2016 OAC States - Round 5

Questions written by Ike Jose and Steven Wellstead

Category Round

American Literature: Answer the following about works of literature related to New York City.

<u>Team A</u>: "Battle Royale" is the first section of this 1952 novel, which follows an unnamed black man living in Harlem who joins an organization known as the Brotherhood.

ANSWER: *Invisible Man* [do not accept or prompt on "*The Invisible Man*"]

<u>Team B</u>: New York professional Henry Cameron hires the protagonist of this 1943 philosophical novel about the stubborn architect Howard Roark, who in one notable scene rapes his future wife, Dominique Francon.

ANSWER: The Fountainhead

<u>Tossup</u>: New York City was the setting of a novel by this author which ends in Paris with the protagonist's son, Dallas, on his way to meet a Countess as his father returns to his hotel. Another of this writer's novels ends with Lawrence Selden deciding to propose marriage to the protagonist, Lily Bart, who commits suicide immediately before his arrival. In another of her novels, Ellen Olenska leaves behind Newland Archer even though she is in love with him. Name this female author of *The House of Mirth* and *The Age of Innocence*.

ANSWER: Edith Wharton [or Edith Newbold Jones]

Mathematics: Pencil and paper ready. Answer the following about sequences and series. You *must* give your answers in simplest fractional form. In particular, do *not* use decimals. You will have 30 seconds for the team questions.

<u>Team B</u>: Give the sum of the infinite geometric series whose first four terms are the following: 5, 5/4 ("five fourths"), 5/16 ("five sixteenths"), and 5/64 ("five sixty-fourths").

ANSWER: 20/3

<u>Team A</u>: Give the sum of the infinite geometric series whose first four terms are the following: 21, 3, 3/7 ("three sevenths"), and 3/49 ("three forty-ninths").

ANSWER: 49/2

<u>Tossup</u>: The "quadrature" of this shape is a discussed in a treatise by Archimedes (ar-kih-MEE-deez) that shows how to sum a geometric series. Lambert's theorem states that if three tangents to one of these shapes form a triangle, then this shape's focus will lie on the circumcircle of the triangle. The semi-latus rectum of this shape is given by the equation "2A," where A is a coefficient. This conic section is generated by using a plane that is more tilted than an ellipse but less tilted than a hyperbola. Name this shape represented by a quadratic equation.

ANSWER: parabola

World History: Name these cities.

<u>Team A</u>: This third most-populous city in Uzbekistan served as the capital for the empire founded in the late 14th century by Tamerlane.

ANSWER: **Samarkand** [or **Samargand**]

<u>Team B</u>: This city's House of Wisdom was destroyed when the Mongol Empire sacked it in 1258 under the command of Hulagu Khan.

ANSWER: Baghdad [or Bagdad]

Tossup: One ruler's invitation for Irish monks to reside in this city led to the construction of the Schottenstift ("SHOT"-ehn-stihft) monastery. Nicholas, Count of Salm successfully defended one attack on this city, where a successful 1485 siege was led by Matthias Corvinus. Kara Mustafa Pasha led the Ottomans in a 1683 attack on this city but was repulsed by Jan Sobieski (YAHN soh-bee-ESS-kee). Karl von Hardenburg represented Prussia at a meeting in this city that concluded during the Hundred Days period and was led by Klemens von Metternich. Name this eastern European city where a namesake 1815 "congress" occurred at the end of the Napoleonic Wars.

ANSWER: Vienna [or Wien; accept Siege of Vienna or Battle of Vienna or Congress of Vienna]

Fine Arts: Name these paintings that feature nudity.

<u>Team B</u>: Five students and the artist, all of whom are nude, congregate in and around Dove Lake in this 1885 painting by Thomas Eakins (AY-kinz).

ANSWER: The <u>Swimming Hole</u> [or <u>Swimming</u> or The <u>Old Swimming Hole</u>]

<u>Team A</u>: Several nude concubines are being attacked in this 1827 Eugene Delacroix (oo-ZHEN duh-luh-KWAH) painting in which the title figure reclines on a bed while another nude woman prostrates before him.

