

2021 ACF Nationals

Packet by Ohio State and Duke

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Tossups

1. The p-wave's contribution to the rate of this process is proportional to the square of relative velocities. A density "spike" near the center of the Milky Way would enhance this process to a degree incompatible with current flux observations. Because this process injects extra energy into the ionization of neutral hydrogen, it broadens the surface of last scattering, leading to suppression of temperature fluctuations and enhancement of polarization fluctuations in the CMB. The rate of this process is increased by Yukawa potential interactions in the Sommerfeld enhancement. The current relic density depends on the "thermally-averaged" cross-section of this process before dark matter freeze-out occurs, in which the expansion rate exceeds the rate of this process. Attempts to "indirectly" detect dark matter use the INTEGRAL and Fermi telescopes to look for gamma rays produced by this process. For 10 points, name this process in which photons are produced from the interaction of particles and antiparticles.

ANSWER: dark matter **annihilation** [or self-**annihilation**]

2. One king of this name and number convoked the Synod of Sutri to elevate the bishop Sudiger to the papacy under the name Clement II, after which Clement crowned this king and his wife Agnes of Poitou on Christmas Day. A later king of this name and number was given a triumphal entry into Venice by a galley of 400 men, and stayed with the courtesan Veronica Franco, whom he only left after breaking into a crying fit. That monarch was opposed by the Politiques or Malcontents led by his brother, the Duke of Alençon, and was the first to accept the *pacta conventa* to become king of Poland-Lithuania. He fled Paris after the Council of Sixteen took power in the wake of the Day of the Barricades, and was later fatally stabbed in the stomach by the Dominican friar Jacques Clement. For 10 points, name this French king of the Valois house whose successor of the same name promulgated the Edict of Nantes.

ANSWER: **Henry III** [accept **Henry III** the Black; or **Henry III** the Pious; or **Henry III** of France; prompt on **Henry**]

3. Isang Yun wrote a piece for solo violin with a theme from *this* musical work and seven variations influenced by both twelve-tone and Korean music. Sofia Gubaidulina's *Offertorium* features an orchestration of the main theme of this work minus the last note. The score for this piece contains one of the latest uses of the instruction "Epidiapente," directing the performer to play its *Fuga canonica* a fifth higher than the previous section. The composer used the name "Prussian Fugue" for a piece in this collection that Anton Webern orchestrated with much *klangfarbenmelodie*; that is this composition's *Ricercar a 6*. Arnold Schoenberg suggested that the composer's son Carl Philip Emmanuel was the true creator of the "Thema Regium" upon which this work is based. For 10 points, name this keyboard composition by J.S. Bach based on a theme given to him by Frederick the Great.

ANSWER: "The **Musical Offering**" [or **Musikalisches Opfer**; or *Das Musikalische Opfer*; or **BWV 1079**]

4. This man's name appears in the subtitle of a book that Ian Hacking reviewed as "a work of refutation and revenge, judicious and remorseless" for its characterization of another researcher's "pidgin" scholarship. According to a 1992 book, evangelizing "myth models" should inform contemporary readings of accounts of this man drawn from the "antiquities" of David Malo. A scholar who postulated the *calcul sauvage* in a Marc Bloch lecture about this man was accused of denying the "practical rationality" of non-Europeans in a book about how "European mythmaking" led to this man's "apotheosis." The books *Islands of History* and *How "Natives" Think* were central to a 1990s debate about this historical person. Gananath Obeyesekere and Marshall Sahlins disputed whether identification with the god Lono led to the death of, for 10 points, what British seafarer who was killed by Hawaiians?

ANSWER: James **Cook** [or Captain **Cook**]

5. Jean-George Noverre wrote a treatise on this technique inspired by ancient Roman practices and used this technique in his successful work *Les Fêtes Chinoises*. Soviet productions of classical ballets sometimes cut scenes that used this technique, such as a scene where Berthe warns the main character about evil spirits. Michel Fokine criticized the conventional use of this technique as “correct but ugly” and said smaller gestures should be replaced by “movement of the whole body.” A successor to 18th-century *ballet d’action*, this technique names a genre of ballet exemplified by *Giselle* and *Sleeping Beauty*. At the end of Antonioni’s *Blow-Up*, the protagonist encounters a “tennis match” represented by students performing this general technique. For 10 points, name this technique of silently acting out emotions and movements, stereotypically performed by street performers in white facial makeup.
ANSWER: pantomime [or **ballet d’action** before “Soviet”]

