

Terrapin Invitational Tournament 2013: “Make your own judgments, but we wrote this set in good faith”  
Packet by Texas A&M and VCU A

### Tossups

1. In one play by this author, one character decides to go speak at the Guild of St. Matthew, even though he had earlier cancelled his plans to give a sermon there. In an earlier scene in that play, an aspiring poet asks the naïve Proserpine Garnett if she thinks it is possible for her employer to be loved. A different play by this author ends with the protagonist tearing up a note left by Frank Gardner before she resumes typing while working at Honoria Fraser’s chambers. One play by this author focuses on the love triangle between Reverend James Morrell, his wife, and Eugene Marchbanks. This author of *Candida* wrote a play in which Vivie learns that her mother Kitty actually runs a brothel. For 10 points, identify this socialist author of plays such as *Mrs. Warren’s Profession*.

ANSWER: George Bernard **Shaw**

2. One part of this treatise argues that everything profound hides behind a mask before discussing whether there are any “friends of truth.” It proposes a distinction between a thinker that begets and a thinker that gives birth to argue that scientists are sometimes incapable of understanding human nature. This work defines nobility as distance between oneself and things, and it argues for using a “pathos of distance” as a tool of criticism. This work ends with a wedding song “From High Mountains” and is the first work of its author’s to state “life ... is the will to power.” Its section “Peoples and Fatherlands” criticizes nationalism; other sections include “We Scholars” and “On the Prejudices of Philosophers.” This work begins by criticizing past philosophers for chasing after truth as if it were a woman. For 10 points, identify this masterpiece of moral philosophy that was written by Friedrich Nietzsche.

ANSWER: ***Beyond Good and Evil***: *Prelude to a Philosophy of the Future* [or ***Jenseits von Gut und Böse***: *Vorspiel einer Philosophie der Zukunft*]

[edited]

3. Novikov and Solokov showed a surprising relationship between glass’s Poisson ratio and its deviation from behavior described in this equation. A similar equation named for Neel and this equation’s namesake allows calculation of magnetic relaxation time. The Williams–Landel–Ferry model is applicable above the glass transition temperature because then the system has behaviour following this equation, and it is used to predict the lifespans of paper in accelerated aging techniques. A similar equation which has a factor of Boltzmann’s over Planck’s constant times temperature outside the exponential is based on transition state theory and is named for Eyring and Polanyi. The steric factor gives the ratio between this equation’s pre-exponential factor and collision frequency. For 10 points, name this equation that gives reaction rate as a function of activation energy.

ANSWER: **Arrhenius** equation

[edited]

4. One ambitious orchestral suite by this composer quotes directly from Wagner to represent salmon from the Rhine during a dinner meal. This composer, who is not Fauré, wrote incidental music to *Le Bourgeois Gentilhomme*. One orchestral work by this composer uses tremolos and muted brass “mah’s” to represent the dust cloud and sheep that belong to King Alifanfaron. That work is for orchestra and cello and depicts ten variations of the title character, who ends up fighting the Knight of the White Moon. This composer of *Don Quixote* composed a tone poem with a large ratchet in its percussion section. That work opens with a “Once Upon a Time” theme and uses a horn and D clarinet to represent the title folk hero. For 10 points, identify this composer of *Till Eulenspiegel’s Merry Pranks*, whose tone poem *Also sprach Zarathustra* was used in *2001: A Space Odyssey*.

ANSWER: **Richard Georg Strauss** [prompt on “Strauss”]

5. After this event occurred, an “Open Season” was instituted that interrogated the people responsible for it. Evelyn Barker’s racist comments after this event triggered him to initiate Operation Shark. The men responsible for it targeted the offices of Lieutenant General Alan Cunningham and chief secretary John Shaw and dressed up as Arabic milkmen in order to get access to a kitchen. It was thought to have been carried out by the Lehi at first, and it was a response to Operation Agatha, or Black Saturday, which saw the arrest of Moshe Sharett. Though the Haganah repeatedly denied knowing about this event, it was supposedly their directive that it was to be carried out by the subordinates of Menachem Begin. It was perpetrated in a structure housing the offices that managed the British Mandate of Palestine, and it was an attack carried out by the Irgun. For 10 points, identify this act of terrorism carried out in a namesake hotel.

