

2016 OAC Regionals – Round 8

Questions written by Ike Jose and Steven Wellstead

Category Round

American Literature: Answer the following questions about music in American poetry.

Team A: This author wrote about a fictional character from *A Midsummer Night's Dream* "making music" in his poem "Peter Quince at the Clavier." Other poems by this man include "Anecdote of the Jar" and "The Idea of Order at Key West."

ANSWER: Wallace **Stevens**

Team B: A singer who "slept like a rock or a man that's dead" is mentioned in this Langston Hughes poem that is set on Lennox Avenue "the other night."

ANSWER: "The **Weary Blues**"

Tossup: *The Harmony of Deeper Music* is a collection of posthumously published poems by this writer, who wrote about a hunter of "quail and snipe" named Percy Bysshe Shelley in one of his poems. He asked "Where are Elmer, Herman, Bert, Tom and Charley?" at the beginning of a poem called "The Hill." Abraham Lincoln's supposed first true love, Anne Rutledge, states "Wedded to him, not through union, but through separation" in a poem by this author that is part of a collection of free-verse epitaphs spoken by dead people. Name this American poet who wrote *Spoon River Anthology*.

ANSWER: Edgar Lee **Masters**

Mathematics: Questions in this category will deal with mathematical tools.

Team B: The logarithms of John Napier inspired the formation of this device, which is used to quickly perform multiplication and addition.

ANSWER: **slide rule** [or **slipstick**]

Team A: The slide rule is also used to find these quantities, which are also found by the Newton-Raphson method.

ANSWER: **roots** [accept **zeroes** of a function; prompt on "x-intercept"]

Tossup: The so-called "military" type of these devices are unusually square. Some types of these devices, such as the 400 gon ("gone") type, will feature a Vernier (**vur-NEER**) scale on them to improve the precision of measurements. The goniometer (**goh-nee-AH-muh-tur**) was a more complex form of this mathematical tool, which often reports results in "gradians." The "bevel" type of these devices typically have a pivot used for more accurate measurements. These tools, which are typically transparent, can report results in terms of radians or degrees. Name these devices which are usually semi-circular and used to measure angles.

ANSWER: **protractors** [accept military **protractors** or bevel **protractors**]

World History: Name these men who ruled during the first millennium.

Team A: A massacre of Danes known as the St. Brice's Day massacre was ordered by this English king, who rose to that position in 978 and had an epithet indicating he was poorly counseled.

ANSWER: Ethelred the Unready [or Ethelred II or Ethelred the Unraed; prompt on "Ethelred"]

Team B: This 5th and 6th century ruler converted to Christianity while serving as the first Frankish king of the Merovingian dynasty.

ANSWER: Clovis I [or Clodovechus or Chlodowech]

Tossup: Many scholars believe it is this leader who is depicted in the Barberini ("BAR"-ber-ee-nee) ivory. In one revolt that occurred during his rule, Hypatius (hye-PAY-shus) was declared as the new ruler by the Blues and the Greens, who were groups of chariot racing supporters. The book *Secret History* was written by contemporary historian Procopius (proh-KOH-pee-us) about this ruler, who had the Nika (NEE-kuh) riots put down by his general Belisarius (bel-uh-SAIR-ee-us). The Hagia Sophia (HAH-jee-uh soh-FEE-uh) was constructed during the rule of this man, who is perhaps best known for his *Corpus Juris Civilis* (KOR-pus JOO-riss sih-VIH-liss), which rewrote the Roman law code. Name this 6th century Byzantine emperor known as "the Great."

ANSWER: Justinian the Great [or Justinian I or Saint Justinian or Flavius Justinianus or Flavius Petrus Sabbatius Iustinians Augustus or Flavios Petros Sabbatios Ioustinianos]

Fine Arts: Name these painters born in the 18th century.

Team B: This Anglo-American artist depicted a Native American and many British military officers surrounding the title character of his best known painting, *The Death of General Wolfe*.

ANSWER: Benjamin West

Team A: This American artist created the notable portrait of Paul Revere holding a silver teacup, best his best known painting is set in Havana harbor and depicts an attack on a boy named Brook.

