

Bulldog High School Academic Tournament 2017 (XXVI): Revenge of the BH-SAT

Written by Yale Student Academic Competitions (Stephen Eltinge, Adam Fine, Isaac Kirk-Davidoff, Moses Kitakule, Laurence Li, Jacob Reed, Mark Torres, James Wedgwood, Cathy Xue, and Bo You), Jason Golfinos, and Clare Keenan

Edited by Jacob Reed

Packet 7 Tossups

1. **In a story titled for one of these objects, the title character is made tax-exempt by Colonel Sartoris, and her house is sprinkled with lime to hide a rotting-corpse smell. One of these objects titles a major source for the ideals of Courtly Love, which was written by Guillaume de Lorris and Jean de Meun. One of these objects titles a Faulkner story about the (*) necrophiliac woman Emily Grierson. This object arbitrarily titles a novel in which the pages of Aristotle's lost treatise on comedy are poisoned by Jorge of Burgos. Some monastery murders are investigated by William of Baskerville in an Umberto Eco novel titled *The Name of*—for 10 points—what flower?**

ANSWER: roses [prompt on flowers; accept "A Rose for Emily"; accept *The Romance of the Rose*; accept *The Name of the Rose*] <JR>

2. **Workers in this industry were organized in an 1881 strike by Keir Hardie. The 1926 General Strike was called in support of workers in this industry. The Battle of Orgreave occurred during a strike in this industry led by Arthur Scargill. The Geordie and Davy Lamps were used by workers in this industry, and it used the Newcomen engine to pump water. This industry made possible the most famous works of (*) Isambard Kingdom Brunel and James Watt. This industry was proverbially centered on Newcastle, and it made possible the smelting technologies that spurred the Industrial Revolution. For 10 points, name this industry whose product fueled the Great Western Railway.**

ANSWER: coal mining [prompt on mining] <LL>

3. **This man names an International Gothic sculpture ensemble with a hexagonal base that was commissioned by John the Fearless. He's not Jesus, but the frescoes on the South wall of the Sistine Chapel depict the life of this man. Claus Sluter sculpted this man on a namesake Well. As sculpture of this man now sits in the church of San Pietro in Vincoli. In that sculpture, this man clutches his stomach with his left hand and laces his right fingers in his extremely (*) long beard. Due to a mistranslation in the Vulgate Bible, Michelangelo's Tomb of Julius II included a sculpture of this man with horns. For 10 points, name this Biblical figure that Poussin depicted parting the Red Sea.**

ANSWER: Moses <JR>

4. *Warning: general answer required.* **The decline of this kind of faith was studied as part of the "disenchantment" of the world, in a book that claimed that this faith gave the original moral force to Benjamin Franklin's proverb "time is money." This faith entails less social control, and thus produces more anomic suicide, according to Durkheim. The replacement of this faith's morals through rationalization traps people in an (*) "iron cage." The "spirit" of capitalism was seen as a development of this kind of "ethic" by Max Weber. One branch of this faith holds that material wealth can show that someone is "Elect," or predestined for heaven. For 10 points, name this broad form of Christianity founded in the Reformation.**

ANSWER: Protestantism [prompt on religion or Christianity; accept Lutheranism, Calvinism, Puritanism, Methodism, Baptism, Quakers, or Moravians] <JR>

5. Litz wire is used to minimize the efficiency losses that *this* phenomenon suffers due to the skin effect. Power transfer due to this phenomenon can be maximized by using a three-phase system. This phenomenon is the input to, but not the output from, a diode bridge. Its strength is reported in terms of the root-mean-square amplitude, which is less than the (*) peak amplitude by a factor of the square root of 2. This phenomenon is converted into its counterpart by a rectifier, and its voltage can be stepped up or down at a transformer. For 10 points, name this type of electrical current that follows a sinusoidal pattern, unlike direct current.

