

2016 OAC Regionals – Round 1

Questions written by Ike Jose and Steven Wellstead

Category Round

American Literature: Name these 19th century poets.

Team A: *Clarel* is a long epic poem by this author who is better known for sea-faring tales such as *Billy Budd*.

ANSWER: Herman **Melville**

Team B: “I heard a fly buzz – when I died” is a short lyric poem by this author, whose edited letters were collected by Mabel Loomis Todd.

ANSWER: Emily Elizabeth **Dickinson**

Tossup: One poem by this author is set during “the last steps of day” when the title animal is guided “from zone to zone” by God. That poem by this author asks “Far, through their rosy depths, dost thou pursue thy solitary way?” Another of his poems states “Yet not to thine eternal resting-place shalt thou retire alone,” since “fair forms, and hoary seers of ages past” shall be part of “one mighty sepulcher.” In his best known poem, this author called death “the innumerable caravan, which moves to that mysterious realm.” Name this author of the poems “To a Waterfowl” and “Thanatopsis.”

ANSWER: William Cullen **Bryant**

Mathematics: Pencil and paper ready. Answer the following related to slopes. The answers to the team questions must be in slope intercept form. You will have 30 seconds for the team questions.

Team B: Give the equation of the line that runs through the following points: (12,5) (“twelve comma five”) and (9,-4) (“nine comma negative four”).

ANSWER: **$y = 3x - 31$** (“Y equals three X minus thirty-one”)

Team A: Give the equation of the line that runs through the following points: (-16,3) (“negative sixteen comma three”) and (-6,8) (“negative six comma eight”).

ANSWER: **$y = 0.5x + 11$** (“Y equals one-half X plus eleven” or “Y equals (zero) point five X plus eleven”)

Tossup: When equations are expressed in slope intercept form, it is quite easy to solve a system of linear equations by using this mathematician’s namesake “elimination” technique. This man basically developed clockwork arithmetic by proving his namesake “golden theorem,” which is the law of quadratic reciprocity. This man proved the fundamental theorem of algebra, and before the age of ten, he was able to quickly sum the numbers 1 through 100. Give this German “prince of mathematics” who is the namesake of the normal distribution.

ANSWER: Carl Friedrich **Gauss** [accept **Gaussian** elimination or **Gaussian** distribution]

World History: Name these conflicts.

Team A: The 1902 Treaty of Vereeniging (fuh-RAY-nuh-ging) ended the second of these British conflicts, in which one side was led by Paul Kruger.

ANSWER: Anglo-**Boer** Wars [accept Second Anglo-**Boer** War]

Team B: The 1905 Treaty of Portsmouth ended this Asian conflict in which two separate battles were fought at Port Arthur.

ANSWER: **Russo-Japanese** War

Tossup: One side in this conflict made a secret pact known as the Sykes-Picot (pih-COH) Agreement. In one nation, the Spartacist (SPART-uh-“kissed”) uprising occurred shortly after the conclusion of this war, which was triggered by the July Crisis. In this war, Helmuth von Moltke (HEL-mut fohn MOLT-kuh) the Younger utilized an offensive strategy known as the Schlieffen (SHLEE-ef-un) Plan before being stopped at the First Battle of the Marne (marn). Russia signed the Treaty of Brest-Litovsk to leave this war, which began in response to the assassination of Austrian Archduke Franz Ferdinand. Name this global conflict lasting from 1914 to 1918.

ANSWER: **World War I** or **World War One** or **First World** War [prompt on “Great War”]

Fine Arts: Name these instruments in classical music.

Team B: Joshua Bell, Hilary Hahn, and Niccolò Paganini are classical performers renowned for their virtuosity with this instrument.

ANSWER: **violin**

Team A: Jacqueline du Pre and Yo-Yo Ma are classical performers renowned for their virtuosity with this instrument.

ANSWER: **cello**

Tossup: Malcolm Arnold composed a “Fantasy for” this instrument, whose virtuosos include Harvey Phillips and his teacher, William Bell. Bill Barber is considered to be the first player of this instrument in jazz, as he played it for the album *Birth of the Cool*. The ophicleide (OFF-ih-klide) was the predecessor to this modern instrument, whose variants include the euphonium, which is pitched one octave higher than a common version of this instrument. The sousaphone is a form of what biggest and lowest-pitched of the brass instruments?