ANSWER: The Death of Sardanapalus [or La Mort de Sardanapale]

<u>Tossup</u>: The artist of this painting created a work entitled *Heads of Torture Victims* while studying the decomposition of amputated heads to prep for execution of this work. In the bottom right corner of this painting, a partially nude corpse is covered in a translucent white sheet and has his head emerged in water. In this painting, which caused controversy when it was first displayed at the 1819 Paris Salon, an African man stands on a barrel and waves a white and red cloth towards a ship far in the distance as a wave threatens to overturn the title object. The frantic survivors of an 1816 shipwreck are the subject of what best known painting by Theodore Gericault (tay-oh-dor zhair-ih-koh)?

ANSWER: The <u>Raft of the Medusa</u> [or Le <u>Radeau de la Meduse</u>]

Life Science: Answer the following about biological pathways.

<u>Team A</u>: The citric acid cycle works by oxidizing this substance. The two-carbon functional group that gives this substance its name is attached to oxalo acetate to form citrate.

ANSWER: acetyl-CoA (uh-SEE-tuhl KOH-ay) or acetyl co enzyme A

<u>Team B</u>: During gly colysis, two of these electron carriers are made. After being treated by its namesake de hydrogenase, it is oxidized to create a proton gradient in oxidative phos phorylation.

ANSWER: <u>NAD</u> ("N-A-D") [or <u>nicotinamide adenine dinucleotide</u> or <u>NAD+</u> or <u>NADH</u>; do not accept or prompt on "NADP" or "NADPH" or "nicotinamide adenine dinucleotide phosphate"]

<u>Tossup</u>: Icicle plants were found to have this pathway induced in them when the salt content of their diet was increased. Both primary and final carboxylation take place in the meso phyll cells in plants that use this pathway, in which malic acid is stored in a vacuole (VAK-yoo-ohl) until stomata open. This pathway, which is named for an (*) acid and *Crassula* family plants, is used by pineapples to reduce the effects of photo respiration. Name this pathway that some plants use at night to prevent evapo transpiration.

ANSWER: <u>CAM</u> (kam) pathway or <u>CAM</u> photosynthesis [accept <u>Crassulacean acid metabolism</u> before (*)]

World Literature: Answer the following related to a certain Nobel laureate.

<u>Team B</u>: This Frenchman who won the 1921 Nobel Prize is perhaps best known for authoring the novels *The Gods are Athirst* and *Penguin Island*.

ANSWER: Anatole France (AH-nah-tohl frahnss) [or Jacques Anatole Francois Thibault]

<u>Team A</u>: Every piece of writing by Anatole France was put on the Catholic Church's Index of Banned Books, which also included this other Frenchman's satirical work *Persian Letters*.

ANSWER: Montesquieu (MAHN-tess-"skew") [or Charles-Louis de Secondat, baron de la Brede et de Montesquieu]

<u>Tossup</u>: One character created by this author discusses a "little patch of yellow wall" during a scene in which he dies while viewing the Johan Vermeer painting *View of Delft*; that character, whose name is Bergotte, was inspired by Anatole France. This author depicted the homosexual relationship between Jupien and the Baron de Charlus ("baron" duh shar—"LOOSE") in an early 20th century work entitled *Cities of the Plain*. Charles Swann's mad love for Odette de Crecy is depicted in a novel by this author that opens in Combray. That novel by this author features an episode of "involuntary" memory involving a madeleine cake. Name this French author who wrote *Remembrance of Things Past*.

ANSWER: Marcel **Proust** (proost) [or Valentin Louis Georges Eugene Marcel **Proust**]

U.S. Government/Economics: Name these Chief Justices of the Supreme Court.

<u>Team A</u>: This Chief Justice was known as one of the so-called "Minnesota Twins," along with life-long friend and fellow justice Harry Blackmun. His court issued the ruling in *California v. Bakke* (BAH-"key"), which upheld affirmative action while at the same time striking down the use of racial quotas.

