PACE Partnership for Academic Competition Excellence

2015 NSC - Official Scoresheet

Round	01	Room	
Bracket			
Reader			

Team									Team								
Player Names																	
Q#					Bonus	Steals	Ques. Total	Run. Score					Bonus	Steals	Ques. Total	Run. score
1																
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TB1																
TB2																
TB3																
SD																
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

1. This man was the leading light of the so-called "Maler-Companie" which decorated the northern wall of the Kunsthistorisches (koonst-hih-STOR-ih-shehs) Museum. Three women bow their heads below a pregnant woman who has a skull protruding from her gown in his painting *Hope II*. This artist's university ceiling paintings of *Philosophy*, *Medicine* and *Jurisprudence* joined a painting of *Theology* by Franz Matsch. In 2006, the Österreichische (us-tuh-RIE-kuh-shuh) Gallery returned a Nazi-seized (*) portrait by this artist of a woman in an eye-ball decorated dress. He painted multiple portraits of Adele Bloch-Bauer as well as the *Beethoven Frieze*. He also showed two lovers embracing on a bed of flowers in a sea of gold leaf. For 10 points, name this leader of the Vienna Secession movement who painted *The Kiss*.
ANSWER: Gustav **Klimt** <Bentley>

2. For three months near the end of this war, William Fenwick Williams defended the small town of Kars. This war began shortly after France sent the ship-of-line *Charlemagne* as a show of force in violation of the London Straits Convention. In this war, Patrice McMahon captured the Malakoff Redoubt early in his career. William Howard Russell documented this war for *The Times*, and the (*) Victoria Cross was introduced in its aftermath. Sir Colin Campbell ordered his men to array two-deep, setting up a "Thin Red Line," and six-hundred men were sent to attack a well-prepared artillery battery, at its Battle of Balaclava. For 10 points, name this war in which Lord Cardigan led the charge of the Light Brigade, fought by an Ottoman and European alliance against Russia.
ANSWER: **Crimean** War <Wang>

3. This man's theology was examined by Marisilio Ficino, a prominent Florentine. Ralph Cudworth led a group of theologians inspired by this man at Cambridge. He's neither W.V.O. Quine nor Hillary Putnam, but this man's name often denotes the philosophical view that mathematical objects are ontologically real outside the imagination. A re-envisioning of this man's philosophy, which described reality as decreasingly pure (*) emanations from "The One," appeared in the *Enneads* of Plotinus in the 200s CE. Before Augustine was a Manichean, he was among the "neo" followers of this philosopher, whose own views included a theory of ideal forms. For 10 points, name this author of the allegory of the cave, a Greek philosopher who taught Aristotle and was Socrates's student.
ANSWER: **Plato** [or **Platon**; or **Aristocles**] <Jackson>

4. All fields with characteristic zero contain a copy of this field. The cardinality of this set can be established by writing each element in a big square, then moving diagonally down the square to count them. The larger completion of this set can be constructed from it by partitioning it, then taking the least upper bound of the lesser partition. (*) Algebraic numbers are the roots of polynomials whose coefficients come from this set. This set is the starting point for doing Dedekind cuts, and it is dense in the reals. The set of all of these numbers is denoted Q, and they have eventually repeating or terminating decimal expansions. For 10 points, identify these numbers, which, for integers a and b, can be written as the fraction a over b.
ANSWER: **rational** numbers <Schindler>

5. This color appears in the title of a story in which the narrator sees a white patch on a "brute beast" slowly resolve itself into the shape of a gallows. A clock of this color regularly interrupts the musicians in a story in which a dagger-wielding man chases a "mummer" into a room decorated in this color, only to fall dead. In a short story, an alcoholic who buries his wife in his cellar uses a penknife to remove the (*) eye of Pluto, an animal of this color. Another animal of this color is asked "is there balm in Gilead?" as it sits on a bust of Pallas after appearing on "a midnight dreary" while the poet "pondered, weak and weary". For 10 points, name this color of the title cat of a story by Edgar Allan Poe, who used it to describe the "plume" of "The Raven".
ANSWER: **black** [or **ebon**y; accept "The **Black Cat**"] <Mehigan>

6. In Act II of this opera, a gavotte is heard from outside the palace during a victory celebration in honor of General Melas. The male lead contrasts the blue eyes of an "unknown beauty" he has seen in church with the black eyes of his lover in "Recondita Armonia." The villain uses a fan to arouse the title character's jealousy and convince her to betray (*) Angelotti in exchange for her lover's life. That title character asks God why she has suffered such misfortune in "Vissi d'arte, vissi d'amore," and jumps to her death after realizing that Cavaradossi's "fake" execution was real after all. For 10 points, name this opera in which the title singer stabs the wicked police chief Scarpia, by Giacomo Puccini.
ANSWER: **_Tosca_** <Rosenberg>

