#### 2016 OAC Regionals - Round 4

Questions written by Ike Jose and Steven Wellstead

# **Category Round**

American Literature: Answer the following about works of literature with horror elements to them.

<u>Team A</u>: Tessie Hutchinson is stoned to death following the title event of this short story, which is considered to be an example of a "realistic" subgenre of horror fiction.

ANSWER: "The **Lottery**"

<u>Team B</u>: This author's story "The Call of Cthulhu (kuh-THOOL-hoo)" introduced a part octopus, part dragon, monster that periodically terrorizes the world.

ANSWER: H. P. Lovecraft [or Howard Philips Lovecraft]

<u>Tossup</u>: This author's short story collection *Can Such Things Be?* contains a horror story in which a chess-playing automaton (AH-tuh-muh-tahn) murders its maker after it loses a game of chess. This author of "Moxon's Master" wrote the collection *Tales of Soldiers and Civilians*, which contains a story in which a deaf mute child witnesses the aftermath of the title Civil War battle. This author of the short story "Chickamauga" is better known for a short story in which Peyton Farquhar (FAR-kwahr) hallucinates much of the narrative while being hanged for attempting to destroy the title structure. Name this author of "An Occurrence at Owl Creek Bridge."

ANSWER: Ambrose Gwinnett Bierce

Mathematics: Pencil and paper ready. Give the following related to trigonometric functions. You *must* give your answer in simplest form. You will have 30 seconds for the team questions.

<u>Team B</u>: Give the sine ("sign") of "pi over 6."

ANSWER: <u>1/2</u> or 0<u>.5</u>

Team A: Give the cosine (COH-"sign") of "pi over 6."

ANSWER: square root of 3 divided by 2 [accept radical 3 over 2 or other equivalent answers]

<u>Tossup</u>: The hyperbolic form of this function is equal to the natural logarithm of quantity x plus the square root of quantity x squared minus one. The derivative of this function is equal to negative one over the square root of the quantity one minus x squared; thus, one can see that the sine of this function of x equals the square root of the quantity one minus x squared. This function, whose domain is constricted to that in between negative one and one, will output pi if the input is negative one and zero if the input is positive one. Name this function that is the (\*) inverse of the cosine function.

ANSWER: arc·cosine [accept inverse cosine before (\*); do not accept or prompt on "cosine"]

# World History: Name these 20th century leaders.

<u>Team A</u>: The Informbiro period was triggered by a withdrawal from the Soviet Cominform by this post-World War II leader of Yugoslavia.

ANSWER: Josip **Broz Tito** (TEE-toh) [accept either underlined name]

<u>Team B</u>: The capture of former Nazi Adolf Eichmann by Mossad in 1960 was orchestrated by this leader who served as Israel's first prime minister.

ANSWER: David **Ben-Gurion** [or David **Gruen**; prompt on partial last name]

Tossup: Early in life, this man founded the commune Phoenix Farm outside the city of Durban shortly after being recognized for his service as a stretcher-bearer in the Second Boer War. This leader signed a namesake pact with Lord Irwin after leading a march to the village of Dandi (DUN-dee) to protest a tax on salt. The practice of *satyagraha* (saht-ya-GRAH-hah), a form of nonviolent resistance, was espoused by this man, who was assassinated by Nathuram Godse (NAH-"too"-rahm GAWD-"say") in 1948. Name this leader of the Indian independence movement who was given the honorific title "Mahatma" (mah-"HOT"-mah).

ANSWER: Mahatma **Gandhi** [or Mohandas Karamchand **Gandhi**]

## Fine Arts: Name these European artists.

<u>Team B</u>: This Dutch Renaissance artist is best known for depicting scenes from the Garden of Eden and Hell flanking a depiction of the title location in his triptych ("TRIP"-tik) *The Garden of Earthly Delights*.

ANSWER: Hieronymus **Bosch** ("hi"-uh-RAHN-uh-muss "bosh") [or Jheronimus van **Aken**]

<u>Team A</u>: This 18th century English artist is best known for using Jonathan Buttall as the model for the title child in his painting *The Blue Boy*.

