#### 2016 OAC States - Round 8

Questions written by Ike Jose and Steven Wellstead

# **Category Round**

## American Literature: Questions in this category will deal with the adjective "lost."

<u>Team A</u>: This author wrote about Marian Forrester, a woman who has an affair and eventually runs away from her husband, in the novel *A Lost Lady*. Other books by this author include *The Professor's House* and *One of Ours*.

ANSWER: Willa Sibert Cather

<u>Team B</u>: This posthumously published Ernest Hemingway memoir set in Paris featured the use of the term "Lost Generation," which was supposedly uttered by a garage owner who was taking care of Gertrude Stein's car.

# ANSWER: A Moveable Feast

<u>Tossup</u>: The death of this author's father, Herman, was the subject of his memoir entitled *Patrimony: A True Story*. One novel by this author is divided into the three sections "Paradise Lost," "Paradise Remembered," and "The Fall"; in that novel, a post office is blown up by the daughter of Seymour "Swede" Levov. Another novel by this man imagines that the anti-Semitic Charles Lindbergh has been elected president. This author of *American Pastoral* and *The Plot Against America* wrote a novel in which the title character talks to Dr. Spielvogel about his graphic sexual frustrations. Name this contemporary Jewish-American author who wrote *Portnoy's Complaint*.

ANSWER: Philip Milton Roth

### Mathematics: Answer the following having to do with fractals.

<u>Team B</u>: Fractals have this property, which loosely means that many smaller versions of itself comprise the overall larger object. Because they exhibit this property, a fractal's shape would not change if it was magnified.

## ANSWER: self-similar ity

<u>Team A</u>: This mathematician's namesake fractal, or "snowflake," is derived by starting with an equilateral triangle, dividing each line segment into thirds, and then adding more equilateral triangles that incorporate the middle portion of each line segment.

ANSWER: Helge von **Koch** ("coke") [or Niels Fabian Helge von **Koch**; accept **Koch** snowflake]

<u>Tossup</u>: This mathematician's namesake "dust" is a three dimensional fractal that is formed by crossing sets which have their middle thirds removed. An argument developed by this man involves constructing a list, and then changing a number from a digit in each entry in that list. He stated that there is no set with a cardinality in between that of the sets denoted by aleph zero and aleph one as part of the continuum hypothesis. He used a proof technique to show that the set of real numbers is uncountably infinite. Name this German mathematician who introduced the diagonalization argument.

ANSWER: Georg <u>Cantor</u> [accept <u>Cantor</u> dust or <u>Cantor</u> set or <u>Cantor</u>'s diagonalization argument]

## World History: Name these dynasties.

<u>Team A</u>: King Rama I was the first ruler of this dynasty, which has continued to rule Thailand since its founding in 1782.

ANSWER: Chakri Dynasty

<u>Team B</u>: The 1383 death of King Ferdinand I without an heir led to the rise of this ruling house of Portugal, which was ended upon the 1580 death of King Henry I.

ANSWER: House of Aviz

<u>Tossup</u>: Many leaders of this dynasty had their primary residence at the Hall of Mental Cultivation. One ruler of this dynasty utilized the Green Standard Army to put down the Revolt of the Three Feudatories. The Self-Strengthening Movement occurred during this dynasty, one ruler of which initiated the failed Hundred Days' Reform. This dynasty, which was ruled for 61 years by the Kangxi (KAHNG-shee) Emperor, experienced a rebellion that was put down by the Eight-Nation Alliance. That anti-foreign rebellion during this dynasty was supported by the Empress Dowager Cixi (TSEE-shee) and carried out by the Society of Righteous and Harmonious Fists. The Boxer Rebellion occurred during what dynasty which succeeded the Ming as the final ruling dynasty of China?

ANSWER: Great **Qing** ("ching") Dynasty [or **Ch'ing** Dynasty or **Manchu** Dynasty or **Qing chao**]

### Fine Arts: Name these musical instruments given ethno-musicological clues about them.

<u>Team B</u>: The Senegalese *xalam* is thought to be a predecessor of this folk instrument. In jazz, the earliest performer of this instrument was Johnny St. Cyr.

