

2016 OAC States – Round 11

Questions written by Ike Jose and Steven Wellstead

Category Round

American Literature: Answer the following about science fiction novels.

Team A: An alternate future in which Jews have been relocated to Alaska since Israel was destroyed during World War 2 is imagined in this contemporary author's novel *The Yiddish Policemen's Union*.

ANSWER: Michael **Chabon** (SHAY-bahn)

Team B: In this Larry Niven novel, Louis Wu travels to the title structure and meets its inhabitants, who believe him to be a "god-engineer."

ANSWER: **Ringworld**

Tossup: One of this author's novels ends with Dr. Carlisle Perera receiving a subconscious message stating that members of the title spacecraft "do everything in threes." In that novel by this author, Jimmy Pak and other crew members of the *Endeavour* encounter a giant cylinder named after an Indian god. Another of his novels ends with the protagonist detonating a warhead after becoming a "star child." That book by this author features a giant monolith that appears on the Earth and Moon. Name this sci-fi author of such novels as *Rendezvous with Rama* and *2001: A Space Odyssey*.

ANSWER: Arthur Charles **Clarke**

Mathematics: Pencil and paper ready. Compute the simplest Big O notation function given the following expressions. You will have 20 seconds for the team questions.

Team B: Give the big O function of $7x^2 + 5x + 10$ ("seven x squared plus five x plus ten").

ANSWER: **x^2** ("x squared" or "x to the second power")

Team A: Give the big O function of 5,789.

ANSWER: **1** or **one**

Tossup: This function times n appears in the big O formula for the function "n factorial." The power series expansion of this function starts with z minus 1 and features subtractive terms for all more specific terms. The prime number theorem states that x divided by this function of x is about equal to the number of primes less than x. Taking this function of n factorial is equal to the sum of this function of all the numbers from one through n. Name this function which is the inverse of exponentiation.

ANSWER: **logarithm** [accept natural **logarithm** or **ln** ("L-N")]

World History: Name these nations.

Team A: The *Druk Gyalpo* (DROOK g'Y AHL-poh), or Dragon King, serves as the head of state of this nation, whose economic success is measured by a metric known as the Gross National Happiness.

ANSWER: Kingdom of Bhutan [or Druk Yul or Druk Gyalkhap]

Team B: A fifteen year civil war that lasted from 1975 to 1990 occurred in this country, where the 2005 assassination of former prime minister Rafic Hariri (ruh-FEEK hah-REE-ree) led to the Cedar Revolution.

ANSWER: Lebanon [or Lebanese Republic or Liban or Republique libanaise or Lubnan or al-Jumhuriyya al-Lubnaniyya]

Tossup: During one conflict, the military of this country utilized the Three Alls Policy, which consisted of “burn all, kill all, loot all.” This nation performed human experimentation at a biological warfare research facility called Unit 731. An invasion of this country was the subject of Operation Downfall, which was cancelled when its leader delivered the Jewel Voice Broadcast. Before and during World War 2, this country utilized many thousands of “comfort women” as sex slaves. The Rape of Nanking was perpetrated by this country, which surrendered at the end of World War 2 aboard the USS *Missouri*. Name this Asian nation ruled for 62 years by Emperor Hirohito.

ANSWER: Japan [or Nihon-koku or Nippon-koku]

Fine Arts: Answer the following about performers of classical music.

Team B: Yehudi Menuhin gave his violin to this other Israeli violinist, who also was once conductor of the Detroit Symphony Orchestra.

ANSWER: Itzhak Perlman

Team A: This Catalan cellist made prominent recordings of various cello works by J.S. Bach, as well as many other cello sonatas and concerti.

ANSWER: Pablo Casals (kah-S AHLZ) [or Pau Casals i Defillo]

Tossup: Peter Tchaikovsky’s (chye-KOFF-skeez) first concerto for this instrument was written for Nikolai Rubinstein, who severely criticized it, which led Hans von Bulow to premiere it in his stead. A player of this instrument from Texas won the first International Tchaikovsky Competition for this instrument in 1958. Holocaust survivor Wladyslaw Szpilman (VWAH-dis-wahf SHPEEL-mahn) was a practitioner of this instrument, which was also played by Van Cliburn and Leonard Bernstein. A 2002 Roman Polanski film centered on a title musician who played what instrument that has 88 black and white keys?