ANSWER: alternating current [prompt on AC] <SE>

6. A man with this occupation supposedly died of shame after losing a contest to Mopsus. Mopsus was the grandson of a man with this occupation whom Hera transformed after he beat two mating snakes. Calchas was one of these people who suggested the sacrifice of Iphigenia. A (*) blind man with this occupation advised seven generations of kings in Thebes and was transformed into a woman for seven years. After she spurned Apollo, a woman with this ability was cursed never to be believed. Tiresias and Cassandra were—for 10 points—what kind of people who have the ability to predict the future?

ANSWER: prophets [accept priests; accept answers like seers or soothsayers, or any feminine version of any of those answers] <CX>

7. This organization called for profit-sharing in heavy industry as part of its 25-point programme. A member of this organization, Herbert Backe, developed the Hunger Plan. Another member of this party flew solo to Scotland to try to negotiate a secret peace with Britain. This party supported the “stab-in-the-back” myth, and it gained power via the (*) Enabling Act. This party’s rallies were shown in Leni Riefenstahl’s film *Triumph of the Will*. Members of the S.A. were purged from this party in the Night of the Long Knives, and it perpetrated the Night of Broken Glass. For 10 points, name this anti-semitic party led by Adolf Hitler.

ANSWER: Nazi Party [or National Socialist German Workers' Party; or Nationalsozialistische Deutsche Arbeiterpartei; or NSDAP] <LL>

8. In a music video, this artist “catches” a banana by crafting a makeshift spear from half a shoe. This artist is credited with popularizing a minor third alternation dubbed the “Millennial Whoop.” This artist invoked Muhammad Ali before declaring “I went from zero to my own hero.” One of this artist’s songs begins with (*) Snoop Dogg’s invocation “Greetings, loved ones: let’s take a journey.” Another of this artist’s songs somewhat questionably rhymes “fighter” with “dancing through the fire.” This singer was backed by the ineffable dancing of “Left Shark” at the Super Bowl 49 Halftime Show. For 10 points, name this singer of “California Gurls” and “Roar.”

ANSWER: Katy Perry [or Katheryn Elizabeth Hudson] <JR>

9. The development of this symphony’s first movement includes a “new” theme in the minor flat supertonic of E minor. Its first movement’s first theme is played by the cellos, who “stall” on a strange C-sharp. The main theme of this symphony’s last movement had earlier been the subject of its composer’s Opus 35 variations, and was drawn from his ballet *The* (*) *Creatures of Prometheus*. A C-minor funeral march is the second movement of this E-flat-major symphony. The composer of this 1804 symphony violently scratched out its dedication to Napoleon. For 10 points, name this third symphony of Ludwig van Beethoven.

ANSWER: Eroica Symphony [until “for 10 points,” accept any answer indicating Beethoven’s Symphony No. 3, e.g. “Beethoven’s Third”; accept Beethoven’s Opus 55; prompt for the composer on just Symphony No. 3 (until “for 10 points”) or Opus 55] <JR>

10. This poet memorialized a friend who was “nursed upon the self-same hill” and “fed the same flock” and who died when the “remorseless deep...closed over his head.” He wrote a pair of contrasting poems that begin “Hence vain deluding joys” and “Hence, loathèd melancholy.” This poet described a spirit that (*) “Dove-like sat brooding on the vast abyss, and made it pregnant.” His medium-length poems include “L’Allegro,” “Il Penseroso,” and “Lycidas.” A long poem by this man promises to tell “of man’s first disobedience” and includes speeches by a hopelessly charismatic Satan. For 10 points, name this 17th-century English poet of *Paradise Lost*.

ANSWER: John Milton <JR>

11. During this war, John Byng was executed for failing to stop the “fall” of Minorca. In a theater of this war, twelve Mingo warriors helped win the Battle of Jumonville Glen. This war spilled over into a more local war where the Battle of Plassey was won by Robert Clive. A commander in another theater of this war had to surrender at Fort Duquesne. A theater of this war was won by Britain after the Marquis de (*) Montcalm was killed at the Plains of Abraham. It followed the War of the Austrian Succession in a series of “world wars.” The French and Indian War was the American theater of—for 10 points—what war that lasted from 1756 to 1763, the namesake period of time?