ANSWER: banjo

<u>Team A</u>: This instrument, which may have been given a derogatory name because its performers often drooled, is placed against the teeth and plucked using the fingers.

ANSWER: <u>Jew harp</u> [accept <u>Jew's harp</u> or <u>jaw harp</u> or <u>mouth harp</u> or <u>Ozark harp</u> or <u>juice harp</u> or <u>trump</u>; do not accept or prompt on "harp"]

<u>Tossup</u>: Yasuo Kuwahara was a Japanese composer largely remembered for composing pieces for this instrument. Giovanni Paisiello ("pie"-ZEH-loh) wrote two concerti for this instrument, which was largely popularized in America due to its masterful player, Valentine Abt. Pasquale Vinaccia created the Neapolitan form of this instrument, which features 17 frets on its fingerboard. The most common form of this instrument features four pairs of plucked strings that are tuned in a succession of perfect fifths. Bluegrass music commonly features what (\*) lute-like instrument that is pear-shaped?

ANSWER: **mandolin** [prompt on "lute" before (\*)]

# Life Science: Answer the following about specialized parts of some organisms.

<u>Team A</u>: This structure's ostium is surrounded by the fimbria, which has cilia that move an ovum into these structures. The name of these structures was derived from that of a 16th century scientist.

### ANSWER: Fallopian tubes [or salpinx or salpinges]

<u>Team B</u>: At the base of cilia are these proteins, which are sometimes called kineto somes. These structures are designed to serve as the growth site of axoneme micro tubules.

### ANSWER: basal body or basal bodies [accept basal granules or blepharoblasts]

<u>Tossup</u>: These structures come together and form a mesh for digesting food in some organisms that use the "reticulose" types of them. Cerco zoans and forams use these structures, which are formed and unformed through actin polymerization to create micro filaments. Radio larians use a specialized type of this structure called an axopodia that forms a helical shape. Their name comes from the Greek for "fake-feet." Name these projections used by some amoeba for locomotion.

ANSWER: pseudopods [or pseudopodia or pseudopodium]

### World Literature: Answer the following about fantasy literature.

<u>Team B</u>: This fictional country, which is situated north of the Calormen Empire, is used by Prince Rabadash to launch an attack on Narnia in *The Horse and His Boy*.

## ANSWER: Archenland

<u>Team A</u>: This posthumously published 1977 collection includes such sections as "The Music of the Ainur" and "Of Beren and Luthien."

## ANSWER: The **Silmarillion** (sil-muh-RILL-ee-un)

<u>Tossup</u>: This character visits a location near the mythical Strait of Anian (ah-nee-AHN) and the real life Cape Mendocino. This character is injured by hailstones and is used to scoop out the marrow of bones when he visits a country in which he is dipped into a bowl of cream by a dwarf who has become jealous of him. At one point, this man shuns his family for many months so that he can be around and converse with his horses. In one scene, this man witnesses a war between the Little-Endians and Big-Endians, which began as an argument over the proper way to crack an egg. This man goes to the land of Brobdingnag after discovering a race of tiny people from Lilliput. Name this surgeon whose "travels" are the subject of a novel by Jonathan Swift.

ANSWER: <u>Lemuel Gulliver</u> [accept either underlined portion; accept <u>Gulliver's Travels</u> or <u>Travels into Several Remote</u> <u>Nations of the World, in Four Parts. By Lemuel Gulliver</u>, First a Surgeon, and then a Captain of Several Ships]

#### U.S. Government/Economics: Name these pieces of federal legislation.

<u>Team A</u>: This 1810 law was passed in an attempt to prevent British and French attacks on American ships by agreeing to stop trading with one of the two countries if the other agreed to end their attacks.

ANSWER: <u>Macon</u>'s Bill Number <u>2</u> [prompt on partial answer]

<u>Team B</u>: This law, which was passed in 1910, originally prohibited the transport of women across state lines for "immoral purposes." African-American boxer Jack Johnson was notably convicted of violating this law.

