

**BHSAT XX (2011): This One Doesn't Bilow, We Promise!**  
**Written by Y. Student Academic Competitions**

**Round 6 Tossups**

1. One of his solo piano pieces was inspired by his twenty-fifth wedding anniversary celebration and is entitled "Wedding Day at Troldhaugen." He composed a piece in which the soloist enters directly after the introductory timpani roll. That piece, which is often coupled in recordings with a composition in the same genre and key by Schumann, is his Piano Concerto in A minor. He imitated a Baroque suite in his *From Holberg's Time*, and another of his compositions contains the movements "Solveig's Song" and "Morning Mood." For 10 points, identify this Norwegian composer whose incidental music to *Peer Gynt* contains his "In the Hall of the Mountain King."

ANSWER: Edvard **Grieg**

2. This man worked with Bayard Rustin, who resigned from this man's organization after Adam Clayton Powell accused Rustin of homosexuality. In one address, he claimed the "greatest purveyor of violence in the world today" was his own government; in one writing, he claimed "'Wait!' has almost always meant 'Never'" and described a girl tearing up over a television ad for Funland. He founded the SCLC near Dexter Avenue Baptist Church and helped organize the Selma marches. For 10 points, name this activist who was shot in Memphis by James Earl Ray, an organizer of the Montgomery bus boycott who delivered the "I Have a Dream" speech.

ANSWER: Martin Luther **King, Jr.**

3. This process sometimes leads to bubble overpotentials, such as one that leaves hydroxide ions in sodium chloride solution. In a debunked cold fusion experiment, Fleischmann and Pons performed it using a palladium catalyst. Used in the Hall-Heroult process to obtain aluminum, this process is governed by two laws named for Faraday, which quantify mass produced from it as a function of the transferred charge. For 10 points, name this process which drives a non-spontaneous chemical reaction using an electric current, often used to separate water into gaseous hydrogen and oxygen.

ANSWER: **electrolysis**

4. Kurt Godel authored one of these, using modal logic to arrive at its conclusion, and in a work by David Hume, Cleanthes rejects that any type of them is valid, restating Kant's criticism that "existence is not a predicate." The monk Gaunilo rejected it using the Lost Island objection. The earliest known one of these was offered in the *Proslogion* and relies on understanding the definition "that of which nothing greater can be conceived." For 10 points, name this type of argument attempting to show that a certain omnipotent being is real, put forth by Saint Anselm.

ANSWER: **ontological argument** (prompt on stuff like "proof God exists")

5. Albert Camus adapted a play version of one of this author's novels, about the revolutionaries Verhovensky and Stavrogin. The protagonist of one his works delights in his own toothaches and has a complicated relationship with the prostitute Liza. In another work, Nastasya Fillopovna is romantically pursued by Rogozhin while the title character, the epileptic Prince Myshkin, tries to protect her. Those works are *The Possessed*, *Notes from the Underground* and *The Idiot*. For 10 points, this is what Russian author who created the pawnbroker-murdering Raskolnikov in *Crime and Punishment*?

ANSWER: Fyodor **Dostoevsky**

6. During one quest in this game, the user trades in a Poacher's Saw; later in that quest, the Eyedrop Prescription is traded in for an Eyeball Frog. This game's ten patches of Soft Soil allow the player to plant Magic Beans. Advice-givers in this game include Kaepora Gaepora the giant owl; another helpful figure tells you to "listen" upon pressing C-Up, and allows you to Z-target. It opens with the poisoning of the Deku Tree in Kokiri forest, and later on, the player character meets Sheik after pulling the Master Sword from its pedestal and aging seven years. For 10 points, in what Nintendo 64 game does Link defeat Ganondorf with the help of a magical instrument?