7. In a Teutonic myth, this god is slain by the sword belonging to the forest troll Miming (MIM-ing). This god lends his name to a poem that ends with the traveler Vegtam having his true identity revealed. One of this god's possessions can only be moved by a woman who rides a giant wolf bridled by snakes. A battle of wits ends when the words that were once (*) whispered into this god's ear cannot be identified by Vafthrudnir. Plans to retrieve this deity go awry when the jotun Thokk refuses to weep. This god's mother Frigg makes all but one substance in the world promise never to harm this god. For 10 points, name this brother of Hoder, a Norse god who dies when Loki strikes him with a spear of mistletoe.
ANSWER: **Balder** [or **Bald**r; or **Baldur**] <Kim>

8. A "college without walls" named for this man in Mount Angel, Oregon, remained open from 1973-83. This man and his younger brother Richard joined a protest that pressured DiGiorgio Corporation into holding an election for its workers. This man's meeting with Ferdinand Marcos backfired and alienated many key allies, including Philip Vera Cruz. While undertaking his twenty-four day fast in Phoenix, Arizona, this man came up with the slogan (*) "Yes, one can." The Filipino-dominated AWOC merged with the NFWA co-founded by this man and Dolores Huerta to form the UFW. This man had his followers persuade longshoremen not to load grape shipments. For 10 points, name this Mexican-American activist on behalf of farm-laborers, who is honored by a March 31st holiday.
ANSWER: Cesar **Chavez** [or Cesar Estrada **Chavez**] <Gupta>

9. In a classic example of inverse Compton scattering, photons in this region of the spectrum gain energy through the redshift-independent SZ effect. The selection rule delta J equals plus or minus one applies to rotational spectroscopy using this type of radiation. This radiation has frequency slightly greater than ultra-high or super-high frequency radiation. Radiation at (*) 2.7 Kelvin has its maximum intensity wavelength in this region of the spectrum. A cavity magnetron produces this type of radiation. At Bell Labs in New Jersey, Penzias and Wilson discovered a nearly constant spectrum of this radiation in the universe left over from the Big Bang. For 10 points, name this form of radiation which is slightly less energetic than infrared and is often used to cook food.
ANSWER: **microwave**s [prompt on **radio wave**s] <Silverman>

10. A character in this play is ordered to first put several drops of vinegar in each of various sensory organs, then cry "hum" and "buz" thrice each. Another character in this play disguises himself as a Spanish nobleman and is mocked by two characters who think he can't speak English. Kastril receives a quarreling lesson in this play, which also features a character who wants to meet the Queen of Fairy and a group of Anabaptists led by (*) Tribulation Wholesome. At the end of this play, Dame Pliant marries Lovewit, who had earlier left London because of the plague. Dol Common is courted by Epicure Mammon, who seeks out the protagonists in order to acquire the philosopher's stone in, for 10 points, what Ben Jonson play about the con artists Face and Subtle?
ANSWER: The **Alchemist** <Carson>

11. This passage rhetorically asks "Can any one of you by worrying add a single hour to your life?" A large part of this passage consists of the phrase "You have heard it said," followed by a prescription from Mosaic Law, then the phrase "but I say unto you," followed by a refutation of the prescription. The final verse of this passage beseeches listeners to "Be perfect, therefore, as your heavenly Father is perfect." This passage discards the metaphor of people being the (*) "salt of the earth" in favor of them being "the light of the world." The declaration "Blessed are the meek: for they shall inherit the earth" is one of this passage's Beatitudes. For 10 points, name this section of the Book of Matthew, an oration Jesus delivered at an elevated place.
ANSWER: **Sermon on the Mount** [prompt on Book of **Matthew**; prompt to be less specific on **Beatitudes** before mentioned; prompt to be less specific on Matthew's **Antitheses**] <Gupta>

12. One book subtitled for this condition in the United States asserts that this condition's invisibility made it particularly pernicious. That book was written in 1962 by Michael Harrington. Another book on this condition was a response to the legislation that created TANF and sees the author travel to three different states to work temporary jobs. People in this condition lacked all four entitlements in a book examining the link between this condition and (*) famines by Amartya Sen. This condition described in *The Other America* was portrayed in Paris kitchens and London spikes in a book by George Orwell. For 10 points, name this economic condition explored by Barbara Ehrenreich in *Nickel and Dimed* that is often fought with welfare programs.
ANSWER: **poverty** [or being **down and out**; or being **poor**] <Bentley>

