DRAGOON 2013
Round 3
Questions by the University of Illinois at Urbana-Champaign

<u>Tossups</u>

1. **One passage of this book describes a man with a thousand heads, a thousand eyes, a thousand feet, and claims that all creatures are one fourth of him. This book claims that there was once neither being nor non-being, and that only he in the highest heaven knows how the world was created, "but then, perhaps, he knows not," in a section that asks "What covered it?" "Where was it?" and "Was there cosmic (*)** water?" That passage is called the "Nasadiya Sutka." Another part of this book describes how the cosmic man Purusha was sacrificed by the gods to create the four castes. The Aitareya Brahmana provides commentary on this book, which opens with an invocation of Agni. For 10 points, name this book of hymns, the oldest of the four Vedas.
ANSWER: ___Rig Veda___ [prompt on the **Vedas**]

2. **A biography of this politician subtitled 'From Enlightenment to Tyranny' was written by John Bew. This politician came up with the plan to send an expeditionary force to Walcheren, which was quickly ravaged by disease. As Chief Secretary of Ireland, this man collaborated with Lord Cornwallis to force the Irish Parliament to pass the (*)** Act of Union. After this politician discovered a plot to replace him with Arthur Wellesley, he fought a duel with and wounded George Canning. This man committed suicide when he believed he was being blackmailed for homosexuality. For 10 points, name this British Tory politician who represented the United Kingdom at the start of the Congress of Vienna.
ANSWER: Lord **Castlereagh** [or Robert **Stewart**, Viscount Castlereagh]

3. **On the moon, mascons are areas where this type of anomaly is present. In geophysics, its strength is related to an object's moment of inertia by MacCullagh's formula. Faye's formula gives the difference in values of this phenomenon that is induced by free-air anomalies. Models with anomalies in the strength of this phenomenon can be calculated in a formula given by Bouguer. The equipotential surface of this force which gives the (*)** mean sea level is known as the geoid. The distance at which tidal forces will overcome this other force is known as the Roche limit. Isostatic equilibria are made between a balance between the lithosphere's buoyancy and this other force. For 10 points, name this force, which causes a downward acceleration of most objects equal to 9.8 meters per second squared.
ANSWER: **gravity** [accept **gravitational** force and other word forms.]

4. **Utada Hikaru covered this song with an ending that fades directly into her hit "Passion." A Gregorian cover of this song appears as the antepenultimate track on *Masters of Chant V*. It may have been inspired by Gottfried Helnwein's satirical painting of the same name, which parodies Hopper's *Nighthawks*. Its music video includes an advertisement for a Chinese movie called *Red Trousers*, as well as a shot of poor folk warming themselves by a fire. Its singer, who may be the fictional persona (*)** Jesus of Suburbia, reads "between the lines / [of] what's fucked up and everything's alright." The refrain of this song from *American Idiot* states "my shadow's the only one that walks beside me." For 10 points, name this song by Green Day whose title path the singer traverses alone.
ANSWER: "**Boulevard of Broken Dreams**"

5. **In one of this author's stories, the middle-aged Mr. Huddle and his sister are encouraged to massacre the Jews to escape their boredom. This author incorporated the death of his mother, who was trampled by a cow,**

into a novel where Comus is "exiled" to Africa. His second and final novel imagines life in London under Wilhelm II, who invaded England. This author of "The Unrest-Cure," (*) *The Unbearable Bassington* and *When William Came* wrote about Mrs. De Ropp, a woman who watches over Conradin and the title polecat-ferret. The line "Romance at short notice was her speciality" ends a different work by this man, in which Vera scares Framton Nuttal by telling a story about the title object. For 10 points, name this British master of short stories, who wrote "Sredni Vashtar" and "The Open Window."
ANSWER: Hector Hugh **Munro** or **Saki**

6. **One fictional film within this work is** *The Amazing Mrs. Bainbridge,* **which a man misremembers as** *The Remarkable Mrs. Bainbridge.* **In an amusing scene, one character points out that a certain figure "is a common slob, because he don't even speak good English." The man who wears glasses with octagonal rims in this movie is revealed to not have ever sweated in his life. Central points of discussion within this work include the possibility of an** (*) elevated train obscuring a crime that police believe was perpetrated with a rare switchblade. A man eager to go to a Yankee's game and a bigot who speaks of "those people" comprise the title group, who are all eventually swayed by the eloquence of Henry Fonda's character. For 10 points, name this Sidney Lumet drama about the deliberations of a jury.
ANSWER: *12 Angry Men*