ANSWER: Warren Earl Burger

<u>Team B</u>: This man was appointed as the second ever Chief Justice, but after less than six months of service his appointment to the position was rejected by the Senate and he was replaced by Oliver Ellsworth.

ANSWER: John Rutledge

<u>Tossup</u>: Before being appointed to the Supreme Court, this man co-founded his home state's namesake "Manumission Society." This Chief Justice accepted the legality of jury nullification with his opinion in the case *Georgia v. Brailsford*. Prior to his tenure on the Supreme Court, he served as the U.S. Ambassador to Spain and authored five essays that were included in a collection published under the pseudonym "Publius" (POO-blee-uss). He resigned his position as Chief Justice to become Governor of New York as the successor to George Clinton. While serving as Chief Justice, he was sent overseas to negotiate what would become a namesake 1794 treaty with Britain. Name this first Chief Justice.

ANSWER: John Jay

Physical Science: Name these types of motion.

<u>Team B</u>: Even though the speed is constant, the acceleration of this motion is non-zero. The acceleration of this kind of motion is given by the velocity squared divided by the radius.

ANSWER: <u>uniform circular</u> motion [prompt on partial answer]

<u>Team A</u>: During this kind of motion, the x component of a force is always zero, while the downward force is always caused by gravity. Objects in this motion follow a parabolic path.

ANSWER: **projectile** motion

<u>Tossup</u>: When an object exhibits this kind of motion, it may form a Prandtl-Meyer (PRAAN-tul-"MY"-err) expansion fan. A Ludwieg Tube is a wind tunnel that produces this kind of motion. The Sears-Haack body is the ideal shape to reduce the resistance on a body that is undergoing this kind of motion. This kind of motion often occurs due to the use of afterburners. This kind of motion will produce a certain type of (*) boom since an object has exceeded Mach ("mock") (**) 1. Name this kind of motion in which an object travels faster than the speed of sound.

ANSWER: <u>supersonic</u> motion [accept <u>hypersonic</u> motion before (**), but do not accept thereafter; prompt on "sonic" or "sonic boom" after (*)]

World Geography: Name these European nations.

<u>Team A</u>: The Vardar River flows through the capital city of this country, which shares Lake Ohrid with its western neighbor, Albania.

ANSWER: Former Yugoslav Republic of Macedonia [or Republika Makedonija or FYROM]

<u>Team B</u>: The Most SNP ("S-N-P") Bridge, which is also known as the UFO Bridge, is located within this nation's capital city, the limits of which border the nations of Austria and Hungary.

ANSWER: Slovakia [or Slovak Republic or Slovenska Republika; do not accept or prompt on "Slovenia"]

<u>Tossup</u>: Near the western border of this nation is a grove of oddly-shaped trees known as the Crooked Forest. Along with its western neighbor, this nation shares control of the Szczecin (SHEH-cheen) Lagoon. Pilsudski Square is found in the capital of this nation, which contains the eastern portion of the region of Pomerania. A gated entrance to one notorious site in this country features the slogan "Arbeit macht frei" ("ARE-bite" mokt "fry"), meaning "work sets you free." This country borders the southern boundary of Russia's Kaliningrad Oblast, and its capital is situated on the Vistula River. The remains of the Auschwitz concentration camp are in what Baltic nation containing such cities as Gdansk (guh-DANSK) and Warsaw?

ANSWER: Republic of **Poland** [or Rzeczpospolita **Polska**]

U.S. History: Name these Civil War battles.

<u>Team B</u>: Ulysses Grant's nickname of "unconditional surrender" stemmed from this February 1862 battle in which Grant captured a Confederate Army under the command of Simon Buckner at a location along the Cumberland River.

ANSWER: Battle of **Fort Donelson**

<u>Team A</u>: The USS *Tecumseh* was sunk during this August 1864 naval battle in which winning commander David Farragut, while aboard the USS *Hartford*, supposedly exclaimed "Damn the torpedoes!"