ANSWER: The **Legend of Zelda: Ocarina of Time** [accept **Densetsu no Zeruda: Toki no Okarina**]

7. This opera's third act opens with violins, violas, and cello harmonics playing G in many octaves to evoke moonlight on the banks of a river. One duet is interrupted by a martial hymn first heard in Act I, and one of the title character's ariosos begins with her repeating the choir's unison cry of "Ritorna vincitor!" The final scene takes place on two levels representing the Temple of Vulcan and the vault where two central characters die. The Act II finale features an often-excerpted "Triumphal March," and the aria "O patria mia" is sung by the titular daughter of Amonasro. Amneris and Radames appear in, for 10 points, what opera by Giuseppe Verdi about an Ethiopian princess in Egypt?

ANSWER: Aida

8. The laboratory process of G-banding uses Giemsa dye to stain these bodies, and an error in which a large portion of one joins to another is named for Robertson. Largely composed of spherical proteins called histones wound in supercoils, their ends contain repetitive telomeres. These bodies can undergo translocation, and are spread out for viewing in a karyotype. For 10 points, name these dense DNA-containing structures of which human cells have 46, including X and Y.

ANSWER: chromosomes [accept karyotype or idiogram before "these bodies" is read]

9. Pope Julius II initially founded the League of Cambrai to oppose this city-state. Its rulers included the blind Enrico Dandolo, who helped sack Constantinople in the Fourth Crusade, and Ludovico Manin, who surrendered it to Napoleon. Its government included a Great Council, or Maggior Consiglio, and a Council of Ten, based in the Piazza San Marco. It lost control of Cyprus to the Ottomans before Lepanto, but kept territories in Dalmatia to its east, in what is now Croatia. This rival of Genoa controlled a Most Serene Republic. For 10 points, name this Italian city whose executives were called doges, home to many canals.

ANSWER: Venice [accept Venezia or Venesia but not "Venetia," its successor state. Be careful and ask them to spell it if necessary]

10. To this island's east is the Mona Passage. Pico Duarte is the highest peak of this island's Cordillera Central. In the southwest is the mountainous Tiburón Peninsula, which extends far beyond the rest of the island. The island's original inhabitants were five tribes, led by Cacique chieftains, of Taínos. This island east of the Windward Passage has a line visible from the air to the west of which nearly all trees are deforested. For 10 points, name the second-largest island in the Caribbean which contains Port-au-Prince and Santo Domingo, owing to its division between Haiti and the Dominican Republic.

ANSWER: Hispaniola

11. The Nuer of Sudan perform the "ghost" type of it, and in central Asia, *ala kachuu* is an example of performing this "by capture," acquiring one central component of this phenomenon on horse or by car. In traditional Judaism, these phenomena are undone by a document known as a *get*, and in Tibet, multiple brothers engage in a single one of these. Subject to endogamy and exogamy rules, these compacts often involving the gifting of dowries. For 10 points, name this kinship-creating contract often between a husband and wife.

ANSWER: marriage [prompt "wedding"]

12. One novel by this author is narrated by a spy who encoded messages to the U.S. War Department in his Nazi propaganda radio broadcasts. Another of his novels discusses a senator's son who controls the funds of a wealthy namesake philanthropic foundation. This author of *Mother Night* and *God Bless You, Mr. Rosewater* created a science fiction author named Kilgore Trout, who appears in many of his works. In perhaps this author's most famous novel, the protagonist is kidnapped by aliens from the planet Trafalmador and becomes "unstuck in time." For 10 points, name this author of *Slaughterhouse-Five*.

ANSWER: Kurt Vonnegut

13. The oral folklore hero Arash uses this object to determine the boundary between Iranian and foreign lands. In Hinduism, one of these partly made up of BEES is wielded by Kama-deva. In Chinese tradition, the Earth stops overheating after Houyi uses this weapon to kill nine of the ten suns. Kodanda is Rama's weapon of this type, while Gandiva is Arjuna's. In Greek myth, the poisoned Philoctetes inherited this weapon from Heracles, and Paris uses one to hit Achilles's heel, killing him. For 10 points, name the weapon that is strung by Odysseus upon his return to Ithaca, and which is wielded by Apollo and Cupid.