ANSWER: John Singleton Copley

Tossup: This artist included a depiction of Jordon Hill and Bowleaze Cove in a landscape painting set at Weymouth Bay. He created two separate paintings, one "from the Meadows" and another "from the Bishop's Grounds", of Salisbury (SAHLZ-bree) Cathedral. His painting *Dedham Vale* depicts the countryside near the setting of his best known painting, which includes a view of Willy Lott's cottage. In that painting, the River Stour (stur) is crossed by three horses pulling the title cart. Name this English artist of *The Hay Wain*.

ANSWER: John Constable

Life Science: Answer the following about specialized cells.

Team A: Serum albumin is manufactured in these cells, which are the only cells in the human body which also synthesize bile salts. These cells are formally called hepato·cytes.

ANSWER: liver cells

Team B: These cells, which filter blood, usually have a glomerulus (gloh-MARE-yoo-luss) surrounded by a Bowman's capsule.

ANSWER: nephrons

Tossup: Cells in the piriform cortex are known to assist with this ability, which is aided by tufted cells that reside in a non-kidney structure called the glomerulus (gloh-MARE-yoo-luss). Mitral (MYE-trul) cells are found in the bulb named for this ability, which is supported by the ethmoid bone. The absence of this ability is known as anosmia (uh-NAHZ-me-uh). The first cranial nerve is named for this sense, which occurs when certain molecules bind to (*) olfactory receptors. Name this sense that involves odorants passing through the nose.

ANSWER: smell [accept olfaction or olfactory sense before (*)]

World Literature: Name these novels that have been considered the greatest British novels written.

Team B: According to the BBC, the third greatest British novel ever written is this work by Virginia Woolf, which depicts a day in the life of a woman who is trying to throw a party.

ANSWER: Mrs. Dalloway

Team A: Number two on that same BBC list is this other Virginia Woolf novel, which depicts various trips taken by the Ramsay family.

ANSWER: To the Lighthouse

Tossup: In a scene from this novel, one character believes that another may have a cold because he did not "join in the tune of Hanover" during a service at the Lowick Church. John Raffles humiliates the rich banker Nicholas Bulstrode in this novel, in which Fred Vincy marries Mary Garth. Another character in this novel is writing a book entitled *The Key to All Mythologies* and forbids the protagonist from marrying Will Ladislaw after he dies. In this greatest British novel according to the BBC, Edward Casaubon is the first husband of this novel's protagonist, Dorothea Brooke. Name this "study of provincial life" that was written by George Eliot.

ANSWER: Middlemarch, *A Study of Provincial Life*

U.S. Government/Economics: Name these federal government positions.

Team A: The 1983 Supreme Court case *Marsh v. Chambers* upheld the constitutionality of each Congressional house funding this position, holders of which open each legislative session by leading a prayer.

ANSWER: Chaplain

Team B: Both Congressional houses also employ an individual to this position, which is responsible for overseeing Congressional security and maintaining order during legislative sessions.

ANSWER: Sergeant at Arms

Tossup: The longest holder of this position was William Frye, whose 1911 resignation led to a compromise in which this position was (*) rotated among five different men for the next two years. John Langdon was the first to hold this position, and the only man to hold this position before becoming U.S. president was John Tyler. This position is third in the presidential line of succession, behind vice-president and Speaker of the House. The second highest-ranking position in the U.S. Senate is what position customarily held by the most senior Senator of the majority party, which is currently Orrin Hatch?

ANSWER: President pro tempore (tem-POH-ray) of the Senate [prompt on “U.S. Senator from Maine” before (*) but do not accept or prompt on same answer after (*); do not accept or prompt on “President” or “President of the Senate”]

Physical Science: Answer the following about some things you might see or use in a chemistry lab.

Team B: One type of this object named for Sir James Dewar (DOO-er) features a gap which consists of a near-vacuum. A more common form of this object named for a German features both conical and cylindrical parts.

ANSWER: flask [accept Dewar flask or Erlenmeyer flask]

Team A: In chemistry labs, materials that need to be heated are typically accommodated within these containers, which can withstand very high temperatures. The “Gooch” type of this object contains a perforated bottom.