ANSWER: King David Hotel bombing [accept equivalents that indicate an attack on the King David Hotel]  
[edited]

6. A property sometimes considered a quantum field theory analogue of this phenomenon is the Reeh-Schlieder property and states that in an arbitrarily small neighborhood, the vacuum can generate any state vector of the field. This phenomenon occurs when any of the eigenvalues of a state’s partial transposition are negative according to the Peres-Horodecki criterion. States in which this phenomenon is at a maximum are superpositions of *eigenstates* of the particles involved and are named for Bell. This phenomenon was first considered in a paper which suggested that quantum events were determined by hidden parameters. It occurs when two or more spatially separated particles are still in interdependent states. For 10 points, identify this quantum mechanical “spooky action at a distance” that allows for teleportation of information.

ANSWER: quantum entanglement

7. In a study of this character’s creator as a mystic, Raymond Weaver highlights the fact that this character is an atheist who is enfeebled by the weakness of those around him. In chapter 37, “Sunset,” this character imagines himself wearing the iron crown of Lombardy. To explain his motivations, this character states that a pasteboard mask surrounds his mind. In a dramatic scene, this man holds a thick set of chain-links in his hands and praises the “corpusants” or balls of lighting that have appeared. While doing that dramatic action, he is stepping on Fedallah. In one scene, many characters see a reflection of themselves from a doubloon that this character nailed to a mast. This character shouts “from hell’s heart I stab at thee; for hate’s sake I spit my last breath at thee” as he fires his harpoon and causes the destruction of the Pequod. For 10 points, name this monomaniacal captain in pursuit of Moby Dick.

ANSWER: Captain Ahab

8. An extra-canonical source states that when this man was trying to ascend to heaven, a different apostle opposed him by praying to God, which caused this man to fall to earth. According to Pseudo-Clement, this man copulated with a personification of the divine *Ennoia*, a female essence that was reincarnated variously as a prostitute from Tyre and Helen of Troy. This man supposedly wrote *The Great Declaration*, which became the basis for his namesake Gnostic sect. Roman sources state that this man was called “the Favored One” or Faustus, possibly inspiring the Faust legend. This man was a Samaritan who was baptized by Philip the Evangelist after he made a decision to convert to Christianity. He supposedly had the power to levitate, which partially explains why he is called the father of all heresies. For 10 points, identify this religious figure whose magical powers led him to be called a “Magus.”

ANSWER: Simon Magus or Simon the Magician  
[edited]

9. Jonathan Shay’s influential study of PTSD is titled after this figure in America, and Jon Elster’s volume of essays on rationality and irrationality is titled after this man. That book influenced legal theory, where this kind of contract binds oneself to a restrictive condition in the future. Carl Jung used one of this figure’s achievements as the basis for his theory of *nekyia*, or night sea journey. Although not Jesus, this man’s deeds inspired stages such as “Master of

Two Worlds” and “The Call to Adventure.” This figure was the basis for a 17 stage model that begins with “Departure” and ends with “Return” - that model is the monomyth and was developed by Joseph Campbell. For 10 points, identify this mythological figure, who gives his name to a type of adventurous and long journey.

ANSWER: Odysseus or Ulysses

[edited]

10. One mayor of this city accidentally set his hair on fire with a blowtorch during a photo op, and that mayor, Ralph Perk, was succeeded by a Democrat who is now mostly known for his British redhead wife. This city staged the Great Lakes Exposition in the late 1930s to promote tourism, and race riots in this city began when Joyce Arnett was shot by police. The Hough [“huff”] Riots took place in 1966 in this city, where Dennis Kucinich was mayor. It was the first major city to have an African-American mayor, and that mayor was Carl Stokes. This city’s economic resurgence under mayor George Voinovich was spearheaded by the construction of a building designed by I. M. Pei. For 10 points, name this city, home to the Rock and Roll Hall of Fame, this second-largest city in Ohio behind Columbus.