7. **One of these compounds undergoes an eta-5 to eta-3 transition in the indenyl effect. The presence of one of these compounds causes a change in interelectron repulsion as measured by the Racah parameter in the nephelauxetic effect. The size of these compounds can be measured using bite or cone angles. These compounds are ordered in the spectrochemical series based on the size of their** (*) crystal field splitting parameter. Cyclopentadiene acts as one of these compounds with a hapticity of 5 in ferrocene. Polydentate examples of these compounds act as chelating agents. Tetrahedral complexes possess 4 of these compounds. For 10 points, name these compounds which bond to a central metal atom in a coordination complex.
ANSWER: **ligand**s [before the words "Racah parameter," accept **metallocene**s or **coordination complexe**s or **coordination compound**s, do not accept or prompt on them afterwards]

8. **In its first section, the author compares himself to naked people who think they wear purple clothes and those who suffer from the glass delusion. This book offers examples of a "myriagon" and a "chiliagon" to distinguish between imagination and pure intellect. It compares man to a clock made of faulty wheels and counter-weights to show that man can err from nature. Its opening letter states its author will use** (*) geometric methods to prove the existence of God. This work is framed as a series of writings on pure inquiry that each span a day, wherein the author takes a skeptical position, such as meditating on a piece of wax and suggesting the world around him was created by an evil genius. For 10 points, name this book by Descartes that expands upon his earlier *Discourse on Method*.
ANSWER: *Meditations* on First Philosophy

9. **At the conclusion of one of his works, this author predicted "Yet, I'll be borne, the finer part of me, above the stars." One of his elegies is addressed to a parrot that he gave to his mistress Corinna. This author wrote an epic which describes how the shape-shifting Vertumnus woos Pomona. He authored a fragmentary poem on** (*) religion whose structure is derived from the Roman calendar. This author wrote about his stay in the town of Tomis in collections such as *Tristia* and *Epistulae ex Ponto* after he was exiled from Rome. This author of *Amores* wrote a satirical 15-book epic poem which describes the apotheosis of Romulus as well as how Arachne turned into a spider. For 10 points, name this Roman poet who authored the *Metamorphoses*.
ANSWER: **Ovid** [or Publius **Ovid**ius Naso]

10. **After this artist challenged an attributed painting to Correggio that was actually by Francesco Furini, he was inspired to paint** *Sigismunda*. **His portrait of Captain Coram was painted for the Foundling Hospital its subject founded. This artist's painting** *Night* **depicts a magistrate who has the contents of a chamber pot**

emptied over him. **This artist of *The Four Times of the Day* included his dog Trump and an S-shaped (*)** "line of beauty" on a palette in his self-portrait *The Painter and his Pug*. Another of his artistic subjects is depicted dumping his pregnant fiancée Sarah Young and has his watch stolen by syphilis infected whores before he goes to Fleet debtor's prison and ends up in an insane asylum. For 10 points, name this satirist who depicted seedy London life in *A Harlot's Progress* and *A Rake's Progress*.
ANSWER: William **Hogarth**

11. **Treating myoblasts with PRDM16 can cause them to turn into one form of this tissue. When this tissue is enzymatically digested and then centrifuged, the pellet formed at the bottom is a rich source of various stem cells called the stromal vascular fraction. The mitochondria in one type of this tissue can generate heat without shivering through the use of (*)** thermogenin. Leptin is primarily derived from this tissue, which when surrounding the organs is called visceral and serves as padding. This tissue exists in brown and white forms, and excess amounts of this tissue increase risk of diabetes and heart disease. For 10 points identify this type of tissue which the body uses to store energy as lipids.
ANSWER: **adipose** tissue [Accept anything along the lines of **fat** cells or **adipocyte**s. Accept brown **adipose** tissue]

12. **In a book about this activity, Bryan Caplan argued that "rational irrationality" underlies the biases inherent in it. Simpson and Kramer devised a form of this activity based on the minimax theorem, which unfortunately violates the criterion of reversal symmetry. Michael Dummett introduced a system for this activity that incorporates the Droop quota. The (*)** Gibbard-Satterthwaite theorem governs this activity. Political philosopher Jean-Charles de Borda created a scheme for this activity, which may still produce a result named for Condorcet. Criteria such as non-dictatorship and independence of irrelevant alternatives are requirements for Arrow's impossibility theorem, which applies to this activity. For 10 points, name this activity, which involves approving laws or electing a public official.
ANSWER: **voting** [prompt on "creating laws."]