13. Selegiline raises the availability of this compound by selectively inhibiting MAO-B. This compound's second G protein-coupled receptor, which inhibits adenylyl cyclase, is targeted by many antipsychotic drugs. This compound's beta-hydroxylase catalyzes its transformation into norepinephrine. The ventral tegmental area contains the largest group of neurons releasing this neurotransmitter in the brain. A chiral precursor to this compound with (*) L-configuration is used to treat a disease in which neurons releasing it in the substantia nigra die, leading to tremors and a slow, shuffling gait. For 10 points, name this neurotransmitter involved in pleasure-reward pathways in the brain, whose levels fall in Parkinson's disease.
ANSWER: **dopamine** [or **3,4-dihydroxyphenethylamine**] <Gupta>

14. The German Romantic opposition to this classical author was led by the Schlegel brothers, who claimed that an "immeasurable gulf" separated him from his contemporaries. The title character of a play by this man drunkenly calls another character "Ganymede", then drags that character into a cave to have sex with him. In the final scene of another of his plays, the antagonist appears in a dragon-pulled chariot with the bodies of (*) her dead children. This author of *Cyclops*, the only surviving satyr play, wrote a play in which a group led by Agave rips apart Pentheus, as directed by Dionysus. He also wrote a play whose antagonist murders Glauce to take revenge on her unfaithful husband Jason. For 10 points, name this Greek tragedian who wrote *The Bacchae* and *Medea*.
ANSWER: **Euripides** <Carson>

15. In 2010, Greenpeace protesters off the coast of this island scaled the Stena Don oil rig owned by Cairn Energy. This island's extremely agglutinative namesake language was first given a Latin orthography by missionary Samuel Kleinschmidt. Archaeologists divide sites on this island into Western, Middle, and Eastern Settlements, the last of which contains the well-preserved ruins of the medieval-era Hvalsey church. In 1888, this island was crossed for the first time by Fridtjof Nansen. The U.S. operates (*) Thule Air Base on the western shore of this island, part of which faces the Davis Strait. Since 1979, it has been administered under home rule from the settlement of Nuuk. For 10 points, name this large northerly island once owned by Denmark.
ANSWER: **Greenland** [or **Kalaallit Nunaat**] <Wang>

16. In preparation for World War I, workers in this industry were granted an eight-hour day through the Adamson Act. In the Civil War, Herman Haupt supervised this industry for the Union and War Secretary Simon Cameron resigned due to his role in profiteering from it. An 1862 act issued bonds to a company in this industry established by Theodore Judah and financed by the Big Four. A Civil War raid using (*) infrastructure from this industry inspired Buster Keaton's film *The General*. Ruined infrastructure from this industry became "Sherman's Neckties" during the March to the Sea. An 1862 Act of Congress proposed a project in this industry eventually completed at Promontory Point with the driving in of a golden spike. For 10 points, the Union Pacific Company is in which industry?
ANSWER: **rail**roads [or **rail** industry; prompt on **transportation**] <Bentley>

17. The alpha and beta Kamlet-Taft parameters quantify the extent of this effect. This phenomenon is modeled as a double-well potential between donors and acceptors. SN1 reactions, but not SN2, are sped up by solvents demonstrating this effect. It is often incorrectly given as the reason for the higher melting temperatures of CG-rich DNA sequences. This interaction occurs perpendicular to the chains of antiparallel (*) beta sheets and links the amide groups of every fourth residue of an alpha helix. Alcohols have higher boiling points than ethers because of this phenomenon. This strong class of dipole-dipole forces classically requires nitrogen, oxygen, or fluorine to be present. For 10 points, name this intermolecular attractive force involving the lightest element.
ANSWER: **hydrogen bond**ing [or **H bond**ing] <Silverman>

18. This composer's last three masses are all in the key of B-flat, and another of his masses is sometimes nicknamed for the prominent timpani solo in the "Agnus Dei." Another of his choral pieces concludes part 1 with "The Heavens are Telling the Glory of God." The melody from the second movement of this composer's "Emperor" (*) Quartet is now used for the German national anthem. This composer wrote *Mass in Time of War* and the *"Nelson" Mass* while under the patronage of Prince Nikolaus Esterhazy, and he also composed an oratorio inspired by *Paradise Lost* and the Book of Genesis, called *The Creation*. For 10 points, name this Austrian composer known as the "Father of the String Quartet" and "Father of the Symphony."
ANSWER: Joseph **Haydn** [or Franz Joseph **Haydn**] <Rosenberg>