ANSWER: Thomas Gainsborough

<u>Tossup</u>: Four women play the blanket toss game with the title figure of this artist's painting *The Straw Manikin*. He depicted a mutilated body that has been impaled upon a tree branch in an etching entitled *This is worse*. The painting *The Charge of the Mamelukes* (MAM-lookz) is a companion piece to the best known work by this artist of *The Disasters of War* series. That best known work by this artist depicts a lantern illuminating a man in a white shirt who raises his hands upward while facing a French firing squad about to shoot several Spanish citizens. Name this Spaniard who painted *The Third of May 1808*.

ANSWER: Francisco Jose de Goya (GOY-uh) y Lucientes

## Life Science: Answer the following about vaccines.

<u>Team A</u>: While working at the University of Pittsburgh, this scientist became the first person to create a successful vaccine for polio.

ANSWER: Jonas Edward Salk

<u>Team B</u>: German measles is another name for this viral disease that is one of the namesakes of the MMR ("M-M-R") vaccine.

ANSWER: rubella (roo-BEL-lah) [accept three-day measles; do not accept "rubeola"]

<u>Tossup</u>: Dukoral is the common trade name for a preventive and reactive vaccine used to combat this disease. An 1854 outbreak of this disease in London was mapped by the epidemiologist John Snow. In Asian countries, this disease is often prevented by using a *sari* cloth as a filter. A *Vibrio* (VIB-ree-oh) species of bacteria causes this disease, which is characterized by severe dehydration caused by excessive diarrhea. Name this disease that is often caused by drinking water that has been contaminated with fecal matter.

ANSWER: cholera (KAH-lur-uh) [accept Vibrio cholerae]

## World Literature: Answer the following about dwarves in literature.

<u>Team B</u>: A murderer named Piccoline is the title character of the novel *The Dwarf* by Par Lagerkvist (parr LAH-gurkweest), who is a native of this country. A better known author from this nation wrote the play *Miss Julie*.

ANSWER: Kingdom of **Sweden** [or Konungariket **Sverige**]

<u>Team A</u>: This German author of *The Meeting at Telgte* (TELG-tuh) wrote about a dwarf named Oskar Matzerath who can shatter glass with his voice in the novel *The Tin Drum*.

ANSWER: Gunter (GOON-tur) Wilhelm Grass (grahss)

Tossup: One picaresque novel written in this language is about the "life and deeds" of a dwarf that survived the Thirty Years' War. One author writing in this language created a character who becomes so entranced by a puppet show put on by Master Peter that he rescues the female victim in the show. That author of the *Exemplary Novels* is best known for a novel in this language in which the Knight of the White Moon beats the title character, who notably tilts at windmills that he thinks are giants. That character in a novel written in this language rides the horse Rocinante (roh-see-NAHN-tay) alongside his good friend Sancho Panza. Name this language in which *Don Quixote* (dohn kee-HOH-tay) was written by Miguel de Cervantes ("sir"-VAHN-tase).

ANSWER: Spanish [accept Espanol]

#### U.S. Government/Economics: Name these Supreme Court cases.

<u>Team A</u>: A break-in at a Panama City, Florida pool hall provided the origin for this 1963 case, which ruled unanimously that criminal defendants have the right to a state-appointed attorney if they are too poor to afford their own.

ANSWER: Clarence Earl Gideon v. Louie Lee Wainwright [accept either]

<u>Team B</u>: Oliver Wendell Holmes noted that "free speech would not protect a man in falsely shouting fire in a theatre" in the unanimous majority opinion of this 1919 case, which established the "clear and present danger" doctrine that limits the freedoms of the First Amendment.

ANSWER: Charles T. Schenck v. United States

<u>Tossup</u>: An argument in the majority opinion of this case was described as "more a matter of taste than of law" in the dissenting opinion issued by John McLean. The only other dissenter, Benjamin Curtis, resigned from the Supreme Court due to this case, which originated from a journey taken to Fort Snelling by John Emerson. In this case, the Court ruled that the Missouri Compromise was unconstitutional in a decision delivered by Roger Taney (TAW-nee) two days after the inauguration of James Buchanan. Name this 1857 case which ruled that African-Americans could not become U.S. citizens.