ANSWER: bow and arrows [prompt on just "arrows"]

14. This man had his brother's severed head thrown into his tent near the Metaurus River, and he lost use of one eye from infection; later, he swallowed poison from a ring to kill himself while exiled to Bithynia. He faced the hot-headed Flaminius at Lake Trasimene, and another of his enemies was called "Cunctator" for his delaying tactics. He used the double-envelopment tactic to win at Cannae, and was finally defeated at Zama by Scipio Africanus. For 10 points, name this Carthaginian general who, in order to invade Rome, took his war elephants when crossing the Alps.

ANSWER: Hannibal Barca

15. The Fizeau experiment measured this quantity in moving water. Though it's not the age of the universe, this quantity's finitude can resolve Olbers's paradox. It's equal to the reciprocal of the square root of the product of permittivity and permeability of free space. Cerenkov radiation occurs when particles exceed the local value of this in a transparent medium, emitting a largely ultraviolet bluish glow. The interferometer used by Michelson and Morley failed to find any "ether" that would cause this quantity to vary. For 10 points, name this constant symbolized in  $E = mc^2$  by  $c$ , which is the fastest possible speed.

ANSWER: speed of light [accept  $c$ ]

16. This artist painted *Daubigny's Garden* and *Wheat Field with Crows* during the last year of his life, spent in Auvers-sur-Oise. A red-mustached man leans on his fist in two portraits this man painted of his physician, Dr. Gachet. The title location of one of his paintings has a green ceiling, red walls, and a yellow floor, and is dominated by a billiard table in the center. A woman pours out chicory while the title figures eat by the light of an oil lamp in another work. Those paintings are *The Night Café* and *The Potato Eaters*. For 10 points, name this Dutch painter of a landscape dominated by a cypress and several celestial swirls, *The Starry Night*.

ANSWER: Vincent van Gogh

17. At the end of this poem, the protagonist encounters a Hermit, a Pilot, and the Pilot's boy, who laughs crazily and thinks he is the devil. In this poem, Death plays dice with Life-in-Death for the souls of certain characters. The poem opens with the Wedding Guest unwillingly listening to the tale of the title character. And the lines "Water, water everywhere / Nor any drop to drink" describes the stranding of a ship, which occurs after the title character shoots a certain animal with his crossbow. For 10 points, this is what poem in which the title sailor reaps the consequences of killing an albatross, by Samuel Taylor Coleridge?

ANSWER: "The Rime of the Ancient Mariner"

18. Melchizadek blessed this figure, introduced in the Torah *parsha* entitled "Lech L'cha." He planted a tamarisk tree and swore an oath with Abimelech at Be'er Sheba, and lied twice that his wife was his sister. This son of Terah and brother of Nahor and Heran smashed all the idols in his father's shop in Ur, and successfully argued that ten good men should spare the city in Sodom before fleeing that city with Lot. He received a name change after being sent to Canaan by God. For 10 points, name this husband of Sarah, patriarch to Jews, Christians, and Muslims alike.

ANSWER: Abraham [accept Avraham, Abram, or Avram]

19. Philosopher Jean Baudrillard argued that this war "did not take place;" at the beginning of this war, one national leader patted a British boy on the back of the head and asked whether he was getting his milk. At its end, a non-Israeli country forcibly expelled 400,000 Palestinians. Scud missiles were fired westward during this conflict, which included the Highway of Death, the siege of Khafji, and overwhelming air strikes. Norman Schwarzkopf authored the Allied offensive strategy, Operation Desert Storm. For 10 points, name this war at the end of which America ended the occupation of Kuwait, but left Saddam Hussein in charge of Iraq.

ANSWER: First Persian Gulf War [prompt "Desert Storm" until read]

20. He described transformations onto the open unit disk in his "mapping theorem." A geometric object with an inner product for all tangent spaces, a curvature tensor, and differentiability is his "manifold." He co-names a set of conditions for analytic complex functions with Cauchy. He also names a construct that possesses a critical line on which all zeroes might have real part one-half; that "zeta function" helps find the distribution of primes in his unsolved hypothesis. Another method named for him uses right-handed or left-handed rectangles under a function. For 10 points, name this German mathematician whose namesake "sums" help define the integral in calculus.