ANSWER: pianoforte

Life Science: Answer the following about organ systems.

Team A: In the circulatory system, these are the only arteries that do not contain oxygenated blood.

ANSWER: pulmonary arteries

Team B: There are “superior” and “inferior” examples of these veins that carry blood from the rest of the body directly into the heart.

ANSWER: vena cava [accept venae cavae]

Tossup: The ciliary muscle in the iris is attached to this system by Edinger-Westphal nuclei. The acronym SLUDD (slud) is used to describe the functions of this system, since it controls lachrymation and salivation. This component of the enteric system is responsible for relaxing sphincter muscles, slowing the heart rate, and other involuntary responses. This system is responsible for the “rest-and-digest” aspect of the nervous system. Name this system that augments the similarly-named sympathetic nervous system.

ANSWER: parasympathetic nervous system [prompt on “nervous system”; do not prompt on or accept “sympathetic nervous system”]

World Literature: Questions in this category will involve works of fiction about foods.

Team B: Puerto Rican writer Giannina Braschi, who authored the novel *United States of Banana*, also authored *Yo-Yo Boing!*, which is considered to be the first novel written in this so-called language sometimes known as *Inglanöl*.

ANSWER: Spanglish

Team A: The novel *The Green Pope*, which depicts the rise and fall of the United Fruit Company, was written by Miguel Angel Asturias (mee-GEL ahn-HEL uh-STUR-ee-us), who is a writer from this country.

ANSWER: Republic of Guatemala [or Republica de Guatemala]

Tossup: A novel from this country whose chapters open with various recipes ends with the protagonist eating candles, which kill her when they are lit. Another writer from this country included the image of a “willow of crystal, a poplar of water” at both the beginning and end of a 584 line poem that is structured like a calendar. *Like Water for Chocolate* and “Sunstone” are two works of literature from this country, which also produced a work that takes place on the deathbed of Artemio Cruz. The history of this country is the subject of the book *Labyrinth of Solitude*. Name this Spanish-speaking country whose writers include Laura Esquivel (ESS-kee-vel), Carlos Fuentes (FWAYN-tayss), and Octavio Paz (pahz).

ANSWER: Mexico [or United Mexican States or Estados Unidos Mexicanos]

U.S. Government/Economics: Answer the following about the economic factors of production.

Team A: Natural resources such as water are grouped under this basic factor of production.

ANSWER: land

Team B: Machines such as tractors that are needed to run a business fall under this factors of production.

ANSWER: capital

Tossup: In his book *A Contribution to the Critique of Political Economy*, this thinker discussed the relations of production that arise from the superstructure and the base. In a critique of Georg Hegel (HAY-gull), this man proposed “alienation” theory, the means by which social classes become a mechanistic part of society. In his major work of thought, this thinker critiqued political economy by arguing that the exploitation of labor and the desire for surplus value and profit underlies the title system. Name this Prussian-born thinker who authored *Das Kapital* and collaborated with Friedrich Engels to write *The Communist Manifesto*.

ANSWER: Karl Marx

Physical Science: Answer the following about colors in chemistry.

Team B: Sodium gives off this color in a flame test. An element that primarily appears in this color is harvested through the Frasch process.

ANSWER: yellow

Team A: Radium and strontium give off this color during a flame test. The cochineal (kok-uh-NEEL) insect is used to create a dye of this color called carmine.

ANSWER: red

Tossup: The first artificial dye of this color was made during an attempt to synthesize quinine by William Perkin. Gram-positive bacteria retain a dye of this color when they are stained. Potassium gives off hues of this color during a flame test. A dye of this color was harvested from *murex* seashells. Iodine was given the Greek name for this color since its vapor has this hue. The light of this color has the shortest possible wavelength of visible light. Give this color that is similar to mauve (mohv) and formed by combining red with blue.

ANSWER: purple [or violet]

World Geography: Give the following related to the Pacific Ocean.

Team A: At the north end of the Pacific Ocean, within the Bering Strait, approximately two and a half miles separate these two islands on either side of the International Date Line. The “big” one is owned by Russia and the “little” one is owned by the U.S.

