PACE Partnership for Academic Competition Excellence

Team									Team								
Player Names																	
Q#					Bonus	Steals	Ques. Total	Run. Score					Bonus	Steals	Ques. Total	Run. score
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
OT																	
Player 20s																	
Player 10s																	
Point totals																	
Final score																	

Substitutions before Tossup 11		Substitutions before Tossup 11	
Out:	In:	Out:	In:
Out:	In:	Out:	In:

Circle winning team above. Clearly mark if game goes to OT/SD. **Fill out "Point totals" row completely.**
If there are substitutions, please note tossups by each player in "20s" and "10s" rows. Below is for Tab Room use only:

RH	RS	BH	BS	Left	Right	BH	BS	RH	RS

PACE NSC 2016 - Round 17 - Tossups

1. This man's wife Isabel published a heavily redacted posthumous biography that played up his secret conversion to Catholicism. In *The City of the Saints*, this person detailed the Mormon marriage practices he observed on his journey to meet Brigham Young. This man collaborated with Forster Fitzgerald Arbuthnot on a controversial English translation of the *Ananga Ranga*. This man got desperately sick while his companion John Speke went blind before their visit to Lake (*) Tanganyika during an expedition to find the source of the Nile. This explorer published the *Kama Sutra* in English and translated *The Arabian Nights*. In 1853, he disguised himself to join a caravan on the hajj. For 10 points, name this British explorer who journeyed to Mecca.
ANSWER: Richard Francis **Burton** <Bentley>

2. A poem titled for this figure describes a friend's notched pencil and claims that this figure "sets a thing significant." Another poem ends by comparing a phenomenon to "the Distance on the look of" this figure. A poem titled for this figure notes that "The Dews drew quivering and chill" and describes a "School, where Children strove at Recess in the Ring." This figure "knew (*) no haste" in a poem in which "we paused before a House that seemed a swelling in the ground." In that poem titled for this figure, the speaker recalls the day she "surmised the Horses' Heads were toward Eternity" after entering this figure's carriage. For 10 points, name this abstract figure which the speaker "could not stop for" in an Emily Dickinson poem.
ANSWER: **Death** <Brownstein>

3. The artificial production of these proteins requires the use of EBV-immortalized cell lines sensitive to aminopterin (uh-MEEN-oh-tare-in). One kind of these proteins is produced by combining spleen cells and myeloma cells from mice. These proteins have additional diversity generated through the addition of N and P nucleotides during (*) VDJ recombination, and can undergo rounds of somatic mutation to increase their affinity. In Western blots, pairs of them are used to recognize proteins of interest. Plasma cells secrete these proteins into the serum, and they occur in five different isotypes that contain heavy and light chains. For 10 points, name these Y-shaped proteins expressed by B-cells that bind to antigens, which include IgG.
ANSWER: monoclonal **antibodies** [or **immunoglobulin** until "IgG" is mentioned] <Mukherjee>

4. This composer said he wrote "one bar at a time" for the *Adagio assai* movement for a jazz-influenced concerto in G. He called for the now-obscure luthéal piano attachment in a rhapsody written for the violinist Jelly d'Arányi. A solo originally written for valveless horn opens an extremely slow piece dedicated to the Princesse de Polignac by this composer. A sopranino (*) saxophone features in a piece by this composer inspired by Ida Rubinstein's commission to produce a ballet based on Albéniz's *Iberia.* In that piece by this composer of *Tzigane* and *Pavane for a Dead Princess,* instruments take turns carrying the melody over a snare drum ostinato. For 10 points, name this composer of *Boléro.*
ANSWER: Maurice **Ravel** [or Joseph Maurice **Ravel**] <Alston>

5. The homogeneous matrix that represents this operation has ones across the diagonals and zeros elsewhere, except for the right-most column, where non-zero values are used. Two linearly independent instances of this operation define the wallpaper group, which preserves this kind of symmetry under bijective affine transformations. In the 3D special Euclidean group, this is the only operation with three degrees of freedom that preserves (*) orientation. The constants of integration that result from computing an anti-derivative model vertical instances of this operation. In physics, this geometrical operation is equivalent to displacement. For 10 points, name this geometrical transformation in which a figure is moved without changing size or shape.
ANSWER: **translation** [accept word forms such as **translating** or **translates**; prompt on transformation] <Jose>