ANSWER: **tuba**

Life Science: Name these organelles.

Team A: This organelle is often known as the “powerhouse of the cell” since it provides the cell with the ATP it needs.

ANSWER: mitochondrion or mitochondria

Team B: This organelle is responsible for conducting photosynthesis in plants.

ANSWER: chloroplasts

Tossup: One type of these organelles is called the autophagosome (ah-toh-FAYZH-uh-zome) and is responsible for directing material to a lysosome (“LIE”-soh-sohm). These organelles are coated with a triskelion-shaped protein called clathrin. A tonoplast is a membrane that surrounds these organelles, whose “contractile” type is used by some protists to remove water from the cell. (*) Vesicles can merge to form one of these organelles, a large example of which is often found at the center of plant cells. Name these organelles that store food and water for the cell.

ANSWER: vacuoles (VAK-yoo-ohl) [accept contractile vacuoles; accept vesicles before (*)]

World Literature: Name these characters created by William Shakespeare.

Team B: This husband of Emilia tells Othello that jealousy is a “green-eyed monster which doth mock the meat it feeds on.”

ANSWER: Iago

Team A: In *Hamlet*, this villainous king kills the father of Hamlet and marries the latter’s mother, Gertrude.

ANSWER: King Claudius

Tossup: In one speech, this character describes the “stern alarums changed to merry meetings” due to the presence of “grim-visaged war.” This character states that he “cannot prove a lover,” so he is “determined to prove a villain” by making “drunken prophecies” and hating “the idle pleasures of these days.” At the beginning of the play in which he appears, he states “Now is the winter of our discontent, made glorious by this sun of York.” Shortly before being killed, this title character offers “my kingdom for a horse.” Name this hunchbacked king who was the subject of a play set during the Wars of the Roses.

ANSWER: Richard III [prompt on “Richard”]

U.S. Government/Economics: Give the following related to the U.S. Constitution.

Team A: The U.S. Constitution states that no person shall become President without having been a resident of the U.S. for at least this many years.

ANSWER: fourteen years

Team B: According to its own text, the Constitution was to become effective upon its ratification by the conventions of this number of states.

ANSWER: nine

Tossup: One clause within this article of the U.S. Constitution was the subject of the ruling in the Supreme Court case *Muskrat v. U.S.* The first section of this article allows for the holding of an office “during good behavior.” Another of its sections was altered by the passage of the 11th Amendment. The crime of treason is defined in the final section of this article, which prohibits the issuance of advisory opinions due to the Case or Controversy Clause. This article specifies that all trials, except for impeachments, shall be done with a jury. Name this article which established the U.S. judicial branch.

ANSWER: Article Three or Third Article

Physical Science: Answer the following about subatomic particles.

Team B: Baryons (“BARE”-ee-onz) are formed by three of these particles, which comes in six different varieties. The name of these particles was coined by Murray Gell-Mann.

ANSWER: quarks

Team A: James Chadwick discovered this type of baryon, whose namesake “flux” is often used to measure the activity of a nuclear reactor.

ANSWER: neutrons

Tossup: The holes in the Dirac (dih-RAK) sea are filled with this kind of particle, which Dirac posited to solve the problem of energy states in his namesake equation. Baryogenesis immediately after the Big Bang explains why so few types of these particles exist. A type of this substance is used as a radio-nuclide source in PET (“pet”) scans. The (*) positron is an example of this kind of substance, which has an opposite charge to most matter. Name this kind of substance which annihilates normal matter.

ANSWER: anti-matter [or anti-particles; accept positrons before (*)]

World Geography: Name these U.S. states.

Team A: The Twelve-Mile Circle forms the northern border of this state, which is bisected by a canal connecting a namesake bay with the Chesapeake Bay.

ANSWER: Delaware

Team B: This state's Chimney Rock is a National Historic Site along the northern branch of the Platte River, which empties into the Missouri River just south of its most populous city.