ANSWER: Big and Little **Diomedes** Islands

Team B: The Solomon Islands are just southeast of this Pacific Ocean archipelago, which is separated from the nation of Papua New Guinea by a namesake sea.

ANSWER: **Bismarck** Archipelago

Tossup: This nation is the site of a unique architectural style that originated on the Pacific Ocean island of Chiloe (**chil-oh-AY**). One city in this nation has been called the “Jewel of the Pacific.” *Robinson Crusoe* was inspired by the time Alexander Selkirk spent on this country’s Juan Fernandez Islands. Antofagasta (**ahn-toh-fah-GAH-stah**) is a port city within this nation, which controls an island that contains many *moai* (**MOH-“eye”**) statues and is known to its natives as Rapa Nui (**RAH-puh “NEW”-ee**). This country, which features the port city of Valparaiso and Easter Island, also controls the western part of the Tierra del Fuego archipelago. Name this long and thin South American nation whose capital is Santiago.

ANSWER: Republic of **Chile** (**CHEE-lay**) [or Republica de **Chile**]

U.S. History: Name these signatories of the U.S. Constitution.

Team B: This man, who served as one of Pennsylvania’s first two U.S. Senators, personally invested his own wealth to back the Revolutionary War, leading to him receiving the nickname “Financier of the Revolution.”

ANSWER: Robert **Morris** Jr.

Team A: The Olive Branch Petition that attempted to avert the Revolutionary War was drafted by this other Pennsylvania native who was nicknamed “Penman of the Revolution.” This man also authored a collection of essays titled *Letters from a Farmer in Pennsylvania*.

ANSWER: John **Dickinson**

Tossup: This man was reprimanded by Britain for revealing the contents of the anti-colonial Hutchinson Letters. America’s first ambassador to Sweden was this man, whose son served as the final colonial governor of New Jersey. The pseudonym Silence Dogood (**“DO-good”**) was utilized for various writings by this man, who was America’s first Postmaster General. Prior to espousing his Albany Plan of Union, this man depicted a snake cut into eight sections in a political cartoon titled “Join, or Die.” He is better known for inventing a namesake stove and bifocal glasses. Name this polymath Founding Father who authored *Poor Richard’s Almanack*.

ANSWER: Benjamin **Franklin**

Alphabet Round – Letter E

1. Title character of a 1950 Joseph Mankiewicz film in which Bette Davis plays Broadway actress Margo Channing, who delivers the line “fasten your seatbelts...it’s going to be a bumpy night.”
2. In contrast to absorption lines, the spectral lines named for this process are detected when an atom transitions from a higher energy state to a lower energy state.
3. At the age of 15, Christopher Paolini wrote this first novel of the *Inheritance Cycle*.
4. Body of water that is the largest lake and lowest point in Australia.
5. **(MULTI-WORD ANSWER)** – 1685 decree that revoked the rights granted to Huguenots by the Edict of Nantes.
6. Francis Galton was the pioneer of this field of study, which uses genetic principles to improve the human population.
7. In computing, these are programs that simulate another computer program. For example DOSBox is one of these programs that lets a user runs the DOS operating system on their computer.
8. AD 431 Christian council at which Nestorianism was officially declared a heresy.
9. The title woman of this poem by Henry Wadsworth Longfellow searches for her lover Gabriel Lajuenesse.
10. Connecticut politician who served as the third Chief Justice of the Supreme Court.
11. This adjective describes some notes, such as F sharp and G flat, that are in the same pitch. On a keyboard, the same black key plays notes of this type.
12. In Greek myth, the Tiryn king who ordered Heracles to perform his twelve labors.
13. This term refers to a clot of blood, or some other lump of material, that gets lodged in an artery and causes a blockage in the bloodstream.
14. From the Greek for “mournful poem,” this poetic form expresses sorrow or sadness at a certain event. Thomas Gray wrote one set in a “country churchyard.”
15. Period of Japanese history that corresponded to the rule of the Tokugawa shogunate.
16. Rationalism is contrasted with this other philosophical theory of human learning, which holds that one must experience something before one can know about it. John Locke was a proponent of this belief.
17. This quantity is loosely defined as a measure of a system’s disorder. According to the second law of thermodynamics, it is constantly increasing.
18. Nickname for the group of artists, which included Maurice Prendergast and Robert Henri, that exhibited their works at New York’s Macbeth Galleries in 1908.
19. **(TWO WORD ANSWER)** – Lensky is killed by the title character in this poem by Alexander Pushkin.
20. What the “E” stood for in the military unit known as the AEF, which fought for the U.S. in World War I.