6. During this holiday, people greet each other with a phrase meaning "what is the news?" During this time, a mat is laid out to offer a firm foundation for the ceremonies, and the unity cup is used to offer libations to ancestors. On the final day of this holiday, children may open *zawadi*, handmade gifts from their parents. A central object of this holiday holds three red, one black, and three green items; those (*) candles symbolize this holiday's seven guiding principles, or Nguzo Saba, which include goal-setting, or *nia*, and a sense of unity, or *umoja*. This holiday's name is taken from a phrase meaning "first fruits of the harvest" in Swahili. For 10 points, name this year-end holiday created by Dr. Maulana Karenga in 1966 for African-American communities.
ANSWER: **Kwanzaa** <Aggarwal>

7. One member of this family runs a truck repair company in Phoenix called Valet Fleet Service. Another member of this family controversially claimed that African Americans in Las Vegas ended up in jail because "they never learned how to pick cotton." A group led by a member of this family included an individual nicknamed "Tarp Man," who was killed in a police (*) shootout. A member of this family is the head of the Citizens for Constitutional Freedom, a group which launched a protest on behalf of Dwight and Steve Hammond. An older member of this family got into a public dispute with the Bureau of Land Management in Nevada over grazing fees. For 10 points, name this family that includes Ammon, who occupied the Malheur National Wildlife Refuge in Oregon.
ANSWER: **Bundy** family <Bentley>

8. This non-European country's ancient artwork includes sculptures that are decorated with powdered quartz over a vitreous substance called "faience." A motif of this country's ancient art features names enclosed within an oval and a single horizontal line, called a cartouche. This country's funereal art includes small sculptures called *ushabti*, in which subjects were depicted with their arms folded across their chests. An artwork from this country called the "Younger (*) Memnon" depicts its subject wearing the *uraeus*, a cobra symbol on top of the crown. A bust of one of its female rulers was found at Amarna in 1912. Statues at Abu Simbel can be found in, for 10 points, what country whose art includes sarcophagi that have hieroglyphics inscribed on their covers?
ANSWER: Ancient **Egypt** <Jose>

9. A transcription of one of this author's poems written on a piece of paper soaked in tea comprises the first page of Anne Carson's novel *NOX*. The narrator of that poem by this writer reports that "Through many countries and over many seas I have come" to "these melancholy shores." One of Carl Orff's cantatas sets many of this writer's poems to music, including one beginning "Let us live and love." A short couplet by this author states "Why I do this, perhaps you ask? I do not know, but I feel it happening and I am tortured." This author of "I (*) love and I hate" addressed his brother's "silent ashes" in a poem ending "Hail and Farewell," which is a translation of the Latin phrase "Ave Atque Vale." For 10 points, name this Silver Age poet who addressed many of his works to Lesbia.
ANSWER: Gaius Valerius **Catullus** <Jose>

10. Claud Cockburn accused supporters of this policy of meeting as the "Cliveden Set" in Nancy Astor's mansion. After the failure of this policy, its chief promoter was told "in the name of God, go!" in a speech which Leo Amery gave during the "Norway Debate." The pamphlet *Guilty Men* savaged architects of this policy, including "the Umbrella Man" and Lord Halifax. Edvard Benes was not invited to a (*) meeting orchestrated as part of this policy which was attended by Edouard Daladier. This policy's most notable implementation was followed by a declaration of "peace for our time" and allowed the cession of the Sudetenland by the Munich Agreement. For 10 points, name this informal policy of Neville Chamberlain which involved giving into Germany's demands to avoid a war.
ANSWER: **appease**ment [accept word forms; prompt on being pro-German or pro-Hitler or pro-Nazi or similar answers] <Brownstein>