6. This compound’s namesake synthase is irreversibly inhibited by the herbicide phosphinothricin (“phos-phino-thricin”). The enzyme that breaks it down is inhibited by the failed cancer drug telaglenastat (“tela-glena-stat”). In some tumors, c-myc (“C-mic”) upregulates an enzyme that breaks down this amino acid, resulting in a state of addiction to it. Astrocytes synthesize this amino acid and transport it out to neurons. This amino acid is a common nitrogen source in serum-free cell culture media, and it is the most abundant free amino acid in circulation. Disorders of the urea cycle typically cause elevation in this amino acid, because it serves as the main carrier of ammonia to carbamoyl phosphate synthase. Several forms of spinocerebellar ataxia and Huntington’s disease are caused by expansions of repeats coding for this amino acid. For 10 points, name this amino acid with a three-carbon amide side chain, with single-letter designation Q, which is deaminated into glutamate.
ANSWER: **glutamine** [prompt on Q]

7. The daughter of William Lloyd Garrison, activist Fanny Garrison, married a man of this ethnicity who owned the Northern Pacific Railway. An American politician of this ethnicity wrote a “Report on the Condition of the South,” after President Andrew Johnson sent him to collect facts for that work. Volunteers mainly of this ethnicity foiled a Confederate plot to seize an arsenal during the Camp Jackson Affair. A Jewish man of this ethnicity founded the first clinic for child diseases in America. Immigrants of this ethnicity used Round Hill School as the first club in the “Turner Movement,” which set up gymnasiums across America. The “Forty-Eighters,” who were immigrants of this ethnicity, included the Secretary of the Interior for Rutherford Hayes who later edited the *New York Evening Post*. For 10 points, name this ethnicity of Abraham Jacobi and journalist Carl Schurz, who fled their home country in 1848 after the failure of the Frankfurt Parliament.
ANSWER: **German**s or **German**-Americans [accept **Prussian**s; accept **Saxon** Germans; do not accept “Hungarians” or “Czechs” or “Austrians”] (The “Forty-Eighters” were German and not other European nationalities.)

8. In an early manifesto, this writer argued that his country’s literature needed “demonic” “Mara poets” in the mold of Lord Byron. This author initiated the Modern Woodcut Movement by organizing a workshop led by Kakichi Uchiyama. Those woodcuts illustrated many of his works, including a late sequence of twenty-three prose poems titled *Wild Grass*. This writer dropped out of medical school after seeing a slideshow in which apathetic onlookers watched the beheading of a prisoner of war. This founder of the League of Left-Wing Writers asked whether it was just to wake a few people up only for them to suffocate in a parable about sleepers in an iron house. That argument prefaces a collection by this author, which includes a story whose narrator sees the words “Eat people!” appear in the Confucian classics. For 10 points, name this Chinese modernist author of *A Call to Arms*, which contains “A Madman’s Diary.”
ANSWER: **Lu** Xun [or **Zhou** Shuren]

9. In one tale, a violet mark between the shoulders and on the instep of a woman's left foot reveals that she was switched as a child with this creature. The travel memoirs of Sir John Mandeville claim this creature was the daughter of the physician Hippocrates. In one form, she bears ten children, each of whom has a flaw such as a lion's foot growing from his cheek, or one very large tooth. This creature lives at Castle Ringstetten with her beloved knight Huldebrand in a novella by Freidrich de la Motte Fouqué. A popular play by Jean Giraudoux led central hypoventilation syndrome to be called this creature's namesake curse. She was included along with gnomes, salamanders, and sylphs as one of the alchemical spirits by Paracelsus, who created her in his *Liber de Nymphis*. For 10 points, name this elemental of water, who gives her name to an opera by E.T.A. Hoffman.

ANSWER: **Undines** [or **Melusine**; or **Ondines**; prompt for more specific name on "water nymphs" or mermaid or "little mermaid" or "water elemental"]

10. After striking another character with this object, its owner turns into a gigantic pyramid in the dream chapter "Queen Mab." This object's owner refers to a blacksmith working on this object as "Prometheus" and toys with having him build a fifty-foot-tall robot in a chapter written as a scene from a play. This object was once "violently displaced" so that it nearly pierced its owner's genitals, a revelation that hints at that character's potential impotence. This object is replaced after it is damaged disembarking from the *Samuel Enderby*. In its owner's first appearance, the narrator overlooks this object in amazement at the lightning-shaped white scar running down its owner's body. Ivory, rather than wood, was used to make this object, for which holes are bored into the deck of the *Pequod*. For 10 points, name this prosthetic limb belonging to a monomaniacal captain, in place of a natural one eaten by *Moby Dick*.