ANSWER: Cleveland, Ohio

11. This architect incorporated a series of gallery pods into his design for the campus of the Ohr-O’Keefe Museum of Art, which was overhauled after it was damaged by Hurricane Katrina. In 1992, this architect released a series of bentwood furniture, each piece of which was named after a different term from hockey. This man was sued following the buildup of moisture and water leakage in his Stata Center at MIT. He designed a work that used large criss-crossing pipes covered in speakers as a trellis. That work was classified as a work of art to prevent its removal from Grant Park. Jeff Koons’ *Puppy* sits outside of a building created by this man, which is noted for its use of titanium sheets designed to resemble fish scales. For 10 points, name this architect responsible for designing the Pritzker Pavilion and the Guggenheim Museum in Bilbao.

ANSWER: Frank Gehry

12. One model for the structure of this astronomical action is based on the Hall effect and assumes that outflow is driven by dispersive waves to account for the Petschek shock structure. That model of this one-word action was an update to the Sweet–Parker model. This kind of action and an accompanying storm caused the breakdown of many instruments during the so-called Bastille Day Event. This kind of action gives its name to a class of stellar objects such as UV Ceti and Barnard’s Star. This astronomical action is thought to be caused by the breaking up and refusing of field lines via magnetic reconnection. This astronomical action may be followed by a coronal mass ejection. For 10 points, identify this action that names a class of variable stars whose brightness increase suddenly, which also names a sudden increase in brightness of the Sun.

ANSWER: flares or flaring [accept solar flares and flare stars, etc.; prompt on “coronal mass ejections” or “CMEs” before mention; prompt on “magnetic reconnection” until mention]

[edited]

13. This enterprise’s naval component included attacks by the warships HMS *Lord Nelson* and HMS *Agamemnon*, both of which were part of a fleet commanded by Vice-Admiral Sackville Carden. After this offensive’s naval attack against the forts of Sedd-el-Bahr and Kum Kale, it saw amphibious landings at Y, W, X, and V beaches. This offensive included multiple battles at Krithia and a failed final confrontation at Sari Bair. Its largest battle was a landing at Suvla Bay, where Frederick Stopford was repelled by forces under Otto Liman von Sanders. Attacks on Salonika prevented reinforcements from aiding it, whose failure led to the end of Churchill’s tenure as First Lord of the Admiralty. It was partly carried out by a corps of Australian and New Zealand troops. For 10 points, name this failed attempt to capture Constantinople and clear a sea route to Russia during World War I.

ANSWER: Gallipoli Campaign [or Dardanelles Campaign or the Battle of Gallipoli]

[edited]

14. In one of these works, a shepherd ventures to a bridge and finds a snow white bone that magically states that his brother murdered him in the aftermath of a boar hunt. The second volume of them ends before a little boy can use a golden key to open an iron chest. One of these works describes how a donkey, a rooster, a cat and a dog scare away robbers in a cottage. They include a work about a clever boy that gouges out the eye of his fiancé after mishandling his previous gifts. One of these works sees the title figures return home by using pebbles, only to get lost the next day at a house made out of gingerbread and cakes. These works include “Town Musicians of Bremen” and “Rumpelstiltskin.” For 10 points, name these fairy tales written by a pair of German brothers.

ANSWER: stories by the Brothers **Grimm** [accept anything mentioning Grimm that makes sense, such as “fairy tales by the Brothers **Grimm**”; prompt on “German fairy tales” and other less specific answers; accept **Children’s and Household Tales**]

15. This man was referred to as *hypolispos* after he sat down for so long that he left his buttocks behind attached to some rocks. Diodorus Siculus states that he was responsible for incorporating many *demes* into his kingdom. This man’s son Acamas was one of the figures that hid in the Trojan Horse. While travelling around Scyros, this man was murdered by King Lycomedes. In his early life, he took a path around the Saronic Gulf that featured six entrances to the underworld. He was good friends with the king of the Lapiths that was named Pirithous. He made the Amazon Hippolyta his wife. During one adventure, he killed the year-king Cercyon and a figure that fit people to his bed, Procrustes. This man left Athens in a black-sailed ship and successfully returned after leaving Ariadne on Naxos. For 10 points, name this hero, a slayer of the Minotaur.