11. One book by this thinker closes with the image of a face being washed away by the waves of the sea to indicate the "death of man"; that book by this author investigates what disciplines and mindsets constitute the Renaissance, classical, and modern epistemes. This man presented the Victorian "repressive hypothesis" in *The Will to Knowledge*. He presented an (*) "archaeology of the human sciences" in a 1966 book which opens with an analysis of Diego Velazquez's painting *Las Meninas*. This author of *The Order of Things* wrote a work inspired by his time in a mental hospital which argues that "the Other" was increasingly viewed as mad during the Age of Reason. For 10 points, name this French philosopher, who wrote *The History of Sexuality* and *Madness and Civilization*.
ANSWER: Michel **Foucault** <Jose>

12. The absorption cross-section of these entities is inversely proportional to the square root of their energies in the "one over nu" region. The reproduction factor and the probability of these entities escaping resonance capture appear in the four-factor formula for their "multiplication factor." Whether these particles' energies are below 1 eV, between 1 eV and 10 keV, or above 10 keV determines whether they are "thermal," "epithermal," or (*) "fast." Graphite and heavy water-based "moderators" reduce the energies of these particles, three of which are produced when uranium reacts with one of them to form rubidium and cesium, thus causing a chain reaction. Nuclear fission reactions are induced by, for 10 points, what uncharged particles found in atomic nuclei?
ANSWER: **neutron**s <Busse>

13. Carl Hoffman's 2014 book *Savage Harvest* investigates rumors that an aspiring anthropologist from this family was devoured by cannibals in New Guinea. During the 1930s, this family financed a complex featuring Paul Manship's golden statue of Prometheus. A member of this family commissioned works depicting the frontiers of "ethical evolution" and "material" development before ordering the destruction of the mural (*) *Man at the Crossroads* because Diego Rivera had painted an image of Lenin. General Electric and NBC are both headquartered in this family's namesake "Center" in New York. A liberal Republican governor of New York from this family served as vice president to Gerald Ford. For 10 points, name this family that founded Standard Oil.
ANSWER: **Rockefeller** family <Wang>

14. Fritz Koenig's sculpture *The Sphere* was damaged during this event, and now serves as a tribute to those who died during it. The only time the SCATANA emergency protocol was used was when it was invoked as a response to this event, which caused Canada to institute Operation Yellow Ribbon. The day after this event, police raided the apartment of the so-called "Hamburg Cell" and found evidence that its members, such as (*) Ramzi bin al-Shaibah, planned it. Todd Beamer, who said "Let's roll" before he died in Stonycreek Township as a result of this plot, partially mitigated its damage by rerouting Flight 93. Mohammed Atta executed part of this attack, which partially targeted The Pentagon. For 10 points, what 2001 terrorist attack destroyed the World Trade Center?
ANSWER: **September 11** attacks [or **9/11** attacks or **2001 attacks on the World Trade Center** before "plot;" do not accept or prompt on it thereafter. Prompt on World Trade Center attack before "plot," do not accept or prompt on it thereafter] <Jose>

15. After this European country tried to force its colonial subjects to grow cotton, it faced a revolt led by the mystic Kinjikitile Ngwale, who claimed he could turn bullets into water. This colonial power faced the Maji Maji Rebellion in 1905, around the same time that its forces won the Battle of Waterberg in order to drive the Herero people into the desert. Before being passed to (*) Belgian rule, Rwanda was a colony of this country, which unsuccessfully challenged French influence by sending gunboats to Agadir and Tangiers in the two Moroccan Crises. All of its colonies, including modern-day Namibia and Tanzania, became League of Nations mandates after World War I. For 10 points, name this country that aggressively expanded its colonial empire under Wilhelm II.
ANSWER: **Germany** [or **German Empire**; accept **German Reich** or **Second Reich**] <Wang>