ANSWER: Captain **Ahab's pegleg** [or **Ahab's fake leg**; or **Ahab's ivory leg**; or **Ahab's prosthetic leg**; prompt on Ahab's leg; do not accept "Ahab's wooden leg"]

11. One ruler by this name sent an embassy that reported forest priestesses of the Keftiu people of Crete using a double-headed ax for bull sacrifice. A ruler of this name sent letters to the Mitanni king Tushratta requesting to marry two Mitanni princesses. He built the artificial lake Birket Habu in front of his palace, the "House of Rejoicing," in his paradise-city of Melqata to celebrate the first sed-festival, on the 30th year of his reign. That ruler by this name had a powerful primary queen mummified as the Elder Lady. She appears with him on two massive seated statues of him dubbed the Colossi of Memnon. That pharaoh of this name ruled with his Queen Tiye and took power on the death of his father Thutmose IV, presiding over the wealthiest period of the 18th Dynasty. For 10 points, identify this name which was also the *original* birth name of his son, who began the Amarna Period and adopted monotheism in ruling as Akhenaten.

ANSWER: **Amenhotep** [or **Amenophis**; or **Amana-Hatpa**]

12. The only woman to hold this position, the "Holy Maid," set up her "Green School" after falling unconscious at her mother's grave. Another occupant of this position composed the "Melody of the Four Gates," part of a genre of "table tunes" sung to nonsense syllables. Thirteen fables, including "The Lost Princess" and "The Seven Beggars," were written by another holder of this title, whose devotees are called "Dead" because he declined to choose a successor. An occupant of this position dispatched ambassadors called *shluchim* on "mitzvah campaigns" to promote Jewish traditions. Nachman of Breslov held this title, also occupied by a leader whose motorcade struck the young Guyanese immigrant Gavin Cato, precipitating the Crown Heights Riot. For 10 points, give this title of spiritual leaders in Hasidic Judaism, including Menachem Mendel Schneerson of Chabad-Lubavitch.

ANSWER: **rebbe** ("REB-eh") [accept **tzaddik**; accept Lubavitcher **rebbe**; prompt on rabbi ("RAB-eye"); prompt on Hasidic rabbi; ask players to spell if it's difficult to tell which answer they're giving]

13. In 2013, this artist's long-lost *The Sacrifice of Polyxena* was discovered hanging next to the bathroom in the Coco Chanel suite at the Paris Ritz. This artist made unsettling engravings of human faces distorted to resemble animals like owls and lions as part of a popular lecture on physiognomy that inspired the facial expressions in *Watson and the Shark*. This non-Italian's series on the life of Alexander the Great won him his most famous patron. Servants hold blue umbrellas over the title statesman in this man's portrait of Pierre Seguier on horseback. This artist decorated the Vaux-le-Vicomte under the patronage of Nicholas Fouquet. With Jules Hardoin-Mansart, this artist completed interior designs for the Salons of War and Peace. For 10 points, the Hall of Mirrors at Versailles was designed by what "first painter" under Louis XIV, whose distant cousin married the painter Elisabeth Vigée?

ANSWER: Charles **Le Brun**

14. A potential consisting of a "Newtonian" term, plus a "centrifugal barrier" term, plus a term proportional to the inverse cube of radius appears in an equation solved to obtain these for the Schwarzschild metric. The uniqueness of nearby ones of these objects fails to hold at points corresponding to the zeros of the Jacobi equation. According to the Hopf-Rinow theorem, one of these objects exists for any two points on a connected Riemannian manifold. The differential equation whose solutions are these objects sets the second derivative of position proportional to the sum over the product of first derivatives of position and the Christoffel symbols. Solving the Euler-Lagrange equations yields paths equivalent to these objects, which in the absence of conjugate points extremize proper time or proper distance. For 10 points, name these objects representing the shortest distance on a manifold between two points.

ANSWER: **geodesics** [accept **Schwarzschild** metric before "Schwarzschild" is read; prompt on **solutions to the Euler-Lagrange equations** before "Euler" is read; prompt on **trajectory** before "Euler" is read]

15. Along with mutism, Aunt Margaret suffers chronically from this condition in Angela Carter's *The Magic Toyshop* due to her oppressive marriage. Djuna Barnes exposed the cruelty of a treatment for this condition in a 1914 piece of stunt journalism for the *New York World*. After being unfaithful to her husband Frankford, Anne dies of this condition in Thomas Heywood's domestic tragedy *A Woman Killed with Kindness*. Many critics, including Maud Ellman, argue that this condition is the immediate cause of death of the title character in Samuel Richardson's *Clarissa*. Marian MacAlpin experiences an identity crisis manifesting as this condition in the first novel by Margaret Atwood. Nyasha, who has internalized British values, suffers intensely from this affliction in Tsitsi Dangarembga's *Nervous Conditions*. For 10 points, name this condition that Marian suffers from in Atwood's *The Edible Woman*.

