Western Invitational Tournament 2013
Packet by George Mason (Neeraj Vijay, Ben Cole, Zach Foster, David Dorsey, Riley May), Sheffield A (Jonathan Elliott, Matthew Priest, Alex Ross, Adam Steiger), and Chicago C (Ben Gammage, Tracy Lee, Kay Li, Connie Prater)

Tossups

1. **In one work by this philosopher, the Tahitian Orou discusses the role of the "all-knowing craftsman" with a chaplain who eventually sleeps with Orou's 18 year-old daughter. This philosopher wrote a series of dialogues to a Milanese noble over the definition of "bread" and "famine" and how it relates to the role of "female advisors." This philosopher wrote a work in which two patrons of the (*)** Café de la Regence discuss Jean Bossuet's moralist mindset. This philosopher's most famous work was influenced by Ephraim Chambers' work of the same name and featured sections on every art and science in the world. For 10 points, identify this 18th century philosopher who wrote *Rameau's Nephew* and collaborated with D'Alembert to write *L' Encyclopedie*.
ANSWER: Denis **Diderot**

2. **John Damrell became this city's Inspector of Buildings following an 1872 event in which much of its financial district was destroyed in a fire. On 15 January 1919, twenty-one people were crushed to death or died of asphyxiation in its North End after a (*)** storage tank burst and an immense wave of molasses rushed through the streets. A much earlier incident in this city saw five people shot dead outside its custom house, including the black merchant seaman Crispus Attucks. Five years after that event, British troops were defeated in a battle that took place primarily on and around Breed's Hill, located near this city. For 10 points, name this city, the home of John Hancock and Paul Revere, where tea was dumped into the harbour in 1773.
ANSWER: **Boston**, Massachusetts

3. **Louis Couperin wrote fourteen of this type of composition, which are to be played sans mesure. Another work of this type is played entirely in the whole tone scale but briefly switches to the pentatonic; that work, like others in the same collection, has its title "Voiles" placed at the end of the piece. Another composition of this type repeats an (*)** A flat through the middle section. Debussy wrote two books of them, including the "Girl with the Flaxen Hair." Chopin wrote 24 of these works, including one nicknamed "Raindrop." A famous piece of this type begins with the notes A-G sharp-C sharp; that work by Rachmaninoff is in C sharp minor. For 10 points, name this type of composition, whose name suggests that they are played before another piece.
ANSWER: **prelude**s

4. **During the rule of this politician, a strike resulting from the rationing of milk in his country led to the execution of a communist lawyer and a labor activist. This man espoused a philosophy he called Univerism. This man was appointed Commander of the Order of the British Empire for his humanitarian works, which included a stint in the Ukraine trying to help alleviate a famine there in 1921 undertaken at the behest of mountain climbing-humanitarian (*)** Fridtjof Nansen. This head of the Nasjonal Samling political party overthrew the government of Hakkon VII, whose government would order his execution at Akershus Forterss after coming back to power. For 10 points, name this infamous traitor who ruled Norway during World War II.
ANSWER: Vidkun **Quisling**

5. **A multilinear map from any space has a corresponding unique linear map from the corresponding space containing these objects, by a universal property. The force per unit volume from a charge distribution equals the difference between the divergence of one of these objects and time-derivative of the Poynting vector, and that example is named for Maxwell. When these objects are composed of both (*)** vectors and covectors, they have contravariant and covariant orders, represented by lowered and raised indices. Another object of this type gives the flux of the 4-momentum, and is symmetric with rank 2, like the moment of inertia type of this object. For 10 points, name these objects often described as multidimensional arrays.
ANSWER: **tensor**s [or **tensor product**; or **stress tensor**]

6. **This man married his late father's wife Tadukhipa, whose father Tushratta complained about her position. During this man's reign the Hwt Benben and Rud-menu temples were built. Nicholas Reeves has argued that**

this man ruled alongside his father for 12 years before his father's death. This man's tomb was discovered by Edward Ayrton in 1907 and was labeled KV55. A shrine in his tomb is dedicated to his mother Tiye, and the coffin within was intended for his wife Kiya. A famous statue of this man's (*) wife can be found in Berlin's Altes Museum. The reign of this pharaoh and his chief consort Nefertiti saw the monotheistic worship of the sun god Aten. For 10 points, name this Egyptian pharaoh, who ruled from the newly established capital at Amarna.
ANSWER: **Akhenaton** [or **Amenhotep IV**; prompt on **Amenhotep**]