ANSWER: *Dred Scott v. John F. A. Sandford* or *Dred Scott v. John F. A. Sanford* [accept any underlined portion; accept Dred Scott decision; do not accept or prompt on "*Dred Scott v. Emerson*"]

## Physical Science: Answer the following about rotational dynamics.

<u>Team B</u>: If the Lagrangian (luh-GRAHN-jee-in) is rotationally symmetric, then Noether's (NOY-tur'z) theorem guarantees that a system will exhibit a conservation of this quantity, which is measured in newton meter seconds.

ANSWER: <u>angular momentum</u> [or <u>rotational momentum</u> or <u>moment of momentum</u>; do not accept or prompt on "momentum"]

<u>Team A</u>: According to a simple theorem, the moment of inertia for an object around an axis will be equal to I+md<sup>2</sup> ("I plus M D squared") if another axis has this property.

ANSWER: **parallel** with respect to the first axis [accept **parallel**ism or **parallel** axis theorem]

<u>Tossup</u>: Energy can be extracted from these objects via the Penrose process. Rotating varieties of this object are surrounded by an ergo sphere. Angular momentum, charge, and mass uniquely characterize these objects according to the no-hair theorem. Gravitational waves were detected when two of these objects collided. These objects consist of a singularity surrounded by an event horizon, which is sometimes called a "point of no return." Name these objects from which light cannot escape.

ANSWER: black holes [accept rotating black holes]

#### World Geography: Answer the following related to European geography.

<u>Team A</u>: The port city of Oulu (OH-loo) is the most populous along this gulf between Sweden and Finland that is the northernmost extension of the Baltic Sea.

ANSWER: Gulf of **Bothnia** [or **Bottniska** Viken or **Pohjan Lahti**]

<u>Team B</u>: Ajaccio (ah-YAHT-choh) is the most populous city on this island that is situated between the Strait of Bonifacio (bahn-ih-FAH-see-oh) and Ligurian (lih-GURR-ee-un) Sea.

ANSWER: Corsica [or Corse]

<u>Tossup</u>: Within this city, a Tomb of the Unknown Soldier is guarded by military personnel called Evzones (EHV-"zones") next to Syntagma ("sin"-"TAG"-mah) Square. Kerameikos ("care"-uh-mee-KOHSS) is an archeological site within this city, which can be viewed from the top of Mount Lycabettus ("lie"-kuh-"BET"-iss). Five caryatid ("care"-ee-"AT"-id) columns exist at the ruins of the Erechtheion (eh-REK-"thigh"-on) temple on this city's most notable geographic feature, from which the Elgin Marbles were taken. The first modern Olympics were held in this city, whose Acropolis (uh-KRAW-puh-liss) contains the remains of the Parthenon ("PAR"-thuh-nahn). Name this capital city of Greece.

ANSWER: Athens, Greece [or Athina or Athenai]

## U.S. History: Name these notable criminals.

<u>Team B</u>: This Chicago serial killer of the 1970s killed more than thirty individuals, all of whom were teenage boys or young men. The fact that he often worked children's parties as "Pogo the Clown" led to him receiving the nickname "Killer Clown."

ANSWER: John Wayne Gacy ("GAY-see") Jr.

<u>Team A</u>: Judge Irving Kaufman issued the death sentence that was carried out in 1953 on this duo, who were convicted of espionage for transmitting atomic bomb secrets to the Soviet Union.

ANSWER: **Rosenberg**s [or Julius and Ethel Greenglass **Rosenberg**]

<u>Tossup</u>: Among his associates, this man was commonly known by the nickname "Snorky." Hymie Weiss ("vice") was a rival of this man, who succeeded Johnny Torrio as the leader of a group known as "the Outfit." While disguised as police, his associates killed seven men under the control of Bugs Moran in the St. Valentine's Day Massacre. This man was sent to prison on tax evasion charges after being targeted by the investigations of Eliot Ness' group of Untouchables. "Scarface" was the nickname of what Chicago gangster of the Prohibition era?