ANSWER: Mann Act [or White-Slave Traffic Act]

<u>Tossup</u>: Some opponents of this legislation provided homemade jam to their representatives with attached notes reading "Preserve us from a congressional jam; vote against [this] sham." While under consideration, this legislation was altered by a rider introduced by Senator Carl Hayden. This legislation was the subject of the case *Idaho v. Freeman*, which ruled that an extension to its approval deadline was unconstitutional and that its rescission by five states was valid. Phyllis Schlafly (SHLAFF-lee) led an opposition campaign against this legislation, which was ratified by thirty-five states between 1972 and 1977. Alice Paul wrote the wording to what failed constitutional amendment to prohibit sex discrimination?

ANSWER: Equal Rights Amendment or ERA [accept Equal Rights after (\*)]

Physical Science: Name these objects within the solar system.

<u>Team B</u>: This object is the site of a periodically occurring storm known as the Great White Spot.

ANSWER: Saturn

<u>Team A</u>: The Gertrude Crater is the largest on this object, which was discovered in 1787 on the same day as Oberon.

**ANSWER: Titania** 

<u>Tossup</u>: On this object, a dark region called Gallifrey Macula is bisected by Tardis Chasma. In a recent statement from NASA, it was noted that this object's "mountain in a moat" has stumped astronomers. This is the smaller of two objects that may have a reddish color due to tholins. The north polar region of this object is informally called Mordor. This object was discovered by James Christy in 1978. This was the largest satellite documented by the *New Horizons* probe that was launched in 2006. This satellite is the largest of five moons that also include Hydra and Nix. Name this moon of Pluto.

ANSWER: Charon ("SHARE"-en) [or 134340 Pluto I; do not accept or prompt on "Pluto" by itself]

# World Geography: Name these African nations.

<u>Team A</u>: Rio Muni is the name of the mainland portion of this country, which controls the island of Bioko off the coast of its northern neighbor.

ANSWER: Republic of **Equatorial Guinea** [or Republica de **Guinea Ecuatorial** or Republique de **Guinea equatoriale**; do not accept or prompt on "Guinea"]

<u>Team B</u>: Along with its northern neighbor, part of this country's western border is formed by the Ruzizi River, which ends at Lake Kivu (KEE-voo). Along with its northern and eastern neighbor, it was part of the colony of German East Africa.

ANSWER: Republic of Burundi [or Republique du Burundi or Republika y'u Burundi]

Tossup: A desert located primarily in this country features many unexplained, barren patches of land known as fairy circles. The north end of this nation contains a large salt pan within Etosha (uh-TOH-shuh) National Park. In its colonial era, this nation was the site of the Herero (huh-"RARE"-oh) Genocide. Part of its coastline where many shipwrecks have occurred is known as the Skeleton Coast. Part of this country's northern border is formed by the Okavango River, which bisects its Caprivi Strip. The west end of the Kalahari Desert is in this country, whose entire southern border is formed by the Orange River. German South-West Africa was the colonial name of what country whose capital is Windhoek (VINT-"hook")?

ANSWER: Republic of Namibia (nuh-MIB-ee-uh)

### U.S. History: Name these treaties involving the United States.

<u>Team B</u>: In this 1835 treaty, a faction of the Cherokee tribe agreed to cede its territories east of the Mississippi River and move west to Indian Territory; thus, this treaty was used as the legal basis for the removal of Native Americans in the Trail of Tears.

ANSWER: Treaty of New Echota

<u>Team A</u>: The Clayton-Bulwer Treaty was nullified by this 1901 agreement with the United Kingdom, which gave the U.S. the right to construct and control a canal across Central America.

ANSWER: Hay-Pauncefote (PONS-"foot") Treaty

<u>Tossup</u>: The text of this agreement referenced a map published by John Melish. One provision of this treaty was a renunciation of all claims stemming from an expedition undertaken by Francisco de Miranda. This agreement explicitly upheld most provisions of Pinckney's Treaty. This treaty established a border that referenced the source of the Arkansas River, which was undetermined at the time. The U.S. agreed to pay any legal claims by its citizens up to five million dollars as part of this treaty, which fixed the Sabine (suh-BEEN) River as the western boundary of the Louisiana Purchase. The First Seminole War helped hasten what 1819 treaty in which Spain agreed to cede Florida?