ANSWER: Bernhard Riemann

TB. Both this play's central act and the culprit of that act are discovered by a guard who notably babbles. This non-Orpheus-related play concludes with the discovery of the corpse of Eurydice. The blind prophet Tiresias approves of the play's central act, while the king's son Haemon attempts to protect the woman who committed it. That woman's sister refuses to help her commit the act, but later tries and fails to take responsibility for the act. Ismene does not share in her sister's punishment of being entombed while still alive. For 10 points, name this tragedy by Sophocles in which the titular character defies Creon to bury her half-brother.

ANSWER: *Antigone*

## Round 6 Bonuses

1. This ruler signed truces to end the Livonian War, called the first *zemsky sobor* assembly of nobles, and founded the *Oprichniki* bodyguards, who carried out the Massacre of Novgorod. For 10 points each:

[10] Name this Rurikid succeeded by Fyodor who became mentally unstable after taking the title Tsar of Russia.

ANSWER: **Ivan IV** Vasilyevich [accept **Ivan Grozny** or the inaccurate translation **Ivan the Terrible**]

[10] This power vacuum included invasions from Poland and Sweden and the usurper Vassily Shuisky. Arising after Fyodor's death and the weak tsarship of Boris Godunov, it ended when Michael Romanov was named tsar.

ANSWER: **Time of Troubles** [accept **Smutnoe Vremya**]

[10] During the troubles, three separate men sought power by claiming to be this missing son of Ivan the Terrible, who was most likely murdered at the age of nine.

ANSWER: **Dmitri** [accept **false Dmitris**]

2. This type of bond is formed when two atoms of similar polarity share electrons. For 10 points each:

[10] Identify this type of bond found within molecules such as water and carbon dioxide, often contrasted with the "ionic" type.

ANSWER: **covalent** bond

[10] This type of covalent bond is the strongest, and arises from the mixing of two *s* orbitals. Every covalent bond contains exactly one of these bonds.

ANSWER: **sigma** bond

[10] If the central atom of a compound is able to form four covalent bonds and has no lone pairs, VSEPR ("vesper") theory predicts that it will adopt this molecular geometry, exemplified by methane.

ANSWER: **tetrahedral** geometry

3. In the bottom right of this painting, a rabbit runs onto the tracks. For 10 points each:

[10] A black train travels across a bridge towards the viewer in what 1844 canvas?

ANSWER: **Rain, Steam, and Speed** - *The Great Western Railway*

[10] *Rain, Steam, and Speed* is by this English landscape painter, whose historical paintings include *The Battle of Trafalgar* and *Snow Storm: Hannibal and His Army Crossing the Alps*.

ANSWER: Joseph Mallord William **Turner**

[10] Sharks and seagulls swarm around corpses that have been thrown off the title vessel of this Turner painting.

ANSWER: *The Slave Ship* [or *Slavers Throwing overboard the Dead and Dying-Typhoon coming on*]

4. This protest play of the 1950's civil rights movement, the first play written by a black woman to premiere on Broadway, takes its name from a Langston Hughes poem about a "dream deferred." For 10 points each:

[10] Name this play featuring an African American family, the Youngers, who receive a \$10,000 life insurance check in the mail, but whose family members cannot agree on how to spend it.

ANSWER: *A Raisin in the Sun*

[10] Name the author of *A Raisin in the Sun*, whose play, *Les Blancs*, was posthumously completed by Robert Nemiroff.

ANSWER: Lorraine **Hansberry**

[10] Name the male protagonist of the play, who wants to use the insurance check to purchase a liquor store, believing that this investment will grant his family financial security

ANSWER: **Walter** Younger

5. Sections of this text, which include the Cow, Bee, Moon, and House of Imran, are called suras. For 10 points each,

[10] Name this book of scripture, which is the first source of sharia and was dictated by Gabriel to a certain prophet.

