

Terrapin Invitational Tournament 2013: "Make your own judgments, but we wrote this set in good faith"

Editors 2

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Tossups

1. This is the last word of the title of a film that sees a child steal a nightgown from a neighbor, only to toss it into a river later on. A movie whose title ends with this word features a *Lacrimosa* playing while images of the creation of the universe are shown; that movie, set in Waco, Texas, ends with the architect protagonist Jack O'Brien meeting just about everyone he has ever known in a mystical sandy-location. A scene towards the end of a different film with this noun in its title ends with several people surrounding a dead ray on a beach. This is the last word of the title of a film in which the protagonist wades in Trevi Fountain with the actress Sylvia, causing her drunken fiancée Robert to slap her; that film is about Marcello Rubini's search for love. For 10 points, identify this word, the last word of the title of Terrence Malick's experimental 2011 film, as well as a Fellini movie in which it is described as sweet.

ANSWER: life [accept vita]

2. A phenomenon named for this physicist occurs when electrons in the valence band can jump to the conducting band by means of his namesake arc. He is the first namesake of an experiment which simulated vibrations on a string and found quasi-periodic behaviour. He's not Landau, but the Luttinger liquid model is a one-dimensional version of his liquid model that describes helium-3 and reasonably approximates cold metals. This physicist names a diffusion equation that equates the squared of  $q$  with  $d q d \tau$ , where  $q$  is the slowing density and  $\tau$  is his namesake age; that equation describes neutron capture. Particles at the energy named for him are at the highest quantum state for the system at absolute zero, which is his level. For 10 points, name this Italian physicist whose namesake particles are subject to the Pauli exclusion principle.

ANSWER: Enrico Fermi

3. This character receives a female horse from the Numidian King Fayolles. That mare then goes berserk and starts attacking bees and ox-flies. This character almost kills six pilgrims while making himself a salad, and he embroils himself in a conflict started by Lord Picrochole and his father's grape-growers. Taught by his tutor Ponocrates, he uses his own urine to flood parts of Paris when a throng angers him. This son of Grandgousier is born from his mother's ear while having a huge erection. This character funds Friar John's "anti-abbey" whose motto is "Do What Thou Wilt," and his son goes in search of the Oracle of the Holy Bottle. For 10 points, name this gigantic father of Pantagruel, a character created by François Rabelais.

ANSWER: Gargantua

4. The vanguard of this force typically wore a dress in the style of the emperor with a purple robe to highlight their importance. Spear-bearers and javelin bearers who made up this force were called *sparabaras* and *takabaras* respectively. For combat, this force adapted the Scythian bollock dagger for their own *akinaka*. One account of this military force states 1,000 of its soldiers carried spears with gold pomegranates on them, while 9,000 others carried spears with silver pomegranates on them; that section of this force was led by Hydarnes. Ten soldiers who comprised this force were part of a *dathabam*, while a thousand of those units made up a *hazarabam*. The *Cyropedia* asserts that a certain ruler invented the scythed chariot, then bestowed it upon this force. For 10 points, identify this military force that defeated Leonidas at the Battle of Thermopylae, and which has been led by Xerxes and Darius.

ANSWER: Persian army or military [accept Achaemenid for Persian; anti-prompt on "Immortals" or "*amrtaka*" before mention]

5. This group sang that “Everyday it grows a little more” in one song, “It’s Growing,” and Dennis Edwards replaced one member of this group. This group sang “it was dull and ordinary/ but you make it sunny and bright” in the song “You’re My Everything,” and another song by this group begins with the declaration “I know you wanna leave me, but I refuse to let you go.” This group famously fired David Ruffin, and many of their songs were written by Smokey Robinson. This group behind “Ain’t Too Proud to Beg” sang “I guess you’d say, what can make me feel this way?” in their biggest hit. For 10 points, name this group founded by Paul Williams and Eddie Kendricks, the Motown group that sang “My Girl.”

ANSWER: The **Temptations**

6. This work’s second movement opens with the marking “Ermüdet” and features hushed strings under an oboe solo to evoke winds in a certain season. The fifth piece in this work slows the tempo of the strings to imitate the beating heart of a girl that is looking at riders who are passing by. The very end of the score for this piece is marked *Gazlich esterbend* and features a celesta and harp framing the chanting of the word “*ewig*.” This composition ends with *Der Abschied* and opens with lyrics that repeatedly intone “Dark is life, so is death.” This “symphony for tenor and alto with large orchestra” sets to music translations by Hans Bethge. For 10 points, name this setting of Táng Dynasty poets to music, an orchestral composition by Gustav Mahler.