ANSWER: **Theseus**

[edited]

16. One decision to do this action was defended in an interview which stated that “66,000 people want to rip [my] throat out at the same time ... that’s about 20 fold what Custer felt.” That interview was given by Andy Reid. A different regular season 2012 game that featured an instance of it in overtime occurred in the same game in which Darrelle Revis suffered a knee injury. That instance of this action nullified the play of Randy Starks, resulting in a 2–1 record for the Jets. In a 2007 game against the Bills, Joe Gibbs’s attempt to do this controversial action twice in a row resulted in a fifteen yard penalty for unsportsmanlike conduct. More recently, Pete Carroll’s decision to perform this action in the 4th quarter hilariously did nothing to stop Matt Bryant’s second attempt, although he did miss the first time. For 10 points, identify this action in which a timeout is called to ostensibly screw-up a field goal attempt.

ANSWER: **icing the kicker** or **freezing the kicker** [prompt on “calling a timeout” before mention]

[edited]

17. This monarch revived the 14th century custom of obtaining revenue from Forest Laws. His appointee for archbishop of Canterbury used the Court of the Star Chamber to chop off the ears of the author of *Histriomastix*; that author was the lawyer William Prynne. The state of Maryland was named after the wife of this monarch, who courted Maria Anna of Spain while still the Prince of Wales. He set a precedent by charging ship money from non-coastal cities. He appointed William Laud to one post and convened a body to fund the Bishops’ Wars, thus ending a period of personal rule called “Eleven Years Tyranny.” This man’s advisors included the Duke of Buckingham, George Villiers. His supporters were forcibly ejected by Thomas Pride from the Long Parliament, a body he summoned. For 10 points, identify this monarch whose tyranny led to his execution during the English Civil War.

ANSWER: **Charles I**

[edited]

18. In eukaryotes, the stalks in this organelle are formed by a heterodimer of P1 and P2 proteins that attach to this organelle via a P0 protein. Neomycin blocks the function of this organelle by binding to its Helix 69 structure, which interacts with Helix 44 to form the bridge B2a. EF-Ts facilitates the function of these organelles by removing GDP from EF-Tu, which then finds a new GTP and continues to escort molecules into this body. Kozak sequences indicate to this organelle when to start its main function. Its large subunit contains peptidyl transferase. This organelle's main enzyme forms peptide bonds between amino acids brought to it by tRNA. For 10 points, name these organelles often located on the rough endoplasmic reticulum that assemble proteins.

ANSWER: ribosomes

[edited]

19. The premiere of one painting titled after these figures featured a mirror opposite to it so that the viewers could imagine themselves as part of the painting. Picasso depicted these figures in a work that has a man with yellow legs on the far right; that man also wields a green knife. One painting that depicts these figures sees a red-clothed leader hold onto a thin golden staff as he stands in between two fluted columns. That work was inspired by a sculpture in the Loggia della Signoria that was made by Giambologna. One of the most virtuous of these artistic figures is Hersilia, who can be seen spreading her arms out between the nude Titus Tatius and the athletic Romulus. For 10 points, name these peoples whose intervention was depicted by Jacques-Louis David and whose abduction by the Romans was depicted in two paintings by Poussin.

ANSWER: Sabines [or Sabine Women]

20. The second poem in one collection by this author imagines doom walking with Schoeney's daughter and describes the daughter of Lir and the eyes of Picasso under black fur-hood. That collection by this author begins with a poem that is a free-verse adaptation of the oldest book of *The Odyssey*. In another poem, this author asserts "there can be but the one Sordello" and tells Robert Browning to "Hang it all." This man won the first Bollingen Prize for poetry, and a different author referred to this American as *Il miglior fabbro*. A founding member of Vorticism, he described "the apparition of these faces in the crowd" in his short work "In a Station of the Metro." His best known work includes "Rock-Drill" and "Pisan" sections. For 10 points, identify this American poet, the author of *The Cantos*.