13. **Aldus Manutius founded a print shop in this city where he published new editions of Greek and Latin Classics. One leader of this city introduced the *grosso,* or "Matapan" silver coin. Membership in this city's Great Council was restricted to an elite group of aristocrats in the "Closing" of 1297. This city owned Crete from the thirteenth century until the loss of the (*)** Cretan War to the Ottomans. In order to combat this city, Pope Julius II forged the League of Cambrai. This city's massive navy was largely built at its namesake "Arsenal," and it was once led by Enrico Dandolo, who supplied many ships to carry out the Fourth Crusade. For 10 points, name this Italian city led by *doges* and home to many canals.
ANSWER: **Venice** [or **Venezia**]

14. **This character once threatened to burn the hair off of a close friend while in school, and she constantly makes reference to a "crown of vine leaves" in another character's hair. She annoys her aunt at the beginning of the work by suggesting that her hat actually belonged to a lowly servant. As the work begins, this woman has just returned from a six (*)** month long honeymoon during which her husband spent most of the time reading to write a book on handicraft in Brabant during the Middle Ages. This heroine plays the piano frantically before using one of her father's pistols to kill herself. Before that, Judge Brack blackmails her into submission when he deduces that she burned Eilert Loevborg's manuscript. For 10 points, name this title woman of a play by Henrik Ibsen.
ANSWER: **Hedda** **Gabler** [or **Hedda** **Tessman**]

15. **Owen Jander wrote a book-length study of the fourth of these works, investigating the possibility that it was programmatic. The second movement of that work was compared to Orpheus taming the Furies, and Claudio Arrau recorded a complete cycle of these works with the Staatskapelle Dresden and Sir Colin Davis in 1984 and 1987. The last of these works was premiered by (*)** Friedrich Schneider, and the fourth was the first

in its genre ever to open with the soloist playing unaccompanied. The fifth and last of these works is in E-flat major and opens with a cadenza punctuated by three *tutti* chords from the orchestra, and was dedicated to Archduke Rudolf. For 10 points, name these five works for a soloist and orchestra, the fifth of which is called the 'Emperor.'
ANSWER: **piano concertos** of Ludwig van **Beethoven**

16. **He didn't secure the VP nomination at the convention, but this politician placed second to John Bell as the Constitutional Union's nominee for president in 1860. At age 16, he ran away from home, staying with a Cherokee tribe led by Ahuludegi. He hired Francis Scott Key to represent him after thrashing William (*)** Stanbery with his cane. This governor of Tennessee and political protégé of Andrew Jackson commanded the winning forces at a battle that had benefitted from the burning of Vince's Bridge and a gift from Cincinnati, the Twin Sister cannons. In his most famous post, he was succeeded by Mirabeau Lamar. For 10 points, name this first President of the Republic of Texas, the victor at San Jacinto who names the largest city in Texas.
ANSWER: Sam **Houston**

17. **One story by this author opens by commenting on the belief of metempsychosis in Hungary and concludes with Baron Frederick riding a fiery horse into a burning castle. One of his narrators tries to keep the writer Ernest in a mesmeric state while near the point of death, only for his body to liquefy after several months. A different story by this author describes eight men who are dressed up as orangutans that are burnt alive by the vindictive title dwarf. This author of (*)** "Metzengerstein" and "Hop-frog" created a narrator whose house burns down after he uses a knife to gouge the eye out of Pluto, the title creature. In another of his stories, Fortunato is trapped behind a row of stones by the narrator Montresor. For 10 points, name this author of "The Black Cat," and "The Cask of Amontillado."
ANSWER: Edgar Allan **Poe**

18. **Leonard Grace and Leroy Cannon were executed in this country for attempting to blow up the ship *Diamante*. This country signed the Bryan-Chamorro treaty with the United States during the presidency of Adolfo Diaz. It's not Spain, but following independence, this country entered a civil war between a conservative faction in the city of Granada and a liberal one in Leon. The Leon faction hired the (*)** American filibuster William Walker, who quickly usurped power as president of this country. This country's ruling Somoza family was forced to cede power in 1979, and another faction in this country was secretly funded by the US using arms sales to Iran. For 10 points, name this home country of Daniel Ortega's Sandinista party and its longtime enemy the Contras.
ANSWER: **Nicaragua**