ANSWER: **Das Lied von der Erde** [or *The Song of the Earth*]

7. One novel titled after this substance opens with the discovery of a black dog near a waterfall and includes a scene in which numerous people search for a ring that a pair of Siamese princes named Chao P. and Kri lose while at a school. In a different novel, the death of a fictional character who wrote 20 poems about this substance in his green notebook prompts a character who shares his name with the author to investigate whether or not he was responsible for Blue’s death. One novel titled after this substance is the first in a series that also includes *The Temple of Dawn* and *Runaway Horses*. A different novel titled after it climaxes with soldiers firing into a play about women refusing to wear headscarves and features the protagonist reigniting his love with Ipek. That novel begins with the return of Ka to the city of Kars. For 10 points, an Orhan Pamuk novel is titled after what cold substance?

ANSWER: **snow** [accept “**Spring snow**”]

8. Jan Nattier has argued that the earliest version of this text was composed in Chinese; that hypothesis is supported by the existence of commentaries by the disciples of Xuánzàng and textual similarities between this text and a larger work often attributed to Nāgārjuna. This text begins with a figure who embodies compassion recognizing that human existence is no more than emptiness. The longer version of this text is used by Tibetans, and contains framing text that sees the words of its speaker confirmed by the Buddha. In this text, Avalokiteśvara explains to Śāriputra that those who attain enlightenment rely only on the Perfection of Wisdom, a phrase that is sometimes appended to the title of this text. Ending with the mantra “*gaté gaté pāragaté pārasaṃgaté Bodhi svāhā*,” this is, for 10 points, what text that plays a central role in Mahāyāna Buddhism along with the *Lotus* and *Diamond* sūtras?

ANSWER: **Heart** of the Perfection of Transcendent Wisdom sūtra [accept **Prajñāpāramitā Hṛdaya**]

9. Ambassador Clinton Knox ensured a smooth transition between the succession of these figures, who were served by a man who sold blood named Luckner Cambronne. The US air force personally provided the military aircraft for the escape of the second and final of these figures, whose rule was troubled by income inequality and a US order to slaughter all pigs after the breakout of the African Swine Fever Virus. That one was married to the socialite Michèle Bennett. The first one of these figures made himself President for Life after a 1961 referendum and was served by Clement Barbot. That one of these two figures employed a secret police force of “bogeymen” named the Tonton Macoutes. For 10 points, identify this pair of Haitian dictators nicknamed Papa Doc and Baby Doc.

ANSWER: **Duvaliers** [prompt on “Haitian rulers” up until “second and final of these figures.”]

10. The PAX5 gene plays a role in these cells' differentiation by encoding their specific activator protein, and the MS4A1 gene encodes a marker located on the surface of them. Their primary receptor and Toll-like receptors on their surface work together to stimulate the production of CD80 and CD86, which interact with CD28 on another class of immune cells. Rituximab is used when lymphoma has been determined to be caused by these cells, often identified by the expression of CD20 on their surfaces. They are made and mature in the blood marrow and part of the function of helper T cells is facilitating their maturation into plasma cells. For 10 points, name this type of lymphocytes which aid in immune response by producing antibodies.

ANSWER: **B cells**

11. A woman named Matilda Lockhart was tortured in this polity, leading to an incident known as the Council House Fight. At least 60 people were killed in the ensuing Great Raid led by Buffalo Hump. One side in a different conflict here was led by Charles Jackson and Edward Merchant and, though this polity is not North Carolina, that conflict was called the Regulator-Moderator War. Key figures in this polity's government included Memucan Hunt Jr. and Anson Jones. Its second president issued Redbacks as currency and reversed his predecessor's policy towards the Comanche Indians. That man was Mirabeau Lamar. Controversially annexed by joint resolution, for 10 points, name this Republic which gained its independence from Mexico in 1836 and whose first president was Sam Houston.