ANSWER: Ezra Pound

Extras

21. This man wrote about how the blindness of an American farmer's daughter and a German duchess were two different things entirely in one work. This foremost theorizer of defectology introduced the idea of a pivot when it comes to children's play. This author of "The Role of Play in Development" theorized the idea of learning from being immersed in a community, his idea of "cultural mediation." This man is more famous for positing that children merely think out loud while adults develop an "internal speech" in one work. This teacher of Luria also introduced the concept of the "zone of proximal development" in that work. For 10 points, name this Russian psychologist who wrote *Thought and Language*.

ANSWER: Lev Vygotsky

Bonuses

1. Answer some questions about cities of ancient Egypt. For 10 points each:

[10] Located south of Cairo, this ancient city was founded by the Pharaoh Menes around 3000 B.C. It is most famous for being the capital of Egypt during the Old Kingdom, and its patron god was Ptah.

ANSWER: **Memphis**

[10] This city was the capital of Egypt during the Middle Kingdom's 11th dynasty and most of the New Kingdom's 18th dynasty. This city shares one of its two notable names with a powerful city-state in Greece around the time of Alexander the Great.

ANSWER: **Waset** [or **Thebes**]

[10] This first capital of ancient Egypt is still unexcavated due to the obscurity of its exact location along the Nile River, but literary references to it abound in ancient texts. The eponymous confederacy that united Egypt under Menes was located here.

ANSWER: **Thinis** [accept **Tjenu**]

2. This aria is sung after one character discovers that his love agrees to run away with Silvio. For 10 points each:

[10] Name this aria that exhorts its singer to "Turn [his] distress and tears into jest." It is sung by Canio in Act I of the opera it appears in.

ANSWER: **"Vesti la giubba"** [or **"Put on your costume"** or equivalents]

[10] "Vesti la giubba" appears in this opera about a bunch of costumed performers by Ruggero Leoncavallo.

ANSWER: **I Pagliacci** [or **The Clowns**]

[10] This other character confesses his love to Nedda, but it is ultimately rejected. At the beginning of the opera, he addresses the audience in the aria "Si puo?," reminding them that the actors are actually human.

ANSWER: **Tonio**

3. This method is an alternative to the bridge PCR method of DNA sequencing, and it relies on the chain termination method. For 10 points each:

[10] Name this DNA sequencing method developed by Craig Venter. It breaks up the DNA into many fragments, sequences them individually, and then puts back the pieces. It runs into problems when a section has lots of repeats.

ANSWER: **shotgun** sequencing [or **shotgun** cloning]

[10] It takes enormous processing power to put the fragments together into these longer composite sequences. This term was invented for use with shotgun sequencing and these sequences can be put together into a scaffold.

ANSWER: **contig**

[10] Shotgun sequencing was used by this project, concluded in 2003, whose purpose was to identify the genes in and determine the sequences of the base pairs that make up DNA.

ANSWER: **Human Genome** Project [or **HGP**]

4. This author was a prominent figure in the Bengali Renaissance. For 10 points each:

[10] Name this author who wrote *The Home and the World*, in which Sandip spreads the notion of Swadeshi and is in conflict with Nikhil. He was the first Asian to win the Nobel Prize in Literature and wrote the national anthem of India and Bangladesh.

ANSWER: Rabindranath **Tagore** [accept Rabindranath **Thakur**]

[10] This poetry collection won Tagore the friendship of Yeats and the admiration of Europe. It contains such poems as "Mind Without Fear," "Purity," and "Song Unsung."

ANSWER: **Gitanjali** [accept **Song Offerings**]

[10] This other author of Bengali origin wrote about a Hindu woman travels to America after her husband dies in *Jasmine*. She wrote about a Calcutta native named Tara who returns to India in *The Tiger's Daughter*.

ANSWER: Bharati **Mukherjee**

5. A representative from this country warned James Thurman that troops under his command would "meet a miserable destruction." For 10 points each:

[10] Name this country that had previously engaged US forces during the Axe Murder Incident and was the target of ridicule for a hilariously low budget website.

ANSWER: Democratic People's Republic of Korea [or North Korea or Chosŏn Minjujuŭi Inmin Konghwaguk]

[10] The DPRK was internationally condemned once again in February 2013 after one of these events created an "artificial earthquake."