ANSWER: the **Koran** or **Quran**

[10] In addition to the Quran, sharia relies on interpreting these texts describing the life of Muhammad. They begin with an isnad, or chain of oral transmission, and relate sunnah, or legal customs.

ANSWER: **hadith**

[10] This is the word for Islamic jurisprudence, which is practiced by scholars called ulama. There are four Sunni and two Shiite schools, or madh'habs, of this practice.

ANSWER: **fiqh**

6. He compared a Union in which states could nullify federal law to a “rope of sand” while debating senator Robert Hayne, and resolved tensions with British Canada by signing a treaty with Baron Ashburton. For 10 points each:  
[10] Name this Massachusetts Senator, a part of the Great Triumvirate with Henry Clay and John C. Calhoun.

ANSWER: Daniel **Webster**

[10] Webster supported this set of bills which admitted California as a free state, abolished the slave trade in DC, left Utah and New Mexico’s slave status to popular sovereignty, and included a harsh Fugitive Slave Law.

ANSWER: **Compromise of 1850**

[10] Three decades earlier, Webster used the contract clause to defend the trustees of this college, his alma mater, against acquisition by its home state.

ANSWER: **Dartmouth** College

7. Many of the chapters in this work are parts of soap operas by one of its title characters, Pedro Camacho. For 10 points each:

[10] Name this novel in which Mario Varguitas marries the other title character, who is modeled on the author’s own first wife.

ANSWER: **Aunt Julia and the Scriptwriter** [or *La tía Julia y el escribidor*]

[10] *Aunt Julia and the Scriptwriter* is by this Peruvian author of *The Green House*, the most recent Noble Prize winner for literature.

ANSWER: Mario **Vargas Llosa**

[10] The revolutionary Antônio Conselheiro causes conflict in Canudos, Brazil, in this Vargas Llosa novel.

ANSWER: *The* **War of the End of the World** [or *La guerra del fin del mundo*]

8. Answer some questions about Italian cities for 10 points each.

[10] This city on the Arno river is the capital of Tuscany, and features the large-domed Duomo designed by Brunelleschi. It was an important Renaissance city under the Medicis.

ANSWER: **Florence**

[10] This northwestern city in Sicily, the largest on that island, celebrates Saint Rosalia’s Day every July 15.

ANSWER: **Palermo**

[10] This city is close to the Adriatic Sea, and was the last capital of the Western Roman Empire.

ANSWER: **Ravenna**

9. The government needs more money! Help collect it, for 10 points each.

[10] The Sixteenth Amendment allows for the income type of these procedures that supply-side economists don’t like. They are a revenue stream along with imposts, duties, and excises.

ANSWER: **taxes** [accept **taxation**]

[10] According to this curve, supposedly first drawn on a napkin, an ideal tax rate  $t$  between 0 and 100 percent will raises the maximum amount of money, and tax rates above that cause a loss of revenue.

ANSWER: **Laffer** curve

[10] This Pareto inefficient outcome is often caused by a tax levied on a good. It causes some consumers to buy a product even though they incur more marginal costs than marginal benefits, or abstain from doing so if they’d accrue more marginal benefits than costs.

ANSWER: **deadweight loss**

10. He wrote a string quartet whose tonally ambiguous slow introduction has led it to be nicknamed the “Dissonance” Quartet. For 10 points each:

[10] Name this composer who also wrote *The Marriage of Figaro*, *The Magic Flute*, and the “Jupiter” Symphony.

ANSWER: Wolfgang Amadeus **Mozart**

[10] Mozart left this large choral work unfinished at his death. It is a setting of the Latin mass for the dead and gets its name from the introit text used, which pleads for “eternal rest.”

ANSWER: **Requiem** in D minor, K. 626

[10] *Slumdog Millionaire* song “Jai Ho” quotes a theme from this Mozart symphony, his second and last to be in a minor key. It is Mozart’s only symphony to open with an accompaniment figure.