ANSWER: Republic of **Texas**

12. In one appearance, this character meditates about the plate-glass windows of the Marine Biological station and spends many pages discussing "our native muse" and its relation to performance. In that appearance, he speaks in the style of Henry James as he delivers a prose poem to the audience. A different work depicts this character allowing twenty crabs to live, before deciding to stone the twenty-first crab. In that work, this figure is told that a mysterious force called "The Quiet" rules nature before comparing his situation to that of a whimsical god that "dwelleth i' the cold o' the moon." He appears in *The Sea and the Mirror* and is used to satirize natural theology in a work by Robert Browning in which he contemplates Setebos. For 10 points, identify this son of Sycorax, a villain from Shakespeare's *The Tempest*.

ANSWER: **Caliban**

13. Pino Arlacchi argued for a two-stage model of social development in this entity, which begins with an anomic stage. Billions of dollars of funding for this entity were given in the guise of relief money for the Irpinia earthquake. This entity was put on trial in an underground bunker during the Maxi Trial. Cesare Mori was tasked with brutally suppressing this entity, but his work was reversed when an Allied Invasion freed up members of this entity. This entity was responsible for the deaths of Piersanti Mattarella and Giovanni Falcone. 'Ndrangheta and *Camorra* are names for Calabrian and Neapolitan types of this entity. Members of this entity practice a code of honor known as *omertà*, and this organization takes its name from a word meaning "man of honor." For 10 points, identify this crime syndicate associated with Sicily.

ANSWER: **mafia** or **cosa nostra** [prompt on "the mob" or other such answers]

14. In one scene in this play, it is revealed that Siegfried recommended Miller to another lab where he will make poison gas. Near its beginning, Edna tells her husband that all of their furniture was taken away since they were unable to make payments on it. A conversation between Dr. Barnes and Dr. Benjamin in this play reveals that the latter will be fired because he is Jewish. The "fourth episode" of this play sees a mysterious Voice told by Fatt that he is a company spy. As it opens, the audience is included as part of a meeting that discusses the political climate, such as the inauguration of FDR. This play, which consists of a series of vignettes separated by blackouts, concludes with a man named Agate inducing a group to yell "Strike! Strike! Strike!" For 10 points, identify this play about a group of discontented taxi drivers, written by Clifford Odets.

ANSWER: **Waiting for Lefty**

15. This figure's parents received an oracle that one of their children will marry a dragon which will bring much destruction. In one adventure, this hero visits the source of the rivers Cocytus and Styx to obtain some black water that is guarded by a dragon. Both of this figure's siblings perished when they jumped off a cliff in the hopes that they could become more beautiful. A talking tower tells this figure how to descend into the underworld, and ants assist her in sorting some grains. She plans on committing suicide while searching out some golden fleece, but a reed restores her hope. Her last voyage sees her put some of Proserpina's beauty in a box. Eventually, she is able to appease Venus and marry her son. For 10 points, identify this figure from Roman myth who is granted immortality when she gets married to Cupid.

ANSWER: **Psyche**

16. An idealized distribution of this substance is modeled using a potentiometric surface. The Dupuit–Forchheimer approximation accurately models its movement in two dimensions. A solid form of this material is converted into its liquid form below the so-called “active layer.” It is responsible for the creation of travertine structures and produces structures called speleothems. This material's fluctuations in shape leads to a characteristic cone of depression. This substance feeds into gaining streams, and it percolates from the zone of saturation. It moves against gravity to rise above its initial level in artesian set-ups. The amount of movement of this material is typically expressed by the hydraulic head and formally described by Darcy's law. For 10 points, identify this substance that can be found in aquifers.

ANSWER: **groundwater** [prompt on “water”]

17. One work that is titled for the opposite of this phrase attempts to refute the notion that the Greeks used a Mystery System and that Aristotle stole his ideas from an ancient library of Alexandria. Milford Wolpoff formulated a theory of multiregionalism to argue against the theory of this name. The opposite of this phrase is used to title a work by Mary Lefkowitz, which attacks the research of Martin Bernal's *Black Athena*. Erich Heckel argued against the theory of this name, which is typically augmented by the Southern Dispersal Route argument. Wilson's landmark study on Mitochondrial Eve gave credence to this idea, suggesting a locus of origin in the Sub-Saharan. For 10 points, identify this three word phrase suggesting that humans migrated from the title continent.