ANSWER: testing the detonation of a nuclear device [accept reasonable equivalents]

[10] Shin Dong-hyuk somehow escaped and lived to tell about the horrors of this North Korean prison camp after being born inside of it. He remains the only escapee to present details about the atrocities inside this camp.

ANSWER: Kaech'ŏn internment camp [or Camp 14; do not accept or prompt on "Kaech'ŏn Concentration Camp"]

6. As of this week, FBI investigators announced that they have identified the perpetrators, potentially bringing to an end a 23-year-long unsolved case involving this museum. For 10 points each:

[10] A pair of thieves, disguised as police, stole thirteen paintings, including Rembrandt's *Storm on the Sea of Galilee*, from this Boston art museum in 1990.

ANSWER: Isabella Stewart Gardner Museum

[10] The theft included *The Concert*, one of only 34 paintings confirmed to be the work of this painter of *The Astronomer* and *The Allegory of Painting*.

ANSWER: Jan Vermeer [or Johannes Vermeer, or Johan Vermeer]

[10] In this other Vermeer painting, the title woman, wearing a yellow blouse and a blue skirt, pours a pearly white liquid into a bowl.

ANSWER: *The* Milkmaid [or *De* Melkmeid or *Het* Melkmeisje]

7. The treaty resolving this dispute defined a border through the major channel of the Strait of Juan de Fuca, an ambiguity that would lead to later conflict. For 10 points each:

[10] Name this boundary dispute between the United States and Great Britain that produced the phrase "Fifty-four forty or fight."

ANSWER: Oregon Question OR Oregon boundary dispute (Accept logical equivalents)

[10] American claim to Oregon stemmed from this 1819 treaty, which also defined the United States border with New Spain along the Sabine and Red Rivers. This treaty also allowed the US to purchase Florida.

ANSWER: Adams-Onís Treaty

[10] Of course, America has had its share of internal border disputes. This 1837 "war" between Iowa and Missouri was nearly bloodless, with the exception of some bees who were killed as their hives were taken in lieu of taxes.

ANSWER: Honey War

8. MIPS, SPARC and ARM are all processors in this family. For 10 points each:

[10] Identify this processor architecture that uses only simple instructions, as opposed to its complex counterpart.

ANSWER: RISC [or reduced instruction set computing]

[10] In RISC architectures, the data and instruction types of this component, which is used to speed up processing time, are separate. Browsers typically store previous server responses in an entirely unrelated "web" one of these.

ANSWER: cache

[10] Most RISC instructions are designed to operate between these units, which are temporary storage that holds words to be operated on by a processing unit. The load-store architecture loads values from memory to here and stores values from here to memory.

ANSWER: register

9. One creature of this type had four arms which held a chakra, a conch, and a mace. For 10 points each:

[10] Name this animal which is the form of Vishnu's third avatar. Other examples of them include the ever-regenerating one Saehrimnir in Valhalla and one that ravaged the Calydonian Kingdom.

ANSWER: **boar**

[10] The first avatar of Vishnu is Matsya, a fish who saved this first man from a great flood.

ANSWER: **Manu**

[10] This first human form of Vishnu is a dwarf who disguised himself as a Brahman with an umbrella. After some contrived contest involving leaping and land, Mahabali chopped his off own head out of respect for this figure's mad hopping skills.

ANSWER: **Vamana**

10. Works by this author include the delightfully titled *Twin Pimps*. For 10 points each:

[10] Name this Roman playwright best known for his farces. Influenced by Menander's New Comedy, he is credited with developing stock characters.

ANSWER: Titus Maccius **Plautus**

[10] One of Plautus' better known plays is this one centering on the miser Euclio who uses the title object to attract suitors for his daughter Phaedria. It is later revealed that Phaedria had slept with Lyconides while the latter was drunk.

ANSWER: *The **Pot of Gold** or **Aulularia***

[10] Another playwright of ancient Rome was Melissus, who wrote *fabula trabeata*. Melissus was one of this man's freedmen, a noted patron of the arts under Augustus.

ANSWER: Gaius **Maecenas**

11. This composer's popular works include *Fur Alina*, *Fratres*, *Summa*, and *Tabula Rasa*. For 10 points each:

[10] Identify this Estonian composer who invented the style of composition called tintinnabuli.