7. **Jacques-Louis David depicted this man on the left of a painting that shows a naked woman sitting on a bed in _Apelles Painting Campaspe in the Presence of [This Figure]_. A painting by Eugene Delacroix shows this man along with an advisor picking out Homer's epics as a treasure. A more famous painting depicting this man shows a moon on the top left while a sun occupies the top right. In that painting, a giant (*) scroll in Latin flies** over the top of the soldiers fighting on the ground. In a famous mosaic, this man is looking towards his enemy in a yellow headdress on the right. For 10 points, identify this historical personage that Albrecht Altdorfer depicted fighting against Darius III in the _Battle of Issus_.
ANSWER: **Alexander** the Great [or **Alexander III** of Macedon]

8. **The density and volume of these structures can be measured and trapped on melinex tape in an instrument known as a Burkard Sampler. One specific type of these objects can only be fully observed by combining water, iodine, and potassium iodine into Melzer's Reagent. Another specific type of these structures prevents the entrance of conidia via a protective sheath known as the (*)** ascus. The "resting" ones are produced through meiosis and can survive harsh temperatures through a thick cell wall. In alternation of generations, these structures grow into a gametophyte after being formed by meiosis. For 10 points, identify these reproductive structures used by ferns and fungi, which are asexually reproducing, unlike seeds.
ANSWER: **spore**s

9. **The leader of this event was arrested after a related event during Bigod's Rebellion, although he himself did not authorize it. After this event, the Statute of Uses was suspended in favor of the Statute of Wills, and several of the sacraments were returned to the Bishop's Book. At Scawsby Leys, Thomas Howard and George (*)** Talbot were sent to negotiate with this event's leader, who brought with him a group of over 30,000 people. During this event, a group of 9,000 followers entered and occupied York. The leader of this rising was hung at York Castle. For 10 points, Robert Aske led what rising in protest of Henry VIII's Dissolution of the Monasteries?
ANSWER: **Pilgrimage of Grace**

10. **A character in one novel by this author collects stamps with Kappie and is implicated for a crime by a seashell planted in his pocket. In that novel, the central character beheads a woman he had impregnated, hoping in vain to avoid prosecution under the Immorality Act. This author wrote a novel in which Barbara Smith's servant is sent to jail for brewing liquor and Mr. McLaren claims his countrymen will only improve if they find meaning in life. That novel by this author of (*)** _Too Late the Phalarope_ includes the monk Msimangu and a character who is put on trial for murdering Arthur Jarvis, Absalom. For 10 points, name this South African author who wrote about the Kumalo family in _Cry, the Beloved Country_.
ANSWER: Alan **Paton**

11. **This scientist packed a calorimeter full of ice and observed that the combustion of carbon melted less ice than the body heat produced by a guinea pig. In another experiment, this scientist collected the same amount of carbon dioxide from a sample of carbon and a sample of diamonds, proving that they were one and the same. This chemist put together a short list of elements in his _Elementary Treatise on Chemistry_, considered to be the (*)** first modern chemistry textbook. This scientist went a step further than Joseph Priestley by showing that nothing new was produced after combustion, putting the final nail in the phlogiston theory. For 10 points, name this French "father of modern chemistry" who discovered the conservation of mass and named oxygen and hydrogen.
ANSWER: Antoine-Laurent de **Lavoisier**

12. **This man's discovery of pollen samples near crater lakes lent credence to the three-epoch model of the history of Easter Island, which he suggested was the original island to bear the name "rapa." This man was accused of racism after he visited the rock carvings at the Azerbaijani site of Gobustan and concluded that the Aesir originated from there. This man documented the success of a (*)** papyrus construction in his work _The_

Ra Expeditions. This man directed an Academy Award-winning documentary based on his most famous feat, which was named for the Incan sun god and sought to prove plausible contact between South America and Polynesia. For 10 points, name this Norwegian ethnologist who sailed thousands of miles on board his raft, the *Kontiki*.
ANSWER: Thor **Heyerdahl**