ANSWER: Seven Years’ War [prompt on French and Indian War until it’s mentioned] <MK>

12. The hormones secretin and CCK stimulate this substance’s release through the Sphincter of Oddi. This substance passes through the cystic duct. The prefix “chole-” comes from the Greek word for this substance. This substance includes a waste product from red blood cell recycling that’s made when porphyrin is degraded through a “-verdin” intermediate. Lipids are emulsified by this alkaline substance’s namesake (*) “acids” and “salts.” Pigments in this substance formed from the degradation of bilirubin create the normal brown color of feces. For 10 points, name this yellow-brown goop made by the liver and stored in the gallbladder, which is bitter and helps the body digest fats.

ANSWER: bile [accept “pancreatic juice” or “pancreozymin” before “cystic”] <JR>

13. This place names the 24-volume collected works edition that Henry James put out from 1907 to 1909. In this city, the fall of Julius Beaufort induces a stroke in the obese matron Mrs. Manson Mingott. Morris Townsend backs out of marriage in this city when he finds out that Catherine Sloper would renounce her inheritance for him. This city’s society is exemplified by May Welland, in contrast to the (*) Polish Countess Ellen Olenska, who is loved by Newland Archer. This city is the setting of Henry James’s *Washington Square* and Edith Wharton’s *The Age of Innocence*. For 10 points, name this city where Bartleby the scrivener works on Wall Street.

ANSWER: New York, New York [or NYC; accept Manhattan] <JR>

14. Near the end of the Nicene Creed in its original wording, *this* verb is used to describe the “acknowledgement” of the “one baptism.” In Episcopalian churches, a version of this practice follows the Prayers of the People during Sunday Mass. This kind of act is performed before the *Kyrie* at the (*) beginning of Catholic and Lutheran Mass. One party to this practice must maintain a “seal.” This practice concerns “venial” and “mortal” actions. In Catholicism, it ends with the priest saying “ego te absolvo.” For 10 points, name this Christian practice in which someone describes their sins to a priest.

ANSWER: confession [accept answers like penance or penitential acts; accept reconciliation; accept word forms like I confess; accept confiteor] <MK>

15. In Act I of a ballet, the “Grossvater Tanz” is danced after one of these objects is brought out. In that ballet, a cabbage and a pie turn out to contain four of these objects. A lullaby is sung to one of these objects that is later saved by a thrown slipper. Swanhilda imitates one of these objects made by Doctor Coppélius in a ballet by Léo Delibes. In another ballet, Fritz breaks one of these objects that was a gift from (*)

Drosselmeyer. After stabbing the Mouse King, that one of these objects is transformed into a prince and leads the protagonist to the Land of Sweets. For 10 points, what kind of object names a ballet in which Clara meets the Sugar Plum Fairy, by Pyotr Ilyich Tchaikovsky?

ANSWER: toys [accept dolls; accept nutcrackers; prompt on presents] <JR>

16. A bank in this country has reported losses for two years in a row, due to several multibillion dollar fines for its role in the Libor scandal and the 2008 crisis. That bank in this country has recently attempted a restructuring under John Cryan. Another company from this country sold millions of products outfitted with “defeat devices” under CEO Martin (*) Winterkorn. That company from this country was fined for violating the Clean Air Act by programming its cars to disguise their nitrogen oxide emissions. This country’s banks own by far the biggest part of Greece’s national debt. For 10 points, name this home of Deutsche [“DOY-chuh”] Bank and Volkswagen, whose chancellor is Angela Merkel.

ANSWER: Federal Republic of Germany [or Bundesrepublik Deutschland] <JR>

17. This value names a limit first surpassed in 2013, using a quantum gas of potassium atoms. This is the total spin of a particle or particles in a singlet state. This number’s law of thermodynamics states that thermal equilibrium is transitive. According the kinetic theory, this is the volume of each particle in an (*) ideal gas. This is the change in Gibbs free energy for a system at equilibrium. By the third law of thermodynamics, this is the entropy of a perfect crystal at a temperature with this name. Minus 273.15 degrees Celsius is the “absolute” temperature named for—for 10 points—what value?