19. **A resonant form of this phenomenon generates a quasi-local state in which a certain quantity is equal to 1 when the total energy equals the bound-state energy. One formalism describing this phenomenon produces a solution equal to a constant times momentum raised to the minus one-half power times the exponential of i over h-bar times the position integral of momentum. That formalism uses an Airy function to patch together two solutions at a turning point. Binnig and Rohrer developed a device that uses this phenomenon and a (*)** scanning probe to perform nanoimaging. This phenomenon is associated with a transition from oscillatory to exponential solutions of the Schrödinger equation. For 10 points, name this process in which a particle passes through a classically forbidden region, crossing a potential barrier higher than its total energy.
ANSWER: quantum **tunneling** [in case anyone is curious: the formalism is the WKB approximation and the device is the scanning tunneling microscope]

20. **In one story, a barbarian king seeks this item out by cutting out the heart of a man who is so brave that his heart doesn't quaver with fear. This item is sought by King Atli from Hogni, though it originally belonged to a creature that died after a man dug a pit and hid in the hole so that he could avoid its blood. A body that is stuffed with this material is given to (*)** Hreidmar after Loki mistook Otr for an otter. A story involving the god Ran lead the phrase "brightness of the sea" to be a kenning for this substance. Draupnir is an item that is made of it, as is the bristles of the boar Gullinbursti. For 10 points, name this treasure that comprises Sif's hair, hordes of which are guarded by the dragon Fafnir.
ANSWER: **gold** [Accept **treasure of Fafnir** or the **gold of Fafnir**]

21. **The integration of this equation typically assumes the temperature-independence of a quantity whose temperature dependence can be given by the Watson correlation. One empirical alternative to this equation is the Riedel equation. It's not the Gibbs-Duhem, but this equation can be derived by taking the definition of the differential of Gibbs free energy and noting that the Gibbs free energy does not change. That derivation eventually sets the change in entropy divided by the change in (*)** volume equal to the derivative of pressure with respect to temperature. The final form of this equation sets the natural log of the pressure equal to minus the change in enthalpy divided by RT plus a constant. For 10 points, name this equation which gives the slope of a coexistence curve on a phase diagram.
ANSWER: **Clausius-Clapeyron** equation

1. This process is a series of redox reactions between cytochromes, Rieske proteins, and other molecules, which generates a "proton motive force." For 10 points each:
[10] Name this process which is coupled with ATP synthase in oxidative phosphorylation to produce many molecules of ATP.
ANSWER: **electron transport chain** [or **ETC**]
[10] During this process, which occurs at complex III of the electron transport chain, ubiquinol is oxidized to ubiquinone, which is then reduced back to ubiquinol. The electron flow is used to cause a net movement of protons across the mitochondrial membrane.
ANSWER: **Q cycle**
[10] Each turn of the Q-cycle increases the proton gradient by this many protons. Glycolysis results in the net production of this many molecules of NADH.
ANSWER: **2**

2. In honor of the end of *Breaking Bad*, demonstrate your knowledge of Albuquerque and New Mexico. For 10 points each:
[10] Albuquerque lies on this River, which travels into Mexico before meandering north again to form most of the Texas-Mexico border.
ANSWER: **Rio Grande** [or **Big River**]
[10] Between the Pecos and Rio Grande in southern New Mexico, the United States military maintains this giant missile test range, which includes the site where Trinity was detonated.
ANSWER: **White Sands** Missile Range
[10] At the time the Trinity test was performed, it took place on a bombing range named for this nearby city. In 1983, a mass burial of Atari video game consoles and cartridges took place here.
ANSWER: **Alamogordo**

3. This man oversaw the insurgency of the Viet Cong while in hiding. For 10 points each:
[10] Name this Vietnamese diplomat who held secret talks with Henry Kissinger to forge a ceasefire agreement there, culminating in the Paris Peace Accords.
ANSWER: **Le** Duc **Tho** [accept either, or **Phan** Din Kai]
[10] Le Duc Tho co-founded an early Communist party in Vietnam while it was still known by this colonial name. This colony was divided into the protectorates of Annam, Tonkin, and Cochinchina.
ANSWER: **French Indochina**
[10] Although it was a French colony, Annam was still ruled in name by this last emperor of the Nguyen dynasty, who was forced to abdicate after the Japanese surrender in 1945.
ANSWER: **Bao Dai**