ANSWER: crucible [accept Gooch crucible]

Tossup: Special columns are used in the “spinning band” form of this technique. The McCabe-Thiele (TEE-luh) method is often used to analyze this process, whose usage of “theoretical plates” is governed by the Fenske (FEN-skee) equation. This process may make use of refluxing, in which a vapor is re-deposited into the original source mixture of liquid. Certain forms of this technique cannot be applied to azeotropes (AY-zee-oh-TROHPS). Name this process in which the components of a mixture are separated by evaporation and condensation based on differences in boiling point.

ANSWER: distillation [accept word forms; accept spinning band distillation]

World Geography: Name these European nations.

Team A: The island of Saaremaa (SAR-uh-mah) at the north end of the Gulf of Riga is controlled by this country, whose eastern border runs through Lake Peipus ("PIE"-pus).

ANSWER: Republic of **Estonia** [or **Eesti** Vabariik]

Team B: Most of the Istrian Peninsula is controlled by this country, whose city of Dubrovnik (doo-BROV-nik) is located along the southern end of its Dalmatian Coast.

ANSWER: Republic of **Croatia** (kroh-AY-shuh) [or Republika **Hrvatska**]

Tossup: Within this country, large stones inscribed during the 10th century sit between two hills known as the Jelling Mounds. A body of water named Limfjord (LIM-fjord) is surrounded by this nation, whose city of Odense (OH-den-suh) is the most populous on its island of Funen (FOO-"nun"). The west end of the Oresund (UR-uh-"sun") Bridge is near this nation's capital city, which contains the Tivoli ("TEE"-vuh-lee) Gardens and is on an island at the south end of the Kattegat (KAT-ih-gat) strait; that island is named Zealand. In 2009, Greenland was given "home rule" by what country on the Jutland peninsula whose capital is Copenhagen?

ANSWER: Kingdom of **Denmark** [or Kongeriget **Danmark**]

U.S. History: Name these military generals.

Team B: This general was given command of the U.N. forces fighting the Korean War after his predecessor, Douglas MacArthur, was controversially removed from command by Harry Truman in April 1951.

ANSWER: Matthew Bunker **Ridgway**

Team A: The first man to hold the position of Chairman of the Joint Chiefs of Staff was this general, who in 1950 became the final man to receive the five-star rank of General of the Army.

ANSWER: Omar Nelson **Bradley**

Tossup: Shortly after facing off against Gideon Pillow at the Battle of Belmont, this man's army came under the command of Henry Halleck. He issued General Order No. ("number") 11, which required an expulsion of Jews, before leading an expedition in which he secured the surrender of an army led by John Pemberton. After receiving overall command of the Army, this general led the Overland Campaign and Siege of Petersburg, which culminated in him forcing the surrender of the Army of Northern Virginia at Appomattox (AP-uh-mat-uks) Court House. Name this Union Civil War general who went on to serve as president from 1869 to 1877.

ANSWER: Hiram Ulysses S. **Grant**

Alphabet Round – Letter F

1. Missouri city that was the site of social unrest and rioting following the 2014 murder of 18-year-old Michael Brown by policeman Darren Wilson.
2. An ellipse is defined by two of these points. When the distance between two of these points becomes zero for an ellipse, a circle is defined.
3. This “poet of the American Revolution” wrote about his captivity on board a British boat in “The British Ship.” His other Romantic poems include “The Wild Honeysuckle” and “The Indian Burying Ground.”
4. This symbol, which indicates that a note should be played for longer than its original note value, resembles a cyclops or a single eye.
5. Medieval social system in which peasants worked on land, known as fiefs, that was owned by nobility in return for military protection.
6. Danish archipelago due north of the island of Great Britain.
7. This Italian scientist proposed a model of low-temperature metals in which the substances have been modelled as a “liquid.” Particles named for him obey the Pauli Exclusion Principle.
8. E.M. Forster used this term to describe characters that are relatively simple. These kinds of characters are usually static and rarely undergo character development.
9. Receptacle that is utilized to carry out a baptism. Byzantine Emperor Constantine V was given the epithet “Copronymus” because he supposedly defecated in one during his baptism.
10. Civil war fought in France between 1648 and 1653.
11. Ronald Coase wrote a paper about “The Nature” of these entities, which Coase defined as collections of people who minimize transaction costs of certain activities.
12. Sperm cells often have these long tails attached to them, which are used for locomotion.
13. German Romantic artist best known for painting *Wanderer above the Sea of Fog*.
14. South African playwright who wrote *Blood Knot* and “*Master Harold*” ...and the Boys.
15. **(MULTI-WORD ANSWER)** – Government organization whose first president was Thomas Willing.
16. The millet god Houji and the mythical hero Yu the Great averted one of these disasters in Chinese legend.
17. **(TWO WORD ANSWER)** – The formula for this quantity is the number of valence electrons minus the number of non-bonding valence electrons minus the total number of electrons shared divided by 2.
18. This happy businessman from Charles Dickens’s *A Christmas Carol* is the “tempered capitalist” for whom Scrooge once apprenticed.
19. 1898 event in which British and French troops had a standoff over a territorial dispute in present-day South Sudan.
20. American director who won the “Best Director” Oscar for his films *The Informer*, *The Grapes of Wrath*, *How Green Was My Valley*, and *The Quiet Man*.