19. A leader of this country enjoyed demolishing huge swathes of urban areas as part of his North Korea-inspired "systematization" campaign. This country was represented on the world stage by female diplomat Ana Pauker. A dictator in this country encouraged women to become "heroine mothers" by having ten or more children, and controlled his populace with the Securitate secret police. The (*) Iron Guard carried out the Final Solution in this country, which joined Czechoslovakia and Yugoslavia in the Little Entente, and was led throughout most of World War II by the pro-German Ion (EON) Antonescu. A leader of this country was tried and executed with his wife Elena on Christmas, 1989. For 10 points, name this Eastern European country ruled by the dictator Nicolae Ceausescu (chow-SHES-koo).
ANSWER: **Romania** <Mukherjee>

20. A character created by this author dismisses "outward things", claiming "I am my Heaven and my Hell". In a play by this author, a group of generals are shown a document with a clause pledging loyalty to the emperor, which is removed from a different copy that all but one general signs after Illo and Terzky get the generals drunk. A trilogy by this author is titled for a character who is found out to have been (*) negotiating with the Swedes. Another of his protagonists is plotted against both by the vengeful Spiegelberg and by his own brother, Franz, who desires Amalia and tricks the Old Moor into disowning Karl. For 10 points, name this author of *Wallenstein* and *The Robbers*, who also wrote a poem to the "daughter of Elysium" called "Ode to Joy."
ANSWER: Friedrich **Schiller** [or Johann Christoph Friedrich von **Schiller**] <Gehring>

21. This man's medical practice with James Bates failed after Bates's death, after which he decided to go to sea. This man's cousin Richard Sympson edited out nearly half of a manuscript this man wrote, in which he described how he was taught languages by the Sorrel Nag and Glumdalclitch. In one episode, he is arrested after putting out a fire by urinating on it, while in another, he is forced out of a community of ultra-rational **(*)** horse-like creatures who believe him to be a Yahoo. He encounters the Little-Endians and Big-Endians in a country whose leaders charge him with treason, forcing him to flee to Blefuscu. For 10 points, name this fictional author and adventurer who visits Laputa, Brobdingnag, and Lilliput in a satirical travelogue by Jonathan Swift.
ANSWER: **Lemuel** **Gulliver** [accept either underlined portion] <Gehring>

22. The momentum j-factor in the Chilton-Colburn analogy is given by a number describing this phenomenon, divided by two. A constant factor of 1.33, times the square root of the Reynolds number, gives the magnitude of this phenomenon on a flat plate. For high Reynolds numbers, the magnitude of this force is proportional to the velocity squared, but in creeping flow, the dependence is **(*)** linear, with a coefficient often symbolized b. This force is proportional to the radius and viscosity according to Stokes' Law for spherical particles. The "form" contribution to this force is greater when a surface is perpendicular to the oncoming streamlines. For 10 points, name this force that balances gravity at the terminal velocity, and opposes thrust in fluids.
ANSWER: **drag** force [or **air resistance**; prompt on air **friction**] <Silverman>

23. Abraham Mendel Theben convinced this ruler to offer limited protections to Jews. This ruler appears on the obverse of a namesake silver bullion *thaler* which was circulated for over two centuries. Wenzel Anton von Kaunitz was state chancellor and foreign minister to this ruler, during whose reign the physician Gerard van Swieten was sent to Moravia to investigate the existence of vampires. Charles **(*)** VI's flagrant disregard for Salic law resulted in this ruler taking the throne. After this ruler's death, her country underwent a decade of temporary reform under her son Joseph II. The Pragmatic Sanction attempted to legitimate the rule of this queen, who lost the region of Silesia to Frederick the Great. For 10 points, name this 18th-century queen of Austria.
ANSWER: **Maria Theresa** [or **Maria Theresa** Walburga Amalia Christina; or **Maria Theresia**; prompt on partial answer] <Wang>

24. Deflection of starlight was observed by William Wallace Campbell while he was observing one of these events at the Lick Observatory. Walter Grotrian and Bengt Edlen found that the green emission line found as a result of these events was not actually a new element, but was instead highly ionized iron. Arthur Eddington experimentally confirmed Einstein's theory of general relativity using one of these events in 1919. While working in Madras, Pierre **(*)** Janssen used one of these events to discover the element helium. The "annular" type of this event occurs when a disk surrounds the occluding body. For 10 points, name these events during which the corona becomes visible because the moon is in front of the sun.
ANSWER: **solar eclipse** [prompt on **eclipse**s until "sun" is read and accept it afterwards] <Jose>