ANSWER: Al Capone [or Alphonse Gabriel Capone]

#### Alphabet Round – Letter B

- 1. The reconstruction of German life after World War II is depicted in this author's novel about the struggling Faehmel family titled *Billiards at Half-Past Nine*.
- 2. **(TWO WORD ANSWER)** Bacteria often reproduce using this method of asexual reproduction, in which a single cell splits into two new cells.
- 3. **(TWO WORD ANSWER)** Literally meaning "son of the commandment," this term refers to a Jewish boy who has become 13 and is now accountable for their conduct, or the ceremony and party that celebrates the transition.
- 4. (TWO WORD ANSWER) Nickname by which Byzantine Emperor Basil II is often known.
- 5. An F-clef placed on the fourth line of a stave is this kind of clef, which is often used for cello notes.
- 6. In 1855, this man compiled the reference work now named for him, which contains various "familiar quotations."
- 7. The object into which unsuspecting passersby were fitted, either via stretching or cutting, by the mythical Greek bandit Procrustes.
- 8. This adjective describes certain "plastics" and certain types of trash that are easily broken down by fungi, slime molds, or bacteria over time.
- 9. (TWO WORD ANSWER) The ship captained by John Paul Jones when he spoke the line "I have not yet begun to fight!"
- 10. Auguste Rodin's sculpture *The Burghers of Calais* was made out of this metal alloy.
- 11. (MULTI-WORD ANSWER) Three word phrase and social movement that originated in 2013 in the aftermath of the George Zimmerman murder acquittal with the goal of fighting various injustices towards African-Americans.
- 12. Gabbro is the intrusive equivalent of this extrusive igneous rock. Much of the oceanic crust of the Earth is composed of this rock.
- 13. (TWO WORD ANSWER) Peninsula that is bordered to the east by the Sea of Cortez.
- 14. (MULTI-WORD ANSWER) Fred narrates this Truman Capote work, which describes the adventures of the "American geisha" Holly Golightly.
- 15. Parisian fortress that was stormed at the beginning of the French Revolution.
- 16. Archimedes' principle states that this force on a body immersed in a liquid is equal to the weight of the fluid displaced by the body.
- 17. In economics, periods of intense economic growth are called booms, while these periods are ones of intense recession or downturns.
- 18. (**TWO WORD ANSWER**) The Edgar Allan Poe poem "The Raven" was partly inspired by this Charles Dickens novel in which a raven named Grip is a pet of the title Englishman, who works at the Maypole Inn.
- 19. 20th century French artist who co-founded Cubism.
- 20. 19th century freedom fighter who served as the first president of Gran Colombia and was nicknamed "The Liberator."

# <u>Alphabet Round – Letter B Answers</u>

- 1. Heinrich Theodor **Boll** (bohl)
- 2. binary fission (TWO WORD ANSWER)
- 3. <u>bar mitzvah</u> [accept <u>b'nay mitzvah</u>; do not accept "bat mitzvah"] (TWO WORD ANSWER)
- 4. <u>Bulgar Slayer</u> [accept Basil the <u>Bulgar Slayer</u>] (TWO WORD ANSWER)
- 5. bass ("base") clef
- 6. John Bartlett
- 7. **<u>bed</u>**
- 8. bio·degradable
- 9. USS *Bonhomme Richard* (BAH-num ree-SHAR) (TWO WORD ANSWER)
- 10. **bronze**
- 11. Black Lives Matter (MULTI-WORD ANSWER)
- 12. basalt (buh-"SALT")
- 13. **Baja California** peninsula [or Peninsula de **Baja California**] (TWO WORD ANSWER)
- 14. Breakfast at Tiffany's (MULTI-WORD ANSWER)
- 15. Bastille (bas-TEEL) Saint-Antoine
- 16. **buoyancy** [accept **buoyant** and other word forms]
- 17. **bust**s
- 18. Barnaby Rudge (TWO WORD ANSWER)
- 19. Georges **Braque** (zhorzh brahk)
- 20. Simon <u>Bolivar</u> ("see"-MOHN boh-LEE-var) [or Simon Jose Antonio de la Santisima Trinidad <u>Bolivar</u> y Palacios Ponte y Blanco]