ANSWER: **Out of Africa**

18. This painter created four crayon self-portraits for a lecture that argues “Exactitude is Not Truth.” At the bottom of one notable painting by this artist, a woman plays two flute-like instruments at the same time. In the background of that painting, two goats are positioned nearby another figure playing with a wind instrument. This man's experiment with divisionist technique can be seen in his depiction of the French Riviera, which is titled after Baudelaire's concepts of Luxury, Peace, and Pleasure. A window to the outside world can be seen in his painting of a maid placing fruit and wine on a table, which is titled *Harmony in Red*. He was the leader of a group that included Raoul Dufy and Andre Derain as members. The background of another of his paintings depicts five figures cavorting in a circle. For 10 points, identify this painter of *The Joy of Life* and *The Dance*, the leader of the Fauvists.

ANSWER: Henri **Matisse**

19. In spin-charge separation, electrons split into three quasiparticles: spinons, holons, and a particle carrying information about this function. The Roothaan–Hall equation extends one method of calculating these to the case of a non-orthonormal basis, and a theorem that states that the first ionization energy is equal to the energy of one of these is named for Koopman. The spectrochemical series orders ligands based on the degree to which they split energy levels of these functions. A common method for finding them involves approximating the wavefunction as a single Slater determinant and using the variational method; that is the Hartree–Fock method. Atomic ones have shapes that are entirely given by the quantum numbers, and s ones are spherical. For 10 points, name these regions where electrons are likely to be found around a molecule or atom.

ANSWER: (molecular or atomic) **orbitals** [accept specific types; accept **orbitons** on the first clue; prompt on “wave function”]

20. One philosophy of this name was called “concrete metaphysics” and discussed in its author’s book *Riddles of the Sphinx*. That movement of this name was inspired by the lectures of William James and started by FCS Schiller. A letter on this movement insists that the author’s student mistranslated *Dasein* as “human reality.” That letter by Heidegger to Jean Beaufret was itself a response to a lecture to the Club Maintenant, whose title ends with this word. That lecture asserts “existence precedes essence” and was written by Sartre to show that his philosophy is one of *these* movements. In the Renaissance, this movement started as a revolt against scholasticism. For 10 points, identify this generic name of a group of movements which sought to establish a philosophy that centered on man.

ANSWER: **humanism** [prompt on “Pragmatism” before “A letter”]

Extras

21. One poem by this author describes a youth encountering an assassin “attired in the garb of old day.” In another poem by this author, a spirit stops a “maid with violets” from offering flowers to the grave of her lover. A collection by this author contains a poem about some angels above a church who wonder why the “little black streams of people... stayed so long within.” The speaker of another poem by him describes “many devils running, leaping and carousing in sin,” one of whom calls him a “Comrade!” and a “Brother!” He described “a creature, naked, and bestial” in a desert that ate his own heart. This author began that aforementioned poetry collection “clang and clang of spear and shield, and clash and clash of hoof and heel” after the titular characters “came out from the sea.” For 10 points, name this author of *The Black Riders*, a novelist who also wrote *Maggie* and *The Red Badge of Courage*.

ANSWER: Stephen **Crane**

Bonuses

1. The nuclear Overhauser effect can be used to determine 3-D structure in this technique’s two dimensional form. For 10 points each:

[10] Name this form of spectroscopy invented by Purcell and Bloch which has proton and carbon-13 types.

ANSWER: **NMR** [or **nuclear magnetic resonance** spectroscopy]

[10] NMR makes use of this phenomenon in which a quantum system cycles between two states. Formally it involves revolution around the Bloch sphere, and it is named for another scientist who worked on NMR.

ANSWER: **Rabi** oscillations or cycle [accept Isidor **Rabi**]

[10] When measuring chemical shift, this molecule and the similar DSS are the most commonly used references.

ANSWER: **tetramethylsilane** [or **TMS**]

2. It occurred during British efforts to establish military control over all of Acadia and Nova Scotia. For 10 points each:

[10] Name this war that saw the namesake priest lead a group of Mi’kmaq and Acadians over the disputed territory of New Brunswick.

ANSWER: **Father Le Loutre’s War**

[10] The Father Le Loutre War began after the British unilaterally established this city in violation of a treaty signed after the earlier Father Rale’s War. This Canadian city was also the site of a 1917 huge explosion in its harbor when the SS Mont-Blanc collided with the SS Imo.

ANSWER: **Halifax**

[10] Father Le Loutre’s War occurred before this war, the American phase of the Seven Years’ War that lasted from 1754 to 1763.

ANSWER: **French and Indian War**

3. Name some Shinto *kami*. For 10 points each:

[10] This thunder god is often depicted with his companion Fujin. He is said to eat the navels of children and is depicted as a demon beating drums. One source states that hiding behind a mosquito net gives you immunity to his powers.

