

2013 ACF Regionals: Transmitido en Quizbowlese (“This man while traveling through the woods found bathing in a stream the naked goddess Artemis”)

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Packet by Illinois A, Dorman (Meghan Clusserath, Madhav Kumar, Brian Owen, and Tabitha Walker), Wellesley

1. A tragicomic liaison with this athlete was chronicled by Ayana Marie, who lamented that after having sex he returned to their hotel room “with Chipotle for himself and none for me.” In an interview, this player once solemnly reflected, “apparently. . . if you get a fastbreak and throw it off the backboard. . . and you're 1-11, you're not supposed to do that.” This player flailed desperately at a lob pass while attempting to post up 5'9" Isiah Thomas, helping earn him the moniker “Tragic Bronson” during numerous appearances on “Shaqtin' a Fool.” More famously, he followed an airball hook shot by sprinting back while his team was still on offense, exasperating then-teammate John Wall. The son of USC and WNBA star Pam, this player currently comes off the bench for Kosta Koufos next to Kenneth Faried. For 10 points, name this former Wizard and current Denver Nuggets center whose innumerable missteps are documented in a running feature on Deadspin.

ANSWER: Javale McGee [accept Pierre]

2. One duke from this house led a fleet which captured the city of Azamor. The penultimate monarch of this house was assassinated in an open carriage along with his eldest son while passing through the streets of his capital, which came after he allowed the Regenerator Party to form a dictatorship. One ruler from this house agreed to import all woolen goods from Britain in exchange for a reduction in duties on his own country's wine in the Methuen Treaty of 1703; that man was Peter II. The British helped one ruler of this dynasty flee the country after its Queen Mary I went insane and Napoleon invaded. This dynasty first came to power during a restoration war which ended in 1668 with the accession of John IV, thus dissolving the Iberian Union. For 10 points, name this splinter branch of the House of Aviz, the last ruling house of Portugal.

ANSWER: House of Braganza

3. This character is told that he isn't in love with anyone by a girl who rubs a dandelion under his chin. This character communicates with a friend through a “green bullet” that fits into his ear. His wife is obsessed with her “family”, played by actors that appear on the parlor wall, and listens to music from “seashell” radios. At the end of the work in which he appears, he is referred to as the “Book of Ecclesiastes” since he is assigned to memorize that text by Granger. This character mourns the death of his young neighbor Clarisse and seeks solace from former professor Faber. This man reads “Dover Beach” to his wife Milly and two of her friends before he is arrested by Beatty and the Mechanical Hound is set on his trail. For 10 points, name this fireman who burns books, the protagonist of *Fahrenheit 451*.

ANSWER: Guy Montag [accept either]

4. These algorithms should be designed to be preimage resistant. They can be designed using the Merkle-Damgard construction. When these algorithms are selected at random from a family, they are said to be universal. To mathematically analyze these algorithms, one often makes the assumption abbreviated SUHA. The modulo operator is used in the class of them based on the division method. A rolling one of these algorithms is used in the Rabin-Karp string searching algorithm. They can be used to construct error-detecting codes called checksums, such as the cyclic redundancy check. Separate chaining and linear probing can be used to resolve collisions in them. An example of these algorithms is MD5. For 10 points, identify these functions that map a set of keys to a set of indexes and are used to sort unordered data for easy lookup in a namesake table.

ANSWER: collision-resistant cryptographic hashing functions

5. Renditions of “Everything Happens to Me” and “Just Friends” appear on an unusual album by this artist in which he was backed by a string section. One of his tunes mixes the main progression from “Honeysuckle Rose” with the middle eight from “I Got Rhythm”. A progression named for this musician fits chains of II-V [“two-five”] sequences into a twelve-bar blues, and was used by him in his “Blues for Alice”. This composer of “Scrapple from the Apple” is credited with creating a new jazz style with his recording of “Cherokee”. He wrote a song for Billie Shaw titled “Billie's Bounce” and used “How High the Moon” as the basis for his “Ornithology”. For 10 points, identify this musician who pioneered bebop with Dizzy Gillespie, a jazz saxophonist nicknamed “the Bird.”

ANSWER: Charlie Parker, Jr.