ANSWER: Symphony no. **40** in G minor, K. 550 [also accept “**Great G minor**”]

11. This collection contains the sonnet “Correspondences,” which is often cited as an example of his synaesthesia. For 10 points each:

[10] Name this poetry collection with sections entitled “Spleen and Ideal” and “Revolt,” whose first section addresses the “hypocrite reader, my likeness, my brother!”

ANSWER: Les fleurs du mal [or The Flowers of Evil]

[10] This French Symbolist wrote *Les fleurs du mal* and translated Poe into French.

ANSWER: Charles Baudelaire

[10] This other French Symbolist wrote about the title creature encountering several nymphs that he “would perpetuate” in his poem “Afternoon of a Faun.”

ANSWER: Stephane Mallarmé

12. It was originally conceived as an answer to one of the author’s namesake paradoxes. For 10 points each:

[10] Name this work, co-authored with Alfred North Whitehead, that utilized the “theory of types” in an attempt to derive all of mathematics from axiomatic logic.

ANSWER: Principia Mathematica

[10] This author of *Why I am Not a Christian* and the philosophical essay *On Denoting* co-authored Principia Mathematica with Whitehead. He fiercely advocated nuclear disarmament.

ANSWER: Bertrand Russell

[10] Russell’s Paradox concerns one of these mathematical constructs which in turn contains all of these that do not contain themselves. Georg Cantor is known as the father of this type of theory with a Zermelo-Frankel framework.

ANSWER: sets [accept set theory]

13. Answer these questions about drama between the papacy and the French monarchy, for 10 points each.

[10] In 1305, the Papacy moved from Rome to this city in south France, staying until 1377. After the move back to Rome, an antipope lived here during the succeeding 40-year schism.

ANSWER: Avignon

[10] The move to Avignon occurred during the reign of this French king who really ground the Church’s gears by taxing clergymen. He expelled Jews from France and eliminated the Knights Templar.

ANSWER: Phillip IV [accept Phillip the Fair]

[10] This pope issued the bull *Clericos laicos* against Phillip IV, and claimed that the Church had absolute temporal power in his *Unam sanctum*. He died two years before the move to Avignon and appears in Dante’s *Inferno*.

ANSWER: Boniface VIII

14. Answer the following questions about the eye, for 10 points each.

[10] Rhodopsin-containing rod cells detect the brightness of light on this back wall of the eye, where color-perceiving cone cells are also situated.

ANSWER: retina

[10] This small area of the retina contains a point called the fovea, where a high number of cones allows for sharp vision. Its degeneration leads to a loss of central vision.

ANSWER: macula lutea [do not accept “macula densa”]

[10] This process allows the eye to adjust between close-up and distance vision. To obtain a focused image, the lens of the eye undergoes this process through action of the ciliary body.

ANSWER: accommodation

15. One of his few English movies was the film version of *Fahrenheit 451*. For 10 points each:

[10] Name this French director, whose alter ego Antoine Donel appears in such films as *Stolen Kisses* and *The 400 Blows*. He portrayed the love triangle between Catherine and the title pair of men in *Jules and Jim*.

ANSWER: François Truffaut

[10] Along with Jean-Luc Godard, Truffaut was one of the leading figures of this artistic movement in French film, which included many directors who had previously been critics for the magazine *Cahiers du Cinema*.

ANSWER: Nouvelle Vague [or French New Wave]

[10] A hunting party at the Marquis de La Chesnay’s estate is the setting of the *Rules of the Game*, a classic French film by a director with this last name. His father was the painter of *Luncheon of the Boating Party*.

ANSWER: Renoir

16. Usually at between 60 and 80 beats per minute and without vocals, it features syncopated rhythms, occasional vocals, a unique musical “wobble,” and an overwhelming bassline. For 10 points each:

[10] Name this style of “filthy” or “dirty” electronic dance music originating from drum and bass, popularized in England in the early 2000s. Artists of this genre include Digital Mystikz, Datsik, and Prototype.