ANSWER: <u>Adams-Onis</u> (oh-"NIECE") Treaty of 1819 [accept <u>Transcontinental</u> Treaty of 1819; prompt on "Florida Treaty" or "Florida Purchase Treaty"]

#### Alphabet Round - Letter N

- 1. Roman emperor who was the final ruler from the Julio-Claudian dynasty.
- 2. This prostitute and thief in Fagin's gang is brutally beaten to death by Bill Sykes in the novel Oliver Twist.
- 3. This branch of Buddhism, which is named for a monk who regarded the *Lotus Sutra* as a source of morality, believes that each person possesses an "inner" Buddha nature.
- 4. Optics and electronics, as well as golf clubs, often make use of this incredibly small cylindrical allotrope of carbon.
- 5. Nation where a 2015 election was held in which incumbent president Goodluck Jonathan was defeated by Muhammadu Buhari.
- 6. (MULTI-WORD ANSWER) This semi-monthly magazine was founded by Robert Silvers and Barbara Epstein. Abbreviated NYRB, its regular contributors included Susan Sontag and Oliver Sacks.
- 7. 1721 treaty which ended the Great Northern War.
- 8. This chord, which is named for an area of Italy, is built on the supertonic of a major or minor scale.
- 9. The "Coalsack" and "Finger of God" are two examples of the "dark" type of these objects since they extinguish all light that are behind them.
- 10. The Bedouins display this behavior of some primitive tribes that involves constantly being on the move.
- 11. **(TWO WORD ANSWER)** This literary movement, whose practitioners included Alain Robbe-Grillet, eschewed many of the conventions of fiction. *The Erasers* and *Jealousy* are considered to be its representative examples.
- 12. First prime minister of an independent India.
- 13. In an opera by Richard Strauss, Ariadne is abandoned on this island, which is also the name for a musical record label started by Klaus Heymann.
- 14. **(TWO WORD ANSWER)** When light is reflected between a sphere and a flat surface, the resulting concentric interference pattern is given this name.
- 15. Large, arid plain due north of the Great Australian Bight.
- 16. *Speak, Memory* is an autobiography of this Russian-American author also known for penning *Ada* and being an avid lepidopterist.
- 17. Female beings from Norse mythology who water Yggdrasil and determine the fate of men.
- 18. (TWO WORD ANSWER) Abolitionist newspaper founded in 1847 by Frederick Douglass.
- 19. (**TWO WORD ANSWER**) Full name of the doctor whose "anatomy lesson" is the subject of a 1632 painting by Rembrandt.
- 20. This is the term for the nerve endings of cells which detect and transmit pain to the brain.

## Alphabet Round – Letter N Answers

- 1. Nero [or Nero Claudius Caesar Augustus Drusus Germanicus]
- 2. Nancy
- 3. Nichiren (NEE-chee-ren) Buddhism
- 4. carbon **nanotube**
- 5. Nigeria [or Federal Republic of Nigeria]
- 6. New York Review of Books (MULTI-WORD ANSWER)
- 7. Treaty of **Nystad**
- 8. **Neapolitan** chord
- 9. **nebula**s [or **nebula**e]
- 10. **nomad**ic [accept **nomadism**]
- 11. nouveau roman [or new novel] (TWO WORD ANSWER)
- 12. Jawaharlal Nehru (juh-WAH-her-lahl NEY-roo) [or Pandit Nehru]
- 13. Naxos [accept Naxos Records]
- 14. Newton's Rings (TWO WORD ANSWER)
- 15. Nullarbor (NULL-uh-bor) Plain
- 16. Vladimir Vladimirovich Nabokov (nah-BAW-kuff)
- 17. Norns or Nornir
- 18. <u>North Star</u> (TWO WORD ANSWER)
- 19. Nicolaes Tulp (TWO WORD ANSWER)
- 20. <u>noci·ceptor</u>s (NOH-sih-sep-turz)