6. The ceasefire of this skirmish took place at the abandoned Moore's House. A prisoner duty mishap by Moses Hazen in the aftermath of this battle led his side to be accused of spying in an affair named after Charles Asgill. A thunderstorm during this battle ruined an advance to Banastre Tarleton's position on Gloucester Point. A fleet from Saint Domingue roused by de Grasse prevented the escape of the losers in this land battle. An illness struck the losing commander of this battle, causing him to send in his place Thomas Symonds and Charles O'Hara, whose sword was accepted by Benjamin Lincoln. For 10 points, name this victory for the forces of the Comte de Rochambeau and George Washington, the final land battle of the Revolutionary War that ended with the surrender of Charles Cornwallis.

ANSWER: Battle of Yorktown

7. One character in this novel taunts a would-be disciple by constantly mocking his father's gin shop. At a friend's suggestion, one character in this novel replaces his father's poetry with a copy of Ludwig Buchner's *Kraft und Stoff*. In this novel, when a female character gives a male character a rose to thank him for giving her medicine drops for her baby, they end up kissing. This causes one character to duel with his best friend's uncle, Pavel Petrovich, over Fenitchka. Two characters in this novel fall in love with Anna Odintsova but one marries Katya while the other dies from cutting himself while performing an autopsy on a corpse infected with typhus. For 10 points, Arkady Kirsanov and Yevgeny Bazarov represent the nihilistic younger generation in what novel by Ivan Turgenev?

ANSWER: Fathers and Sons [or Ottsy i Deti; or Fathers and Children]

8. One extension to this idea involves using axiom S5 to show that necessity exists when there is a possibility in one of many possible worlds. That extension to this idea, builds upon Norman Malcolm's version of it and defines a quantity called maximum excellence. The first published refutation of it was presented in the text *In Defense of the Fool* and discusses the absurdity of a lost island. Immanuel Kant pointed out its flaw in assuming perfection is predicated by existence. Statements that express beliefs, or modalities, were used by Plantinga to update this idea. It relies on the premise that a being existing within the mind is inferior to a being existing both in the mind and in reality. Introduced in the *Proslogion*, for 10 points, name this proof of God's existence presented by Anselm.

ANSWER: ontological argument

9. An important source of studies of this neurotransmitter is the electroplax of *Torpedo californica*. Work by Fatt and Katz revealed that discrete quanta of this molecule result in miniature end plate potentials. The proteins agrin and rapsyn are involved in clustering receptors for it during creation of one type of synapse. High levels of this molecule are found in the basal nucleus of Meynert. In both the sympathetic and parasympathetic divisions, it is the neurotransmitter for preganglionic fibers. Unusually, its action is terminated by direct enzymatic hydrolysis by a namesake esterase. Myasthenia gravis is caused by antibodies blocking its nicotinic receptors, which are paired with muscarinic receptors. The synthesis of this neurotransmitter occurs in a single step and is catalyzed by ChAT. For 10 points, identify this first substance shown to be a neurotransmitter, which is found at the neuromuscular junction.

ANSWER: acetylcholine [or Ach]

10. One noted biography of this man is titled for his 'Exercise of Princely Power' and was written by Anthony Goodman. One of his worst military defeats was a failed attack on Saint-Malo. His estate of Savoy Palace was destroyed after he spearheaded the passage of the first poll tax in English History at the so-called Bad Parliament, and formed a political alliance with John Wycliffe against his prelate enemies. This man launched an unsuccessful bid to claim the throne of Castile following his marriage to the Infanta Constance, and after her death, this man married Catherine Swynford. After his death, this man's estates were confiscated by his nephew Richard II, who was subsequently overthrown by this man's son. His descendants fought against Richard III in the War of the Roses. For 10 points, name this father of Henry IV and founder of the House of Lancaster, whose name reflects that he was born in Ghent.

ANSWER: John of Gaunt, 1st Duke of Lancaster

11. A Central American community of these people was the subject of the 2006 documentary *Living in a Perfect World*. One of the foundational texts of this tradition contains a "meditation on the twenty-fifth Psalm" and the chapters "The True Ministers" and "The Time of Grace", and is known as the *Foundation-Book*. An early expression of this group's theology is found in the Dordrecht Confession. A disagreement among members of this Plautdietsch-speaking sect over the use of a form of shunning called *meidung* led to the splintering-off of a smaller, related group led by Jakob Amman that is now characterized by its resistance to technological change. For 10 points, the Amish split from which Anabaptist sect known for its simple dress and non-violence, which was founded by a Frisian

preacher surnamed Simons?