4. In some traditions, this group of deities also included Thelxinoe, the charmer of minds. For 10 points each:
[10] Name these nine virgin goddesses of the Arts.
ANSWER: the **Muses**
[10] This muse is the goddess of history. She has a son named Hyacinthus, who bloomed into a flower that bore his name after a discuss killed him.
ANSWER: **Clio**
[10] Although some sources state it was Mt. Parnassus, the Muses made this mountain their home. Its fountain of Hippocrene was created by Pegasus, who kicked up some of its dirt and inadvertently created a well.
ANSWER: **Helicon**

5. This character is shot by Mr. Doyle in the last pages of the novel in which he appears. For 10 points each:
[10] Name this newspaper advice columnist who feels religiously troubled by the desperate New Yorkers that he writes about.
ANSWER: **Miss Lonelyhearts**
[10] Miss Lonelyhearts was created by this author of *The Day of the Locust*.
ANSWER: Nathanael **West**
[10] Miss Lonelyhearts has an affair with Mrs. Doyle, as well as this character's wife. This character is the editor of Miss Lonelyhearts and often makes fun of him while drinking at Delehanty's.
ANSWER: **Shrike**

6. This phenomenon is characterized by an additional root-mean-square current equal to the square root of two times the electron charge times the mean current times the bandwidth. For 10 points each:
[10] Name this process in which the discrete nature of charge causes the current in an electrical component to fluctuate.
ANSWER: **shot noise** [prompt on "noise" and "white noise," but not any other type of noise!]
[10] Shot noise is a type of white noise, in which this quantity has a flat spectral density. Irradiance and intensity are equal to this quantity divided by area.
ANSWER: **power**
[10] In flicker noise, the power spectral density falls off as one over this quantity. The energy of a photon is equal to Planck's constant times this quantity.
ANSWER: **frequency**

7. Name these 20th-century choreographers, for 10 points each:
[10] This "mother of modern dance" stripped away the smoothness of ballet and incorporated more violent, explicit movements into her dances. A frequent collaborator of Isamu Noguchi, she choreographed *Appalachian Spring*.
ANSWER: Martha **Graham**
[10] After working with Diaghilev at the Ballet Russes, this Georgian-born dancer co-founded the New York City Ballet, where he choreographed works like Stravinsky's *Agon* and pioneered a sleeker, 'neoclassical' form of ballet.
ANSWER: George **Balanchine**
[10] This other alumnus of the Ballet Russes choreographed ballets like Stravinsky's *Pulcinella* and de Falla's *The Three Cornered Hat*, both of which featured sets designed by Picasso.
ANSWER: Léonide **Massine**

8. This period began with a rebellion by the Cossack leader Bogdan Khmelnitsky. For 10 points each:
[10] Identify this period which fell during the reign of King John II Casimir, which was marked by incursions into that man's country by Charles X of Sweden.
ANSWER: the **Deluge** [accept **Potop**]
[10] The Deluge marked the beginning of the decline of this country, which formed a commonwealth with Lithuania and was once ruled by the Jagiellonian dynasty.
ANSWER: **Poland**
[10] Historians have sometimes blamed the Deluge on this Polish legislature, which often tried to maintain its own power by electing weak kings at the expense of the country as a whole.
ANSWER: **Sejm**

9. At the end, you, the reader, exclaim "Just a moment, I've almost finished" *this book*. For 10 points each:
[10] Name this meta-novel centering on Ludmila and the reader, who discover that their copy of the book is corrupted. It is largely told in the second-person.
ANSWER: *If on a Winter's Night a Traveler* [or *Se una notte d'invierno un viaggiatore*]
[10] *If on a Winter's Night a Traveler* was written by this Cuban-born Italian author, who wrote about long discussions between Marco Polo and Kublai Khan in *Invisible Cities*.
ANSWER: Italo **Calvino**
[10] In this Calvino novella, often published alongside *The Cloven Viscount*, the title character is the perfectionist Agilulf, whose body is a suit of armor. Agilulf is destroyed when his colleagues deny his deeds.
ANSWER: *The **Nonexistent Knight*** [or *Il **Cavaliere inesistente***]