ANSWER: **hunger** [or self-**starvation**; accept **anorexia** nervosa or **bulimia** or an **eating** disorder; prompt on answers describing a **mental illness**]

16. A passage about this concept that Pausanias found on lead plates while visiting Mount Helicon is treated at length in the last of Friedrich Nietzsche's *Prefaces to Unwritten Works*. In the *Euthydemus*, Socrates charges the Sophists with practicing a mode of discourse named for this concept, which Socrates negatively contrasts with dialectic. One of Heraclitus' *Fragments* provocatively claims that this concept "is justice," while elsewhere, Heraclitus writes that "all things are born through necessity" and this concept. After invoking Zeus, Hesiod's *Works and Days* begins by contrasting two different personifications of this concept, one good and one bad. In Empedocles' cosmology, the four elements interact through the opposing forces of love and this concept. For 10 points, identify this concept personified by a goddess who once threw a golden apple with the inscription, "to the fairest."

ANSWER: **strife** [or **eris**; or **neikos**; **struggle**; or **discord**; or **competition**; or **quarrel**; or **contest**; or **rivalry**; accept **eristic** discourse; do not accept "war"]

17. *Two answers required.* A bond between these two elements may be eliminated using a mixture of trichlorosilane (“tri-chloro-silane”) and triethylamine (“tri-ethyl-amine”), and is used to convert a waste product’s +5 oxidation state to a desirable ligand in a +3 state. These two elements form a short 1.5 angstrom bond due to p-orbital lone pairs donating to neighboring antibonding orbitals. An alkoxide ion attacks an ion containing these two elements to produce the final product of the Mitsunobu reaction. These two elements form a desiccating agent with an adamantane structure which is misleadingly referred to by its empirical formula. The driving force behind the Wittig reaction is formation of a double bond between these two elements, resulting in a waste product with these two elements and three phenyl groups. For 10 points, give these two elements bound by a double bond in the center of TPPO.

ANSWER: **phosphorus** and **oxygen** [or **P** and **O**; accept in either order]

18. A speech in favor of this cause included a poem by Brunton Stephens, beginning “Not yet her day! How long? Not yet! There comes her flush of violet!” It’s *not* declaring independence, but a plan in support of this cause was drafted by doctor John Quick, a representative of the Bendigo Association, at a meeting dubbed the birthplace of this idea, the Corowa Conference. This goal was nearly derailed by the so-called “Hopetoun Blunder.” The most cited speech in favor of this cause, the Tenterfield Oration, was given at a School of Arts by elderly politician Henry Parkes, who is now called the father of this movement. Samuel Griffiths and Andrew Inglis Clark drafted constitutions to try to effectuate this process. It was officially attained on January 1, 1901 and led to the swearing-in of Edmund Barton as first Prime Minister. For 10 points, name this goal achieved when Tasmania, Queensland, New South Wales, and three other colonies agreed to join to form a Commonwealth.

ANSWER: **Federation** of **Australia** [accept equivalents such as **unification** of the Commonwealth of **Australia**, or **creation** of state of **Australia**; accept any answer implying that the modern country of **Australia** is **coming together** or being **formed**; do not accept or prompt on the “Independence of Australia”]

19. Tamar Gendler traced the “puzzle of imaginative resistance” to an essay from this country that describes the “violent effort” needed to entertain the “ideas of morality” found in works of fiction. Jerrold Levinson asked why we shouldn’t defer to “izeal” critics, who are “zany” and “left-handed,” instead of the “true judges” described in that essay from this country, which recounts the story of a key on a leather thong being found in a cask of wine sampled by Sancho Panza’s kinsmen. A philosopher based in this country defined beauty as “uniformity amidst variety,” and claimed that aesthetic appreciation derived from an “internal sense” akin to his Shaftesbury-influenced theory of the “moral sense.” The *Four Dissertations* by a thinker from this country include the essay “Of the Standard of Taste.” For 10 points, name this country whose “enlightenment” included Frances Hutcheson and David Hume.

ANSWER: **Scotland** [or **Alba**; prompt on the **United Kingdom**; prompt on or Great **Britain**]

20. The three inset tales in this work include the story of Phatta, who is transformed into a wood pigeon after her cows are stolen. This work is introduced as one long *ekphrasis* on a painting by the main characters that the narrator discovered in a grove of the Nymphs. The male protagonist of this work is saved from pirates when a Pan flute magically inspires the pirates’ stolen livestock to overturn their ship. In this novel, the temptress Lykaenion tells the male protagonist never to have sex with the other title character because it will leave her “bleeding...as if slain.” Yukio Mishima’s *The Sound of Waves* was inspired by this novel, whose title characters are raised on Lesbos by rustics and marry after being rediscovered by their noble birth parents. For 10 points, name this Greek pastoral novel by Longus, which is titled for its central pair of lovers and inspired a ballet by Ravel.