#### **Lightning Round**

1. This is the shorter of the two major rivers that has historically played host to the annual KROK ("croc") International Animated Films Festival. This river is overlooked by the nearly 1,000 year old Monastery of the Caves. One of its tributaries, the Pripyat (PREE-pyit) River, is connected by a canal to the Bug (boog) River at the city of Brest. This is the second longest river that begins in the Valdai (VAHL-dye) Hills, which also contains the source of the Volga River. The mouth of this river is just east of Odessa along the northern coast of the Black Sea. Kiev is located along what chief river of Ukraine?

ANSWER: <u>Dnieper</u> (NEE-pur or d'NEE-pur) River [or <u>Dnepr</u> (d'NEH-pur)]

- 2. This quantity lies on the y-axis of a Michaelis-Menten curve. A coefficient that determines this quantity is dependent on the change in the Gibbs free energy according to the Eyring ("EYE"-ring) equation. The exponential temperature dependence of this quantity is given by the Arrhenius (uh-REE-nee-us) equation. This quantity equals the product of a namesake constant and the reactant concentrations raised to an exponent called the order. Temperature will usually increase this quantity since more collisions are being induced. Name this measure of the speed of a chemical reaction. ANSWER: reaction rate [accept reaction velocity or rate constant]
- 3. This author wrote "we cannot know his legendary head with eyes like ripening fruit" in a poem that ends "You must change your life." This author of "The Archaic Torso of Apollo" wrote one work that was inspired by Picasso's depiction of a family of acrobats. A castle near Trieste ("tree"-EST) is the namesake of a ten part poetry collection by this author which asks "who if I cried out would hear me among the angelic orders?" Name this German poet who wrote the *Duino Elegies* (DWEE-noh EL-ih-jeez).

ANSWER: Rainer Maria Rilke (RYE-nur muh-REE-uh RIL-kuh) [or Rene Karl Wilhelm Johann Josef Maria Rilke]

4. This man used a triangular composition for the tombs of Clement XIII ("the 13th") and Clement XIV ("the 14th"). Although he is not Benvenuto Cellini, he depicted the title Greek hero holding the head of Medusa in the sculpture titled *Perseus Triumphant*. One sculpture by this artist has a catafalque (CAH-tuh-fahlk) that makes it easily rotated; that work depicts Pauline Bonaparte as *Venus Victrix*. His other works include *Psyche Revived by Cupid's Kiss* and *The Three Graces*. Name this neoclassical Italian sculptor.

ANSWER: Antonio Canova

- 5. Samuel Swett provided one account of this battle, which included a diversionary operation led by Robert Pigot (PIGuht). One side in this battle suffered the deaths of both James Abercrombie and John Pitcairn. Charlestown Peninsula was the site of this battle, which included the death of Dr. Joseph Warren. The winning side in this battle led three assaults against troops commanded by William Prescott, who may have been the one to order "don't fire until you see the whites of their eyes." Name this June 1775 battle in Boston that was fought on (\*) Breed's Hill. ANSWER: Battle of **Bunker Hill** [accept Battle of **Breed's Hill** before (\*)]
- 6. Although it's not stress, Benjamin Greenwood suggests that this phenomenon can be prevented with exercise. An experiment partly run by Dr. Maier first provided evidence for this phenomenon, in which "yoked pairs" of animals had the option to press a lever. Clinical depression is thought to be caused by this phenomenon, which Martin Seligman initially demonstrated by repeatedly shocking dogs. Name this situation in which an organism is unable to get out of its harmful behavior.