13. **This game introduced the long-running joke of whether a two sided ladder should be called a "ladder" or a "step-ladder." One character specializes in delivering lunches and is nicknamed the "Cough-Up Queen." In this game, you prove that a balloon that was being inflated by an air tank is the actual "Gourdy" in a part in which you use a metal detector to prove that a villain still had a (*)** bullet in his shoulder. This game, which has an additional fifth chapter for the DS remake, includes a wealthy character who makes up words like "fantabulistic" in order to seem smart, named Redd White, in its second case, in which *The Thinker* statue is again used as a murder weapon. For 10 points, name this Capcom game which introduced a lawyer who shouts "Objection!"
ANSWER: *__Phoenix Wright__: Ace Attorney*

14. **This poem evokes "grey walls… on which dull Time/Feeds, like slow fire upon a hoary brand." In this poem, such abstractions as "Desires and Adorations, Winged Persuasions and veiled Destinies, Splendours, and Glooms" are later joined by Chatterton, Lucan, and Sidney under "Rome's azure sky." The speaker of this poem abruptly says (*)** "Peace, peace," declaring that the title character "hath awakened from the dream of life." This poem, which invokes Aphrodite's aspect Urania to lead a procession of mourners, declares that "life, like a dome of many-coloured glass, Stains the white radiance of Eternity." It opens "I weep for" the title character – "he is dead." For 10 points, name this elegy for the late John Keats, written by Percy Shelley.
ANSWER: *__Adonais__: An Elegy on the Death of John Keats, Author of Endymion, Hyperion, etc.*

15. **According to Pausanias, this man fought a battle in which he killed Khorea and Ariadne, earning the ire of Dionysus. This man's life probably ended when Megapenthes killed him in revenge for the death of Proetus, an action that prompted this man to switch from ruling Argos to Tiryns. As a child, this man was saved on the island of Seriphos by (*)** Dictys. This man retrieved a wedding present for the supposed marriage of Hippodameia and Polydectes. After his return, he visited the funeral games of Teutamides, where his discus struck his grandfather Acrisius. This man's father impregnated his mother Danaë in the form of a golden shower. For 10 points, name this son of Zeus who married Andromeda and slew the gorgon Medusa.
ANSWER: **Perseus**

16. **An apocryphal book of the Tanakh, The Book of Jasher, states the judges Serak and Sharkad caused this event by erecting beds on top of rotting bodies. This event was preceded by the Apparition at Mamre. One figure at this event was told to "stay at a servant's house" where he could "wash his feet." That figure would later leave with a group of followers to the town of (*)** Zoar. Prior to this event, a crowd formed to rape two angelic guests disguised as travelers. One character attempted to find "ten good people" to prevent this event. Looking back at this event, an unnamed woman turned into a pillar of salt. For 10 points, identify this event from the Book of Genesis where Lot escaped from the "sulfur that engulfed two sinful cities."
ANSWER: Destruction of **Sodom** and **Gomorrah** [accept synonyms for destruction, prompt them if they only give one of the two cities]

17. **This character is asked by a wanderer in an alleyway about the "great disgrace of the age" and is singled out in an article of the *Egyptian Nights* newspaper. This man is confronted by a drunkard nicknamed "Gunpowder" because of his angry personality. He experiences a dream in which a young boy sees Mikolka kill a small (*)** horse. He describes a child who smashed his head on a sidewalk to his lover, with whom he argues about the raising of Lazarus in the New Testament. The perverted businessman Svidrigailov stalks this man's sister Dunya. Before his most notorious action, he tries to sell a silver cigarette box to an elderly pawnbroker. For 10 points, name this character who murders Alyona, the protagonist of Fyodor Dostoyevsky's *Crime and Punishment*.
ANSWER: **Rodion** **Romanovich** **Raskolnikov** [accept any underlined name]