ANSWER: zero [accept zereth law of thermodynamics; accept absolute zero] <AF/JR>

18. This man fought a delaying action at Valcour Island against Guy Tarleton. This man took Fort Griswold in Connecticut a month before Yorktown. This man was co-commander when Richard Montgomery was killed at the Battle of Québec. This man wrote the letter “To the Inhabitants of America” after leaving on the sloop *Vulture*. Along with Ethan Allen, this man captured fort (*) Ticonderoga. This man was stripped of command by Horatio Gates, even though this man helped win the battle of Saratoga. In 1780, John André’s capture revealed this man’s scheme to hand over West Point. For 10 points, name this Revolutionary War general who defected to the British.

ANSWER: Benedict Arnold <LL>

19. This author wrote a comic *Critique* of one of his own plays to defend his ethics. William Wycherley drew heavily on that play by this author, in which Horace is able to meet and marry Agnes, despite the main character’s attempts to hide her away from the world. In another of his plays, Damis is disinherited in favor of the title character, who steals a strongbox of incriminating documents, and is eventually (*) arrested by an officer of the king. The protagonist of that play by this author is hidden under a table while Elmire tries to expose the title “impostor.” For 10 points, name this French comic playwright, who wrote *The School for Wives* and *Tartuffe*.

ANSWER: Molière [or Jean-Baptiste Poquelin] <JR>

20. This function's properties include being "multiplicative," "subadditive" and "positive definite." This piecewise linear function is differentiable everywhere except 0. For complex numbers in polar form, this quantity is symbolized r . This function's properties are generalized by metrics and norms, since this function of " x minus y " gives the number-line (*) distance between x and y . This function of " x plus y " is less than or equal to "this function of x " plus "this function of y ," by the triangle inequality. This function of x equals the "square root of x -squared." For 10 points, name this function that gives the value of a number without its sign, denoted by vertical bars.

ANSWER: absolute value [or modulus; or magnitude; prompt on "value"] <JR>

Tiebreaker

21. In this election, the nasty South Carolina primary featured accusations that a candidate's adopted child was actually born out of wedlock. A candidate in this election was derided for proposing a federal "rainy day fund," and was the first major-party candidate with a Jewish running mate. In this election, Joe (*) Lieberman ran with a man who said he "took the initiative in creating the Internet." In this election, many voting errors came from "butterfly ballots" and "hanging chads." In this election, Green Party candidate Ralph Nader won 2.7% of the vote and recounts in Florida were halted by the Supreme Court. For 10 points, name this election that Al Gore lost to George W. Bush.

ANSWER: United States Presidential Election of 2000 <LL>

Bonuses

1. One of these events marks the boundary between the Cretaceous and Paleogene periods. For 10 points each:

[10] Name these events in which a large percentage of Earth's species disappear. The Alvarez hypothesis states that an asteroid impact caused one of these events between the Cretaceous and Paleogene periods.

ANSWER: mass **extinctions**

[10] Over 90% of marine species and 70% of land species died out in the Permian extinction, which may have been caused by a rift in the north of *this* landmass. This landmass was made by the collision of Laurasia and Gondwana.

ANSWER: **Pangaea**

[10] Another proposed cause of the Permian extinction is global warming—sound familiar? Then you know about *this* ongoing extinction event, named for the current epoch of geologic time, which began 11.7 thousand years ago.

ANSWER: **Holocene** extinction/epoch <AF>

2. In Graham Greene's 1982 parody, this title character travels around in a SEAT 600 car. For 10 points each:

[10] Name this title character of a novel supposedly translated from an Arabic text written by "Cide Hamete Benengeli," which means "my Lord eggplant." This character's book collection is burned by a priest and a barber.

ANSWER: Don **Quixote** [accept Alonso **Quixano**]

[10] *Don Quixote* was written by this man Spanish author, who also wrote twelve *Exemplary Novels*.