1. Late in his career, this man upheld academic freedom in his decision in *Sweezy v. New Hampshire,* and controversially turned down Ruth Bader Ginsburg for a clerkship due to her gender. For 10 points each:
[10] Name this adviser to Franklin Delano Roosevelt, a Supreme Court justice from New York City famed for his advocacy of judicial restraint.
ANSWER: Felix **Frankfurter**
[10] Frankfurter was a co-founder of American Civil Liberties Union, whose other founders included this woman, who founded Hull House with Ellen Gates Starr.
ANSWER: Jane **Addams**
[10] Frankfurter issued a 62-page concurring dissent declaring that "Courts ought not to enter this political thicket" in this 1962 decision, which held that the redistricting of state legislative districts was justiciable by federal courts, thus allowing decisions like *Reynolds v. Sims.*
ANSWER: ***Baker*** *v. Carr* [or ***Carr*** *v. Baker*] <Gupta>

2. The phrase "begging the question" originally referred to arguments with this property. For 10 points each:
[10] Name this property of arguments whose conclusion must be assumed as a premise to prove that very same conclusion.
ANSWER: **circular** arguments [or **circular** logic; or **circular** reasoning]
[10] This other type of flawed logical statement must always be true, since it equates a thing to itself without providing any further information. "All squares are square" is an example of one these statements.
ANSWER: **tautology** [or **tautologies**; or **tautological** reasoning; or **tautological** argument]
[10] The "Third Man" argument in Plato's *Parmenides* is this type of objection, which posits that a justified claim needs a second-order justification for its justification, that the second-order justification itself needs a third-order justification, and so on.
ANSWER: **infinite regress** argument [prompt on **regress**] <Jackson>

3. Traditional forms of this practice incorporated instruments like the calabash and pahu drums, and women wearing *pa'u* would sometimes perform it to celebrate a king's fecundity. For 10 points each:
[10] Identify this performing art whose patron deities included Laka.
ANSWER: **hula** dancing
[10] Hula dancers often wear these necklaces, made from strung-together flowers.
ANSWER: **lei**s [prompt on **garland**s]
[10] One story describes how Laka invented the hula dance to entertain this volcanic deity. She has 13 sisters all with the name Hi'iaka, and used a staff called the *paoa* to create a fire pit on Kilauea.
ANSWER: **Pele** <Bentley>

4. This composer intentionally put the stress on the wrong syllables for much of his *Gloria.* For 10 points each:
[10] Name this 20th-century French composer who wrote the *Concert champetre* for harpsichord and orchestra, and the opera *Dialogues of the Carmelites.*
ANSWER: Francis **Poulenc**
[10] Like Darius Milhaud and Arthur Honegger, Poulenc was a member of Les Six, which drew inspiration from this eccentric composer of the *Gymnopedies.*
ANSWER: Erik **Satie**
[10] Arthur Honegger wrote three "Symphonic Movements," including *Rugby* as well as *Pacific 231*, which imitates the sound of one of these things.
ANSWER: **trains** [or **locomotive** or **railroads**] <Rosenberg>

5. Answer the following about directions in the atmospheric and earth sciences, for 10 points each.
[10] In the Northern Hemisphere, the winds around a low pressure area flow in this direction, forming a cyclone.
ANSWER: **counter-clockwise** [or **anti-clockwise**; or **CCW**; do not accept "clockwise" or "CW"]
[10] When a fault's slip is approximately horizontal, it is parallel to this property of the fault surface. This property of a fault thus names a type of "slip" fault.
ANSWER: fault **strike**
[10] The Kuroshio and Agulhas Currents are classified as this type of boundary current, denoting their place in the ocean gyres of which they are a member. This term is also applied to the "intensification" those boundary currents exhibit.
ANSWER: **western** [or obvious equivalents] <Voight>

6. This character is raised at the castle of Thunder-ten-Tronckh, where he is taught that he lives in the "best of all possible worlds" by Pangloss. For 10 points each:
[10] Name this character who calmly states that "we must cultivate our garden" at the end of the Voltaire novella of which he is the title character.
ANSWER: **Candide**
[10] Candide is kicked out of the castle after he is caught *in flagrante delicto* with this daughter of the Baron. She later flees to Buenos Aires with Candide, then marries him after he finds her in Istanbul.
ANSWER: **Cunegonde**
[10] While on the run in Paraguay, Candide is captured by the Oreillons, who intend to eat him because he is wearing an item of clothing belonging to this religious group. Luckily, he is saved by Cacambo..
ANSWER: **Jesuit**s [or **Society of Jesus**; prompt on **Catholic**s] <Lee>

7. In 1881, Prince Charles of this dynasty ascended to the throne of Romania and became King Carol I. For 10 points each:
[10] Identify this dynasty, named for a castle in Swabia, the ruling house first of Brandenburg-Prussia, then of imperial Germany until 1918.
ANSWER: **Hohenzollern** dynasty [or House of **Hohenzollern**; or **Hohenzollern**-Hechingen; or **Hohenzollern**-Haigerloch; or **Hohenzollern**-Sigmaringen]
[10] Two *kaiser*s of the Hohenzollern house were advised by this "Iron Chancellor," who initiated the Kulturkampf against the Catholic Church.
ANSWER: Otto von **Bismarck** [or Otto Eduard Leopold, Prince of **Bismarck**, Duke of Lauenburg]
[10] Napoleon III denied a Hohenzollern prince with this name the chance to ascend to the Spanish throne, precipitating the Franco-Prussian War. A man with this name was crowned king of a new country after an 1830 revolution that broke out at an opera performance.
ANSWER: **Leopold** <Bentley>