ANSWER: **Daphnis and Chloe** [or **Daphnis kai Khloe**; do not accept “*Daphnis et Chloe*”]

Bonuses

1. This man founded the Solidarios, a terrorist group within the “National Confederation of Trabajo” or CNT trade union, and he often yelled “We renounce everything except victory!” For 10 points each:

[10] Name this man who fought alongside philosopher Simone Weil in a namesake military unit of 3000 anarchists that operated without any direct command.

ANSWER: Jose Buenaventura **Durruti** Dumange [accept the **Durruti** Column]

[10] The Durruti Column fought in this conflict, trying to retake Zaragoza from General Emilio Mola. An infamous bombing was carried out by the Condor Legion in this conflict.

ANSWER: **Spanish Civil** War

[10] Durruti was killed in 1936, the same year that this Nationalist leader died in a plane crash, reportedly because he insisted on taking heavy luggage back to Spain with him. The death of this commanding general allowed Mola to take over full army command, until he too died the next year.

ANSWER: José **Sanjurjo** [or Jose **Sanjurjo** y Sacanell]

2. Answer some questions about the most widely-used NoSQL (“no-sequel”) database system, MongoDB. For 10 points each:

[10] MongoDB’s default security configuration was once notoriously unsafe, making it a prime target for this kind of attack, in which a piece of malicious software locks down a network and extorts the target for money.

ANSWER: **ransomware**

[10] Mongo is a type of non-relational database classified under this term, which is contrasted with a graph database. Mongo queries generally return objects of this type in JSON (“jason”) format.

ANSWER: **document**-oriented database [prompt on descriptive answers like text files or text]

[10] MongoDB uses sharding to perform this task, which improves the performance of queries without external software. The Nginx (“engine-x”) web server offers a “random with two choices” method for performing this task.

ANSWER: **load balancing**

3. A teenager in this film is fixated on the idea of “saving mankind” and asks a girl if she’d like to be the mother of mankind before lighting some candles with her and describing the film he’s making. For 10 points each:

[10] Name this semi-autobiographical film in which a director attempts to recreate the events that led to him stabbing a policeman while attempting to steal his gun at a protest rally twenty years earlier.

ANSWER: *A **Moment of Innocence***

[10] The lower class cinephile Hossain Sabzian is put on trial for impersonating the director of *A Moment of Innocence*, Mohsen Makhmalbaf, in this 1990 work of docufiction directed by Abbas Kiarostami.

ANSWER: ***Close-Up***

[10] Kiarostami experimented with digital video in *Ten* which documents the life of a woman with this profession. Jafar Panahi made a 2015 film about a man with this profession in Tehran, also the profession of Travis Bickle.

ANSWER: **taxi driver** [accept **cab driver**; accept **cabbie**]

4. The Welsh engineer Rhys Davis constructed this facility, which was run by Joseph Reid Anderson and produced the plating for the ironclad *CSS Virginia*. For 10 points each:

[10] Name this ironworking facility in Richmond, Virginia responsible for supplying nearly all munitions to the Confederate army at the start of the Civil War.

ANSWER: **Tredegar** Ironworks

[10] Tredegar Ironworks was pivotal in the decision to move the Confederate capital to Richmond from this first capital in Alabama, home to the initial White House of Jefferson Davis.

ANSWER: **Montgomery**, Alabama

[10] Tredegar pumped out the hollow balls named for this French officer, which caused far greater injury than round shot. American soldiers corrupted the name of these conical bullets, assuming they were just named for being small.

ANSWER: Claude-Etienne **Minié** [accept **Minie** balls; accept **Mini** balls]

5. This man promoted a racist theory that associated different human ethnicities with five “Cultural Epochs,” of which the “highest,” the Germanic Aryans, descended from the lost continent of Atlantis. For 10 points each:

[10] Name this author of *The Philosophy of Freedom*, an Austrian occultist who founded a society around his beliefs in Dornach, Switzerland.

ANSWER: Rudolf **Steiner**

[10] Rudolf Steiner, whose principles inform the Waldorf school system, split off from this broader crank religion established by Madame Helen Blavatsky. It takes its name from the Greek words for “wisdom” and “God.”

ANSWER: **Theosophy**

[10] Steiner broke with Theosophy after this woman proclaimed that the new “World Teacher” was the decidedly-non-Atlantean Jiddu Krishnamurti. This woman was the second president of the Theosophical Society.