ANSWER: **learned helplessness** [prompt on "helplessness"]

7. This bone covers the cervico axillary canal, and a nerve named for this bone connects the third and fourth cranial nerves. In some reptiles, this bone is replaced by the extremely flat plastron, which can be found in most turtle shells. In birds, this bone fuses together with a similar one to create the "wishbone." This long bone, whose name comes from the Latin for "key," connects the sternum with the shoulder blade. Name this bone sometimes called the (\*) clavicle. ANSWER: **collarbone** [accept **clavicle** before (\*)]

- 8. One composition written for this instrument includes a quodlibet (KWAHD-lih-bet) based on two songs, one of which notes how "cabbage and beets / have driven me away." In the 20th century, Wanda Landowska (VAHN-dah lahn-DOHV-skah) was renowned for playing this musical instrument. Francis Poulenc's (poo-lonkz) *Pastoral Concerto* was written for it. Domenico Scarlatti wrote 555 sonatas for this instrument, which was used in the J.S. Bach composition *Goldberg Variations*. Name this Baroque keyboard instrument that was the predecessor to the piano.

  ANSWER: harpsichord (HARP-sih-kord)
- 9. One character in this novel used to command 100,000 soldiers of the Milky Way but after getting drunk one night was banished to the mortal world. The main character of this novel is given the job of being a keeper of the horses after being born from a stone egg on Flower Fruit Mountain. This book describes a voyage undertaken by Sandy, Pigsy, and Sun Wukong to retrieve Buddhist scrolls from India. Name this 16th century book that is one of the four classical novels of China.

ANSWER: <u>Journey to the West</u> [or <u>Monkey</u> or <u>Xi You Ji</u> or <u>Hsi-yu chi</u>]

- 10. This present-day country was the site of the War of Knives, which led to the exile of Andre Rigaud (ree-goh). Immigrants from this nation were targeted in the 1937 Parsley Massacre. The Battle of Vertieres (vair-tee-"air") concluded a revolt in this nation that claimed the life of General Charles Leclerc. Saint-Domingue (san-doh-MANG) was the colonial name of this country, which was led for nearly 30 years by "Baby Doc" and "Papa Doc" Duvalier (doo-val-yay). Jean-Jacques Dessalines (day-sah-leen) and Toussaint Louverture (too-SAN loo-vair-TOOR) were revolutionaries of what Caribbean nation ruled from Port-au-Prince ("port"-oh-"prince")? ANSWER: Republic of **Haiti** [or Republique d'**Haiti** or Repiblik d'**Ayiti**]
- 11. Prior to this event, one participant clothed herself in garments that were comprised of flowers and made by the Seasons and Graces. Before this event, several participants bathed in a spring at Mount Ida, where it took place. This event, which occurred during a banquet celebrating the marriage of Peleus and Thetis, began after Eris threw an apple which was inscribed with the words "for the fairest." Helen of Troy was kidnapped in response to what mythical event in which Hera and Athena were defeated by Aphrodite (af-roh-"DIE"-tee)?

ANSWER: **judgement of Paris** [accept clear knowledge equivalents that mention **Paris** and the notion of a **judgement** of a beauty contest; prompt on partial answer]

12. So-called "Chinese walls" form on the top of "reverse" type of these structures. A complex, constantly changing Aeolian (ay-OHL-ee-un) profile leads to the creation of the "star" types of these structures. Barchans (bar-KHANZ) are types of these that form with only one slipface. A large collection of these structures is called an erg. They usually form when certain granular materials accumulate before reaching the angle of repose; that accumulation often occurs in desert regions. Name these large collections of sand.

ANSWER: sand dunes [accept reverse sand dunes or star sand dunes]

- 13. In one poem by this author, "Seraphs swing their snowy Hats...to see the little Tippler leaning against the Sun!" In that poem by this writer, "Tankards scooped in Pearl" allow the speaker to "taste a liquor never brewed." In another of her poems, she writes "Don't tell they'd advertise you know!" after asking the question "are you Nobody too?" The author of "I'm Nobody? Who are you?" was what reclusive, female poet from Amherst, Massachusetts?