ANSWER: Battle of Mobile Bay

Tossup: During this battle, one commander led a flanking march past the Catharine Furnace. John Sedgwick was prevented from intervening in this battle after being intercepted at the Battle of Salem Church. The Second Battle of Fredericksburg was fought as part of this battle, in which the XI Corps ("11th core") commanded by Oliver Howard was overrun, ultimately leading to a Union retreat across the Rappahannock River. During this battle, the 18th North Carolina regiment shot a commander whose subsequent death led Robert E. Lee to remark "I have lost my right arm." Union commander Joseph Hooker lost what May 1863 battle in which a friendly fire incident led to the death of Stonewall Jackson?

ANSWER: Battle of Chancellorsville

Alphabet Round – Letter M

- 1. Abraham Cowley and Thomas Traherne are this type of poet, who used literary "conceits" in their poetry. The name for these poets was coined in a work by Samuel Johnson.
- 2. **(TWO WORD ANSWER)** Secret society of Irish-American coal miners which was active in late 19th century Pennsylvania.
- 3. **(TWO WORD ANSWER)** This law, developed by John Dalton, states that the ratio of X to Y will be a simple ratio if X and Y are the same element in two different compounds that use a constant amount of a second element.
- 4. In mosques, the direction to Mecca, or *qibla*, is indicated by one of these niches.
- 5. People with bipolar disorder shift between periods of intense depression, and these other periods of intense joy or euphoria. During this phase, some will purchase a lot of unnecessary goods.
- 6. **(TWO WORD ANSWER)** Jadis is awakened by the title character of this novel, which is the first chronologically in *The Chronicles of Narnia*.
- 7. Ruler of the Mali Empire who crippled the economy of North Africa due to the large amounts of gold he gave away during a 14th century hajj.
- 8. Anabaptist denomination named after a 16th century Dutch priest; its "Stauffer Pike" group shuns the use of cars and modern technology.
- 9. These animals with curved tusks went extinct during the Pliocene epoch. The related mastodon went extinct during the Pleistocene epoch.
- 10. (MULTI-WORD ANSWER) 1540 Parmigianino painting in which a miniature St. Jerome holds an open scroll next to the title baby-holding woman.
- 11. Horror stories such as "The Venus of Ille" were written by this French master of the short story. His story about a gypsy girl was turned into the opera *Carmen*.
- 12. Body of water which separates Madagascar from mainland Africa.
- 13. (TWO WORD ANSWER) Autobiography of Adolf Hitler that was written in the aftermath of the Beer Hall Putsch.
- 14. In Greek myth, the half man-half bull creature that was housed within the Labyrinth.
- 15. The Latin word for "mulberry" gives its name to this stage of an embryo in which there are a collection of cells. This stage of an embryo transitions into the blastula stage with the development of a blastocoel.
- 16. "The Million-Year Picnic" depicts a family voyaging to this place; other "chronicles" set at this place in a story collection by Ray Bradbury include "The Summer Night."
- 17. Mozart's Piano Sonata in C minor opens by using the "rocket" technique named for this school of music. That technique is a series of arpeggios that also crescendo.
- 18. Baltimore fort that was the site of an 1814 battle which inspired Francis Scott Key to write the Star Spangled Banner.
- 19. (MULTI-WORD ANSWER) For a solid octahedron and for its principle axis, this quantity is "mass times side length squared over 10."
- 20. This branch of philosophy, which includes ontology, is defined as the study of the nature of being.