16. A piece of the island of Cos was broken off using one of these weapons so that it could be hurled at the monster Polybotes. This weapon was used to terrorize a satyr who had surprised the nymph Amymone. In the *Aeneid*, the trumpeter Misenus was killed for his impudence by a god who carried one of these weapons. In a contest judged by Cecrops, a figure used this weapon to create either a horse or a (*) wellspring, though Athena's olive tree was judged superior. This weapon was used by Nereus, father of the Nereids. Either the Telkhines or the Cyclopes created one of these weapons, while the owner of another also carried a conch shell that could calm the waves. For 10 points, name this three-pronged weapon wielded by Triton and Poseidon.
ANSWER: **trident** <Jose>

17. This unnamed character tells the story of a family who is banished when one of their members helps a Turkish merchant escape from prison. This character plants a portrait on a girl he finds sleeping in a barn in order to frame her for murder. This character discovers a trunk containing works by Plutarch and Milton while living outside a cottage inhabited by Felix, Agatha, and their blind father (*) de Lacey. This character strangles Elizabeth on her wedding night and kills Henry Clerval on a beach. At the end of the novel he appears in, this character weeps over the corpse of the title character aboard Robert Walton's ship in the arctic. For 10 points, identify this creation of "the Modern Prometheus," a creature built by Victor Frankenstein in a Mary Shelley novel.
ANSWER: Frankenstein's **monster** [or the **daemon**; or the **creature** before "creature" is read; do not accept or prompt on "Victor" or "Frankenstein" alone] <Brownstein>

18. The Trivers–Willard hypothesis states that these organisms with this trait are favored if environmental conditions are good. According to Bateman's principle, organisms with this trait generally have greater variance in reproductive success. In haplodiploid systems, these organisms are the haploid ones. Among turtles, the number of organisms with this trait drops off as temperature increases. Birds with it are homozygous (*) ZZ. RA Fisher proposed that organisms with this trait will undergo runaway selection for other exaggerated useless traits. Some wrasses and parrotfish spontaneously acquire this trait during sequential hermaphroditism, and a scarcity of it may lead to parthenogenesis. For 10 points, name these organisms which, in humans, have a Y chromosome.
ANSWER: **male**s [or **maleness**; or **masculinity**; or obvious equivalents] <Silverman>

19. A mother tiger growls at a crocodile decked in cherubs in this artist's *Allegory of the Four Corners of the World*. In one of this artist's few pre-Italy paintings, two satyrs look on as a nude, seated Paris makes the title judgement. He painted the family of his collaborator Jan Brueghel the Elder. Hymen and Amor hold up a portrait of one of this artist's patrons for that patron's future (*) husband in the fourth entry in a series that also depicts a monarch landing in Marseilles. A team of muscled men struggle to perform the title *Raising of the Cross*, which, like *The Descent from the Cross*, was painted by this artist for the Antwerp Cathedral. This artist created the Marie de Medici Cycle. For 10 points, name this Flemish artist known for his fleshy nudes.
ANSWER: Peter Paul **Rubens** <Bentley>

20. The angel Gabriel takes this character's glove as he lies beneath a pine-tree on a grassy mound. After learning of this character's demise, his fiancee Alde prays for death and promptly drops dead. A man flies Elijah's chariot to the moon to find this character's wits in a trove of lost things. This character speaks against the Peers' plan to accept Marsilie's tribute, leading to his (*) betrayal by his stepfather Ganelon. While searching for his beloved Angelica of Cathay, this character goes insane in a Ludovico Ariosto poem. This wielder of the sword Durendal and friend of Oliver dies after bursting a blood vessel while blowing his horn during a battle with the Saracens. For 10 points, name this paladin of Charlemagne whose "song" is the subject of a medieval poem.
ANSWER: **Roland** [or **Orlando**] <Brownstein>

21. An artist and jūdō instructor from this country created some works with a flamethrower and had nude women roll around in his namesake shade of blue. An artist from this country known as a "tubist" included billboards and robotic pedestrians in his Purism-influenced *The City*. An abstract painting titled *The Talisman* inspired a circle of artists in this country called the Nabis. A painter from this country included a black snake charmer in a painting which features a (*) woman lying on a couch in a flowery jungle scene. That artist from this country painted a woman in a multicolored dress lying next to a jug and mandolin while being observed by a lion in *The Sleeping Gypsy*. For 10 points, name this country home to the artists Yves Klein, Fernand Leger, and Henri Rousseau.
ANSWER: **France** [or the **French** Republic] <Bentley>