10. For 10 points each, answer the following about governors of California.
[10] This governor of California once presided over the Screen Actors Guild. He was president from 1981-1989.
ANSWER: Ronald **Reagan**
[10] It was said that Charles Evans Hughes lost this election "by a handshake," referring to his snub of California governor Hiram Johnson. The incumbent in this election, a former President of Princeton, ran with Thomas Marshall.
ANSWER: **1916**
[10] Nixon stated "they won't have Dick Nixon to kick around anymore" after he lost a gubernatorial election to this man. While running against Reagan, he reminded a bunch of kids that John Wilkes Booth was also an actor.
ANSWER: Pat **Brown** [or Edmund Gerald **Brown**]

11. Artworks representative of this movement include Frantisek Kupka's *The Disks of Newton*: Study for a Fugue in Two Colors. For 10 points each:
[10] Name this art movement exemplified by Robert Delaunay's *Simultaneous Contrasts: Sun and Moon*. It takes its name from an ancient mythological figure and is known for incorporating color into angular shapes.
ANSWER: **Orphism**
[10] Orphism combines this movement, pioneered by Braque and Picasso, with bursts of color. The analytic phase of this movement deconstructed the world into various basic geometric shapes.
ANSWER: **cubism**
[10] This artist's own personal take on cubism can be seen in his *Homage to Pablo Picasso*, which incorporates shadows into the geometry. His *Still-Life and Townscape* integrates newspaper text into the painting.
ANSWER: Juan **Gris**

12. One of his essays takes its title from a speech given by Isabella to Angelo in *Measure for Measure* and attempts to delineate the differences between a psychical and physical properties of an object. For 10 points each:
[10] Name this American pragmatist who wrote "Man's Glassy Essence" and who published many articles in *The Monist*. As a statistician, he introduced the term "likelihood functions."
ANSWER: Charles Sanders **Peirce**
[10] This essay by C.S. Peirce discusses four various modes of acquiring knowledge. It compares the method of tenacity with an ostrich who has buried his head in the sand.
ANSWER: "The **Fixation of Belief**"
[10] Peirce's namesake law is actually an extension of this other law of logic, which states that either a law is true or its negation is.
ANSWER: law of the **excluded middle**

13. Applying this operation to 1 yields the result 1/s. For 10 points each:
[10] Name this mathematical operation which can transform differential equations into algebraic equations. It converts a function expressed in the time domain into its moments.
ANSWER: **Laplace** transform
[10] While the Laplace transform is useful for dealing with continuous signals, the z-transform is more commonly used on signals with this property, which is contrasted with continuity.
ANSWER: **discrete**ness
[10] In working up to the general technique of his namesake transform, Laplace applied a Mellin integral to this type of equation in an attempt to find a general solution for it. These equations can be solved by unrolling or by applying a z-transform .
ANSWER: **difference** equation [accept "**recurrence** relation." Do not accept any other answers.]

14. This novel opens with a battle between the villages of Umuraro and Okperi. For 10 points each:
[10] Name this novel in which the fellow villagers of Umuraro abandon their priest Ezeula after a famine and convert to Christianity.
ANSWER: *Arrow of God*
[10] *Arrow of God* is a work of this Nigerian author, who also wrote about Okonkwo's attempt to escape the shameful reputation of his father and prove his manliness in *Things Fall Apart*.
ANSWER: Chinua **Achebe**
[10] In *Things Fall Apart*, Okonkwo becomes the guardian of this character, who is taken a prisoner by the people of Umofia as a peace settlement with another village. He is later killed by Okonkwo because The Oracle of the village demanded it.
ANSWER: **Ikemefuna**

15. Name these early Christian thinkers, for 10 points each:
[10] This bishop converted to Christianity after meeting with St. Ambrose. After Rome was sacked, he wrote his philosophic masterwork, *City of God*.
ANSWER: St. **Augustine** of Hippo
[10] This Alexandrian was the chief opponent of the Arian heresy. At the First Council of Nicaea, he affirmed that the Father and the Word were of one and the same substance, and his thought was incorporated into the Nicene Creed.
ANSWER: **Athanasius**
[10] This earlier Alexandrian prefigured the Arians by subordinating the Son to the Father. He argued for the pre-existence of souls and analyzed various translations of the Old Testament in his *Hexapla*.
ANSWER: **Origen**