ANSWER: Annie **Besant**

6. First formulated in a 1985 paper by Likharev *et al.* on Bloch oscillations, this idea combines the single-electron transport effect with two others to formulate an interconnected theory of measurement. For 10 points each:

[10] Identify this theoretical construct that is used to define the fundamental SI units of resistance, voltage, and current.

ANSWER: **quantum metrology triangle**

[10] Together with the Josephson effect and the aforementioned single-electron transport, this effect provides the third leg of the QMT. This effect results from the quantization of Landau levels such that the measured resistance of a sample changes in discrete units of the von Klitzing constant as a function of applied field.

ANSWER: **quantum Hall** effect [prompt on **Hall** effect]

[10] In the theory of the Josephson effect, this quantity is the difference in Ginzburg-Landau order parameters across a Josephson junction. It varies linearly with time in the AC version of the Josephson effect.

ANSWER: Josephson **phase** difference

7. This artist covered himself in red paint and broken doll parts for the piece *Angel*, generally interpreted as a protest against the abortions mandated by the One Child Policy. For 10 points each:

[10] Name this artist who covered himself in honey and sat in a filthy public toilet to attract flies in the horrifying piece *12 Square Meters*.

ANSWER: **Zhang** Huan [or **Dong Ming**]

[10] Zhang has created several public sculptures of this subject, including San Francisco’s *Three Heads Six Arms* and a 26-ton sculpture made of incense ash in Sydney. This subject was often represented by footprints before the advent of the Gandhara style.

ANSWER: the **Buddha** [or **Gautama** Buddha; or **Siddhartha** Gautama]

[10] Zhang and nine other artists got naked and lay on top of each other in a piece aimed to “Add One Meter to an Anonymous” one of these features. The *shan shui* painting genre depicts water and these natural features.

ANSWER: **mountains**

8. The last years of James I's reign were overshadowed by the scandal around the poisoning of a notable poet. For 10 points each:

[10] This author of the scandalous poem "A Wife" was administered a lethal enema while imprisoned in the Tower of London. His poem was quoted in a Jacobean screed against cross-dressing, *Hic Mulier*.

ANSWER: Thomas **Overbury**

[10] Overbury was poisoned by agents of Frances Howard, the wife of a nobleman holding this position. A previous holder of this title commissioned the Lord Chamberlain's Men to perform *Richard II* the night before his rebellion.

ANSWER: Earl of **Essex** [accept Robert Devereux, 2nd Earl of **Essex** or Robert Devereux, 3rd Earl of **Essex**]

[10] Overbury's literary compendium, *Characters*, was written with the help of this Jacobean playwright of *The Duchess of Malfi*. Overbury's involvement in scandal may have influenced this author's play, *The White Devil*.

ANSWER: John **Webster**

9. Irad Kimhi's 2018 book *Thinking and Being* takes its title from this book's remark that "thinking and being are the same" and begins by discussing its opening section. For 10 points each:

[10] Name this lost magnum opus of Parmenides. In the surviving fragments of this book's proem, a goddess gives the narrator the choice of pursuing either the way of "is" or the way of "is not."

ANSWER: ***On Nature*** [or ***Peri Physeos***]

[10] Michael della Rossa's 2020 book *The Parmenidean Ascent* ends with two nearly blank chapters to suggest the "freedom" of Parmenides's "extreme" form of this position. This position holds that there is only one substance.

ANSWER: **monism**

[10] Like della Rossa's book, Graham Priest's *One* compares Parmenides's argument for the partlessness of being with this argument for monism first put forth in 1893, which holds that the existence of any relations between things would require an infinite amount of relations.

ANSWER: **Bradley's regress** [prompt on infinite **regress**]

10. In a novel, a character asks "what man would not [perform this act] if he could?" and claims that "as war becomes dishonored... honorable men who recognize the sanctity of blood" will be excluded from this act. For 10 points each:

[10] Name this action performed in "in light and in shadow" by a giant albino man who "never sleeps" and "says that he will never die" in the final lines of a novel.

ANSWER: the **dance**

[10] The dance is a favorite ritual of this 7-foot, hairless scalp-hunter who shoots a dancing bear at Fort Griffin in the final chapter of *Blood Meridian*.

ANSWER: Judge **Holden** [or The **Judge**]

[10] This character begins dancing beside a fire after being given whiskey mixed with sarsaparilla. The Judge saves this character from drowning in the Colorado, after which he is kept on a leather leash.

ANSWER: the **idiot** [or **James** Robert Bell]

11. The Mormon leader Orson Hyde published the *Frontier Guardian* in this town, where Brigham Young was confirmed as second president of the Mormon Church. For 10 points each:

[10] Name this birthplace of radio pioneer Lee De Forest. Its “Mile Zero” marker indicates where the Union Pacific Railroad started, before it was built west to meet the Central Pacific at Promontory Point.