18. **One of these properties for a commutative ring is given by the supremum of the length of chains of prime ideals. Another one of these is defined as the minimal value *x* such that every open cover admits a refining open cover with no point contained in more than *x* +1 sets. By using the Steinitz exchange lemma, the well-definedness of another one of these properties can be proven by (*)** swapping vectors between sets. For the

domain of a linear map, this property equals the sum of its value for the kernel and for the image, by the rank-nullity theorem. R^n is isomorphic to any real vector space with a value of n for this property, given by the size of a basis. For 10 points, give this property which for Euclidean space how many coordinates are needed to specify a point.
ANSWER: **dimension**

19. **In a novel by this author, the protagonist becomes so bored with life that he creates advertisements that read "Don't kill yourself, call" the title character, whose fortune is coveted by the lawyer Norman Mushari. Another novel by him follows a character who becomes a teacher at a prison run by the Japanese warden Hiroshi Matsumoto, and then becomes warden himself. Besides writing about Eugene in (*)** *Hocus Pocus* and Eliot in *God Bless You, Mr. Rosewater*, this man wrote a novel which combines the narrator's description of a Bokononism with the narrative of Felix Honikker, inventor of ice-9. For 10 points, name this author of *Cat's Cradle*, who created the "unstuck in time" Billy Pilgram for his novel *Slaughterhouse-Five*.
ANSWER: Kurt **Vonnegut**, Jr.

20. **This city's stock exchange building was converted in 1965 into the Centaur Theater. The largest island in the Hochelaga Archipelago shares its name with this city, which is the world's largest inland port. This city contains a green-domed basilica called Saint Joseph's Oratory. An unpopular stadium here includes the world's tallest inclined tower, but is only really used for the (*)** Alouettes after the departure of this city's baseball team. This city, which hosts the Just for Laughs festival, is the headquarters for Cirque du Soleil. This host city of the 1976 Olympics lies at the confluence of the Saint Lawrence and Ottawa Rivers and has a large bilingual population. For 10 points, name this Francophone Canadian city, the largest in Quebec.
ANSWER: **Montreal** [accept an unlikely buzz of **Hochelaga** until mentioned]

Tiebreakers

21. **A tall residential building designed by this architect is located on 8 Spruce Street. The Science Fiction Museum and Hall of Fame was added onto another building designed by this architect. With the Croatian architect Vlado Milunić, he designed a building that was originally called "Fred and Ginger." This architect designed a (*)** titanium-clad building on the Nervion River that was designed to look like a ship. For 10 points, name this Canadian-American architect of the Dancing House in Prague and the Experience Music Project in Seattle, whose trademark curved sheets of metal can be found in his Guggenheim Museum in Bilbao.
ANSWER: Frank Owen **Gehry** [or Frank Owen **Goldberg**]

22. **As n goes to infinity, the binomial coefficient *n* choose *nk* tends to 2 raised to *n* times the binary form of this quantity for *n*. One form of it is bounded above in Fano's inequality. This value for the input distribution determines the maximal efficiency of a randomness extractor. This quantity bounds the optimal code length in the source coding theorem. 1 minus the binary form of this quantity gives a binary symmetric channel's capacity, up to which reliable transmission is possible by the (*)** noisy-channel theorem. Given a discrete random variable X, taking negative 1 times the sum over all i of $p_i$log of p_i, where p_i is the probability X equals i, gives this quantity. For 10 points, name this measure of information content or randomness that comes in a Shannon form.
ANSWER: **entropy** [accept more specific answers]

Bonuses

1. Along with rosemary and myrtle, this object was used during the funerals of high-ranking officials in Athens. For 10 points each:
[10] Name this plant, which originated as a nymph that was pursued by Hades. That nymph was turned into this plant to be trampled upon, but Hades gave it the quality of smelling nice so that would not happen.
ANSWER: **mint** plant
[10] This goddess was jealous of her husband Hades' affair with Minthe. This woman became the queen of the Underworld and Goddess of Death after she ate a pomegranate.
ANSWER: **Persephone** [accept **Proserpina**]
[10] Diodorus Siculus and Aristobulus describe how mythical warriors alleviated their hunger by drinking this mixture of mint, cereal and water. This substance was also consumed by worshippers in the Eleusinian Mysteries.
ANSWER: **kykeon**