ANSWER: Nebraska

Tossup: Within this state, untreated wastewater from fracking affects streams flowing through the Wind River Indian Reservation. Lamar Valley is a popular wildlife viewing area within a national park in this state, whose highest point is Gannett Peak. The first place to be designated a U.S. National Monument was this state's Devils Tower. Within this state, the valley known as Jackson Hole sits just outside of Grand Teton National Park, which is due south of a national park containing the geyser ("GUY"-zer) Old Faithful. Name this state that contains most of Yellowstone National Park and has its capital at Cheyenne ("shy-AN").

ANSWER: Wyoming

U.S. History: Name the following related to slavery.

Team B: An 1841 Supreme Court case affirmed the freedom of the dozens of illegally enslaved Africans who sailed to America after successfully rebelling aboard this Spanish ship.

ANSWER: The Amistad [or La Amistad]

Team A: This proposed law of the late 1840s, which was introduced by a Pennsylvania Representative but never passed by the Senate, would have banned slavery in any western territories acquired from Mexico.

ANSWER: Wilmot Proviso

Tossup: In advance of this event, David Gue sent an anonymous letter to Secretary of War John Floyd. During this event, a group of men took Lewis Washington hostage and confiscated several objects once belonging to George Washington. A fire station served as the setting for much of this event, which was ended by a group of Marines commanded by Robert E. Lee. The goal of this event was to capture a stockpile of weapons that would be used to incite a large-scale slave revolt. Name this 1859 event in which a zealous abolitionist targeted a Federal Armory in present-day West Virginia.

ANSWER: John Brown's raid on Harper's Ferry [accept any equivalent answers that mention Brown and Harper's Ferry and the notion of an attack; prompt on partial answers]

Alphabet Round – Letter A

1. Longest river in South America.
2. **(NAME AND REGNAL NUMBER REQUIRED)** – 14th century Egyptian pharaoh who changed his name to Akhenaton.
3. In the developmental disorder known by the acronym ADHD, the “A” stands for this word.
4. The “peak-to-peak” form of this quantity is the change of a wave’s height from peak to trough.
5. *The Dyer’s Hand* is a volume of critical essays by this English poet, who wrote about the start of World War I in his poem “September 1st, 1939.”
6. **(TWO OR MULTI-WORD ANSWER)** – Father-in-law of Muhammad who served as the first Islamic caliph.
7. Catholic dogma which holds that both the soul and body of Mary, mother of Jesus, were taken to heaven upon her death.
8. A group of notes in a chord that is played in successive order as opposed to simultaneously.
9. In proof theory, these are statements that cannot be proven and are assumed to be true. They are synonymous with postulates.
10. This is the term for a collection of writing, often poetry, that is usually compiled by a person selecting works from various writers. W.W. Norton puts one out of “American Literature.”
11. City that served as the residence of the papacy between 1309 and 1377.
12. Robert Ingersoll was nicknamed “The Great” one of these persons. This term describes someone who claims that some truths about God are fundamentally unknowable.
13. This neurotransmitter alters a membrane’s response to some ions by depolarization or hyperpolarization. It is released at neuromuscular junctions to stimulate contraction.
14. Many churches and cathedrals contain one of these raised structures, upon which sacrifices are made. The Roman Emperor Augustus commissioned one of these of “Peace.”
15. **(MULTI-WORD ANSWER)** – In this novel by Robert Penn Warren, Willie Stark, who is a fictionalization of Huey Long, is killed by Adam Stanton.
16. In Egyptian myth, this god would weigh the souls of the dead against the feather of truth. Impure souls were condemned to be eaten by the demon Ammit.
17. **(MULTI-WORD ANSWER)** – Set of four acts that included the Naturalization Act of 1798, which made it more difficult for immigrants to become U.S. citizens.
18. Artist who illustrated the title creatures of the 19th century book *The Birds of America*.
19. **(TWO WORD ANSWER)** – Lysine and glutamic acid are examples of these substances, which are sometimes said to be the “building blocks” of proteins.
20. This Nigerian author’s *No Longer at Ease* is a sequel to a novel depicting Okonkwo’s inability to adjust to an Africa colonized by Europeans, *Things Fall Apart*.