#### **Lightning Round**

- 1. The first man to do this twice was Martin Ignacio de Loyola ("mar-TEEN" ig-NAY-"see"-oh "day" loy-OH-luh). Antonio Pigafetta (pee-guh-FETT-uh) documented the actions of one group that completed this feat under the leadership of Juan Sebastian Elcano (el-KAH-noh). The *Golden Hind* performed this feat under the leadership of Francis Drake. The leader of the first group to perform this action was killed in the Philippines in 1521 while en route ("on root"). Name this sailing feat first accomplished by men under the command of Ferdinand Magellan (muh-JELL-in). ANSWER: circumnavigating the globe [accept circumnavigating the world; accept circumnavigation; accept descriptive answers indicating sailing around the world or around the globe]
- 2. This scientist, William Bateson, and Edith Saunders were the first to discover genetic linkage. This scientist wrote the textbook *Mendelism*, as well as a treatise on sex determination in chickens called *Heredity in Poultry*. A di'hybrid cross is often illustrated on a construct named for this scientist, which can be used to show that a 9:3:3:1 ("nine to three to one") ratio exists for certain traits. Name this British biologist whose namesake "squares" are used to illustrate an offspring's genotype (JEE-noh-"type").

ANSWER: Reginald Crundall **Punnett** [accept **Punnett** squares]

3. Planning, attention-arousal, simultaneity, and succession are the four components of the PASS ("pass") model of this concept. In *The Mind of Primitive Man*, Franz Boas debunks scientific racism by showing that race has no bearing on this concept. Though this concept is often measured using the Stanford-Binet (bin-AY) scales, theories suggest that there are "multiple" types of it, such as emotional and cultural. Name this concept, which is the ability to solve certain problems and often measured using a namesake "quotient" known as IQ ("I-Q").

ANSWER: <u>intelligence</u> [accept <u>emotional intelligence</u> and <u>cultural intelligence</u> and <u>intelligence quotient</u>; prompt on "IQ" before end of question]

4. This is the last name of William, who forged the work *Vortigern and Rowena* (VOR-tih-jern "and" ROH-wee-nuh) and attributed it to William Shakespeare. Thomas Kinsella translated this country's epic work of literature *The Cattle Raid of Cooley*. One writer from this country authored the plays *Krapp's Last Tape* and *Endgame*. Another author from this country endorsed the eating of babies in a satirical essay entitled *A Modest Proposal*. Name this European island country whose writers include Samuel Beckett and Jonathan Swift.

ANSWER: <u>Ireland</u> [or Republic of <u>Ireland</u> or <u>Eire</u> or Poblacht na h<u>Eireann</u>; do not accept or prompt on "Northern Ireland" or "England" or "United Kingdom" or "Great Britain"]

5. In one painting, this artist depicted the French city of Vetheuil (VET-"eye"-uh) with a "pink effect." Time he spent in London inspired a series of paintings on both Charing ("CHAIR"-ing) Cross Bridge and the Houses of Parliament. The Rouen (roo-AWN) Cathedral was the subject of many paintings by this artist, whose home at Giverny (zhih-VAIR-nee) contained the ponds used for the setting of his series of paintings on water lilies. Name this French artist who inspired the name of an art movement with his painting *Impression, Sunrise*.

ANSWER: Claude Monet (moh-NAY) [or Oscar-Claude Monet; do not accept or prompt on "Manet" (MAA-nay)]

6. Herodotus states that ancient priests abstained from eating fish because this god threw a certain body part into the Nile River. Isis ("EYE"-sis) once tried to stab the hippo form of this god with a harpoon but ended up hitting another god disguised as a hippo. His wife, Nepthys (nef-THISS), was often invoked during childbirth. He once hacked a body into fourteen pieces to prevent Isis from being able to resurrect a corpse. Name this god who murdered Osiris (OH-"sigh"-riss) and was said to be the embodiment of evil.