8. Answer the following about dogs in Greek mythology, for 10 points each.
[10] On his way to steal the cattle of Geryon, Heracles meets and kills the shepherd Eurytion and his dog Orthrus, who has this unusual feature.
ANSWER: it is **two-headed** [or obvious equivalents]
[10] After Cephalus succeeds in seducing his wife Procris while disguised as a different man, she runs away out of shame, but later returns and brings as a gift this hunting hound that never misses its prey.
ANSWER: **Laelaps**
[10] When Laelaps begins chasing the Teumessian Fox, which can never be caught, Zeus resolves the paradox by performing this action, a power shared by the eyes of Medusa.
ANSWER: they are turned into **stone** [or **petrification**; or word forms; or obvious equivalents] <Kim>

9. The worst assumption of the McCabe-Thiele method is that this quantity is constant and identical for each component. For 10 points each:
[10] Name this quantity which is divided by the gas constant in the most common formulation of the Clausius-Clapeyron equation. This latent heat is low for volatile compounds.
ANSWER: **heat of vaporization** [or **enthalpy of vaporization**; or **heat of evaporation**; or **delta H vap**; prompt on **enthalpy** or **heat**]
[10] At this point, the heat of vaporization goes to zero, because it is no longer possible to distinguish between liquids and vapors.
ANSWER: **critical** point
[10] By the Clapeyron equation, the derivative of vapor pressure with respect to temperature equals this quantity over the change in volume. This quantity equals the heat of vaporization divided by the boiling point.
ANSWER: **entropy** of vaporization [or delta **S** vap] <Silverman>

10. One of these two characters tells the other that they'd be unable to live together because she'd "just *tromper* **(trom-"PAIR")** you with everybody", owing to the fact that the other's war wound has made him impotent. For 10 points each:
[10] All or nothing, name these two characters. A 1926 novel ends with one of them claiming "We could have had such a damned good time together", to which the other responds "Isn't it pretty to think so?"
ANSWER: **Jake** **Barnes** [accept either underlined portion] and Lady **Brett** **Ashley** [accept either underlined portion]
[10] The troubled relationship between Jake Barnes and Lady Brett Ashley is at the center of *The Sun Also Rises*, a novel by this bullfighting enthusiast who also wrote *A Farewell to Arms*.
ANSWER: Ernest **Hemingway** [or Ernest Miller **Hemingway**]
[10] Name either of the two characters, other than Jake and her fiance Mike Campbell, with whom Brett has affairs. One was the Jewish former middleweight boxing champion of Princeton, while the other is a brilliant bullfighter the protagonists meet in Pamplona.
ANSWER: **Robert** **Cohn** OR **Pedro** **Romero** [accept any underlined portion] <Carson>

11. He began his country's Red Terror by holding up bottles ostensibly filled with the blood of his enemies, and then smashing them on the ground. For 10 points each:
[10] Name this leader who succeeded Tafari Benti as the head of the Derg.
ANSWER: **Mengistu** Haile Mariam
[10] Mengistu and the Derg led this East African country. It had previously been attacked by Italy early in the 44-year reign of Emperor Haile Selassie.
ANSWER: **Ethiopia** [or People's Democratic Republic of **Ethiopia** ; or **PDRE**; or **Abyssinia**; or **Ethiopia**n Empire; or ye-**Ityoppya** Hezbawi Dimokrasiyawi Ripeblik; or Mangesta **Ityoppya**]
[10] Under Mengistu, Ethiopia faced this sort of crisis from 1984 to 1985, inspiring several entertainers to put together the Live Aid concert.
ANSWER: mass **famine** [or **drought**; or **crop failure**] <Liao>

12. In some Christian denominations, Maundy Thursday includes this ritual performed during the Mandatum ceremony after the homily. For 10 points each:
[10] Name this ritual performed by Jesus for his disciples after the Last Supper.
ANSWER: **foot washing** [accept answers that convey **washing the feet**; prompt on **wash**ing; prompt on **clean**sing]
[10] The offshoots of the Schwarzenau Brethren combine foot-washing with a feast named for this term, representing Christian love and contrasted with the familial and brotherly love of *storge* **(STOR-jay)** and *philia*.
ANSWER: *agape* **(uh-GAH-pay)**
[10] A sinful woman wets Jesus's feet with her tears and wipes them with her hair -- thereby demonstrating that great love can make up for great sins -- in this third Gospel, which comes between Mark and John.
ANSWER: Gospel of **Luke** <Smart>