ANSWER: Miguel de **Cervantes** (Saavedra)

[10] Don Quixote frees this self-proclaimed legendary criminal from a chain gang, but this man then steals Sancho Panza's donkey, a fact we don't learn until much later. This man also gives a puppet show as "Master Peter."

ANSWER: **Ginés** de **Pasamonte** [accept either name] <MK>

3. For 10 points each—answer the following about the irresistible rise of Henry Ford:

[10] Ford rose to fame after his use of the assembly line allowed him to introduce *this* affordable car in 1908. This car was designed by Joseph Galamb and Eugene Farkas, and came in "any color...so long as it is black."

ANSWER: Ford Model **T**

[10] Model T parts were produced at this Michigan factory complex, which was the largest integrated factory in the world when it opened in 1928. Walter Reuther led workers during the Battle of the Overpass at this factory complex.

ANSWER: Ford River **Rouge** Complex [accept similar answers including the word **Rouge**]

[10] Reuther headed the United Automobile Workers, a union that's now affiliated with a descendant of this union. This union, which was founded by Samuel Gompers, merged with the CIO in 1955.

ANSWER: **AFL** [or **American Federation of Labor**; accept **AFL-CIO**] <LL>

4. This platinum-covered object is dipped in acid, where it reacts with its namesake gas. For 10 points each:

[10] Name this object, whose half-cell reaction produces bubbles of a light diatomic gas. It's defined to have a reduction potential of zero at all temperatures.

ANSWER: **standard hydrogen electrode** [prompt on **SHE**; prompt on partial answers]

[10] Since the SHE has is defined as having a reduction potential of zero, it will be *[read slowly]* oxidized in a galvanic reaction when the reduction potential of the *other* electrode has *this* kind of value.

ANSWER: it is **positive** [accept equivalents like **greater than zero**]

[10] The standard electrode potential is used in the Nernst equation, as is *this* physicist's namesake constant. This crazy English guy sold tickets to demonstrations of his namesake "cage," which protects its contents from electricity.

ANSWER: Michael **Faraday** [accept **Faraday constant**; accept **Faraday cage**] <AF>

5. For 10 points each—answer the following about islands in the Indian Ocean:

[10] This majority-Muslim island country averages a coup once every 2 years, on top of the worst income inequality in the world. Its capital of Moroni is on the island Ngazidja, found between Mozambique and Madagascar.

ANSWER: Union of the Comoros [or Juzur al-Qumur; or Udzima wa Komori; or Union des Comores]

[10] In the 1974 referendum, Comoros voted for independence while *this* territory voted to stay with France. Cities in this department of France include Mamoudzou and Dzaoudzi.

ANSWER: Mayotte [or Maore or Mahori]

[10] Another Indian Ocean island nation is Mauritius, which was once home to this bird. Dutch sailors hunted this flightless bird to extinction in the 17th century.

ANSWER: dodo [or Raphus cucullatus] <MK>

6. The protagonist of this movie rides an actual Civil War cannon and tries to use a handcar in a train chase scene. For 10 points each:

[10] Name this 1926 comedy set during the Civil War. An actual train was used for this movie's climax, in which that train drives onto a collapsing bridge and into a river.

ANSWER: *The General*

[10] *The General* is a film by this comedic actor, who also made *Sherlock Jr.* and *The Cameraman*. This actor's rivals included Harry Langdon, Harold Lloyd, and of course Charlie Chaplin.

ANSWER: Buster Keaton [or Joseph Frank Keaton]

[10] All of those actors produced *this* kind of film, which were replaced by "talkies." Movie theaters hired organists or pianists to improvise music for these films, since they had no soundtrack.

ANSWER: silent films <JR>

7. Members of this religious group currently include Venus and Serena Williams, and in the past have included Prince and Michael Jackson. For 10 points each:

[10] Name this denomination of Christianity, whose members are known for rejecting military service and blood transfusions. They often distribute magazines like *Awake!* while preaching door-to-door.