ANSWER: Set or Seth

7. Early in this conflict, one side carried out the Bodo League Massacre. The Battle of Pork Chop Hill took place shortly before this conflict was ended by an agreement signed at Panmunjom ("PAN"-"moon"-jahm). While fighting at the Pusan (poo-SAHN) Perimeter, one side in this war led an amphibious assault on the city of Inchon ("in"-CHAHN). This war ended along the 38th parallel, which is now the site of a demilitarized zone. An invasion by Kim Il-Sung ("eel"-soong) prompted the U.N. to fight what conflict of the 1950s on an Asian peninsula?

ANSWER: <u>Korean</u> War [or <u>Korean</u> Conflict or <u>Fatherland Liberation</u> War or <u>Hanguk</u> Jeonjaeng or <u>Joguk Haebang</u> Jeonjang]

8. Rudolph Minkowski and Fritz Zwicky devised the classification scheme for these phenomena. The type of this phenomena involving at least one white dwarf and another star are of the Type Ia ("one A"). The Type II ("two") types of these phenomena are frequently observed in the arms of spiral galaxies. The Crab Nebula is known to be a remnant of one of these events, and the "Champagne" one of these events was first observed in 2003. Name these events in which a massive star violently explodes.

ANSWER: supernovas [accept supernovae]

9. At the end of this play, the "chorus mysticus" notes that the "Eternal Womanhood draws us from on high." A surreal Walpurgis Night scene is the penultimate act of this play, in which the title character falls in love with Gretchen. While translating the *logos* from the Book of John, the title scholar of this play is given an offer by Mephistopheles (meh-fih-STAH-fuh-leez). Name this two-part play by Johann von Goethe (GUR-tuh) in which the title character sells his soul to the devil.

ANSWER: <u>Faust</u> (fowst) [or <u>Faust: The First Part of the Tragedy</u> or <u>Faust. Der Tragodie erster Teil</u>; do not accept or prompt on "Doctor Faustus"]

10. Two scenes in this film begin by zooming through a ceiling skylight and past a sign that advertises the El Rancho Floor Show. The protagonist of this film fires his friend and colleague, Jedadiah Leland, for writing a scathing review of the operatic debut of his wife, Susan Alexander. The final scene of this film takes place at the title character's sprawling estate, Xanadu (ZAH-nuh-doo), and depicts a furnace fire burning a sled. Name this 1941 Orson Welles ("wells") film about a newspaper magnate whose dying word is "Rosebud."

ANSWER: Citizen Kane

11. This ruler consolidated his power by winning the Battle of Chrysopolis (krih-SAH-puh-liss). Lorenzo Valla confirmed that a document containing his namesake papal "donation" was a forgery. Maxentius (mack-SEN-"tee"-uss) was defeated by this leader at the Battle of Milvian (MIL-vee-un) Bridge, in which his troops fought under the Chi-Rho (kye-roh) symbol. This emperor established religious tolerance with the Edict of Milan in AD 313. Name this first Christian ruler of the Roman Empire.

ANSWER: Constantine I or Constantine the Great [or Flavius Valerius Aurelius Constantinus Augustus]

- 12. This scientist discovered dia magnetism. The differential form of his namesake law relates the curl of the electric field to the time derivative of the magnetic field. A metal conducting mesh is used to screen out electric fields in his namesake "cage." This student of Sir Humphry Davy is the namesake of a law stating that the EMF ("E-M-F") equals minus the time derivative of the magnetic flux. Name this 19th century British namesake of a "law of induction." ANSWER: Michael Faraday [or Faraday's Law of Induction or Faraday Cage]
- 13. This philosopher proposed a similar concept to kinetic energy called *vis viva* (veess VEE-vuh), which was equal to "mv ("M-V") squared." He is not French, but one of this philosopher's nonfiction books, which is titled for a word that means "a system of thought that explains why God allows evil in the world," asserts that "We live in the best of all possible worlds." This man is satirized by Dr. Pangloss in the novel *Candide* ("can-DEED"). Name this German philosopher who is also credited with co-discovering calculus.