Alphabet Round – Letter M Answer

- 1. metaphysical poets
- 2. Molly Maguires (TWO WORD ANSWER)
- 3. law of multiple proportions (TWO WORD ANSWER)
- 4. mihrab ("ME-rob")
- 5. mania or manic
- 6. The Magician's Nephew (TWO WORD ANSWER)
- 7. Mansa Musa Keita I
- 8. Mennonites
- 9. mammoths [or mammuthus]
- 10. <u>Madonna of the Long Neck</u> or <u>Madonna with the Long Neck</u> [or La <u>Madonna del Collo Lungo</u> or <u>Madonna and Child with Angels and St. Jerome</u>] (MULTI-WORD ANSWER)
- 11. Prosper Merimee (may-ree-MAY)
- 12. Mozambique (moh-zahm-BEEK) Channel
- 13. *Mein Kampf* ("mine" kahmpf) [or *My Struggle*] (TWO WORD ANSWER)
- 14. Minotaur (MIH-nuh-"tar")
- 15. morula (MOR-yoo-luh)
- 16. **Mars**
- 17. Mannheim School [accept Mannheim rocket]
- 18. Fort McHenry
- 19. moment of inertia [accept mass moment of inertia] (MULTI-WORD ANSWER)
- 20. metaphysics or metaphysical philosophy

Lightning Round

- 1. Worthington Whittredge served as the model for this painting's central figure, who holds a monocular (muh-NAWK-"you"-lerr) in his right hand. This work appears in the background of a painting that depicts three stern-faced women, one of whom holds up a cup of tea; that painting is Grant Wood's *Daughters of Revolution*. One figure pushes off an iceberg with his oar in this painting, which depicts future president James Monroe holding a flag behind the title character. Name this Emanuel Leutze (LOYT-zuh) painting that depicts a military action preceding the 1776 Battle of Trenton. ANSWER: *Washington Crossing the Delaware*
- 2. A poetic format named for this concept was used by William Wordsworth in his poem *Resolution and Independence*. Shakespeare's Sonnet 55 states that "Not marble nor the gilded monuments of princes shall outlive this powerful" concept, whose "feminine" type matches two or more syllables. The "sight" type of this concept applies to words like "tough" and "cough." Name this repetition of sounds at the ends of words that is exemplified by "picky" and "tricky." ANSWER: rhyme [accept rhyme or other word forms; accept feminine rhyme or sight rhyme or eye rhyme or other equivalent word forms]
- 3. The arrow shot by this hero is supposedly still flying across the universe as a principle of "dharma" that upholds the order of the world. Shatrughna (SHAH-troog-nuh), Lakshmana ("LOCK"-shmahn-uh) and Bharata (BUH-rah-TUH) are the three brothers of this man, who is raised by Queen Kaikeyi (KYE-"key"-uh). This son of Dasharatha (DAH-shuh-RATH-uh) rescues his wife Sita (SEE-tuh) from the demon Ravana (RUH-vah-NUH) in an epic named for him that was written by the poet Valmiki (VAL-MEE-"key). Name this king of Ayodhya ("EYE"-yoh-DEE-yuh) who is the seventh avatar of Vishnu.

ANSWER: Rama [prompt on "Vishnu"]

4. These items were the subject of the Supreme Court case *Coleman v. Miller*. The protection of "domestic institutions" was the subject of one of these proposed by Thomas Corwin. The ruling in *Dillon v. Gloss* stated that deadlines for approval may be included as part of these items, one of which contains the "Privileges or Immunities" and "Equal Protection" clauses. One of these enacted in 1865 prohibits "involuntary servitude." Name these Constitutional provisions, the first ten of which are called the Bill of Right.

ANSWER: <u>amendments</u> to the United States Constitution [accept U.S. Constitutional <u>amendments</u> or other clear knowledge equivalents]

5. An Arabic scientist named Mashallah wrote the first treatise on this object, which inspired Geoffrey Chaucer's treatise on it. The unrelated "mariner" type of this device is used to measure the latitude of a ship. This device, which is a type of inclinometer, is used to measure the relative positions of the Sun, the Moon, and other objects on the Celestial Sphere. Name this medieval instrument whose name comes from the Greek words for "star-taker."