2. In a dream sequence, a reunion with this character is accompanied by the protagonist hearing the song lyrics "Under the spreading chestnut tree/I sold you and you sold me." For 10 points each:
[10] Name this sensuous character whose story, from the beginning of her affair with Winston until their capture and incarceration, is told in Book Two of a certain novel.
ANSWER: **Julia**
[10] Julia and Winston appear in this George Orwell novel, best known for phrases such as "FREEDOM IS SLAVERY" and "Big Brother is watching you."
ANSWER: *1984* [or *Nineteen Eighty-Four*]
[10] This seemingly nice old man, who runs a secondhand store where Winston and Julia carry out their affair, is actually a member of the Thought Police.
ANSWER: Mr. **Charrington**

3. Identify these Conservative politicians who served as Chancellor of the Exchequer, for 10 points each.
[10] Before becoming PM in 1923, this man served as Chancellor of the Exchequer in the ministry of Bonar Law following his move to pull conservative support from David Lloyd George. He was also PM two other times.
ANSWER: Stanley **Baldwin**
[10] This man held the post of Chancellor from 1983 to 1989, during which time his tax cuts brought about an eponymous boom in the British economy. One of his daughters is a celebrity chef.
ANSWER: Nigel **Lawson**
[10] As Chancellor under Stanley Baldwin between 1924 and 1929 this man oversaw Britain's disastrous return to the gold standard. He became Prime Minister eleven years later, serving during most of World War II.
ANSWER: Sir Winston Leonard Spencer-**Churchill**

4. Answer these bonus questions on a meteorological phenomenon, for 10 points each.
[10] This name is given to an intense, localised wind vortex with the appearance of a funnel shaped cloud. They are particularly prevalent in the midwestern United States.
ANSWER: **tornado** [or **twister**]
[10] The related supercell is characterized by the presence of this feature, a rotating updraft in the shape of a vortex.
ANSWER: **mesocyclone** [do not accept or prompt on "cyclone"]
[10] Since it is difficult to measure the speed of the wind in a tornado, their intensity is usually measured by this scale, which is defined in terms of the damage a tornado causes.
ANSWER: **Fujita**-Pearson Scale [or **F** scale]

5. One minor engagement shortly after this event resulted in one ruler incorporating the Elite Qing Tiger Infantry into his army. For 10 points each:
[10] Name this 184 AD event in which the Zhang brothers led a namesake apocalyptic Taoist sect against the Han imperial court. The Ten Regular Attendants later gained influence at the court after the conclusion of this event.
ANSWER: **Yellow Scarves'** Rebellion [or **Yellow Turban** Rebellion]
[10] This period emerged after the Yellow Turban Rebellion was crushed. This period, which included Zhuge Liang's Southern and Northern Campaigns, is chronicled in a "romance" that is one of China's Four Great Classics.
ANSWER: **Three Kingdoms** Period
[10] Zhuge Liang's armies constantly engaged in battle against this Prime Minister of Cao Pi in the Wei Kingdom. This victor at Wuzhang Plains laid the foundation for the Jin Dynasty which conquered all Three Kingdoms by 280.
ANSWER: **Sima Yi** [pronounced "sooma yi", but be lenient]

6. This man defended the castle of Kruja several times. For 10 points each:
[10] Name this former captain who defected from the services of the Ottoman Sultan to found the League of Lezhë (LEH-zhuh). He is known by a corruption of a Turkish title which translates into English as "Lord Alexander."
ANSWER: George Kastrioti **Skanderbeg** [or Gjergj Kastrioti **Skënderbeu**; or İskender **Bey**]
[10] Skanderbeg is regarded as a national hero in this modern-day European country, which in the twentieth century was ruled by the classic example of an insane communist dictator, Enver Hoxha. It's 80-90% Muslim.
ANSWER: Republic of **Albania** [or Republika e **Shqipërisë**; or **Shqipëri**a; or **Shqipni**a]
[10] Skanderbeg defected from the Ottoman Army at this battle in modern Serbia, where a crusader army under John Hunyadi defeated a much larger Ottoman force, destabilising Turkish dominance of the Balkans.
ANSWER: Battle of **Niš** (neesh)