ANSWER: Jehovah's Witnesses

[10] This other magazine of the Jehovah's Witnesses is now the most widely-circulated magazine in the world.

ANSWER: *The Watchtower Announcing Jehovah's Kingdom*

[10] Jehovah's Witnesses are at risk of *this* occurrence if they accept a blood transfusion or join the military. This practice is similar to excommunication in other Christian denominations, and it is often followed by being shunned.

ANSWER: disfellowshipping <MK>

8. For 10 points each—answer some question about Marilyn Monroe....and literature:

[10] After she divorced him, Monroe was depicted as Maggie in this man's play *After the Fall*. This man depicted Italian-American dockworkers in *A View from the Bridge*, and also wrote *All My Sons*.

ANSWER: Arthur (Asher) Miller

[10] Monroe's studio was afraid her marriage to Miller would lead to scrutiny by the House Un-American Activities Committee. That committee inspired *this* earlier Arthur Miller play, which is about the Salem Witch Trials.

ANSWER: *The Crucible*

[10] Monroe starred in *Bus Stop*, a 1956 film adaptation of this man's play of the same name. Other works by this "Playwright of the Midwest" include *Come Back, Little Sheba* and *The Dark at the Top of the Stairs*.

ANSWER: William (Motter) Inge <LL>

9. T-N-F-alpha triggers this process via activation of the N-F-kappa-B pathway. For 10 points each:

[10] Name this biological response to pathogens or irritants. The mnemonic “PRISH” is used to remember this process’s five key symptoms: pain, redness, immobility, swelling, and heat.

ANSWER: **inflammation**

[10] T-N-F-alpha is an example of *these* proteins, which are broadly defined as cell signaling proteins. They should not be confused with a similarly-named class of plant growth hormones.

ANSWER: **cytokines** [do **not** accept or prompt on “cytokinins”]

[10] The M-1 type of these cells encourage inflammation via release of T-N-F-alpha. These cells can also be polarized as the M-2 type, which decrease inflammation and instead encourage tissue repair

ANSWER: **macrophages** <AF>

10. An assassination attempt on Zhou Enlai, an attendee of this conference, was foiled at the last minute when he switched planes. For 10 points each:

[10] Name this 1955 conference, which helped lead to the creation of the Non-Aligned Movement. It was coordinated by Ruslan Abdulgani, and adopted a ten-point declaration.

ANSWER: **Bandung** Conference

[10] The Bandung conference took place in this country, then ruled by a president who advocated “Pancasila.” This Asian country’s first president took power in 1945, and it was ruled by a dictator from 1967 to 1998.

ANSWER: Republic of **Indonesia** [or Republik **Indonesia**]

[10] This South Asian country also attended the conference. This country’s independence movement was led by Mahatma Gandhi.

ANSWER: Republic of **India** [or **Bharat** Ganarajya] <LL>

11. In one of these books by Matthew Lewis, the title monk rapes and murders Antonia, who turns out to be his own sister. For 10 points each:

[10] Name these books, seven of which are described as “horrid” by Isabella Thorpe. Catherine Sloper avidly reads books of this kind, including *The Romance of the Forest*.

ANSWER: **Gothic** novels [prompt on **novels**]

[10] This author parodied Gothic novels like Ann Radcliffe’s *The Mysteries of Udolpho* in her novel *Northanger Abbey*. This woman also wrote *Pride and Prejudice*.

ANSWER: Jane **Austen**

[10] Udolpho is one of these buildings, another one of which is the setting of a novel featuring Jonathan Harker and Lucy Westenra. The first Gothic novel, written by Horace Walpole, is titled for one of these buildings in Otranto.

ANSWER: **castles** (The other novel mentioned in the first sentence is *Dracula*.) <JR>

12. This man subtitled his fifth symphony “A Soviet artist’s creative response to just criticism.” For 10 points each:

[10] Name this Soviet composer who wrote fifteen string quartets and fifteen symphonies. His seventh is nicknamed “Leningrad.”