ANSWER: Mennonites [accept word forms; prompt on Anabaptists; anti-prompt on Amish]

12. Peter Burke's *A Social History of Knowledge* begins with an analysis of this man's achievements. One book titled after this man suggests that there exists a metaphysical relationship between reading and the reader. That book was written by Sven Birkerts and discusses the "fate of reading in the electronic age." Another book titled after this man suggests that the moving image and multimedia have lead to a "grammatology of the video" that the author terms tel literacy. In that work titled after this thinker, the author advances the idea that "the medium is the message." He titles a work about "the making of typographic man" that was written by Marshall McLuhan. For 10 points, name this German who ushered in the knowledge-based society with the printing of his namesake Bible.

ANSWER: Johannes Gutenberg

13. In one of this author's stories, a musician rants about seeing a field full of urns at a session at which he records "Amorous". That story by this author opens with Johnny admitting he's lost another saxophone on the metro and ends with him haranguing his biographer, Bruno. In one story by him, Irene and her brother flee their house after it is taken over by unnamed forces. Another story by this author of "The Pursuer" features a narrator who becomes obsessed with the golden-eyed, rosy salamander larvae in an aquarium, eventually becoming one himself. This author of "The Axolotl" also penned a novel about the search for La Maga by Horacio de Oliveira. That novel by him can be read by following the Table of Instructions and skipping through the chapters. For 10 points, identify this Argentine author of *Hopscotch*.

ANSWER: Julio (Florencio) Cortazar

14. In the Celtic romance *The Voyage of Mael Duin*, the title warrior's crew becomes intoxicated by a maiden on an island with four of these entities made out of gold, silver, copper and crystal. Some of these entities were created by the sons of Zeus and Antiope; according to that story, the struggling Zethus was aided in making them by the magical lyre-playing of his brother Amphion. In a Norse myth, an anonymous hrimthurs offered to create one of them in exchange for the sun, the moon, and Freya, but was killed by Thor after Loki distracted his horse Svadlifari. Poseidon and Apollo sent a sea monster and a plague to attack Troy after Laomedon refused to pay them for constructing another of these objects. For 10 points, identify these common defensive structures which surrounded both Asgard and Troy.

ANSWER: walls

15. The reliability of these devices is affected by TDD, HCI and NBTI. Buried layers are used in these devices to prevent latchup. A measure usually abbreviated g-sub-m, the transconductance, is important in characterizing these devices. The accumulation of minority carriers near the surface of the substrate creates an inverted layer in these devices; that inverted layer is pinched off in the saturation region and, depending on that layer's composition, results in these devices being classified as n- or p-channel. These devices can be categorized into depletion or enhancement mode depending on their threshold voltage. These devices can suffer from parasitic capacitance when the gate overlaps the drain and source. For 10 points, identify this most popular type of transistor that supplanted the BJT.

ANSWER: MOSFET [or metal-oxide-semiconductor field-effect transistor; or MOS transistor; or other types of field-effect transistors, such as insulated-gate (IG), modulation-doped (MOD), junction gate (J), metal-semiconductor (MES), tunnel (T) and numerous less common ones]

16. This country's government has recently implemented Operation Production, an ill-conceived plan to move the homeless urban dwellers into the rural areas for farm work. This country's second president ordered all policemen to learn "Transcendental Meditation" in order to master "Yogic Flying." The Margo Commission investigated the fatal air crash that killed this country's first president. Joaquim Chissano led this site of Operation Gordian Knot, an attempt to stop one of its major rebel groups. This country was the subject of fighting between its RENAMO and FRELIMO groups, and like Angola gained independence after the fall of the Estado Novo. For 10 points, name this African country colonized the Portuguese, whose capital is Maputo.

ANSWER: Mozambique

17. A man escapes through a window in this work as a bloodied man stands next to a kneeling woman as the floor is

littered with masks and swords. Two dogs share a connected collar in a room with a medusa-head portrait nearby the central figure of this work, who negotiates over the construction of his mansion visible through a window. The artist of this work accompanied it with a story that employed character like the Viscount and the lawyer Silvertongue, who respectively whore around and have an affair with the Countess. The paintings *The Bagnio*, *The Tête à Tête*, and *The Lady's Death* are featured in this painting cycle that satirizes the 18th Century English upper class. For 10 points, name this six-membered William Hogarth series about the debilitating love-union of Earl Squanderfield.

