apocryphal propaganda document called the *Memoirs of Mr. Hempher* states that this religious movement was started by a British agent. For 10 points each:

[10] Name this ultra-conservative branch of Islam practiced heavily in Saudi Arabia. They really hate what they call innovation, or bid'ah, and one of its modern proponents believed the Earth was flat.

ANSWER: **Wahhabism** [or **Salafism**]

[10] Wahhabism purports not to belong to any one school of legal interpretation, or fiqh (fick). Fiqh is used to interpret this thing, the law code set down by the Qu'ran and the Hadith.

ANSWER: **sharia**

[10] A common criticism of Wahhabism is that its proponents are too willing to perform this action, the act of calling another Muslim a *kafir* and thus excommunicating them.

ANSWER: **takfir**

10. The British *Daily Telegraph* called this man the "living and kicking symbol of everything that everybody likes best about the United States." For 10 points each:

[10] This president's namesakes include the mascot of the University of Missouri and a doctrine opposing the spread of communism in Europe.

ANSWER: Harry S **Truman**

[10] Truman's VP was this Kentucky lawyer who, while in Congress, pushed for infrastructure improvements throughout the midwest. He was nicknamed "Iron Man" for giving 16 speeches in one day while campaigning.

ANSWER: Alben **Barkley**

[10] In his keynote address at the Democratic National Convention of *this year*, Barkley asked "Is the Court beyond criticism?" Earlier, the ticket of Franklin Roosevelt and John Garner had been nominated for the 2nd time.

ANSWER: **1936**

11. The narrator of *this section* of a larger work sees the spindle of necessity, a device used to control the order of the universe. For 10 points each:

[10] Name this story about a man from Pamphylia (pam-FEE-lee-uh) who returns from the dead to describe how souls are allowed to choose new lives after death.

ANSWER: The myth of **Er**

[10] The myth of Er closes this Platonic dialogue in which Socrates discusses the meaning of justice. Its other sections discusses the allegories of the Sun, the Line, and the Cave.

ANSWER: The **Republic** [or **Politeia**]

[10] This figure in the Republic offers three categories of goods and challenges Socrates to prove that justice is of the highest category because it is both good in its effects and good in itself. He is the interlocutor in the Allegory of the Cave.

ANSWER: **Glaucon**

12. The author's sister Mary appears in the guise of "Cousin Bridget" in this collection, whose contents were initially published in *The London Magazine*. For 10 points each:

[10] Name this 1823 volume containing such pieces as "The South-Sea House," "Dream-Children: A Reverie," "Old China," and "A Dissertation Upon Roast Pig".

ANSWER: **Essays of Elia**

[10] This English essayist, a close friend of William Hazlitt, wrote the *Essays of Elia* and collaborated with his aforementioned sister on *Tales From Shakespeare*.

ANSWER: Charles **Lamb**

[10] This contemporary of Lamb oustripped him in popularity with the publication of the personal essays later collected in his book *Confessions of an English Opium-Eater*.

ANSWER: Thomas **de Quincey** [or Thomas Penson de **Quincey**]

13. This composer's Symphony No. 4 begins with a brass "fate" theme that is heard again in the fourth movement. For 10 points each:

[10] Name this composer who included a canzonetta in his D major violin concerto, which its dedicatee Leopold Auer declined to premiere.

ANSWER: Pyotr Ilyich **Tchaikovsky**

[10] This other Russian composer wrote *Scheherazade* (shuh-HAIR-uh-zahd) and included the "Flight of the Bumblebee" in his opera *The Tale of Tsar Sultan*.

ANSWER: Nikolai **Rimsky-Korsakov**

[10] This student of Rimsky-Korsakov wrote a concerto in E-flat major for saxophone and strings. His A minor violin concerto groups the first two movements as one large sonata-form movement.

ANSWER: Alexander **Glazunov**

14. Answer the following about the relationship between space and time, for 10 points each.

[10] First proposed in the 1905 paper "On the Electrodynamics of Moving Bodies," this theory holds that the speed of light in vacuum is the same for all observers.

ANSWER: **Special relativity** [or **SR**]

[10] In special relativity, Lorentz transformations are conducted across vectors in this four-dimensional space, which is equipped with a non-positive definite inner product.

ANSWER: **Minkowski** space

[10] A consequence of special relativity is this behavior, where a correction to spin is required after a parallel transport. It is necessary when considering electron orbits.

ANSWER: **Thomas precession** [or **Thomas rotation**]

15. E.H. Gombrich claimed that this unusually-proportioned painting had a "method" in its madness. For 10 points each:

[10] Name this painting of the Virgin Mary and an unnaturally large baby Jesus whose title refers to one of Mary's disproportionately elongated features; its alternate title refers to the figure in the bottom right-hand corner.

ANSWER: **Madonna with the Long Neck** [DONT READ THIS OUT LOUD but accept **Madonna and Child with Angels and St. Jerome**]

[10] This artist of *Self-Portrait in a Convex Mirror* painted *Madonna of the Long Neck*.