7. Factors proposed to explain the existence of this phenomenon include access to specialized polling data, as well as the ability to assign pork-barrel spending favorable. For 10 points each:
[10] Name this idea for the built-in benefits of being a standing politician in an election against a challenger of lesser prominence. It explains the large retention rates of the House of Representatives in recent elections.
ANSWER: **incumbency advantage** [accept word forms, like **incumbents have an advantage**]
[10] One explanation for incumbency advantage is the ability of standing official to influence redistricting in politically slanted ways, a practice given this name after a Governor of Massachusetts who practiced it.
ANSWER: **gerrymandering** [accept word forms]
[10] Another explanation for incumbency advantage is this "privilege" granted to public officials, allowing them to communicate with constituents by mail without paying for postage.
ANSWER: **franking** privilege

8. Upon rereading the Warren Report, this character becomes extremely patriotic and tries to turn his neighbor in to Homeland Security, after discovering, to his shock, that the Warren Report actually made sense. For 10 points each:
[10] Name this conspiratorial neighbor of Hank Hill who also runs a bug extermination business in *King of the Hill*.
ANSWER: **Dale** Gribble [or **Rusty** Shakleford; prompt on **Gribble** or **Shakleford**]
[10] Dale's wife Nancy has an adulterous relationship with this Native American "licensed New Age healer," who is also the true father of Dale's quite obviously illegitimate son Joseph.
ANSWER: **John Redcorn** III [either name fine]
[10] *King of the Hill* was created by this man who also created *Beavis and Butt-head* and directed the movies *Office Space* and *Idiocracy*.
ANSWER: Michael "Mike" Craig **Judge**

9. In *A Prayer for Owen Meany*, Tabitha is inadvertently killed by Owen while he is participating in this activity. For 10 points each:
[10] Identify this sport which famously appears in a work featuring Roy Hobbs and Herman Youngberry. In that work, Roy uses his Wonderboy to perform at his peak potential in this sport.
ANSWER: playing **baseball**
[10] The aforementioned work, *The Natural*, is by this Jewish-American author of *A New Life*. This author also created the character Yakov Bok, who unwillingly participates in pogroms in the Ukraine in this author's *The Fixer*.
ANSWER: Bernard **Malamud**
[10] In *The Natural*, Roy is constantly insulted and belittled by this gambler and "Supreme Bookie". This character

owns the Pot of Fire nightclub, and claims he can tell how much money people have before meeting them.
ANSWER: **Gus** **Sands** [accept either]

10. One holder of this position formed a state militia to force a group of Democrat representatives to change their vote regarding the establishment of Fisk College. For 10 points each:
[10] Name this position that was held by Parson Brownlow, a vehement proponent of the Freedman's Bureau. Isham Harris also held this position, and wrote to Congress urging them to null Grant's General Order Number 11.
ANSWER: **Governor** of **Tennessee**
[10] The most famous individual who was Governor of Tennessee was also the Senator of Tennessee, and President of the United States. While president, this man violated the Office of Tenure Act, which led to his impeachment.
ANSWER: Andrew **Johnson**
[10] Governors Parson Brownlow and DeWitt Senter were both constantly harassed by this terrorist who massacred a regiment of black soldiers at the Battle of Fort Pillow. He was one of the founding members of the KKK.
ANSWER: Nathan Bedford **Forrest**

11. John Ruskin decried this painting for asking "two hundred guineas for flinging a pot of paint in the public's face." For 10 points each:
[10] Name this painting of a nighttime park scene of fireworks over Battersea Bridge.
ANSWER: *Nocturne in Black and Gold: The Falling Rocket*
[10] *Nocturne in Black and Gold* is one of this artist's many works illustrating his belief that black was the color of tonal harmony. He's better known for a portrait of his mother that is currently in the Musee d'Orsay.
ANSWER: James Abbott McNeil **Whistler**
[10] This Whistler painting was shown at the Salon des Refuses in Paris, but was shown-up by the more scandalous *Luncheon on the Grass*. It features his mistress Joanna Hiffernan standing on a wolf skin.
ANSWER: *Symphony in White, No. 1* [or *The **White Girl***; prompt on *Symphony in White*]