ANSWER: Raijin [accept Raiden]

[10] After Izanami died giving birth to this god of fire, eight gods of thunder sprang forth from her body. This deity was cut by his father into eight pieces which subsequently became eight volcanoes.

ANSWER: Kagutsuchi-no-kami [accept Hinokagutsuchi or Homusubi]

[10] This *kami* is the god of the sea and lives in a similarly named palace. He owns two jewels that can control the tides and is waited on by half-human fish.

ANSWER: Ryūjin [or Ryōjin]

4. Name some classics of Western American literature. For 10 points each:

[10] This John Steinbeck novella ends with George shooting the mentally disabled Lennie in the back of the head as they talk about a farm they'll never own.

ANSWER: *Of Mice and Men*

[10] This classic by Walter van Tilburg Clark sees Art Croft and Gil Carter witness a lynch mob kill three innocent men, including the married Martin, on accusations of cattle rustling.

ANSWER: *The Ox-Bow Incident*

[10] This non-fiction prose work details the author's work as a park ranger in the Southwest. Written by Edward Abbey, parts of this book relate fictional stories about men who ventured out to mine radioactive materials.

ANSWER: *Desert Solitaire*

5. Name some prominent figures in computer science. For 10 points each:

[10] A computer science award is named after this British scientist, whose namesake machine is a model for most reasonable types of computation.

ANSWER: Alan Turing

[10] Ralph Johnson and Erich Gamma are two of these computer scientists, the authors of the software engineering book *Design Patterns*.

ANSWER: Gang of Four

[10] This woman, an admiral, was one of the first computer scientists to build a compiler. She was also the first person to literally debug a computer program.

ANSWER: Admiral Grace Hopper

6. Name some Eastern European composers. For 10 points each:

[10] This Czech composer of six symphonies and the opera *Julietta* wrote a 1954 orchestral work that sets the frescoes of Piero della Francesca to music. This student of Albert Roussel also composed a trio for flute, cello, and piano.

ANSWER: Bohuslav Martinů

[10] This composer's symphonic poem *Má vlast*, dedicated to the city of Prague, contains a section depicting the Moldau River.

ANSWER: Bedřich Smetana

[10] This Hungarian composer's 1939 *Concerto for Orchestra* was commissioned by the Chicago Symphony Orchestra for its fiftieth anniversary. A musical sneeze opens his folk opera about the hussar *Háry János*.

ANSWER: Zoltán Kodály

7. According to Wikipedia, this speech caused many “to suffer heart attacks and later commit suicide.” For 10 points each:

[10] Identify this speech which cited works of Marxist philosophy to show that title phenomenon is harmful. It also denounces a certain politician’s role in the Doctor’s Plot, Mingrelian Affair, and social realism. Its actual text remained hidden from public view until the end of the 1980s.

ANSWER: “**On the Personality Cult and Its Consequences**” or “The **Secret Speech**”

[10] Nikita Khrushchev delivered the Secret Speech as part of this de-Stalinization program that also included the Kitchen Debate.

ANSWER: The **Thaw** [or **Ottepel’**]

[10] Georgy Malenkov was nominally responsible for instituting this program of Khrushchev’s, to increase production of foodstuffs in the Altai Region and Kazakhstan.

ANSWER: **Virgin Lands** Campaign

8. Criticism of this work has centered on a possible misunderstanding of the Maori concept of the *hau*, which involves an interlinking of spirits. For 10 points each:

[10] Name this book, which divides the title concept into three obligations. This work posits the title concept as a form of “prosocial behavior.”

ANSWER: *The **Gift*** [or ***Essai sur le don***]

[10] *The Gift* is a work by this French anthropologist and sociologist, who was influenced by Malinowski. He was the nephew of Emile Durkheim.

ANSWER: Marcel **Mauss**

[10] This frequent French collaborator of Mauss’s wrote *A General Theory of Magic* and an essay on Sacrifice with him. He also worked as an archaeologist.

ANSWER: Henri **Hubert**

9. This figure speaks all languages known to humankind and stands at a crossroads between the spiritual and material worlds. For 10 points each:

[10] Name this loa depicted as an old man with a cane. He is often compared to St. Peter in his function.