Alphabet Round – Letter A Answers

1. Amazon River [or Rio Amazonas]
2. Amenhotep IV (ah-mun-HOH-tep “the fourth”) or Amenophis IV (ah-mun-OH-fiss “the fourth”) (NAME AND REGNAL NUMBER REQUIRED)
3. attention
4. amplitude
5. Wystan Hugh Auden
6. Abu Bakr (AH-boo BAH-kur) as-Siddiq [or Abdullah ibn Abi Quhafah or ‘Abd Allah ibn Abi Quhafah] (TWO OR MULTI-WORD ANSWER)
7. Assumption
8. arpeggio (ar-PEH-jee-oh)
9. axioms
10. anthology
11. Avignon (ah-veen-yohn), France
12. agnosticism [do not accept “atheist”]
13. acetyl•choline (uh-SEE-tul-KOH-leen)
14. altar
15. All the King’s Men (MULTI-WORD ANSWER)
16. Anubis
17. Alien and Sedition Acts (MULTI-WORD ANSWER)
18. John James Audubon (AH-duh-bahn) [or Jean-Jacques Audubon]
19. amino acids (TWO WORD ANSWER)
20. Chinua Achebe (CHIN-wah ah-CHAY-bay) [or Albert Chinualumogu Achebe]

Lightning Round

1. This condition has been known by such names as Cheadle's disease and Moeller's disease. According to legend, the island of Curacao (KUR-uh-sao) was so-named because it contained food that could cure this disease. In what became known as the first ever clinical trial, James Lind found a cure for this disease, which is characterized by bleeding gums. This disease, which commonly afflicted sailors, is usually treated by consuming oranges and other fruits. Name this disease resulting from a deficiency of Vitamin C.

ANSWER: scurvy

2. "Administration of Media" is the final chapter of the document specifying the "Principles in the Administration of" this group. This group carried out the Sinjar Massacre against Yazidis (yah-ZEE-deez). The online magazine *Dabiq* (dah-BEEK) is published by this group, which successfully captured the Anbar Province in 2014. Raqqa (RAH-kah) serves as the headquarters of this group, which published several videos showing "Jihadi John" beheading hostages. Name this Middle East terrorist group that proclaimed itself as a worldwide caliphate (CAH-lih-"fate").

ANSWER: Islamic State in Iraq and the Levant [or IS or ISIL or ISIS or Islamic State in Iraq and Syria or al-Dawla al-Islamiyya fi-l-'Iraq wa-l-Sham or DA'SH; accept of in place of "in"]

3. This figure pelts another character with apples in a John Gardner novel in which he is the narrator. This character's "spikes" are compared to "barbed steel" in a translation by Seamus Heaney (SHAY-muss HAY-"knee"). A family member of this character causes a sword named Hrunting to break. This character kills many of the sleeping residents of the mead-hall Heorot (HAY-uh-"rot"). After the death of this male descendant of Cain, a Geatish (GAYT-ish) hero kills his mother. Name this villainous monster from *Beowulf* (BAY-uh-"wolf").

ANSWER: Grendel [do not accept or prompt on "Grendel's mother"]

4. This entity is the third of the four so-called "boxes of liberty," along with "soap," "ballot," and "ammo." This body is chosen from a group called a venire (veh-NIE-ree) through a process called *voir dire* (vwahr deer). In high profile situations, this entity may be "sequestered" to prevent news media from coloring its opinions. A "petite" (peh-TEET) one must be "death-qualified" if it is to rule on a capital case. Name these groups that consist of one's peers during a criminal trial.

ANSWER: jury [accept grand jury or petit jury or petty jury or trial jury]

5. While serving as governor, this man evaded a force intent on capturing him due to the warning of Jack Jouett ("jew"-ET). This author of the Kentucky Resolutions likely fathered children through his slave, Sally Hemings. The manner in which he became president prompted the passage of the 12th Amendment. He became America's second vice president after serving as the first Secretary of State. Name this author of the Declaration of Independence who served as the third U.S. president.