12. Since its initial value problem is well-posed up to the first derivative, it is hyperbolic. For 10 points each:
[10] Name this PDE. In one dimension, it sets the 2nd derivative of displacement with respect to time proportional to the 2nd derivative with respect to position.
ANSWER: **wave** equation
[10] Using a Fourier transform, a solution to the wave equation can be written in terms of these. They are sinusoidal motions of the whole system in phase and with a single frequency.
ANSWER: **normal modes** [or **eigenmodes**; or **harmonics**; prompt on **mode**s]
[10] d'Alembert's formula, the general solution for the one-dimensional wave equation, can be interpreted as two waves travelling in opposite directions with constant values for this quantity, given by frequency times wavelength.
ANSWER: phase **velocity** [or **speed**]

13. In this movement of a larger work, the clarinet reminds the artist of his beloved shortly before pizzicato strings are used to represent his head falling to the ground. For 10 points each:
[10] Name this movement, in which the artist imagines himself being guillotined.
ANSWER: "**March to the Scaffold**" [or "**Marche au supplice**"]
[10] "March to the Scaffold" is part of *Symphonie Fantastique*, a composition by this French composer. This composer's Requiem uses four brass bands.
ANSWER: Hector **Berlioz**
[10] This overture by Berlioz is often used as the prelude to the second act of the opera Benevenuto Cellini. It depicts fireworks at the Piazza Colonna before transitioning into a saltarello.
ANSWER: *Roman Carnival Overture* [or *Le **carnival romain**, overture caracteristique*]

14. There are highest occupied and lowest unoccupied types of these things. For 10 points each:
[10] Name these functions used to determine where electrons may be found. They are often approximated as the linear combinations of simpler, similarly-named functions denoted s, p, or d.
ANSWER: **molecular orbital**s [prompt on **MO**s; prompt on **orbital**s]
[10] Based on whether molecular orbitals change or remain the same under symmetry operations, compounds are placed into these categories. Examples of these categories include D infinity h and C3v.
ANSWER: **point group**s

[10] MO theory was pioneered by Mulliken and this other German scientist, best known for his rule stating that one electron must be placed in every subshell of an orbital before you can double up.
ANSWER: Friedrich Hermann **Hund**

15. This author's most recent novel portrays the mischief caused by Michael, Cassius, and Ramadhin aboard the *Oronsay*. For 10 points each:
[10] Name this author of *The Cat's Table*. A forensic pathologist finds a skeleton, which she uses to attempt to implicate the government in a murder case, in this author's novel *Anil's Ghost*.
ANSWER: Michael **Ondaatje**
[10] Ondaatje won a Booker Prize for this novel, whose title character, Almásy, recounts the events surrounding his affair with Katharine Clifton to Kip and Hana, a Canadian nurse.
ANSWER: The **English Patient**
[10] Ondaatje's novel *Divisadero* is named for a street in this city, where Claire works after her family separates. Vikram Seth's verse novel *The Golden Gate* is also set in this city.
ANSWER: **San Fran**cisco

16. Name these languages spoken in South Africa, for 10 points each.
[10] More than nine million South Africans speak this second most widely spoken language in the Bantu family, which shares its name with a kingdom once led by Shaka.
ANSWER: isi**Zulu**
[10] Click consonants are prominently used in this official South African language, spoken by seven million, whose very name is properly pronounced with an initial lateral alveolar click.
ANSWER: **Xhosa** [or **Xosa**; accept "**HOH-sa**", "**KOH-sa**", "**ZOH-sa**," or "**[click]-sa**" or any other reasonable pronunciation attempts]
[10] This fastest growing non-official language in South Africa contains many verb inflections, has nine vowels, and uses the 26 letters of the Latin alphabet plus five diacritics. A specific dialect of it is spoken in Goa.
ANSWER: **Portuguese** [or lingua **Portugues**a]

17. One character in this story has the ability to change into a lion and an elephant. For 10 points each:
[10] Name this Charles Perrault story about a character who works for the Marquis of Carabas by obtaining rare treasures for him. The title character stops chasing mice at the end of this story after encountering an ogre.
ANSWER: Le **Maistre Chat** [or **Puss in Boots**]
[10] *Le Maistre Chat* is a French story in this genre. Other stories in this genre include one about a girl nicknamed "Aschenputtel" in Cendrillion, and the Brothers Grimm were popular authors of this genre.
ANSWER: **fairy tale**s [or **folk tale**s]
[10] The title character of this bizarre, morose fairy tale by Hans Christian Andersen prevails over Babette by kissing Rudy, causing him to drown the night before his wedding.
ANSWER: "The **Ice-Maiden**" [or "**Iisjomfruen**"; accept reasonable translations like "The **Ice Girl**"]