Alphabet Round – Letter F Answers

1. **Ferguson**, Missouri
2. **focuses** or **foci**
3. Philip Morin **Freneau** (freh-NOH)
4. **fermata**
5. **feudalism** or **feudal** system
6. **Faroe** (“FAIR”-oh) Islands [or **Faeroerne** or **Foroyar**]
7. Enrico **Fermi** (“FAIR-me”)
8. **flat** character
9. baptismal **font**
10. **Fronde** (frahnd)
11. **firms**
12. **flagellum** or **flagella**
13. Caspar David **Friedrich**
14. Harold Athol (AY-thol) Lanigan **Fugard** (FOO-gard)
15. **First Bank** of the **United States** or **First Bank** of the **U.S.** (MULTI-WORD ANSWER)
16. **flood**
17. **formal charge** (TWO WORD ANSWER)
18. Mr. **Fezziwig**
19. **Fashoda** Incident [or **Fashoda** Crisis]
20. John **Ford**

Lightning Round

1. One provision of this document led to a controversy that was settled by the Supreme Court case *Botiller v. Dominguez* (boh-“tee”-YARE “v” doh-MING-gez). U.S. policing of Native American raids was one term of this treaty, which was negotiated by Nicholas Trist. This treaty ended a war in which the Battle of Buena Vista was won by Zachary Taylor, who became president one year after it was signed. Present-day California was ceded by Mexico due to the terms of what 1848 treaty ending the Mexican-American War?

ANSWER: Treaty of Guadalupe Hidalgo (gwah-duh-LOO-pay hih-DAHL-goh) [prompt on partial answer]

2. At the end of this novel, one character gives his approval with the final word of *Timshel*, while another character enlists in World War 1 and is killed in battle. At the opening of this novel, the nine children of the immigrant Samuel Hamilton and his wife Eliza are described before the lives of Charles and Adam Trask in Salinas Valley are compared and contrasted. Name this book by John Steinbeck that is partly named for a Biblical garden.

ANSWER: East of Eden

3. With Amedee Ozenfant (aa-mey-DEY oh-zahn-FAHN), this man wrote the treatise *After Cubism*. One of this architect’s last works is the church made of concrete named Saint-Pierre. His other works include a modernist villa that stands on thin white supports outside of Paris, France and represent the “five points” of an architecture that he pioneered. The Notre Dame Du Haut (noh-truh dahm doo oh) and Villa Savoye (sav-wah) were designed by what 20th century Swiss-French architect?

ANSWER: Le Corbusier (luh kor-boo-zee-ay) [Charles-Edouard Jeanneret-Gris]

4. The divergence of this law is taken when deriving the charge continuity equation. Since this law fails when applied to a parallel-plate capacitor, Maxwell corrected it by adding a “displacement current” term. This law relates the line integral of the magnetic field with the enclosed current within the loop. Give this law named for the French scientist who names the SI unit of current.