ANSWER: Thomas Jefferson

6. At one point in this piece, a folk dance called "At my Gate, At my Gate" is musically depicted before four cellos and two violas play a version of "O Lord, Save They People" to counteract *La Marseillaise* (lah mar-say-yez). This piece, whose climax features cannon fire, was written to commemorate the defense of Napoleon invading Russia. Give this (*) overture by Peter Tchaikovsky (chy-KOFF-skee) that is named for a certain year.

ANSWER: 1812 Overture [or *Festival Overture*, *The Year 1812*, Op. 49; accept 1812 after (*)]

7. Erosion by these objects produces a namesake "flour," which may become "milk" if it is mixed with freshwater. Chunks of material break off of these structures during calving. Erosion caused by these objects may lead to a creation of an amphitheater-like structure called a cirque (serk). Moraines are accumulations of rock that are formed from debris leftover by these objects, which contain a majority of the Earth's freshwater. Name these large bodies of ice that are constantly moving.

ANSWER: glaciers [accept ice sheets or ice caps or ice fields or alpine glaciers or valley glaciers or continental glaciers]

8. Pema Dorje is said to be the first one of these figures, who are held to be an *Avalokiteshvara* (AH-vah-loh-kee-TESH-vah-ruh), or reincarnation of the Buddha of infinite mercy. This title translates as “teacher of the ocean” and is held by the leader of the “Yellow Hat” sect. The fourteenth and current holder of this title has lived in exile in India since fleeing Lhasa in 1959 (LAH-sah). Tenzin Gyatso (TEN-zin ghee-AHT-soh) is the current holder of what position that is the head of Tibetan Buddhism?

ANSWER: **Dalai Lamas** (DAH-“lie” LAH-muh) [prompt on “lama(s)”]

9. This woman is the subject of H. Rider Haggard’s novel *The World’s Desire*. She is compared to “Nicean (nye-SEE-in) barks of yore” in a poem which describes how her “hyacinth hair” brought the speaker home to “the glory that was Greece and the grandeur that was Rome.” This character supposedly “burnt the topless towers of Ilium” with a “face that launched a thousand ships” according to Christopher Marlowe’s *Doctor Faustus*. Name this mythical woman whose beauty started the Trojan War.

ANSWER: **Helen** of Troy

10. This document provided for the removal of all fishing weirs except those along the sea coast. One side’s failure to abide by this agreement, which was annulled by Pope Innocent III (“the 3rd”), led to the First Barons’ War. Stephen Langton, the Archbishop of Canterbury, may have drafted this document, which was accepted at Runnymede (“RUN”-ee-meed). The power of King John of England was limited by what document that was sealed in 1215?

ANSWER: **Magna Carta** Libertatum [or **Great Charter** of Liberties]

11. Interactions between these particles are described by Slater’s rules, which predict that they lower a quantity abbreviated Z_{eff} (“Z sub F”). “Core” examples of these particles exhibit a shielding effect. Dots in Lewis diagrams represent these particles, which fill an orbital in a specific way according to the Aufbau (OWF-bow) principle. In an atom, the outermost of these particles are known as “valance” ones. Name these negatively charged particles which orbit atomic nuclei.

ANSWER: **electrons** [accept core **electrons** or valence **electrons**]

12. The capital of this nation features a building complex that includes the Qutb Minar (KUH-tub mih-NARR). It controls the Siliguri (sih-lih-GOO-ree) Corridor, which is a thin strip of land also known as the “Chicken’s Neck.” The Deccan (DEH-kun) Plateau is in the southern part of this country, which controls the Andaman (AN-duh-mun) Islands at the east end of the Bay of Bengal. The major port city on its Arabian Sea coastline is Mumbai (moom-“BYE”). Name this Asian nation whose capital is Delhi (DEH-lee).

ANSWER: Republic of **India** [or **Bharatiya** Ganarajya]

13. One minor character in this novel is based on Ann Hibbins and is a mistress who is suggested to practice witchcraft. In this novel, a meteor blazes across the night sky while two characters stand on a scaffold with their daughter, Pearl. After confessing his sins, Reverend Dimmesdale dies at the end of this novel, in which the letter “A” is worn on the clothing of the adulterous Hester Prynne. Name this novel set in 17th century Massachusetts by Nathaniel Hawthorne.