ANSWER: Arvo **Pärt**

[10] Arvo Pärt's best known work is this work for violin and piano. It is an early example of his tintinnabuli style and was written in 1978, just before he left Estonia for Berlin.

ANSWER: ***Spiegel im Spiegel***

[10] Arvo Pärt has been often grouped into "New Simplicity" and this other movement loosely associated with figures like Terry Riley. It took inspiration from the reduction of instruments of John Cage.

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

12. It is more prominent in *e g* star antibonding orbitals than *t 2g* nonbonding orbitals. For 10 points each:

[10] Name this effect that results from unequal occupation of valence orbitals in non-linear molecules. This effect commonly causes tetragonal distortions that remove degeneracies, reducing the energy of the species.

ANSWER: **Jahn–Teller** effect [or distortion or theorem]

[10] Jahn–Teller distortions afflict *d* seven complexes with this trait, which tend to have ligands like CN that are high in the spectrochemical series. Transitions for complexes with this trait appear on the right side of Tanabe–Sugano diagrams.

ANSWER: **low-spin** [accept **strong field**]

[10] Whether a complex is high- or low-spin can affect its number of unpaired electrons. Materials with unpaired electrons have this property, making them attracted to magnetic fields, in contrast to diamagnetic materials.

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

13. The market clearing price is obtained from the intersection of these two curves. For 10 points each:

[10] Identify these two fundamental economic quantities, one of which relates how many goods a producer is willing to make, the other how many goods a buyer is willing to purchase.

ANSWER: market **demand** and market **supply** [accept in either order]

[10] The marginal revenue curve for a firm in this kind of market is downward sloping and below the demand curve. It has low barriers to entry, and firms compete by selling similar, but not identical products.



ANSWER: **monopolistically competitive** market [accept word forms like **monopolistic competition**; DO NOT ACCEPT OR PROMPT ON “monopoly”]

[10] This economist wrote *The Theory of Monopolistic Competition*, which argued that brand names are not an efficient way of product differentiation since it is an irrational response to advertising.

ANSWER: Edward Hastings **Chamberlin**

14. Answer the following about the dissolution of the Soviet Union. For 10 points each:

[10] In order to revive stagnant economies, Mikhail Gorbachev introduced two reform oriented policies, one of which was perestroika. The other was this policy of openness that made government behavior more transparent.

ANSWER: **glasnost**

[10] Signed on December 8th, 1991, this agreement effectively dissolved the Soviet Union. Signatories included Boris Yeltsin of Russia as well as dignitaries from Ukraine and Belarus. The treaty was signed in a namesake national forest shared between Belarus and Poland.

ANSWER: **Belavezha** Accords [accept any of **Belovezh**, **Belovezha**, **Belavezha**, or **Belovezhskaya**]

[10] One of the problems with the dissolution of the Soviet Union was that it triggered an ethnic cleansing of Azerbaijanis and Armenians in a bloody war in this enclave of Azerbaijan.

ANSWER: **Nagorno-Karabakh**

15. This poem claims that “Some work of noble note, may yet be done,” and ends with an exhortation “to seek, to strive, to find, and not to yield.” For 10 points each:

[10] Name this poem that concludes with that line about “heroic hearts” that have been made “weak by time in fate but strong in will.”

ANSWER: “**Ulysses**”

[10] This poet of that eulogized his friend Arthur Hallam in “*In Memoriam, A.H.H.*” wrote “*Ulysses*.”

ANSWER: Alfred, Lord **Tennyson**

[10] This Tennyson poem features the title figure being lost at sea for ten years before discovering his wife has married his friend Philip, but never reveals that he is still alive so they can live happy.

ANSWER: “**Enoch Arden**”

16. This theological text built upon pre-existing glosses and is divided into distinctions. For 10 points each:

[10] Name this 12th century text that is comprised four books. It served as the dominant non-biblical source for religious learning and was the subject of a notable commentary by Thomas Aquinas and many others.

ANSWER: *Four Books of* **Sentences** [or **Book of Sentences**]

[10] *Four Books of Sentences* was written by this Catholic theologian who earned the title *Magister Sententiarum*.