18. Identify these bright stars, for 10 points each.
[10] This star is the brightest in the constellation Ursa Minor. Since it is extremely close to the north celestial pole, it remains roughly fixed throughout the night.
ANSWER: **Polaris** [prompt on **northern star**; prompt on **pole star**]
[10] This fifth brightest star in the night sky, and brightest in the summer triangle, was once defined by astronomers to have apparent magnitude zero in order to calibrate brightness scales.
ANSWER: **Vega** [or **Alpha Lyrae**]
[10] This alpha star of Piscis Austrinus was the first star to have an extrasolar planet imaged at visible wavelengths.
ANSWER: **Fomalhaut**

19. During the Renaissance an individual undergoing this procedure would earn the position of *postulare,* which often included the task of sweeping orphanage grounds. For 10 points each:
[10] Identify this process which sometimes involved an individual taking on the role of a *Girovagi*. One example a person who underwent it was Anthony of Thebes, who Athanasius wrote about in the 4th century
ANSWER: **Becoming** a **Monk** [accept clear equivalents such as **Entering** the **Monastic Order** or **Becoming** an **Ascetic**; or being **ordained**; or **ordination**]

[10] During the 12ᵗʰ century, St Damian's monastery was able to stay open thanks to the massive donations by this friar. This man had a vision of Christ in the form of a sick leper and is the patron saint of animals.
ANSWER: St **Francis** of Assisi
[10] The most prestigious monastery during the High Middle Ages was this gigantic French abbey. This monastery's foundation charter is one of the few remaining documents still extant regarding alms-giving to abbeys.
ANSWER: **Cluny** Abbey

20. Name some basic elements of Islamic architecture, for 10 points each.
[10] These are towers that appear in three sections, the base, shaft, and gallery. They are usually spire-like and have onion or conical tops.
ANSWER: **minaret**s
[10] This term refers to the intricate repetitions of geometric forms within patterns meant to imitate natural forms, such as foliage. It also refers to a ballet position in which the back leg is pointed behind the body.
ANSWER: **arabesque**s
[10] The Alhambra contains this style of ornamentation in its Hall of the Abencerrajes. It physically resembles honeycombs or stalactites.
ANSWER: **mocarabe** [accept **muqarnas**]

21. One philosopher that wrote extensively about these places stated they were at their strongest with "physical power". For 10 points each:
[10] Identify these places, which included the first "true" one at Cramford as described in the *Wealth of Nations*. That section on one of these places discusses how they cannot function if individuals think independently.
ANSWER: **factori**es [Accept **Pin factory**]
[10] A more radical excerpt on the function of factories was written by this 18ᵗʰ century French positivist. This man argued factories couldn't profit because of the complete lack of theocratic ideal in his *Nouveau Christianisme*.
ANSWER: Claude Henri **Rouvoy** [Accept Comte de **Saint-Simon**]
[10] This 20ᵗʰ century philosopher claimed that the factory was the most ideal state where "single individuals could double a boss" in his *Society of Control*. This philosopher created the "Body without Organs" idea.
ANSWER: Gilles **Deleuze**

22. Answer the following about avian anatomy, for 10 points each.
[10] This second part of a bird's stomach is used to grind food for digestion after it has been soaked in digestive fluids. A bird will often swallow stones or grit to aid in the functioning of this organ.
ANSWER: **gizzard** [or **gastric mill**; or **gigerium**; or **ventriculus**]
[10] At the other end, birds and many other species possess this orifice, which combines urinary, digestive and, in most birds, reproductive function.
ANSWER: **cloaca** [or **vent**]
[10] The lower vertebrae in birds are fused together to form this structure, which is closely bound to the pelvis. It is thought to provide greater stability for flight.
ANSWER: **synsacrum**