ANSWER: *The **Scarlet Letter**: A Romance*

14. This leader arranged a betrothal for his great-nephew Arghun (AR-“gun”) shortly before the latter’s death. This ruler was victorious in the Toluid (“TOLL”-“you”-id) Civil War against Ariq Boke (“eric” BOH-kuh) to become the successor of Mongke (MAHNG-kuh). “Divine winds” known as *kamikaze* (kah-mih-KAH-zee) were a factor in his two failed attempts to invade Japan. Shortly after founding the Yuan (“YOU-on”) dynasty in 1271, he welcomed the Italian explorer Marco Polo. Name this Mongol ruler who was a grandson of Genghis Khan.

ANSWER: **Kublai** (KOO-bly) Khan [or **Xubilai** Xaan or **Khubilai** Khan; accept **Shizu** or **Setsen** Khan or Shengde Shengong **Wenwu**]

15. In the book *Florence Under Fire*, Frederick Hartt discusses how he had this sculpture entombed in brick to protect it from potential damage during World War 2. This work, which originally stood outside the Palazzo della Signoria (pah-LAHNT-soh DELL-uh seen-YAW-ree-uh), currently stands in the Galleria dell’Accademia (gal-uh-REE-uh dell-ack-ah-DEE-mee-uh). This large sculpture depicts the same subject as a bronze by Donatello in which the subject stands over a severed head. Name this marble sculpture by Michelangelo which depicts a nude biblical hero.

ANSWER: **David**

16. In this theory, four-vectors are covariant under the Lorentz transformations. A thought experiment in this theory concerns a light shone onto a mirror on a moving train. This theory predicts that length contraction and time dilation occur in reference frames moving near the speed of light. This theory was first proposed in a 1905 paper by Albert Einstein. Name this theory which is contrasted with a “general” variant.

ANSWER: **special relativity** [prompt on “relativity”]

17. According to one myth, this figure undertook a quest to obtain a wedding gift for Hippodamia (hip-oh-DAY-mee-uh). This figure, who was raised by the fisherman Dictys (DIK-tiss), threw the discus that accidentally killed his grandfather, Acrisius (uh-KRIH-see-us). He was conceived when Zeus took the form of golden rain to seduce his mother, Danae (DAN-ay). In his best known feat, this husband of Andromeda (an-DRAH-mih-duh) avoided being turned into stone while hunting a Gorgon that he beheaded. Name this mythical Greek hero who killed Medusa.

ANSWER: **Perseus** (PUR-“see”-uss)

18. In this author’s last play, a sister of mercy says “peace be with you” as an avalanche kills Arnold and Maia (MY-uh) Rubek. This author of *When We Dead Awaken* wrote another play in which a woman slams the door shut as she leaves her husband Torvald. In that play by this man, Nora Helmer is blackmailed by the unscrupulous bank employee Krogstad. *A Doll’s House* is one play by what playwright from Norway?

ANSWER: Henrik Johan **Ibsen**

19. This settlement was represented by a triangular shape in a map that was stolen by and named for Spanish ambassador Pedro de Zuniga. The wreck of the *Sea Venture* in Bermuda contributed to this location suffering through the “Starving Time.” Bacon’s Rebellion included the 1676 burning of this town, which survived its earliest years through the leadership of John Smith. Name this Virginia location established in 1607 as the first permanent English settlement in the Americas.

ANSWER: **Jamestown**, Virginia

20. This artist depicted the Virgin Mary and baby Jesus with cube-shaped voids in their torso in one version of the painting *The Madonna of Port Lligat* (yih-GAHT). Another work by this artist shows a tiger emerging from the mouth of another tiger that is emerging from the mouth of a fish that emerges from a pomegranate (PAHM-uh-“granite”). Ants crawl on top of an orange timepiece in his best known work, which features three melting clocks. Name this Spanish Surrealist artist of *The Persistence of Memory*.

ANSWER: Salvador **Dali** (dah-LEE) [or Salvador Domingo Felipe Jacinto **Dali** i Domenech]