ANSWER: astrolabes

- 6. In the epilogue to this book, Nika and Misha meet up and discuss how Tanya, a laundress, resembles the title character. In its last section, Yevgraf helps a woman search for her daughter. Its title character is abducted by Liberius and forced to serve in the Forest Brotherhood. This novel follows a physician who is in love with Lara throughout the turbulence of the Russian Revolution and Stalin's Great Purges. Name this 1957 Boris Pasternak novel about the title physician. ANSWER: *Doctor Zhivago* (zhee-VAH-goh) [or *Doktor Zhivago*]
- 7. This island contains the ruins of a former royal residence known as the Palace of Sans Souci (sahn soo-SEE). One national park on this island lies along a bay named after its Samana (sah-mah-NAH) Peninsula. About three miles separate its two largest lakes, Lake Azuei (AH-"zoo"-ay) and Lake Enriquillo (en-ree-KEE-yoh). This island is bordered to the west by the Gulf of Gonave (goh-NAHV), and it is bordered on the east by the Mona Passage, which separates it from Puerto Rico. Santo Domingo is the most populous city on what Caribbean island that contains Haiti and the Dominican Republic?

ANSWER: <u>Hispaniola</u> (hih-"span"-YOH-luh) [or <u>Espanola</u>; do not accept or prompt on "Haiti" or "Dominican Republic"]

8. Graham Hancock and Robert Bauval argued that this sculpture represents a constellation and that it is actually 12,000 years old in their book *Keeper of Genesis*. E.A. Wallis Budge unusually believes that it was "rediscovered" by Khafre (KHAF-ruh), who is sometimes credited with building this sculpture made out of nummulitic limestone. This object sits near structures built by Cheops at Giza. Name this very old sculpture of a half-lion, half-human creature that is found in Egypt.

ANSWER: Great **Sphinx** of Giza

9. During a trial stemming from this event, John Fryer gave damaging testimony against three men subsequently hanged aboard the *Brunswick*. Shortly after this event, a group of men visited Tofua island before traveling to the city of Kupang. The ship *Pandora* led an expedition to find the men responsible for this event; those men settled on both Pitcairn Island and Tahiti. Fletcher Christian led what 1789 event in which a group of men rebelled against William Bligh (bly), the captain of a certain ship?

ANSWER: <u>mutiny</u> on the HMS <u>Bounty</u> [accept clear knowledge equivalents which mention the <u>Bounty</u> and the notion of a <u>mutiny</u>]

10. Francis Perrin (peh-"RAN") discovered that a natural form of this process once occurred in the Oklo region of Gabon (gah-"BONE"). In certain media, the four-factor formula is used to determine this process' multiplication factor. The first example of this process was achieved by the Chicago (**) Pile-1 under the direction of Enrico Fermi. This kind of process occurs above the critical mass because the splitting of a uranium nucleus using one neutron produces several neutrons. Name this type of self-sustaining nuclear (*) fission reaction.

ANSWER: nuclear **chain reaction** [prompt on "fission" or "nuclear fission" before (*); prompt on "nuclear reactions" or "reactions" before (**) but not thereafter]

11. In one of this author's poems, a soldier recalls seeing "Orion sloping slowly over the West" and the "Pleiads (PLEE-adz), rising thro' mellow shade" at his childhood home. This author of "Locksley Hall" wrote another poem about a group that "had fought so well / Came thro' the jaws of Death." In that poem by this man, the title group of "six hundred" rode into the "Valley of Death." Name this English poet who wrote "The Charge of the Light Brigade" and was made a "lord."

ANSWER: Alfred Tennyson [or Alfred, Baron Tennyson or Alfred, Lord Tennyson]

12. This politician was deemed eligible to run in an election in which he defeated Gery Chico; four years later, he was elected to that same position by defeating "Chuy" ("chewy") Garcia. In March 2016, his state's Supreme Court struck down one of his laws that attempted to address underfunded pension systems. This politician served as Obama's first Chief of Staff before his 2011 election to his current position, during which he has been heavily criticized for his response to Laquan McDonald's shooting death by police. Name this current Mayor of Chicago.