ANSWER: Papa **Legba**

[10] Papa Legba is a *loa* from this syncretic religion practiced in Haiti. Priests and priestesses of this religion are known as *houngans* and *mambos*.

ANSWER: Haitian **Vodou** [or **Voodoo**]

[10] These other people involved in Vodou ritual are sorcerers who use substances like tetrodotoxin and datura to create “zombies,” which are really only people in a pharmacologically induced stupor.

ANSWER: **Bokors**

10. He states that “you have but slumber’d here, / While these visions did appear.” For 10 points each:

[10] Identify this character who closes a certain work by stating “If we shadows have offended, Think but this, and all is mended.”

ANSWER: **Puck** [prompt on “Robin Goodfellow”]

[10] Puck delivers the final lines to this Shakespeare play, which opens with the wedding of Theseus and Hippolyta. Its other characters include Titania and Oberon, who rule over fairies.

ANSWER: A **Midsummer Night’s Dream**

[10] Along with Bottom, Flute and others, this character is a “rude mechanical” who puts on *Pyramus and Thisbe* for Theseus and Hippolyta.

ANSWER: **Peter Quince** [prompt on partial names]

11. One of these works states “From the icy niche where men placed you, I lower your body to the sunny poor earth.” For 10 points each:

[10] Identify this set of three poems inspired by the suicide of Romelio Ureta, which can be found in *Desolacion*.

ANSWER: Sonnets of Death or *Los Sonetos de la Muerta*

[10] This poet of “Death of My Mother,” “Tiny Feet,” “Paraiso,” and “The Artist’s Decalogue” wrote “Sonnets of Death.” She took her pen name from an Occitan writer.

ANSWER: Gabriela Mistral [accept Lucila Godoy Alcayaga]

[10] Gabriela Mistral was a writer from this Latin American country, the birthplace of Pablo Neruda.

ANSWER: Chile

12. Members of this phylum have no internal organs, and the mesohyl is a connective-tissue-like substance that gives it its firmness and shape. For 10 points each:

[10] Name these porous aquatic animals that are some of the most primitive vertebrates. These sessile animals possess choanocytes.

ANSWER: Porifera [accept sponges]

[10] Along with the mesohyl there are two types of cells: the choanoderm and this outermost layer of cells equivalent to the epidermis.

ANSWER: pinacoderms [accept pinacocytes]

[10] Sponges have this large opening at the top that is the chief organ of their excretory system. Primitive muscle cells called myocytes dilate and contract it.

ANSWER: osculum

13. Several characters in this opera are chided into enlisting in the army by a gypsy in the aria “Al suon del tamburo.” For 10 points each:

[10] Name this opera centering on the forbidden love between Don Alvaro and Leonora. It ends after Alvaro mortally wounds Don Carlos, who sought revenge for the accidental death of his father at Alvaro’s hands.

ANSWER: *The Force of Destiny* [or *La forza del destino*]

[10] *The Force of Destiny* is an opera by this Italian composer, who used Egypt as a setting for his opera *Aïda*.

ANSWER: Giuseppe Verdi

[10] The libretto for *The Force of Destiny* was written by this man, who also provided the librettos for *Rigoletto* and *La Traviata*.

ANSWER: Francesco Maria Piave

14. It was once attributed to Guillaume Farel, but now it is generally considered to have been carried out by Antoine de Marcourt. For 10 points each:

[10] Name this October 17, 1534 event that saw the placement of various anti-Catholic posters in Blois, Rouen, Tours, and Orléans.

ANSWER: Affair of the Placards

[10] The Affair of the Placards was one of the reasons for the issuance of this edict a few years later by Francis I which restricted the freedoms of the Huguenots.

ANSWER: Edict of Fontainebleau

[10] Partial tolerance for Huguenots was granted later in this edict issued by Catherine de Medici. A count from this region was supposedly a 500-year-old dude who had extended his life through alchemy.

ANSWER: Edict of Saint-Germain

15. The first one depicts an invisible train zooming by; the second depicts the ecstatic faces of passengers who have experienced speed, the last shows the disappointment of those that have been left behind. For 10 points each:



[10] Identify these three works, consisting of *The Farewells*, *Those Who Go*, and *Those Who Stay*, which form a triptych painted by Umberto Boccioni.

ANSWER: **States of Mind** [or **Stati d'animo**]

[10] *States of Mind* is an artwork that is representative of this movement that glorifies speed, war and other stupid things.