1. An E.E. Cummings poem compares this entity to a "perhaps hand... arranging a window." For 10 points each:
[10] Name this time period, which is also the setting of a Cummings poem in which "the goat-footed balloonMan whistles far and wee."
ANSWER: **spring**
[10] References to spring, as well as summer, autumn, and winter, recur in this Cummings poem, whose title character marries "noone." This poem's parenthetical second line reads "with up so floating many bells down."
ANSWER: "**anyone lived in a pretty how town**"
[10] Both the title of "anyone lived in a pretty how town" and E.E. Cummings's own name are usually written without this feature. In more traditional poetry, this feature is used to mark the first word of each line.
ANSWER: **capitalization** [accept word forms] <Brownstein>

2. In the *Aeneid*, a statue of this god adorns the palatial halls of King Latinus. For 10 points each:
[10] Name this two-faced Roman god, who protected doorways and gateways. The first month of the year is named for this father of Canens, the "nymph of song."
ANSWER: **Janus**
[10] Canens became infatuated with Picus and married him. However, Canens committed suicide by drowning herself after Picus was turned into this specific kind of bird and she was unable to find him.
ANSWER: **woodpecker** [prompt on Picidae]
[10] Picus was turned into a woodpecker by this figure, who in another tradition lived on the isle of Aeaea. Hermes gave a hero the herb moly to combat this villain's magic.
ANSWER: **Circe** [or **Kirke**] <Jose>

3. Determining if a complex-free grammar is ambiguous is a problem in this class. For 10 points each:
[10] Name this type of decision problem, in which it is impossible to construct an algorithm that will output an answer of "yes" or "no" for all inputs.
ANSWER: **undecidable** problem [accept word forms of "undecidable"]
[10] One of the most frequently cited undecidable problems, the halting problem, asks if a model named for this British computer scientist will terminate on a given input. A tape, a head, a state register, and a table comprise that model, this man's namesake "machine."
ANSWER: Alan Mathison **Turing** [accept **Turing** machine]
[10] Yuri Matiyasevich showed that there is no Turing Machine that exists that could solve this problem universally. This problem asked if there existed an algorithm that could find solutions to all Diophantine equations.
ANSWER: **Hilbert's ten**th problem <Jose>

4. Answer the following about American industrial disasters, for 10 points each.
[10] In 1911, 129 women and 17 men were killed in one of these disasters at a factory owned by the Triangle Shirtwaist Company.
ANSWER: **fire**s
[10] In 1860, 145 people were killed when the Pemberton Mill in Lawrence, Massachusetts collapsed. The mill had been partially financed by this prominent New England industrial family, also the namesake of a town where mill girls worked long hours under the Waltham system.
ANSWER: **Lowell** family [or the **Lowells**]
[10] 111 people were killed by the 1947 explosion of a coalmine in a town of this name in Illinois. A fire has been burning in a mine under a Pennsylvania town of this name since 1962, resulting in the abandonment of the area.
ANSWER: **Centralia** <Bentley>

5. This artist's time working at a windmill influenced his extensive "skying" studies. For 10 points each:
[10] Name this British landscape artist who depicted a cart being driven through a shallow pond next to Willy Lott's Cottage in *The Hay Wain*.
ANSWER: John **Constable**
[10] This Swiss-born artist remarked that the weather in Constable's landscapes "[make] me call for my greatcoat and umbrella." A demon crouches on top of a sleeping woman in this man's *The Nightmare*.
ANSWER: Henry **Fuseli** [or Johann Heinrich **Füssli**]
[10] After the death of his wife Maria, Constable used the motif of a rainbow in the stormy sky in a painting of Stonehenge and in his depiction of this building "from the meadow." Cows graze on the "bishops' grounds" of this building in another Constable painting.
ANSWER: **Salisbury** Cathedral [prompt on a **cathedral**] <Bentley>