ANSWER: Marriage à-la-mode

18. In one piano piece by this composer, "God Save the Queen" is banged out in bass octaves at the opening of an homage to a Dickens character. A pentatonic section in G-flat is sandwiched between two sections using only notes from the whole-tone scale in the second piece from his first book of *Preludes*. A collection of piano pieces by this composer of "Voiles" closes with a "Passepied" in F-sharp minor. One piece by him opens with a solo flute playing a chromatically descending tritone from C-sharp to G. A poem by Verlaine about moonlight inspired one movement of his *Suite Bergamasque*. He wrote an orchestral work that contains the movement "Play of the Waves" For 10 points, name this French Impressionist composer of "Clair de Lune", *Prelude to the Afternoon of a Faun*, and *La Mer*.

ANSWER: Claude(-Achille) Debussy

19. This poem describes a time when one shall lie with "the hoary seers of ages past" and "patriarchs of the infant world", when the oak has sent his roots abroad and pierced the addressee's mould. This poem refers to "old Ocean's grey and melancholy waste" and "the hills, rock-ribbed and ancient as the sun" as "solemn decorations". The addressee of this poem is urged not to go like a quarry-slave to a dungeon, but rather to approach "like one who wraps the drapery of his couch / About him, and lies down to pleasant dreams." This poem describes an "innumerable caravan" which moves to the afterlife, and it is addressed "to him who in the love of Nature holds / Communion with her various forms." For 10 points, identify this poem, a meditation upon death by William Cullen Bryant.

ANSWER: "Thanatopsis"

20. Although not a primary alcohol, only one of these compounds with a methyl group undergoes the iodoform reaction. Their simplest example is mixed with sulfuric acid to form Marquis' reagent, which can be used to identify alkaloids. LDA usually cannot be used to deprotonate these compounds to form enolates because self-condensation is too fast. These compounds are transformed into an alkyne by the Corey-Fuchs reaction. When these compounds lack an alpha-hydrogen, they can undergo disproportionation to yield an alcohol and a salt of a carboxylic acid in the Cannizzaro reaction. Unlike a similar organic compound, they have reducing properties, which results in their oxidation in Tollens' reagent, creating a silver mirror. That mirror distinguishes them from ketones. For 10 points, identify these compounds that contain a formyl group and whose simplest example has chemical formula CH₂O.

ANSWER: aldehydes

Tiebreaker. Indian tribes exclusive to this state like the Nansemond and Nottoway are not among its only two reservations that are held by the Mattaponi and the Pamunkey. This American state has the counties of Prince Edward, Brunswick, and Halifax, all of which predate Canada. Its highest point is Mount Rogers. The state flag of this place has a toga-clad man standing on the chest of a fallen toga-man atop this state's state motto. Historic sites on the Historic Triangle of this state can be found in a part of this state that holds cities such as Poquoson and Newport News, the Hampton Roads area. This Old Dominion state contains Shenandoah National Park. For 10 points, name this state home to Charlottesville and Richmond.

ANSWER: Virginia

The intended goal of this battle was to relieve German pressure on the French at Verdun, but this battle ended up even bloodier. For 10 points each:

[10] Name this WWI battle taking place from July to November 1916. The tank was debuted in this battle, on the first day of which approximately 60,000 British troops under Douglas Haig were killed.

ANSWER: First Battle of the **Somme**

[10] After the Battle of the Somme, the Germans made a tactical retreat to this defensive network, one section of which was known as the Siegfried Line. It was named for a German Field Marshal who later became the second President of the Weimar Republic.

ANSWER: **Hindenburg Line**

[10] The Allies could not breach the Hindenburg Line until the Hundred Days Offensive at the end of the war, which began with this August 8th 1918 battle. In the leadup to this battle, troops under Henry Rawlinson silenced their artilleries and used false radio messages to throw off the Germans.

ANSWER: Battle of **Amiens**

It begins “I sat all morning in the college sick bay” and proceeds to describe the reaction of the poet’s family to the death of Christopher, the younger brother of the speaker. For 10 points each:

[10] Identify this poem that ends “A four foot box, a foot for every year.”

ANSWER: **“Mid-Term Break”**

[10] “Mid-Term Break” can be found in the poetry collection *Death of a Naturalist* by this contemporary Irish poet who translated *Beowulf* in 1999.

ANSWER: Seamus **Heaney**

[10] The poem “Death of a Naturalist” ends with the speaker’s frightening encounter with some of these creatures, which he believes to be angry with him for stealing their eggs.