  ANSWER: Emily Elizabeth **Dickinson**
- 14. This painting's most prominent male figure, who appears on the extreme right side, was supposedly modeled after Gaston La Touche (GAA-stahn lah toosh). Its upper left corner depicts the legs of a trapeze artist. In this work's bottom right corner, several alcoholic beverages, including a bottle of Bass beer, stand next to a glass bowl of oranges. A chandelier and dozens of audience members are visible in this painting in the mirror located behind a lone female bartender. A Paris nightclub is the title setting of what painting by Edouard Manet (ayd-wahr maa-nay)? ANSWER: *A Bar at the Folies-Bergere* (foh-lee bair-ZHAIR) [or *Un bar aux Folies Bergere*]
- 15. Out of respect for the Thirteen Martyrs of Arad, it is common for people of this nationality to refrain from clinking beer glasses. Geza (GAY-zah) fathered their first king, who was a member of the Arpad dynasty. Between the World Wars, Miklos Horthy (MEEK-lohsh HOR-tee) served as a "regent" of these people, who were ruled by the Christian King Stephen I shortly after their defeat at the 955 Battle of Lechfeld (LEK-feld). Imre Nagy (IHM-ray nahzh) led these people in a 1956 revolution against Soviet rule. Name these Eastern European people who populate the city of Budapest. ANSWER: **Hungarian** [or **Magyar**; accept **Hungary**]

16. With Herman von Helmholtz, this physicist posited a theory of color vision based on the length of the wavelengths of light. The ratio of tensile stress to tensile strain gives a quantity named for this (\*) scientist also called the "elastic modulus." In an 1801 experiment, this scientist noticed maxima spaced by the wavelength times the distance divided by the distance between apertures. Name this English scientist who demonstrated the wave nature of light by observing an interference pattern in his "double-slit experiment."

ANSWER: Thomas **Young** [accept **Young**'s modulus accept **Young**'s interference experiment or **Young**'s double-slit experiment]

17. Diogenes ("die"-AH-juh-neez) of Sinope supposedly stood up and took a walk to refute all of this philosopher's arguments. Archimedes refuted this thinker by summing a geometric series. This founder of the Eleatic school used the example of an arrow traveling through time to illustrate the impossibility of motion. One argument by this man centered on a race in which Achilles is never able to catch up to a tortoise. Give this ancient Greek thinker who is known for his namesake "paradoxes."

ANSWER: **Zeno** of Elea [accept **Zeno**'s paradoxes]

18. In the preface to this work, its author wrote that "The highest, as the lowest, form of criticism is a mode of autobiography"; that preface also asserts that "All art is quite useless." One character in this book is nearly killed by a sailor named James after visiting an opium den. The protagonist of this novel is called "Prince Charming" by his lover, Sibyl Vane. The artist Basil Hallward is murdered by the title character of this novel, who ages rapidly after stabbing a continuously changing portrait of himself. Name this lone novel by Oscar Wilde.

ANSWER: The Picture of Dorian Gray

- 19. Description acceptable. One of these events involved an alleged conspiracy known as the Siri Thesis. Preparation for these events occur during a nine day period known as *novemdiales* (NOH-vehm-dee-AH-luss). An apocryphal legend states that these events once required an individual to sit on a chair with a hole so his genitalia could be inspected. No more than 120 individuals under the age of 80 can participate in these events, which conclude by burning slips of paper to produce white smoke from the Sistine Chapel. Name this process by which the Bishop of Rome is chosen. ANSWER: <u>election</u> of a <u>pope</u> [accept <u>papal conclave</u>; accept clear knowledge equivalents that mention the <u>pope</u> and notion of an <u>election</u>]
- 20. According to one legend, Satan fathered a medieval knight from this region named Robert the Devil. In order to fight the First Crusade, this region was mortgaged by its ruler, Robert Curthose (kurt-"hose"). It came under the control of Rollo after being ceded by Charles the Simple in AD 911. During World War 2, this region was the site of the failed Dieppe (dee-EP) Raid. One ruler from this region won a battle at Senlac Hill that included the death of Harold Godwinson. The victor at the 1066 Battle of Hastings, William the Conqueror, hailed from what region of northern France?

ANSWER: **Normandy** [or **Normandie**]