13. Answer these questions about pre-modern anti-Semitism, for 10 points each.
[10] Medieval communities often accused Jews of spreading the Black Death by poisoning these communal sources of water.
ANSWER: **well**s
[10] Like Cologne and Strasbourg, this city's Jews were exterminated in 1349 after accusations that they started the Black Death by poisoning wells. Gutenberg's print shop was in this city.
ANSWER: **Mainz**
[10] In eastern Europe, Jews were confined largely to these autonomous villages within the Pale of Settlement, which were often beset by pogroms.
ANSWER: **shtetl**s [do not accept "ghettoes"] <Jackson>

14. This quantity is added to the product of permittivity and electric field to produce the electric displacement field. For 10 points each:
[10] Name this vector equal to the dipole moment per unit volume in a solid. In linear materials, the electric susceptibility describes how this quantity appears in response to an electric field.
ANSWER: electric **polarization** density [do not accept "polarizability"]
[10] The negative divergence of the polarization vector gives the "bound" version of the density of this quantity. The SI unit for this quantity is the Coulomb.
ANSWER: **charge** density
[10] The charges in these highly polarizable materials align to reduce the electric field in their interior. Inserting this type of insulator between the parallel plates of a capacitor increases the capacitance.
ANSWER: **dielectric**s <Eltinge>

15. A short story by this author centers on a monk who puts up a sign advertising that the title dragon will appear on the third day of the third month. For 10 points each:
[10] Name this author who also wrote of a minor functionary named Goi who desires nothing more than to eat the title food in his short story "Yam Gruel".
ANSWER: Ryunosuke **Akutagawa** [accept names in either order]
[10] Akutagawa lends his name to a literary prize for new writers from this country, which was won in 2015 by Masatsugu Ono for *A Prayer Nine Years Ago*.
ANSWER: **Japan** [or **Nihon**; or **Nippon**]
[10] In this Akutagawa short story, a Buddhist priest, the criminal Tajomaru, and a woodcutter are among those who testify regarding the dead body of a soldier named Takehiro. Its plot was combined with the setting of Akutagawa's story "Rashomon" in Akira Kurosawa's film *Rashomon*.
ANSWER: "**In a Grove**" [or "**In a Bamboo Grove**" or "**Yabu no Naka**"] <Bentley>

16. Many works in this medium feature the character of Kilroy. For 10 points each:
[10] Identify this artistic medium. One of the most celebrated artists in this medium was the subject of Julian Schnabel's film, *Basquiat*, and signed much of his work as SAMO.
ANSWER: **graffiti** [prompt on **street art**]
[10] Jean-Michel Basquiat once collaborated with this American pop artist, who also painted a series of *Campbell's Soup Cans*.
ANSWER: Andy **Warhol** [or Andrew **Warhola**]
[10] One work by this street artist proclaims, "If graffiti changed anything, it would be illegal". This man produced a sort-of documentary centering on a man named Thierry Guetta titled *Exit Through the Gift Shop*.
ANSWER: **Banksy** <Bentley>

17. This character reminds his listeners not to use the words "mother" and "father" and insists that everyone belongs to everyone else. For 10 points each:
[10] Name this World Controller who lectures people about the Bokanovsky process at the Central London Hatchery and Conditioning Centre.
ANSWER: **Mustapha** **Mond** [accept either underlined part]
[10] Mustapha Mond appears in this Aldous Huxley novel, in which Bernard Marx discovers John the Savage at an Indian reservation in New Mexico.
ANSWER: *__Brave New World__*
[10] In *Brave New World*, time is measured in years "after" this figure, who has been adopted as a godlike messiah by the World State.
ANSWER: Henry **Ford** <Sy>

18. Intravenously-administered arginine stimulates the secretion of this hormone, whose receptor is antagonized by pegvisomant and is unresponsive in Laron syndrome. For 10 points each:
[10] Name this oft-abused hormone produced in the anterior pituitary whose secretion is inhibited by somatostatin. As the name might suggest, it is underproduced in many kinds of dwarfism, and overproduced in gigantism.
ANSWER: human **growth** hormone [or H**GH**; or **somatotropin**; or **somatropin**]
[10] Growth hormone is also released during times of stress, much like this catecholamine that controls the fight-or-flight response with norepinephrine.
ANSWER: **epinephrine** [or **adrenalin**e; or **beta-3,4-trihydroxy-N-methylphenethylamine**]
[10] The hypothalamus regulates growth hormone production by secreting GHRH, which then travels through the "hypophyseal" type of this kind of blood vessel system, in which a capillary bed pools to another capillary bed through veins without going through the heart. Another one supplies the liver.
ANSWER: **portal** venous system <Gupta>