ANSWER: Ampere’s Law of circuits [accept Ampere-Maxwell Law; do not accept or prompt on “Maxwell’s Law”]

5. The oldest one of these structures in the world may possibly be the Quba (KOO-buh) one made out of different colors of marble. People proselytize or deliver sermons on a *minbar* platform within these buildings. People usually take off their shoes before entering the *musalla*, or main prayer hall, of these buildings, where worship is typically led by an imam (ee-MAHM). Minarets typically surround what type of buildings that are used as a place of worship by Muslims?

ANSWER: mosque [accept masjid]

6. During the rule of this dynasty, Liu Pi (l’yoo “pie”) organized the Revolt of the Seven Kingdoms. A text entitled *Records of the Grand Historian* was authored by Sima Qian (“SEE”-mah CHEE-ahn) during this dynasty, which was founded by Liu Bang (l’yoo bong). The rule of Wang Mang (wahng mahng) split this dynasty into Western and Eastern periods, the latter of which was ended by the start of the Three Kingdoms period in AD 220. Name this Chinese dynasty that rose to power in 206 BC and shares its name with China’s majority ethnic group.

ANSWER: Han (hahn) dynasty [or Han chao]

7. This novel’s title character employs Peppino and other members of Luigi Vampa’s gang after capturing them. Earlier, the title character of this book was saved from killing himself by Abbe Faria, who tells him of an island where Cesare Borgia’s treasure lies buried. Its main character is imprisoned in the Chateau D’if (shaa-toh deaf) and adopts the title persona. Edmond Dantes (DAHN-tayss) gets revenge on those who wronged him in what 1845 novel by Alexander Dumas (doo-MAH)?

ANSWER: *The* Count of Monte Cristo [or *Le* Comte de Monte-Cristo]

8. Frits Zernike developed a form of these devices that relies on phase contrasts. A structure that has undergone oil immersion is typically used in these tools. Vascular structures are often examined using the “bright-field” type of these devices. In some types of these devices, an object is coated with a layer of gold before a beam of electrons are fired at it so that its structure can be visualized. Name these tools which allow scientists to closely examine cells and other small items.

ANSWER: microscopes [accept phase contrast microscopes or bright-field microscope or electron microscopes]

9. One painting by this artist depicts the title family members next to a basket filled by balls of wool. That painting, titled *Two Sisters*, was set at the same location as his best known work, which shows a scene at the Maison Fournaise (may-ZAHN for-NAYZ). In the bottom left corner of that painting, the artist's future wife, Aline Charigot (ah-LEEN shah-ree-GOH), plays with a small dog. That painting by this artist depicts fourteen people enjoying a meal at a restaurant on the banks of the Seine (sen) River. Name this French Impressionist artist of *Luncheon of the Boating Party*.

ANSWER: Pierre-Auguste **Renoir** (ren-war) [or Auguste **Renoir**]

10. Louis Wirth's first book is titled for this kind of location, whose name comes from the *cannaregio* section of a certain city. The Brazilian *favela* (fah-VAY-lah) is often said to be equivalent to this kind of location. Jurgen Stroop brutally suppressed an uprising that arose in one of these locations in Warsaw in 1943. Originally, this term described a region in Venice where Jews were segregated. Give this term that names a rundown area where minorities often live.

ANSWER: **ghettoes** [accept *The Ghetto*; prompt on "slum(s)"]

11. This conflict included an arranged battle known as the Combat of the Thirty, which was part of the related War of (*) Breton Succession. John of Bohemia was killed in this conflict before a brief peace that was established by the Treaty of Bretigny (bray-"TEEN"-yee). During this war, King John the Good was captured while fighting against Edward, the Black Prince at the Battle of Poitiers (pwah-"tee"-AY). King Henry V ("the 5th") won the 1415 Battle of Agincourt (AH-zhin-koor) in what long conflict between France and England?

ANSWER: **Hundred Years'** War [accept War of **Breton Succession** before (*)]

12. A humorous essay by this author frames the Discovery of America as a televised media event and includes a scene in which Leonardo da Vinci reads from his teleprompter backwards. This author of *Misreadings* wrote a novel in which the monk Jorge of Burgos devours a poisoned book while killing his brethren. In that novel by this author, William of Baskerville and Adso of Melk investigate murders at a monastery. Name this Italian author of *The Name of the Rose*.