ANSWER: **frogs**

Most figures in this painting, such as a woman with a monkey at her feet, hold parasols aloft and face left towards the river. For 10 points each:

[10] Identify this painting, the masterpiece of Georges Seurat.

ANSWER: A **Sunday Afternoon** on the Island of **La Grande Jatte** [accept either underlined portion; accept *Un dimanche après-midi à l’Île de la Grande Jatte*]

[10] A boy in a red cap stands in the water opposite the Island of La Grande Jatte in this other Seurat painting.

ANSWER: **Bathers at Asnières** [or *Une Baignade, Asnières*]

[10] Seurat’s fellow pointillist Paul Signac painted a notable portrait of this French art critic, who coined the term “neo-impressionism” for Seurat and Signac’s work.

ANSWER: Felix **Feneon**

Monophysitism was developed as a reaction to this heresy, whose leader rejected the title “Theotokos” for the Virgin Mary, proposing instead the term “Christotokos”. For 10 points each:

[10] Identify this heresy which emphasizes Jesus’s dual human and divine natures. This doctrine was declared heretical at the First Council of Ephesus.

ANSWER: **Nestorianism** [accept word forms; prompt on “dyophysitism” or “diaphysitism” or equivalents]

[10] This Patriarch of Alexandria was known for feuding with Nestorius. He may have been involved in the murder of the philosopher Hypatia, who supported his rival Orestes.

ANSWER: **Cyril** of Alexandria

[10] The Council of Ephesus also condemned Caelestius, a major proponent of this heresy. Its originator, an ascetic of either Breton or British origin, asserted that free will to choose good or evil still existed because original sin did not taint human nature.

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

By binding to GPR109A, this compound inhibits lipolysis, leading to a lowering of LDL levels and a raising of HDL levels. For 10 points each:

[10] Name this compound consisting of a carboxylated pyridine ring, whose deficiency causes pellagra.

ANSWER: **niacin** [or **vitamin B3**; or **nicotinic acid**]

[10] Niacin, like serotonin, is synthesized from this amino acid, which contains an indole as its R group. In bacteria, it is synthesized by the trp operon.

ANSWER: **tryptophan** [or **W**; prompt on **trp**]

[10] Serotonin is converted to 5-HIAL by this enzyme. Selective inhibitors for its type A isoenzyme include clorgyline and moclobemide, while selective inhibitors for its type B isoenzyme include deprenyl.

ANSWER: **L-monoamine oxidases** [or **MAOs**]

For 10 points each, answer the following about social psychology.

[10] The first experiment in social psychology was conducted by Norman Triplett, who found that performing this activity in groups results faster progress than when it is performed alone.

ANSWER: **biking** [accept equivalents, such as **cycling**]

[10] Another major experiment in social psychology was the Robbers Cave experiment, in which this psychologist examined the dynamics of two groups of randomly separated children forced into competition.

ANSWER: Muzafer **Sharif**

[10] Perhaps the best known social psychology experiment was conducted at this university by Zimbardo, which had to be cancelled early due to the brutality of guards vs. the prisoners.

ANSWER: **Stanford** University

A philosopher from this polity authored the influential medieval text “On the Slander of Plato” and was called “George of” this location. For 10 points each:

[10] Identify this splinter of the Byzantine Empire that was based on the southeastern portion of the land surrounding the Black Sea.

ANSWER: **Trebizond** Empire

[10] The Trebizond Empire was formed shortly after this campaign. Led by Enrico Dandolo, it was initially a campaign to conquer Jerusalem, but it eventually became an opportunity to sack Constantinople.

ANSWER: **Fourth Crusade**

[10] A military campaign by this man led to Trebizond becoming the new starting point for the Silk Road. This founder of the Ilkhanate also attacked the fortress of Alamut.

ANSWER: **Hulagu** Khan

This novel’s character of Otake is based on Minoru Kitani. For 10 points each:

[10] Name this novel in which the journalist Uragami chronicles the retirement match of Honinbo Shusai.

ANSWER: *The **Master of Go*** [or **Meijin**]

[10] *The Master of Go* is by this Japanese author who wrote about the relationship between Shimamura and the geisha Komako at a hot spring in *Snow Country*.

ANSWER: Yasunari **Kawabata** [accept in either order]

[10] In this Kawabata novella, Eguchi joins a club in which impotent old men are allowed to share beds with naked virgins.