16. Johann Friedrich Blumenbach posited five types of this concept. For 10 points each:
[10] Identify this concept which divides humans into groups like Caucasoid, Mongoloid, and Negroid.
ANSWER: **race**
[10] This anthropologist argued that race and character are not interlinked in the first part of his treatise *Race, Language and Culture*. His other books include a study of culture's art around the world entitled *Primitive Art*.
ANSWER: Franz **Boas**
[10] This Nordic polymath argued that the human race could be divided into seven categories, such as *Americanus, Europaeus, Asiaticus, Afer, Ferus, Troglodytes,* and *Monstrous* in his book *System of Nature*.
ANSWER: Karl (Carolus) **Linnaeus** or Carl von **Linne**

17. For a non-ideal solution, this law can be modified by multiplying one of the sides of the equation by an activity coefficient. For 10 points each:
[10] Name this law which states that the vapor pressure of an ideal solution is equal to the sum over all components of the vapor pressure of the component times the mole fraction of the component.
ANSWER: **Raoult**'s Law
[10] Debye-Hückel theory can be used to predict the activity coefficient for an electrolyte solution with this property. Henry's Law only applies to an ideal solution with this property.
ANSWER: sufficiently **dilute** [prompt on "low concentration" or similar answers]
[10] The Margules and van Laar equations relate the activity coefficient to the "excess" form of this quantity. The change in this quantity for ideal mixing equals the product of the total number of moles, the gas constant, temperature, and the sum over all components of the mole fraction times the natural log of the mole fraction.
ANSWER: excess **Gibbs free energy** [prompt on "G," prompt on "free energy"]

Note to moderator: do NOT read the alternate answer to the first part.
18. The second movement of this piece quotes a Jewish theme from the composer's second piano trio. For 10 points each:
[10] Identify this C-minor chamber piece whose five movements are all played *attaca*. It was written over the course of three days while the composer was staying in Dresden to write the score for the film "Five Days - Five Nights."
ANSWER: **String Quartet No. 8** [or equivalents. Again, don't reveal it, but also accept **Shostakovich's 8th string quartet** or equivalents.]
[10] That eighth string quartet was one of 15 written by this Soviet composer, who represented himself using the 'D-S-C-H' cryptogram. He also composed the *Leningrad Symphony*.
ANSWER: Dmitri **Shostakovich**
[10] Shostakovich's 13th symphony is based on a poem by Yevgeny Yevtushenko about a massacre of Jews at this ravine outside Kiev.
ANSWER: **Babi Yar**

19. He included many poems called "Willowwood" in his collection *The House of Life*. For 10 points each:
[10] Name this author, who wrote about a woman with "five sweet symphonies" named Cecily, Gertrude, Magdalen, Margaret and Rosalys in a poem that describes how the title figure "leaned out from the gold bar of heaven."
ANSWER: Dante Gabriel **Rossetti**
[10] Rossetti's *The House of Life* is one of these works, which is a collection of namesake fourteen line poems arranged in a specific order. Other examples include a group of poems by Shakespeare and *Astrophil and Stella*.
ANSWER: **sonnet sequence** [Do not prompt on "sonnets" alone.]
[10] This other author wrote a celebrated sonnet sequence that begins "By this he knew she wept with waking eyes." In addition to *Modern Love*, he wrote the novel *The Egoist*.
ANSWER: George **Meredith**

20. The speaker of these words told a friend "They will hear me over there, it will make waves!" For 10 points each:
[10] Identify this controversial four-word phrase spoken at Expo 67. It was seen by many as a statement in support of a radical separatist movement.
ANSWER: "**Vive le Québec libre!**" [accept "**Long live free Québec!**"]
[10] The phrase "Vive le Québec libre" was uttered during a visit to Montreal by this President of France, who had previously led the Free French Forces during WWII, and came out of retirement to found the Fifth Republic.
ANSWER: Charles **de Gaulle**
[10] Three years after the expo, the FLQ took De Gaulle's message to an extreme and kidnapped British trade commissioner James Cross. Pierre Trudeau responded by invoking this controversial statute, allowing the government to suspend certain civil liberties and detain civilians.
ANSWER: **War Measures** Act