ANSWER: Rahm Israel Emanuel

13. According to a text called *Promulgation of the Law*, this set of statements was first delivered to a group of *bhikkhus* (BIHK-"ooze"). According to one of these statements, craving is the origin of "re-becoming." The concept of *dukkha* (DOO-kuh) is central to these statements, the first of which states that "everything is suffering." The last one concerns the "Path of Liberation" that can be achieved by following the Eightfold Path. Name this quartet of statements central to Buddhism.

ANSWER: Four Noble Truths [accept chattari-ariya-saccani or chatvari-arya-satyani; prompt on partial answers]

14. Every member of this group appoints two directors to its Board of Governors, which in turn manages the Special Drawing Rights allocations. Christine Lagarde (lah-"guard") is the current managing director of this group, which has the goal to "reduce poverty around the world." Rape allegations by a hotel maid in New York led to the 2011 resignation of its then-leader, Dominique Strauss-Kahn. The 1944 Bretton Woods Conference saw the establishment of what financial organization that is abbreviated (*) IMF ("I-M-F")?

ANSWER: International Monetary Fund [accept IMF before (*)]

15. One major source of this man's rule was the diary of Henry Francis Fynn. The successor to this ruler massacred a group of settlers led by Piet Retief (peet ruh-TEEF) and was later defeated at the Battle of Blood River. This man came to power during a period of warfare known as Mfecane (em-fuh-KAH-nay). The death of his mother, Nandi (NAHN-dee), led to mass executions, which likely inspired his assassination by his half-brother, Dingane (din-GAH-nay), in 1828 near present-day Durban, South Africa. Name this king of the Zulus.

ANSWER: Shaka Zulu [or Chaka Zulu or Shaka kaSenzangakhona]

16. An isotope of this element is used in NMR ("N-M-R") solvents to reduce the solvent peak. Hillard Bell Huntington and Eugene Wigner predicted the existence of a "metallic" form of this element. The Lyman and Balmer series consist of spectral emission lines of this element, which reacts with nitrogen in the Haber process to produce fertilizer. It is the lighter of the two elements found in methane. Tritium and deuterium are isotopes of what element that is the most abundant one in the universe and the lightest?

ANSWER: **hydrogen** [prompt on "H"]

- 17. This work describes a character who has a vision that "would set him dancing." The primary character of this work "cursed the commonplace / and eyed a khaki suit with loathing." This poem's title character "dreamed of Thebes and Camelot, and Priam's neighbors," but ultimately he "scratched his head and kept on thinking...coughed, and called it fate, and kept on drinking." A "child of fate" who was born too late is the title character of what poem by E.A. Robinson? ANSWER: "**Miniver Cheevy**"
- 18. Leif Segerstam has composed 291 of these works, including six in 2015 alone. One of these works in F-sharp minor features the performers blowing out candles as they leave the stage. A fortissimo chord suddenly appears in the second movement of another work of this type that is part of a larger group of twelve works nicknamed "London." Name this musical form whose "father" was said to be Joseph Haydn ("HIGH"-din), who composed ones nicknamed "Farewell" and "Surprise."

ANSWER: symphony or symphonies

19. In 1910, this state's Representative Robert Broussard introduced a bill to import hippos to combat the invasive water hyacinth and provide a source of meat. The German Coast Uprising occurred in this present-day state, which was once represented in the Senate by Judah Benjamin. Another of its Senators utilized the slogan "Every Man a King" before his 1935 assassination by Carl Weiss. *Plessy v. Ferguson* originated in this state, which was home to politician Huey Long. Name this southern state that is the namesake of a large 1803 purchase from France.

ANSWER: Louisiana

20. The apricot-derived Vitamin B₁₇ ("B 17"), more commonly called laetrile, was once used to treat this disease before it was determined not to be effective. This disease is treated by the drug cisplatin, which is one of the first platinum-containing compounds used to treat it. Doxoʻrubicin is commonly used to treat this disease despite the side effect of hair loss. Hodgkin's lymphoma is one of these diseases caused by the Epstein-Barr virus. Leukemia is an example of what disease often treated with chemoʻtherapy?

ANSWER: cancer [accept more specific kinds of cancer]