ANSWER: **Parmigianino** [or Girolamo Francesco Maria **Mazzola**]

[10] An emaciated and seemingly miniature depiction of this person can be seen in the background of *Madonna of the Long Neck*. Another Parmigianino painting shows him dreaming of St. John pointing at the Virgin Mary and Christ.

ANSWER: St. **Jerome** [or **Hieronymus**]

16. While serving as the Secretary of State for Education and Science in the Heath government, this politician acquired the nickname "Milk Snatcher" after abolishing a free milk program for some schoolchildren. For 10 points each:

[10] Name this Conservative prime minister of the United Kingdom, nicknamed the Iron Lady. She presided over her nation's war with Argentina over the Falkland Islands.

ANSWER: Margaret **Thatcher**

[10] Thatcher's reforms during the 1980s were mostly paid for by a 80% tax on the extraction of oil from this sea.

ANSWER: **North** Sea

[10] Thatcher's speech at the Conservative Party conference in 1980 contained this five-word phrase, indicating her unshakeable resolve to not change her economic policies. It's a pun on a play by Christopher Fry.

ANSWER: The **Lady's Not For Turning**! [do NOT accept "*This Lady's Not for Turning*"]

17. This period began with the defeat of an Umayyad force by Pelagius in the Battle of Covadonga. For 10 points each:

[10] Name this extended military campaign to drive Islamic empires out of Spain. The *Lay of El Cid* is an epic poem about a soldier living during this campaign.

ANSWER: **Reconquista**

[10] In this battle, an Almohad army led by al-Nasir was defeated by a combined force from Alfonso VIII of Castile, Sancho VII of Navarre, Peter II of Aragon, and Alfonso II of Portugal. Al-Nasir's tent was later given to Pope Innocent III.

ANSWER: Battle of **Las Navas de Tolosa** [or the Battle of **al-Uqab**]

[10] After winning the Battle of Ourique (**oh-REE-cay**), this man became the first person proclaimed “King of the Portuguese.” His position was confirmed by Pope Alexander III in the bull *Manifestis Probatum*.

ANSWER: **Afonso I** or Afonso **Henriques**

18. The advice “Always end your book with Nelson Mandela saying something about rainbows or renaissances. Because you care,” concludes a satirical *Granta* article by an author from this country. For 10 points each:

[10] Name this home of Binyavanga Wainaina (**BIN-yah-VAHN-guh WAY-nay-nuh**), a former British colony that served as the setting for memoirs by Beryl Markham, Elspeth Huxley, and Isak Dinesen. It’s also the setting of the crime novel *Black Star Nairobi*.

ANSWER: Republic of **Kenya** [or Jamhuri ya **Kenya**]

[10] *Black Star Nairobi* was written by Mukoma, the son of this titan of Kenyan literature. This author was imprisoned by Daniel Arap Moi after the premiere of his play *I Will Marry When I Want*.

ANSWER: **Ngugi** wa Thiong’o [or James **Ngugi**, if you’re a colonialist]

[10] This novel, Ngugi’s second, is set during the colonial period. It depicts the Kikuyu communities of Komeno and Makuyu, which are divided culturally by religion and physically by Honia, the title entity.

ANSWER: *The **River Between***

19. This protein complex in *Drosophila* usually contains a protein called R2D2, and it often localizes to P-bodies. For 10 points each:

[10] Name this complex of a ribonucleoprotein with a double stranded fragment consisting of the guide strand and passenger strand.

ANSWER: **RISC** complex [or **RNA-induced silencing complex**]

[10] The RISC complex is central to RNA interference, which is a form of gene regulation that occurs after this process. In this process, RNA polymerase reads DNA and creates RNA.

ANSWER: **transcription**

[10] In addition to being a part of the RISC complex, the argonaute homolog Ago2 in humans binds to this structure on the mature transcript, which contains a guanine methylated at the 7 position.

ANSWER: 5’ **cap** [accept anything with the word “cap” in it]

20. In this epic, a knight is assigned to rescue Mabon ap Modron and find the cauldron of Diwrnach the Irishman. For 10 points each:

[10] Name this story in the *Mabinogion* (**ma-bin-OH-jee-un**) about a knight cursed by his stepmother to fall in love with the daughter of the giant Ysbaddaden (**EES-buh-DA-den**). That knight in this story collects a comb and scissors out of the hair of the boar Twrch Trwyth.

ANSWER: **Culhwch and Olwen** (**CULL-witch**)

[10] This man sends his brother Sir Kay to help Culhwch (**CULL-witch**). This husband of Guinevere pulled a sword out of a stone to become King of England.

ANSWER: King **Arthur**

[10] Sir Kay forces this knight to work in a kitchen and mocks his delicate hands. This knight of the Round Table, who later helps the maiden Lynette by killing the Red Knight, was accidentally killed along with Gaheris by Lancelot.

ANSWER: Sir **Gareth**