ANSWER: Dmitri (Dmitriyevich) **Shostakovich**

[10] Shostakovich’s sixth through ninth symphonies, including the “Leningrad,” were written in the midst of this conflict. This war also gives nicknames Prokofiev’s sixth through eighth piano sonatas.

ANSWER: **World War II** [accept reasonable equivalents like **Second World War**]

[10] Shostakovich’s second piano trio opens with the cello using *this* technique, in which one finger hovers just on the string instead of pressing it down, which produces a ghostly, overtone-laden sound.

ANSWER: (artificial) **harmonics** <JR>

13. This soccer player threatened to retire from playing internationally after his country was defeated on penalties at the 2016 Copa America Centenario. For 10 points each:

[10] Name this player, who is the all time top scorer for both Argentina and F.C. Barcelona.

ANSWER: Lionel (Andrés) **Messi** [accept Leo **Messi**]

[10] Lionel Messi is also the top scorer in the *El Clásico*, a match contested between F.C. Barcelona and this club, their biggest rival.

ANSWER: **Real Madrid** ["ray-AHL" Madrid] Club de Fútbol [prompt on just **Madrid**; do **not** accept or prompt on "Atlético Madrid"]

[10] Since 2014, Lionel Messi has formed a deadly attacking trios for Barça with *these* two fellow South American forwards. Name either man.

ANSWER: Luis (Alberto) **Suárez** Díaz OR **Neymar** (da Silva Santos) Júnior <MK>

14. A king legendarily waited in the snow outside this castle for three days without a hat. For 10 points each:

[10] Name this castle town in northern Italy, which was ruled by Matilda of Tuscany in the year 1077.

ANSWER: **Canossa**

[10] Holy Roman Emperor Henry IV's Walk to Canossa was a climax in the dispute over *this* practice. Henry had been excommunicated for performing this kind of appointment despite being a layman.

ANSWER: lay **investiture** [prompt on word forms like **investing**; prompt on any description of **appointing bishops**, **priests**, etc.]

[10] Henry was excommunicated by the seventh pope of this name. The first pope of this name supposedly wrote a body of sacred plainchant, while another pope of this name reformed the Julian calendar into the system we use now.

ANSWER: **Gregory** [I, VII, and XIII; accept **Gregorian chant**; accept **Gregorian calendar**] <JR>

15. For 10 points each—answer the following about people from Greek myths who misbehave and then turn into animals:

[10] After Callisto broke her vows of chastity, Artemis changed her into one of these animals. Callisto and her son by Zeus became the constellations *Ursa Major* and *Ursa Minor*, which represent this kind of animal.

ANSWER: a **bear** [accept more specific answers like **she-bears**]

[10] Cybele turned Atalanta and Hippomenes into these animals after they had sex in a temple. Pyramus killed himself after he saw one of these animals with Thisbe's veil, and Heracles killed the Cithaeronian one of them.

ANSWER: **lion** [accept more specific answers like **lionesses**]

[10] After feeding his son to Zeus to test his omniscience, Callisto's father Lycaon was transformed into one of *these* animals.

ANSWER: a **wolf** [accept more specific answers like **werewolf** or **lycanthrope**, since Lycaon is often described as turning into a **wolf-man** instead of just a wolf] <MK>

16. For 10 points each—answer the following about pendula:

[10] When deriving a pendulum's equations of motion, you have to use *this* approximation, which replaces sine-theta with just theta. This approximation works because the Taylor series for sine begins: "*x* minus *x*-cubed-over-3."

ANSWER: **small angle** approximation

[10] For small angles, a pendulum acts like a simple harmonic oscillator, which means that *this* quantity, the amount of time needed for the pendulum to make a complete cycle, is constant. This quantity is the reciprocal of frequency.

ANSWER: **period** [prompt on **T**]

[10] Under the small angle approximation, the period of a pendulum can be written down fairly easily: it equals [**read slowly**] two-pi, times the square root of the ratio of *these* two quantities. Name *both*.