ANSWER: ***House of the Sleeping Beauties*** [or **Nemureru Bijō**]

In C, these variables are declared with an asterisk. For 10 points each:

[10] Identify these variables whose content is a memory address. When NULL, they can cause segmentation faults.

ANSWER: **pointers**

[10] Pointers fall in this category of data types, which also includes characters and integers. This data type is defined as the basic or built-in datatypes of a programming language.

ANSWER: **primitive** data type

[10] In object-oriented languages, primitive data types can be converted to reference types by this operation, giving them the behavior of an object.

ANSWER: auto**boxing**

Influenced by the author’s time in the French Communist Party, this work seeks to explain the inauthenticity of life that usually arises after a wholesale reform of society. For 10 points each:

[10] Identify this work of existential philosophy which discusses the title figure’s attempts at “refusing to be” and overthrowing God. It uses the example of Nietzsche and the Bolsheviks to warn that the title figure is likely to descend into the “inevitable logic of nihilism.”

ANSWER: *The **Rebel***

[10] In this other work by Albert Camus, the titular Greek king is used an example of an “absurd hero” that contemplates his situation without hope, even though he is happy.

ANSWER: The Myth of Sisyphus [or Le Mythe de Sisyphe]

[10] Both of those works by Camus seek to argue against this method as a way of solving the existential problems of man in the age of ideologies.

ANSWER: suicide [or any other reasonable equivalents, such as killing yourself; prompt on death]

The beginning of this piece portrays a warm summer evening, followed by an *allegro agitato* section depicting a noisy streetcar. For 10 points each:

[10] Name this musical work originally for soprano and orchestra whose text was taken from a James Agee piece about his Tennessee hometown.

ANSWER: Knoxville: Summer of 1915, Op. 24

[10] This American composer of *Knoxville: Summer of 1915* also composed the opera *Vanessa*, which contains the aria “Must the Winter Come So Soon?”.

ANSWER: Samuel Barber

[10] Barber is best known for this orchestral work in B-flat minor, which was adapted from the second movement of his Opus 11 String Quartet. Barber later arranged this piece as the setting for his *Agnus Dei*.

ANSWER: Adagio for Strings

This play’s characters include Hannah Jelkes, who is travelling with her old grandfather Nonno, a man who is working on his last poem, before his death. For 10 points each:

[10] Identify this play about the defrocked Reverend T. Shannon, who has a “crack-up” while giving tours in Mexico.

ANSWER: The Night of the Iguana

[10] *The Night of the Iguana* is by this playwright of *The Glass Menagerie* and *A Streetcar Named Desire*.

ANSWER: Tennessee Williams

[10] Reworked into *The Eccentricities of the Nightingale*, this other Williams play focuses on the relationship between Alma Winemiller and John Buchanan, who end up switching philosophies by the play’s end.

ANSWER: Summer and Smoke

Answer the following about Grant’s Overland Campaign, for 10 points each:

[10] Major General Horatio G. Wright attacked the “Bloody Angle” near a building of this type in Spotsylvania County. Lee surrendered to Grant at McLean House, frequently mistaken for a building of this type in Appomattox.

ANSWER: courthouse

[10] Grant’s memoirs note that the only attack he wish he had never ordered came at this battle whose fighting peaked on June 3, 1864. In it, the Union VI and XVIII Corps were mowed down by Lee’s fortified troops.

ANSWER: Battle of Cold Harbor

[10] This brigadier general commanded his Michigan Brigade, known as the Wolverines, through such engagements in the campaign as the Wilderness, Yellow Tavern, and Trevilian Station. Interestingly, this man’s posthumous reputation was due in large part to tireless propagandizing by his wife Libby.

ANSWER: George Armstrong Custer

These molecules can be classified by their hapticity. For 10 points each:

[10] Identify these molecules which bind to central metal atoms to form coordination complexes.

ANSWER: ligands

[10] This theory, developed by Hans Bethe and John van Vleck, describes interactions of anions surrounding a central metal ion. It explains the colors of transition metal complexes.

ANSWER: crystal field theory [or CFT]

[10] This series orders metals and ligands according to the size of the splitting of the *d* orbitals. Carbon monoxide causes the largest splitting according to it.

ANSWER: spectrochemical series of ligands

Identify the following about recent developments in gay rights, for 10 points each:

[10] Slated to be heard in 2013, *U.S. v. Windsor* is a pending Supreme Court case over the constitutionality of

section 3 of this 1996 law, which defines marriage as the union of one man and woman at the federal level.