ANSWER: Umberto **Eco**

13. This number names the "complement" system that is formed by taking the inverse of a number and subtracting one. Both AVL ("A-V-L") trees and red-black trees feature nodes where this is the maximum number of children. Entries are arranged in a specific order in the "search tree" described by the adjective form of this number. This is the number of digits needed to express the numbers 16 through 255 in hexadecimal. Give this number of the base that uses only ones and zeroes to represent numbers.

ANSWER: **two** [accept **binary**]

14. This philosopher used the sentence "The present King of France is Bald" to refute John Stuart Mill's theory of names in his short work "On Denoting." Kurt Godel (GUR-"dull") criticized the notation that this philosopher and the author of *Process and Reality* used in a three-volume treatise that attempted to lay down the groundwork of set theory. Name this British philosopher who, along with Alfred North Whitehead, wrote *Principia Mathematica*.

ANSWER: Bertrand Arthur William **Russell**, 3rd Earl Russell

15. This mountain range is home to an endemic goat-like creature known as the tur. The World War 2 Operation Edelweiss (AY-dul-"vice") involved an offensive through this range, which the Kura River splits into "Lesser" and "Greater" sections. This range has seen recent insurgency in the region of Dagestan (dah-guh-STAHN). Mount Elbrus is the highest peak in this range, which is home to the region of Chechnya (CHECH-nee-ah). Name these mountains which stretch between the Caspian and Black Seas along the Europe-Asia border.

ANSWER: **Caucasus** (KAW-kuh-suss) Mountains [accept **Caucasian** or Greater or Lesser **Caucasus** Range]

16. In one work in this collection, the stories of the free-spirited Ignatius Gallaher later cause "Little Chandler" to snap at his son when he reads him Lord Byron's poetry. In the last story in this book, snow falls across the grave of Michael Furey as Gabriel Conroy realizes that his wife Gretta will never truly love him. "A Little Cloud" and "The Dead" are work in this 1914 collection of fifteen short stories. Name this James Joyce collection that is set in the capital of Ireland.

ANSWER: **Dubliners** [do not accept of prompt on "Dublin"]

17. This was the nationality of the members of the Rinnan (RIHN-ihn) Gang, which was a Nazi collaboration group. One man with this nationality founded the short-lived Nasjonal Samling (nah-shoh-NAHL SAHM-ling) Party. One king of these people was killed while fighting the English king at the 1066 Battle of Stamford Bridge; that man was Harald Hardrada (har-DRAH-duh). One man with this nationality sailed across the Pacific Ocean on a hand-built raft named *Kon-Tiki*. Give this nationality of explorer Thor Heyerdahl (tor "HAY"-ur-dahl) and Nazi collaborator Vidkun Quisling, the latter of whom was executed in Oslo.

ANSWER: Norwegian [accept Kingdom of Norway or Kongeriget Norge]

18. The father of this figure became king after he was seen pushing a cart utilizing the Gordian knot. Reeds blowing in the wind revealed a secret about this figure that was earlier whispered into the ground by his barber. After judging Pan to be a better musician than Apollo, he was given donkey ears. Dionysus ("die"-oh-NYE-siss) rewarded this man with a gift that nearly caused him to starve despite making him extremely wealthy. Name this mythical Greek king whose touch turned things into gold.

ANSWER: King Midas ("MY"-duss)

19. This quantity is divided by the product of the number of moles and the Faraday constant when deriving the Nernst equation. The change in this quantity equals minus $R T$, times the log of the equilibrium constant. It also equals enthalpy, minus temperature times entropy. Reaction spontaneity is determined by this quantity, which is similar to one named for Helmholtz. Name this (*) "free (**) energy" named for an American chemist.

ANSWER: Gibbs free energy [accept Gibbs by itself after (**); prompt on "free energy" before (*)]

20. This composer musically depicted a jousting tournament in his cantata *The Black Knight*. A poem about a man's ascent into heaven by Cardinal Newman inspired this man's oratorio *The Dream of Gerontius*. This composer's friend Augustus Jaeger is musically depicted in a work whose central "hidden melody" is played fourteen times. Name this British composer of the *Enigma Variations* who also did the *Pomp and Circumstance Marches*.

ANSWER: Sir Edward William Elgar (EL-gar)