ANSWER: **Peter** the **Lombard** [prompt on “Peter” or “Lombard”]

[10] Lombard’s work largely built on pre-scholastic work of this type of textual analysis. A more specific form of hermeneutics, this form of analysis is derived from the Greek for “to lead out.”

ANSWER: **exegesis**

17. It is generally defined as  $d\omega/dE$ , but can also be defined in terms of a delta function, and van Hove singularities occur where this function is continuous but not differentiable. For 10 points each:

[10] Name this variable that, when multiplied by the size of the interval, gives the number of possible energy levels in that interval.

ANSWER: **density of states**

[10] Van Hove singularities are due to the presence of these points in the dispersion, which cause an integrable singularity in the density of states. These points give a negative discriminant in the second derivative test for a surface.

ANSWER: **saddle** points [or **equilibrium** point]

[10] The calculation of density of states typically requires the use of the effective type of this quantity for carriers. It is multiplied by the speed of light squared to give energy in a namesake energy equivalence.

ANSWER: **mass**

18. The Mormon belief that the dead are afforded the opportunity to accept faith in the afterlife, but must still undergo this and all other required ordinances has spurred the LDS Church to keep famously thorough genealogies. For 10 points each:

[10] Name this act, that in the Salt Lake Temple, may be performed in a basin supported by twelve oxen.

ANSWER: **baptism**

[10] According to the Doctrine and Covenants of the LDS Church, “in order to obtain the highest, a man must enter into this order of the priesthood”. This ordinance is generally held to be binding into the afterlife and is formally entered into with a “sealing”.

ANSWER: **celestial marriage** [accept **celestial weddings**; prompt on partial answers]

[10] Another difference between Mormonism and Christianity is that it accepts as canon, a document named for this valuable object, which is the subject of a parable by Jesus that compares heaven’s glory to it.

ANSWER: **Pearl** of Great Price

19. This man, while never General Secretary, was instrumental in moving China towards a market economy. For 10 points each:

[10] Name this figure responsible for laying the basis of China’s economic growth. During his tenure as “paramount leader,” protests broke out at Tiānānmén Square.

ANSWER: **Dèng** Xiǎopíng

[10] After Máo’s death and Dèng’s assumption of paramount leader, Dèng quickly promoted this reformer culminating in his assumption of General Secretary in 1982. His death was one of the principal causes of the Tiānānmén Square protest of 1989.

ANSWER: **Hú** Yàobāng

[10] Before Dèng came to power, he forced Huà Guófēng into early retirement. Huà had earlier arrested this counter revolutionary woman while in power.

ANSWER: **Jiāng** Qīng [or **Lán Píng**; prompt on “Madame Máo”]

20. Henry Fielding wrote a satire of this novel. For 10 points each:

[10] Name this novel, in which Mr. B attempts to seduce the female protagonist. Mr. B ends up marrying the virtuous title character, although he had refused to do so earlier because of the social gap.

ANSWER: **Pamela**; or, *Virtue Rewarded*

[10] Samuel Richardson, the author of *Pamela*, also wrote a huge novel about this character. Unsurprisingly, he isn’t introduced until 200 pages in, when he heroically pops out of nowhere to rescue Harriet Byron from the evil clutches of Hargrave Pollexfen.

ANSWER: Sir **Charles Grandison** [prompt on partial answers]

[10] *Pamela*; or, *Virtue Rewarded* and *Clarissa*, or, *the History of a Young Lady* are both novels in this format, in which the plot and characters develop through the means of a sequence of letters.

ANSWER: **epistolary** novel

Extras

21. The Cordillera Real can be found in this area, and the city of La Paz is the largest city in this area. For 10 points each:

[10] Name this elevated area of South America home to Lake Titicaca.

ANSWER: **Altiplano** [accept but DO NOT reveal **Andean Plateau**]

[10] The Altiplano is the area where this large mountain range is at its widest. It includes the farthest point from the Earth's center at the peak of Chimborazo.

ANSWER: **Andes** Mountains

[10] This salty lake of the Altiplano makes up the eastern half of the Oruro Department in Southwestern Bolivia. It is primarily fed by the Desaguadero River.

ANSWER: **Poopó**