6. Arthur Prior's solution to an apparent paradox about these people implies that that paradox can only be meaningful if one of them has said something true. For 10 points each:
[10] Name these kinds of Greeks. One of these people named Epimenides claimed that all of them are liars.
ANSWER: **Cretans** [accept equivalents indicating "people from **Crete**"]
[10] The liar paradox seems to contract this basic law of logic, which states that either a statement is true or its converse is. This law was first introduced in Aristotle's *On Interpretation*.
ANSWER: law of the **excluded middle**
[10] The law of the excluded middle is complementary to a law forbidding these statements, in which both a statement and its negation are held to be true. The principle of explosion holds that any statement can be derived from one of these.
ANSWER: **contradiction** [accept law of non-**contradiction**] <Jose>

7. This composer used a subject beginning E-flat G-flat B-flat D in a four-voice fugue that constitutes the last movement of his piano sonata. For 10 points each:
[10] Name this American composer of *Knoxville: Summer of 1915*, who adapted a movement from his B minor string quartet into *Adagio for Strings*.
ANSWER: Samuel **Barber** [or Samuel Osborne **Barber** II]
[10] Barber wrote three of these orchestral works, the first of which was premiered by Toscanini alongside *Adagio for Strings*. These works, named after a literary form, develop out of a single melodic theme.
ANSWER: **essay**s
[10] Barber lived in a house called Capricorn with this composer of *Amahl and the Night Visitors* and *The Saint of Bleecker Street*. This man also founded the Spoleto Festivals.
ANSWER: Gian Carlo **Menotti** <Kothari>

8. In 1931, Lord Lytton led an international commission to investigate the circumstances surrounding the establishment of this state. For 10 points each:
[10] Name this state whose nominal ruler was the former Chinese emperor Puyi.
ANSWER: **Manchukuo** [prompt on Manchuria]
[10] After the Lytton Commission issued a negative report about Manchukuo, Japan permanently withdrew from this international organization, a predecessor to the United Nations.
ANSWER: **League of Nations**
[10] Manchukuo was established after Japanese soldiers staged this 1931 "incident," in which they blew up one of their own railways and placed the blame on local Chinese dissidents.
ANSWER: **Mukden** Incident <Wang>

9. During an obscenity trial, the prosecution maintained that this novel was immoral since its "free indirect style" made it impossible to tell if the author was judging its characters. For 10 points each:
[10] Name this novel, whose protagonist is unhappily married to a simple country doctor named Charles.
ANSWER: ***Madame Bovary***
[10] *Madame Bovary* was the first novel by this French author, who wrote it while seeking out "le mot juste," or "the exact word."
ANSWER: Gustave **Flaubert** (flow-BARE)
[10] Madame Bovary has an affair with this character, who plans to elope with her but decides not to do so. At the conclusion, he has drinks with Charles Bovary, who tells him that it was fated that this character would have an affair with his wife.
ANSWER: **Rodolphe** **Boulanger** de la Huchette [accept either underlined name] <Jose>

10. This structure contains hyaluronidase, which helps disperse cells in the corona radiata. For 10 points each:
[10] Name this specialized vesicle, whose contents degrade the jelly coating that surrounds an egg cell.
ANSWER: **acrosome**
[10] The acrosome is found in the head of these cells. These cells are stored in the epididymis after being produced in the testes.
ANSWER: **sperm** cell [or **spermatozoa**]
[10] The fertilization process is often studied with the eggs and sperm of these animals, whose mouthparts were said by Aristotle to resemble a lantern. Declining sea otter populations have led these animals to wreak havoc on kelp forest ecosystems.
ANSWER: sea **urchin**s [or **Echinoidea**] <Zhang>