ANSWER: **Futurism** [accept word forms]

[10] Published in *Le Figaro*, this writer's *Futurist Manifesto* kick-started the movement. He never really was a painter, but he did spend much of his life writing poems and even more manifestoes for the Futurist cause.

ANSWER: Filippo Tommaso **Marinetti**

16. The protagonist of this novel tears apart one of his father's pet birds and has a propensity for ripping things in half. For 10 points each:

[10] Name this novel by Calvino, in which the nobleman Medardo is struck by a Turkish cannonball, causing him to be divided into "The Bad 'Un" and "The Good 'Un," the former of which wreaks havoc on the citizens of Terralba.

ANSWER: *The **Cloven Viscount*** [or *Il **visconte dimezzato***]

[10] Calvino's *The Castle of Crossed Destinies* features a series of characters who can only tell stories to the narrator using these objects. Almost every story is an interpretation about a series of pictures on them.

ANSWER: **tarot** cards [prompt on "cards"]

[10] This other Calvino novel consists of a dialogue between Marco Polo and Kublai Khan, who discuss 55 different locations seen on Polo's adventures.

ANSWER: **Invisible Cities** [*Le **città invisibili***]

17. Its rulers included Shāh 'Abbās the Great and two rulers named Tahmasp, the first of whom gave refuge to Humayun. For 10 points each:

[10] Identify this Iranian dynasty that ruled from 1501 to 1722.

ANSWER: **Safavid** dynasty

[10] This father of Tahmasp I was the founder of the Safavid line. He led many Qizilbash forces in the taking of Tabriz, which he set up as capital of the Safavid Empire.

ANSWER: **Ismā'il I**

[10] 'Abbās the Great moved the Safavid capital to this city in 1598. Its Naqsh-e Jahān Square is one of the largest city squares. Currently, it is Iran's third largest city after Tehrān and Mashhad.

ANSWER: **Isfahan** [or **Esfehān**]

18. Like fluorescence, materials in this effect absorb photons and emit new ones at different frequency; unlike fluorescence, this effect is non-resonant and doesn't involve an excited electronic state. For 10 points each:

[10] Identify this inelastic scattering of a photon named for an Indian physicist which has Stokes and anti-Stokes lines.

ANSWER: **Raman** scattering [or effect]

[10] One method of laser cooling solids is by anti-Stokes Raman scattering, which involves the coupling of phonons to these hydrogenic quasiparticles which consist of an electron and an electron hole.

ANSWER: **excitons**

[10] Sisyphus cooling is a method which involves repeated transitions of kinetic to potential energy which is released by this mechanism of forcing a particle into an energy state. In more general contexts it means raising a particle's energy state and this method is used to achieve population inversion.

ANSWER: **optical pumping**

19. Answer some questions about the recent elections in Italy. For 10 points each:

[10] The elections were a huge mess, but one clear loser was this technocrat Prime Minister who resigned in late 2012 after passing a budget with many unpopular austerity measures. This man only received 10% of the vote.

ANSWER: Mario **Monti**

[10] This Italian media mogul and former Prime Minister, known for his love of the ladies, ended up with a miraculous 29.1% of the vote, only 0.4% behind the winning Pier Luigi Bersani and the Democratic Party. He ran under his own People of Freedom party.

ANSWER: Silvio **Berlusconi**

[10] Perhaps one of the greatest signs of the unpopularity of the austerity Monti represented was the success of this Italian comedian and founder of the Five Star Movement, which received 25% of the vote. His platform was mostly based on populist vagaries and accusations of corruption among other politicians.

ANSWER: Beppe **Grillo**

20. It claims the title entities are “windowless” entelechies without extension. For 10 points each:

[10] Identify this short work by Leibniz that ends with the claim that this is the best of all possible worlds, a reiteration of the previous tract *Theodicee*.

ANSWER: **Monadology**

[10] Leibniz loved to argue with other philosophers of his time. Among those to have that honor were Malebranche, Arnauld, Clark, and this Frenchman, known for his *Historical and Critical Dictionary*.

ANSWER: Pierre **Bayle**

[10] Kant was introduced to philosophy through the writings of this bellicose philosopher. He feuded with Thomasius over the methods of logic and participated in the first *Pietismusstreit* with Pietists after he published his seminal treatise *German Metaphysics*.

ANSWER: Christian **Wolff** [accept Christian von **Wolffius**]