ANSWER: **dubstep**

[10] A notable aspect of dubstep is this musical structure where the music pauses briefly after a buildup and then returns with much more intensity. It is also a term used in b-boying to refer to the transfer from top-rock to breaking.

ANSWER: **drop**

[10] Copyright claims quickly removed several YouTube dubstep remixes of this Ark Music Factory production, in which Rebecca Black asks “Which seat can I take?” and intends to have “fun, fun, fun, fun.”

ANSWER: **“Friday”**

17. In one story in this collection, fear prevents the title character from going to Buenos Aires with her boyfriend, Frank. For 10 points each:

[10] That story, “Eveline”, joins “A Little Cloud”, “The Sisters”, and “The Dead” in this collection of short stories that center on the epiphanies and paralysis of their characters.

ANSWER: **Dubliners**

[10] In this story in *Dubliners*, a boy romanticizes his attraction to his love interest, but his journey to buy her a gift at the title bazaar leads only to his disillusionment.

ANSWER: **“Araby”**

[10] This Irish author wrote *Dubliners*, in addition to other famous works, such as *Finnegan’s Wake*, *A Portrait of the Artist as a Young Man*, and *Ulysses*.

ANSWER: James **Joyce**

18. His advisor Chanakya composed a text about how to rule called the *Artha-shastra*, and he himself rose to power by defeating satraps left behind by Alexander the Great. For 10 points each,

[10] Name this founder of the Maurya dynasty in India, whose name evokes a later dynasty from 320 to 550 CE.

ANSWER: **Chandragupta** Maurya

[10] This grandson of Chandragupta left Pillar Edicts throughout India after his experience with bloody war in the Kalinga province led him to convert to Buddhism.

ANSWER: **Ashoka** the Great [or **Asoka**]

[10] Chandragupta allied with a Diadochos, or successor of Alexander, who won the battle of Ipsus and began a dynasty east of Antigonos stretching east from modern-day Persia. Name *either* that man *or* the dynasty he founded.

ANSWER: **Seleucus** I Nicator *or* **Seleucid** dynasty/empire

19. Answer some questions about a common object-oriented programming language, for 10 points each.

[10] Containing a “virtual machine” that runs on all software platforms, this programming language developed in the 90s by Sun Microsystems is commonly used in Internet applets.

ANSWER: **Java** [do not accept or prompt “Javascript”]

[10] Newer versions of Java feature multiple libraries of these constructs, which are used to perform common programmatic tasks or to abstractly access hardware-level features. Instantiation creates new objects from these.

ANSWER: **classes**

[10] In object-oriented programming, this term refers to a method of storing data in a class with keywords such as “private,” so that objects interacting with that class cannot access said data.

ANSWER: **encapsulation** [prompt on “information hiding”]

20. After being abandoned on Naxos by her first husband, she became the wife of Dionysus, for whom she bore Oenopion, and was eventually rescued from Hades by him. For 10 points each,

[10] Name this daughter of Minos who gave her first husband a ball of string to help him escape the labyrinth.

ANSWER: **Ariadne**

[10] Ariadne’s first husband was this slayer of the Minotaur who became king of Athens after the death of his father Aegeus. He was an Argonaut and tried to abduct both Persephone and Helen of Troy with his friend Pirithous.

ANSWER: **Theseus**

[10] Theseus later married this woman, a queen of the Amazons whose girdle was stolen by Heracles. She bore him a son who was loved by Phaedra.

ANSWER: **Hippolyta**



TB. For 10 points each, answer these questions about radioactive decay:

[10] In this decay process, a namesake particle composed of two neutrons and two protons is released from the nucleus.

ANSWER: alpha decay

[10] This more dangerous form of decay does not alter atomic number or atomic mass, but instead releases a high-energy photon from the nucleus.

ANSWER: gamma decay

[10] Experiments on this black ore led to the discovery of radioactivity. It mainly contains uranium oxides, and its high radioactivity led Marie Curie to analyze it further and discover radium.

ANSWER: pitchblende or uraninite