ANSWER: the pendulum's **length** AND **gravity** [accept in either order; prompt on "**L**" and/or "**g**"] <AF>

17. Nothing is certain but death and taxes. Answer some questions about the latter, for 10 points each.

[10] British economist Arthur Pigou introduced his namesake kind of tax to control *this* kind of externality. This kind of externality is exemplified by pollution, which harms third parties or at least increases costs for them.

ANSWER: **negative** externalities

[10] Income taxes are sometimes contrasted with consumption taxes, which are exemplified by *this* kind of indirect tax. Many countries use a value-added tax instead of this kind of tax, which is usually regressive due to its flat rate.

ANSWER: **sales** tax

[10] A tax that depends positively on GDP will reduce the size of the Keynesian form of *this* kind of quantity. In general, this kind of quantity simply shows how an endogenous variable changes in proportion to an exogenous one.

ANSWER: Keynesian **multiplier** <BY/JR>

18. For 10 points each—answer the following about Nicolas Poussin [“poo-SAA”]:

[10] Poussin mostly worked in *this* genre of painting, which sat above portraits at the top of the hierarchy of genres. This is the term for paintings that try to show a scene with people.

ANSWER: **history** painting

[10] Poussin spent most of his career not in France, but in this Italian city. When Diego Velázquez visited this city, he painted a portrait of Innocent X, one of the many Popes that basically ran this city in the 17th century.

ANSWER: **Rome** [or **Roma**]

[10] Poussin’s *Et in Arcadia ego* depicts a bunch of shepherds gathering around one of *these* objects.

ANSWER: a **tomb** [or **graves**; accept any kind of **funerary monument**; prompt on just **monument**] <JR>

19. This event climaxed with a failed British assault called Operation Musketeer. For 10 points each:

[10] Name this event that led to the resignation of Anthony Eden.

ANSWER: **Suez** Crisis [or **Tripartite Aggression**]

[10] The Suez Crisis occurred during this decade, which also saw the Korean War. World War II ended the decade *before* this one.

ANSWER: **1950s** [accept equivalents]

[10] Both Anthony Eden and his successor Harold Macmillan were members of this British political party. Notable Hitler-appeaser Neville Chamberlain was also a member of this party.

ANSWER: **Conservative** Party [accept **Tories**; accept **Conservative and Unionist** Party] <LL>

20. For 10 points each—answer the following about bones in literature:

[10] This poem cites the Book of Ezekiel by asking “shall these bones live?” This 1927 poem by T.S. Eliot refers to a recent event in his life with the opening line “Because I do not hope to turn again.”

ANSWER: “**Ash Wednesday**” (He had just “turned” to Anglicanism.)

[10] Sugarcane farming in this country was referred to as *The Farming of Bones* in a 1998 novel by Edwidge Danticat. Danticat, who was born in country, has also written *Untwine* and *Breath, Eyes, Memory*.

ANSWER: Republic of **Haiti**

[10] All right, so this American didn’t actually write about bones in his poem “The Jewish Cemetery at Newport,” but at least he wrote the poems *The Song of Hiawatha* and “Paul Revere’s Ride.”

ANSWER: Henry Wadsworth **Longfellow** <MK>

Tiebreaker

21. For 10 points each—answer the following about history you might encounter while hiking the Appalachian Trail:

[10] Right before entering Virginia, you pass over Watauga Dam, one of the many dams built by this New Deal agency. Appalachian Trail founder Benton MacKaye worked for this agency after leaving the Forest Service.

ANSWER: **Tennessee Valley Authority** [or **TVA**]

[10] As you hike the trail, you'll retrace part of the path Robert E. Lee took to the Battle of Antietam in *this* state. Abraham Lincoln decided to suspend habeas corpus in this state instead of bombing its city of Baltimore.

ANSWER: **Maryland**

[10] A bypass route of the Appalachian trail follows the path *this* Native American tribe took after their namesake war in North Carolina. This people then settled in New York, where they became the sixth nation of the Iroquois.

ANSWER: **Tuscarora** people [accept **Tuscarora War**] <IKD>