ANSWER: Gottfried Wilhelm von **Leibniz** (LIBE-nitz)

14. Early in World War 2, the Germans bombed and sunk the SS *Thistlegorm* in this body of water, which contains the Dahlak (dah-"LOCK") Archipelago. A northern extension of this sea borders the resort city of Eilat (ay-LAHT). At its southern end, the Bab-el-Mandeb (BAHB-el-MAHN-dub) connects it to the Gulf of Aden. At its northern end, this sea is split into the Gulf of Aqaba (AH-kuh-buh) and Gulf of Suez ("sue"-EZ) by the Sinai (SYE-nye) Peninsula. The Arabian Peninsula is separated from Africa by what colorful sea?

ANSWER: **Red** Sea [or **Erythraean** Sea]

15. This poet wrote "The self-same power that brought me here, brought you" in a poem which begins with the speaker finding the title fresh "Rhodora" in the woods. In another of his works, the narrator had read "Verses written by an eminent painter" before discussing how "a foolish consistency is the hobgoblin of little minds." Name this American author who wrote "Self-Reliance" and was a major figure of the Transcendentalist movement.

ANSWER: Ralph Waldo **Emerson** 

16. Eugene Schmitz was jailed on extortion charges while serving as mayor of this city, which contains the best known landmark designed by engineer Joseph Strauss (shtrouse). Dan White used the "Twinkie defense" during his trial for the murder of this city's gay politician Harvey Milk. A 1906 earthquake destroyed much of this city, which once housed a federal prison on Alcatraz Island. Name this U.S. city at the south end of the Golden Gate Bridge.

ANSWER: San Francisco, California

- 17. Atoms with high values for this quantity create inductive effects in organic chemistry. This quantity is defined as the mean of the ionization energy and the electron affinity according to Robert Mulliken's definition of it. Like ionization energy, this quantity has the same periodic trend of increasing up and to the right. Fluorine has a value of 3.98 for this quantity, which is the highest of any element. Name this quantity which measures an atom's ability to attract electrons. ANSWER: **electro** negativity
- 18. This composer used a group of liturgical chants called the *Obikhod* as the basis for his "overture on liturgical themes" that was named for the Russian Easter Festival. This composer wrote the suite *Scheherazade* (shuh-heh-ruh-ZAHD). His opera *The Tale of Tsar* (zarr) *Saltan* features an interlude in which Prince Gvidon (g'VEE-don) is transformed into a flying insect. Name this 19th and 20th century Russian composer of the Mighty Five who created the "Flight of the Bumblebee."

ANSWER: Nikolai Andreyevich **Rimsky-Korsakov** [prompt on partial last name]

19. This figure, who was talked out of murdering Nabal (nah-"BALL") by one of his future wives, obtains two hundred foreskins as a dowry to marry Michal ("MY-call"). One of his sons was killed at the Wood of Ephraim (EFF-"rum") by his general Joab (JOH-ab). After coming to power, he arranges the death of Uriah (yur-"EYE"-uh) in battle so that he can marry Bathsheba, who births his wise successor. In a better known story, he uses a sling to slay a giant Philistine (FIH-lih-steen). Absalom (AB-suh-lahm) and Solomon were sons of what Biblical king who killed Goliath?

ANSWER: King **David** [or **Dawid** or **Dawud**]

20. A parody of this poem mentions a girl who "had read Sophocles (SOF-uh-cleez) in a fairly good translation and caught that bitter allusion to the sea." This poem itself, however, mentions Sophocles, who "long ago, heard" the "turbid ebb and flow of human misery." This poem ends with the speaker asking a woman to "let us be true to one another" for the world lies "before us like a land of dreams." The words "the Sea is calm tonight" open what poem by Matthew Arnold about a coastal location in England?

ANSWER: "Dover Beach"