ANSWER: **Council Bluffs**, Iowa

[10] The Mormon Trail runs through Council Bluffs after starting at this town in Illinois, which was renamed by Joseph Smith in 1840 to serve as the main Mormon settlement before their trek to Salt Lake City.

ANSWER: **Nauvoo**, Illinois

[10] A half-Cherokee fur trader from Tennessee gave his name to this trail further south, which he developed with the Lenape scout Black Beaver. It was used to drive cattle from the Rio Grande up to Abilene, Kansas where they could be shipped east.

ANSWER: **Chisholm** Trail

12. According to Michalowski et al., the signal intensity for this technique can be significantly enhanced by adding a partially-destroyed layer of graphene to a surface. For 10 points each:

[10] Name this technique in surface science, a subtype of mass spectrometry where a sample is sputtered with a charged beam and the mass-to-charge ratio of ejected fragments are analyzed to determine surface composition.

ANSWER: **secondary ion** mass spectrometry [or **SIMS**]

[10] SIMS requires a sample chamber in this state, with pressure below 10 to the negative fourth pascals. The ultra-high form of this state can be achieved by pumping the gas out of a chamber.

ANSWER: **vacuum**

[10] The orientation of molecules adsorbed to a surface can be identified using this nonlinear spectroscopic technique, which mixes infrared and visible laser beams at a surface and measures the 2nd-order susceptibility tensor.

ANSWER: **sum frequency generation** spectroscopy [or **SFG**]

13. In his medieval bestiary, Pierre de Beauvais claimed that this creature lives in a sea called Le Mer Darenose in India and has feathers colored black, red, and white. For 10 points each:

[10] Name this creature that lays good eggs that float on the water and bad eggs that sink and hatch underwater, indicating the souls destined for damnation.

ANSWER: **Orphan** Bird [or the **Orphanay**; or the **Rafanay**]

[10] In the myth of these people, the Alkonost lays her eggs on a beach and rolls them into the sea to create a thunderstorm. Another woman in this myth system is Baba Yaga, who dwells in a forest hut with chicken legs.

ANSWER: **Slavic** myth [or **Russian** myth]

[10] Ctesias first described this Indian jungle creature with three rows of teeth in his *Indica* written at the court of Artaxerxes II. Both Pliny and Ctesias say that its tail has lethal, one-cubit-long stingers that it shoots like arrows, which will kill anything except an elephant.

ANSWER: **Manticore** [or **Manttyger**; or **Manticorus**; or **Martichoras**; or **Martikhora**]

14. This composer called for giant ensembles in his *Symphony for Three Orchestras* and *Double Concerto for Harpsichord and Piano with Two Chamber Orchestras*. For 10 points each:

[10] Name this American composer. Richard Franko Goldman coined the term “metric modulation” to describe a technique frequently used by this composer.

ANSWER: Elliott **Carter** [or Elliott Cook **Carter** Jr.]

[10] Carter based the structure of this 1951 composition on the Jean Cocteau film *The Blood of a Poet*. Two sections of this piece are marked *allegro scorrevole*, which describes their “sliding” tempo changes.

ANSWER: Carter’s String **Quartet** No. **1** [or Carter’s **first** string **quartet**]

[10] Carter’s piece of this type splits the orchestra into high, middle-high, middle-low, and low sections. Bartok’s piece of this type parodies the “Invasion” theme from Shostakovich’s Leningrad Symphony.

ANSWER: **Concerto for Orchestra** [prompt on **concerto**]

15. In Stephen Spender’s translation, the speaker of this poem dramatically evokes the “bitter, dark, and echoing reservoir” which hides “intimations of my secret power” within his heart. For 10 points each:

[10] Name this poem set in a town on the Mediterranean coast, which discusses a “worm unanswerable.” The final stanza of this poem proclaims, “The wind is rising...we must try to live!”

ANSWER: “The **Graveyard by the Sea**” [or “The **Cemetery by the Sea**”; or “*Le cimetière marin*”]

[10] The author of “The Graveyard by the Sea,” Paul Valery, claimed that “all known literature is written in the language of common sense,” except for that of this fellow Symbolist poet of *A Season in Hell*.

ANSWER: Arthur **Rimbaud**

[10] This type of character calls the universe “a defect in the purity of non-being” in a Valery poem that Yvor Winters praised as the greatest ever. The speaker of Valery’s “The Young Fate” is awoken by one of these characters.