11. This man once compared himself to a "renegade cowboy" who needed to tell society what was going on "out there." For 10 points each:
[10] Identify this journalist whose profile of Phil Spector, "The First Tycoon of Teen," was collected in *The Kandy-Kolored Tangerine-Flake Streamline Baby*. He also wrote the novels *I Am Charlotte Simmons* and *The Bonfire of the Vanities*.
ANSWER: Tom **Wolfe** [or Thomas Kennerly **Wolfe**, Jr.]
[10] Tom Wolfe, like this author of *Fear and Loathing in Las Vegas*, was a practitioner of New Journalism.
ANSWER: Hunter Stockton **Thompson**
[10] Wolfe coined this two-word phrase to title an essay he wrote about a party given by Leonard Bernstein where socialites mingled with Black Panthers. The essay with this title appears with "Mau-Mauing the Flak Catchers" in a 1970 book.
ANSWER: **radical chic** <Bentley>

12. This city's *fin-de-siècle* (fan duh SYECK-luh) culture involved many discussions in coffeehouses, and is the subject of a book by Karl Schorske. For 10 points each:
[10] Name this city once governed by Karl Lueger, who declared "it is up to me to decide who is a Jew."
ANSWER: **Vienna** [or **Wien**]
[10] While living in Vienna as a homeless failed artist, this future dictator and author of *Mein Kampf* was probably inspired by Karl Lueger's rhetoric.
ANSWER: Adolf **Hitler**
[10] This monarch initially refused to recognize Karl Lueger's election as mayor. Franz Ferdinand was the heir of this first and only Emperor of Austria-Hungary, a position which he held until his death in 1916.
ANSWER: **Franz Joseph** I [or **Francis Joseph** I] <Brownstein>

13. The third stanza of this poem describes the "moping owl" that "molests the moon's solitary reign." For 10 points each:
[10] Name this poem which lists "boast of heraldry, the pomp of power, and all that beauty, all that wealth e'er gave" as examples of "paths of glory that lead to the grave."
ANSWER: "**Elegy Written in a Country Churchyard**"
[10] This author wrote about the anonymity of the country dead in his poem "Elegy Written in a Country Churchyard."
ANSWER: Thomas **Gray**
[10] Thomas Gray also wrote an "Ode" on the death of Selima, a cat that drowned in a tub of goldfishes. That cat belonged to this friend of Thomas Gray, who wrote the Gothic novel *The Castle of Otranto*.
ANSWER: Horace **Walpole**, **4th Earl of Orford** [accept either underlined part] <Jose>

14. For 10 points each, answer the following about the history of culinary barbecue as it pertains to American geography.
[10] Burnt ends and tangy tomato-based barbecue sauce are staples of this city, which despite its name is actually located in Missouri.
ANSWER: **Kansas City**, Missouri
[10] Two different styles of barbecue exist in the eastern and western halves of this state, whose barbecue mecca is Lexington. This state is also home to the estuary of Albemarle Sound.
ANSWER: **North Carolina**
[10] This southern city hosts the World Championship Barbecue Contest every year. It sits at the confluence of the Wolf and Mississippi rivers.
ANSWER: **Memphis**, Tennessee <Jose>

15. Charles Bradlaugh was the first man elected to Parliament to openly subscribe to this position, a stance which caused problems at his swearing in ceremony. For 10 points each:
[10] Identify this belief. A later Englishman, Richard Dawkins, supported this belief in his book *The God Delusion*.
ANSWER: **atheism** [or obvious equivalents of "**God does not exist**"]
[10] The Fourth Party, a group of four members of this British political party, opposed Bradlaugh's attempts to gain a seat in Parliament. This party's principles were outlined in the Tamworth Manifesto, written by its leader Robert Peel.
ANSWER: **Conservative** Party [or **Tory** Party]
[10] In Parliament, Bradlaugh protested the 4,000 pound pension awarded annually to the holder of this ducal title. A husband of Sarah Jennings with this ducal title won the Battles of Oudenarde and Malplaquet.
ANSWER: Duke of **Marlborough** <Bentley>

16. The prologue of Jared Diamond's *Guns, Germs, and Steel* introduces a question asked by Yali, who leads one of these groups. For 10 points each:
[10] Identify this term for religious movements of Melanesia whose leaders promise that the gods will send material wealth if devotees perform actions such as building mock airstrips and planes.
ANSWER: **cargo** cults
[10] A cargo cult in Vanuatu is centered around this figure, apparently based on a World War II soldier. His followers participate in a military-style march in his honor each February 15th.
ANSWER: **John Frum** [or **John Brum**; or **John From**; prompt on partial answers]
[10] John Frum is based on servicemen from this country who came to Vanuatu in the 1940s. In what was wrongly first described as a cargo cult, residents of New Hanover voted for this country's President Johnson to rule the island.
ANSWER: the **U**nited **S**tates of America [or **America**] <Brownstein>