ANSWER: **DOMA** [or **Defense of Marriage Act**]

[10] This woman elected to a Wisconsin senate seat in November 2012 is the first openly gay politician elected to the Senate.

ANSWER: Tammy **Baldwin**

[10] In November, Maryland, Washington, and this state passed referendums legalizing gay marriage through popular vote. A long-tenured senator from this state announced a pending retirement in early 2013.

ANSWER: **Maine**

This figure forced the sons of Tuireann to complete a series of impossible tasks, during which they died, as recompense for their killing of his father Cian. For 10 points each:

[10] Identify this Irish deity whose other accomplishments include founding the Tailteann Games, defeating Oghma in a flagstone-throwing contest, and killing Balor at the second battle of Mag Tuired.

ANSWER: **Lugh** Lamhfhada [or **Lugus**; accept such other epithets as “mac Ethlenn”, “Samhildanach”, or “Lonnbeimnech”; prompt on “**Lleu** Llaw Gyffes”, since he’s Welsh]

[10] Lugh possessed a magical one of these weapons, one of the four treasures of the Tuatha de Danann. Lugh’s son Cuchulainn also used one of these weapons, the Gae Bulg, and other mythological examples include Odin’s Gungnir.

ANSWER: **spears** [or **lances**; prompt on “polearms”]

[10] This first king of the Tuatha De Danann was beheaded by Balor at the second Battle of Mag Tuired, but was avenged by Lugh. His epithet comes from an item crafted for him by the physician Dian Cecht.

ANSWER: **Nuada** Airgetlám [or **Nuada** Silver-hand; **Nuadha**; or **Nuadu**]

In one theory, the Gibbs free energy per unit volume can be expanded as a local function of this parameter, and the magnitude of this parameter, squared, is proportional to the density of super electrons. For 10 points each:

[10] Name this parameter, usually written as the product of a complex phase factor and a modulus, which is found in two coupled differential equations with the magnetic vector potential in that theory.

ANSWER: complex-valued **order** parameter

[10] The order parameter is used in the phenomenological model of this phenomenon created by Ginzburg and Landau. It is also described by BCS theory, and materials that experience it exhibit zero electrical resistance.

ANSWER: **superconductivity** [or word forms]

[10] In BCS theory, superconductivity is a result of the condensation of these of these pairs of coupled electrons into a ground state, after which they behave like bosons.

ANSWER: **Cooper** pairs [prompt on **BCS** pairs]

In the opening sequence of his most famous film, the protagonist dreams of floating off into the sky before being pulled back by a rope. For 10 points each:

[10] Name this Italian director of *Amarcord* and a film in which the director Guido suffers a creative block, 8 ½.

ANSWER: Federico **Fellini**

[10] Fellini directed this 1960 film about the unfaithful journalist Marcello’s week in Rome, which includes a famous scene of cavorting in the Trevi fountain with the actress Sylvia, played by Anita Ekberg.

ANSWER: *La dolce vita* [or *The Sweet Life*; or *The Good Life*]

[10] Fellini co-wrote the screenplay for *Rome, Open City* by this earlier Italian director of *Germany, Year Zero*.

ANSWER: Roberto (Gastone Zeffiro) **Rossellini**

This man’s efforts to establish state control over the private sector alienated business leaders and caused them to adopt the slogan “Better Hitler than” this man. For 10 points each:

[10] Name this first Socialist and first Jew to serve as prime minister of France.

ANSWER: Leon **Blum**

[10] After one of Blum’s terms in office, he was succeeded by this man, who signed the Munich Pact with Hitler and is often blamed for allowing the German takeover of France.

ANSWER: Edouard **Daladier**

[10] Blum and Daladier both served under this incarnation of the French state, which formed after the deposition of Louis Napoleon and was ended with the establishment of Vichy France.

ANSWER: **Third Republic**

This novel opens with the line “This is the saddest story I have ever heard”. For 10 points each:

[10] Name this novel about the philandering Captain Edward Ashburnham, narrated by John Dowell, whose wife Florence pretends to have a heart ailment

ANSWER: *The Good Soldier*

[10] *The Good Soldier* was written by this English author of the *Parade's End* tetralogy.

ANSWER: Ford Madox Ford

[10] Another literary British soldier, Robbie Turner, is sent to prison when Briony Tallis falsely accuses him of rape in this 2001 novel.

ANSWER: *Atonement*