ANSWER: a **serpent** [or a **snake**]

16. This founder of the short-lived National Revolutionary Left Union delivered a speech called the “Oration for Peace” months before he was shot dead in the street by Juan Sierra. For 10 points each:

[10] Name this popular socialist politician, who supported the radical agrarian reform called Law 200, and whose assassination in 1948 set off massive riots.

ANSWER: Jorge Eliécer **Gaitán** [or Jorge Gaitán **Ayala**]

[10] Gaitán’s death set off La Violencia in this country, where a man dubbed Tirofijo or Sureshot founded FARC, and where Pablo Escobar ran a cocaine empire from Medellín.

ANSWER: **Colombia** [or Republic of **Colombia**]

[10] Gaitán was shot during the conference chaired by George Marshall in Bogotá that established this body consisting of 21 member-nations who agreed to the first ever international human rights charter.

ANSWER: **Organization of American States** [or the **OAS** or the **OEA** or the **Organizacion de los Estados Americanos**]

17. Psychologist Jannette Atkinson coined a term about “vulnerability” in this pathway to describe how it can be affected by seemingly unrelated conditions such as Williams syndrome and autism. For 10 points each:

[10] Identify this system, informally called the “where pathway,” that processes spatial information according to a hypothesis proposed by David Milner and Melvyn Goodale.

ANSWER: **dorsal stream** [or **parietal stream**; prompt on answers mentioning “**dorsal**” or “**parietal**” such as “**dorsal** pathway”]; do not accept or prompt on “two-stream hypothesis”]

[10] Evidence for Milner and Goodale’s “two-stream hypothesis” came from studies of this kind of image, including one named for Mario Ponzo, in which two lines falsely appear to have the same length against a background that suggests linear perspective.

ANSWER: optical **illusions** [or visual **illusions**; or geometrical **illusions**; or geovisual **illusions**; accept Ponzo **illusion**]

[10] The two-stream hypothesis is supported by experiments with a circle-size illusion popularized by Edward Titchener and named for this German psychologist. He discovered the “spacing effect” in his studies on memory.

ANSWER: Hermann **Ebbinghaus** [accept **Ebbinghaus** illusion]

18. This book distinguishes between “themes of the self” and “themes of the other,” the latter of which is exemplified by Alvaro’s choice in Jacques Cuzot’s *The Devil in Love*. For 10 points each:

[10] Name this 1970 book that heavily incorporates Freud’s theory of “the uncanny” whose English translation is subtitled “A Structural Approach to a Literary Genre.”

ANSWER: *The **Fantastic**: A Structural Approach to a Literary Genre*

[10] *The Fantastic* was written by this Bulgarian literary theorist who expounded upon the “dialogical principle” in a book about the Russian critic Mikhail Bakhtin.

ANSWER: Tzvetan **Todorov**

[10] Bakhtin’s theories of the grotesque and the carnivalesque were developed in a book on this French author “and His World” which analyzes this author’s satirical series about two giants.

ANSWER: François **Rabelais**

19. The linea aspera of this bone is the attachment site for several muscles, and fractures of its shaft are sorted by the Winquist and Hansen classification. For 10 points each:

[10] Name this longest bone in the human body, located in the thigh. It articulates with the tibia and the fibula to form the knee joint.

ANSWER: **femur**

[10] The head of the femur forms the “ball” in the “ball-and-socket” joint of the hip. This structure on the pelvis is the socket, and is composed of parts of the ilium, ischium, and pubis.

ANSWER: **acetabulum**

[10] This disease, which happens usually between age 3 and 12, is an idiopathic avascular necrosis of the head of the femur. In early stages it has to be detected by MRI.

ANSWER: **Legg-Calve-Perthes** disease [or **LCPD**, or **Perthes** disease]

20. This Senate Minority Leader, known as the “Wizard of Ooze” for his speaking style, inspired the Marigold Festival in his hometown by tirelessly campaigning for the marigold as the national flower. For 10 points each:
[10] Name this man whose speech nominated Barry Goldwater at the 1964 RNC. Along with Mike Mansfield, he saved the Civil Rights Act of 1964 by ending the filibuster with his amendment.

ANSWER: Everett McKinley **Dirksen**

[10] In a performance of the song “Wild Thing,” comic Bill Minkin contrasts the voice of Dirksen with the voice of this iconic liberal politician, who was assassinated by Sirhan Sirhan at the Ambassador Hotel in 1968.

ANSWER: **Robert F. Kennedy** [or **RFK** or **Bobby Kennedy**; prompt on **Kennedy**]

[10] Sometimes simply called “The Speech,” Ronald Reagan supported Goldwater with this more-famous 1964 speech, which proposed that we must decide whether to go up to man’s “age-old dream” of maximum individual freedom or “down to the ant heap of totalitarianism.”

ANSWER: “A **Time for Choosing**”