17. In molecular biology buffers, this compound is often added to sequester cations, preventing metal-dependent enzymes from functioning. For 10 points each:
[10] Identify this molecule that chelates metal ions with its acetate groups and an amine backbone.
ANSWER: **EDTA** [or **ethylenediaminetetraacetic acid**; or **ethylenediaminetetraacetate**]
[10] This molecule, whose oxygen atom has two lone pairs, is a bidentate ligand. This molecule has a bent geometry and is often called the universal solvent.
ANSWER: **water** [or **dihydrogen monoxide**; or **H₂O**]
[10] EDTA and water coordination complexes have this coordination number, also the number of fluorines bonded to uranium during isotope purification via gaseous diffusion.
ANSWER: **six** <Jose>

18. This group was formed after the musician Bennie Moten died, causing its leader to seek out Oran "Hot Lips" Page and other musicians to form it. For 10 points each:
[10] Name this big band formed by a namesake jazz pianist in Missouri, which recorded the albums $E = MC^2$ ("e equals m c squared") and *One O'Clock Jump*.
ANSWER: **Count Basie** Orchestra [or the **Basie** Band]
[10] In most jazz big bands, this "section" of the big band consists of a piano, bass, and drums. Sometimes the piano is replaced or augmented with a guitar.
ANSWER: **rhythm** section
[10] Eddie "Lockjaw" Davis played the "tenor" form of this instrument in the Count Basie Orchestra. John Coltrane played both its "alto" and "tenor" types on such albums as *Giant Steps*.
ANSWER: **saxophone** [accept **sax**] <Jose>

19. In the U.S., these typically last for twenty years and are issued for "new" methods. For 10 points each:
[10] Name this form of intellectual property. It would protect a company that has just devised a new form of manufacturing drugs, or an inventor who has just made a new device.
ANSWER: **patent**s
[10] One of the requirements for a patent to be issued is that the invention has this property, meaning that "a person having ordinary skill in the art to which the claimed invention pertains" cannot easily reproduce the invention.
ANSWER: **non-obvious**ness [prompt on inventive step]
[10] Once a patent expires, it enters into this "area," meaning that anyone can use or improve it without worry. Once copyrights expire, works enter into this "space."
ANSWER: **public domain** <Jose>

20. This idealized type of process can be represented as a rectangle on a $T–S$ diagram. For 10 points each:
[10] Name this thermodynamic cycle comprised of two isothermal and two adiabatic steps where a gas expands and contracts. It has the highest efficiency of any possible heat engine.
ANSWER: **Carnot** cycle
[10] An adiabatic process has no change in this quantity, which is symbolized Q. The first law of thermodynamics gives the change in internal energy as the sum of changes in this quantity and work.
ANSWER: **heat**
[10] Let C denote the temperature of the cold reservoir and H denote the temperature of the hot reservoir. What is the formula for the efficiency of a Carnot engine?
ANSWER: **one minus C over H** [or **one minus C divided by H**] <Busse>

21. This principle describing the speed of incompressible fluid flows can be derived from the conservation of energy. For 10 points:
[10] Name this principle relating changes in speed to changes in pressure that is named for a Swiss scientist.
ANSWER: **Bernoulli**'s principle [or **Bernoulli**'s **equation**]
[10] In one form of the equation of Bernoulli's principle, pressure is divided by this quantity. In another form, one of the terms is pressure, and the other terms have this quantity multiplied by one-half speed squared and by gravitational acceleration times height.
ANSWER: **density**
[10] The quantity one-half density times speed squared is known as this type of pressure, the difference between stagnation pressure and static pressure.
ANSWER: **dynamic** pressure <Reinstein>