19. Caitlin Flanagan wrote about the "dark power" of these organizations in a March 2014 *Atlantic* article that documented the exemptions they often receive from adherence to building safety codes. For 10 points each:
[10] Name this type of organization. Some of these organizations had their operations suspended following the publication of an article by Sabrina Rubin Erdely.
ANSWER: **fraternities** [or **frat**s; or **fraternities** at the University of Virginia; prompt on **Greek** organizations; do not accept or prompt on "sororities"]
[10] A *Rolling Stone* article about a female student of this first name at the University of Virginia led that university to temporarily suspend all fraternity activities. Later investigations called much of her sexual assault story into question.
ANSWER: **Jackie**
[10] At this state's flagship university in Norman, the Sigma Alpha Epsilon chapter was disbanded in March 2015 after a video was uploaded showing frat members singing a racist song. Mary Fallin is this state's governor.
ANSWER: **Oklahoma** <Bentley>

20. In a work titled for this man, a dog sleeps in front of a pair of slippers and next to a resting lion. For 10 points each:
[10] Identify this saint who can be seen working in his study in an engraving by Albrecht Dürer.
ANSWER: Saint **Jerome** or [or Saint **Hieronymus**]
[10] Joachim Patinir's *The Penitence of Saint Jerome* was one of the earliest examples of this type of painting. Members of the Hudson River School specialized in this type of painting, exemplified by Thomas Cole's *The Oxbow*.
ANSWER: **landscape**s [or **landscape** painting]
[10] The right panel of Patinir's landscape depicts this other saint, who holds both a book and a rosary. A monastery devoted to this saint commissioned the *Isenheim Altarpiece*, whose right-most open panel depicts a turtle-like creature gnawing on this saint's knuckles.
ANSWER: Saint **Anthony** the Great [or Saint **Antony** the Great or **Anthony** of Egypt or **Anthony** the Abbot or **Anthony** of the Desert or **Anthony** the Anchorite or **Anthony** of Thebes or Abba **Antonius**] <Bentley>

21. The genes KAPP and WUS regulate the complex CLV signaling pathway maintaining a balance between four cell groups in one type of this tissue. For 10 points each:
[10] Name these tissues consisting of undifferentiated cells in plants. The "apical" variety can be found at the tips of roots and shoots.
ANSWER: **meristem**s
[10] Primary meristems may differentiate into this form of thin-walled ground tissue, which remains meristematic after differentiation and forms the mesophyll in leaves.
ANSWER: **parenchyma** [or **parenchymal** tissue]
[10] Meristematic cells are often compared to these undifferentiated animal cells, which have different levels of potency, such as totipotent and pluripotent, and broadly come in "adult" and "embryonic" forms.
ANSWER: **stem** cells <Gupta>

22. This line ends a speech whose speaker notes that "They knew I'd stand at the fire-place stroking this thing of bronze". For 10 points each:
[10] Give the four-word declaration spoken by Garcin, which follows the line "There's no need for red-hot pokers." Its speaker states it after dismissing torture-chambers and fire and brimstone as old wives' tales.
ANSWER: "**Hell is other people**" [or "L'**enfer, c'est les autres**"]
[10] The line "Hell is other people" comes from this French existentialist's play *No Exit*.
ANSWER: Jean-Paul **Sartre** [or Jean-Paul Charles Aymard **Sartre**]
[10] After the three characters make a pact of silence, Estelle breaks it by asking the others for one of these objects. Inez volunteers to serve in the role of this object for Estelle, then mentions the way it is used to catch larks.
ANSWER: a **mirror** [or a looking-**glass**; or a pocket-**mirror**; or a lark-**mirror**] <Jose>

23. In 2006, the Department of the Interior awarded a $2 million grant to help preserve this battlefield's Slaughter Pen Farm. For 10 points each:
[10] Name this costly December 1862 Union loss in which Ambrose Burnside's army failed to dislodge James Longstreet's troops from Marye's Heights.
ANSWER: Battle of **Fredericksburg**
[10] This winning general at Fredericksburg and commander of the Army of North Virginia refused an offer to fight for the Union after his home state, Virginia, seceded.
ANSWER: Robert E. **Lee** [or Robert Edward **Lee**]
[10] Burnside lost due to his delayed crossing of this Virginian river, which served as a natural boundary separating the North from the South in the east. Grant later circumvented it entirely during his Overland Campaign.
ANSWER: **Rappahannock** River <Gupta>