Alphabet Round – Letter E Answers

1. Eve Harrington [accept All About Eve]
2. emission [accept emission lines]
3. Eragon
4. Lake Eyre (“air”)
5. Edict of Fontainebleau [or Edit de Fontainebleau] (MULTI-WORD ANSWER)
6. eugenics (yoo-JEN-ikss)
7. emulators
8. First Council of Ephesus
9. Evangeline, *A Tale of Acadie*
10. Oliver Ellsworth
11. enharmonic [accept enharmonic notes]
12. embolism (EM-buh-lih-zum) [accept embolus]
13. Eurystheus (yur-ISS-thee-us)
14. elegy
15. Edo period [or Edo jidai]
16. empiricism or empirical or empiricist
17. entropy [do not accept “enthalpy”]
18. The Eight
19. Eugene Onegin (oh-NAY-ghin) (TWO WORD ANSWER)
20. Expeditionary [accept American Expeditionary Forces; do not accept “Expedition” or any other answers]

Lightning Round

1. Some have attributed the death of attorney Ronald Hughes to this group, which was based for over a year at the Spahn Movie Ranch. This group carried out the murders of Leno and Rosemary LaBianca, whose blood was subsequently used to write the words “Helter Skelter.” One member of this group, Lynette “Squeaky” Fromme, attempted to assassinate Gerald Ford. Give this criminal group that is best known for their 1969 murder of actress Sharon Tate on the orders of their namesake leader, Charles.

ANSWER: Manson family [accept Manson followers or other equivalent answers that mention Charles Milles Manson]

2. The original instrumentation of this work was used by Johann Nepomuk Hummel for a rearrangement of one of his septets. The first section of its *allegro giusto* finale ends in the subdominant of D major. This work in (*) A major features a fourth movement based on themes from “Die (**) Forelle (dee foh-REH-luh).” This piece was written for Sylvester Paumgartner and replaces one of the violins with a double bass. Name this 1819 composition by Franz Schubert in which five people musically depict a fish.

ANSWER: Trout Quintet [or D. 667 or Duetsch 667; accept Piano Quintet in A major before (*) and prompt thereafter; accept Forellenquintett before (**)]

3. One novel by this author follows Arnold Spirit, a man called “Junior” who is born with hydrocephalus. In another novel by this author, Robert Johnson, who sold his soul to the devil, reappears to modern Spokane Indians. *The Absolutely True Diary of a Part-Time Indian* and *Reservation Blues* are novels by what Native American author, who also wrote the short story collection *The Lone Ranger and Tonto Fistfight in Heaven*?

ANSWER: Sherman Joseph Alexie, Jr.

4. In this city, the death of Gavin Cato occurred after the motorcade of Menachem Mender Schneerson, the last rabbi of the Chabad-Lubavitch movement, inadvertently struck two children of Guyanese immigrants. The radio show *Keepin’ It Real* is broadcast by a reverend in this city named Al Sharpton. Name this city, where the Crowne Heights Riots flared racial tensions between Brooklyn Jews and African-Americans in Harlem.

ANSWER: New York City [or NYC]

5. Anthony Barnosky refuted this idea by suggesting that it is abiotic factors which determine survival in a statement named after the “court jester.” A statement about “all the running you can do to keep in the same place” led Leigh Van Valen to propose this statement, which suggests that organisms must evolve and adapt to merely survive. Name this evolutionary hypothesis which is named for a figure from Lewis Carroll’s *Through the Looking Glass*.

ANSWER: Red Queen hypothesis

6. In the work which introduces this concept, a fictional man named Cartwright Millingville presides over the Last National Bank, which becomes insolvent after there is a panic. In the book *Social Theory and Social Structure*, Robert Merton elaborates on this concept at length, in which a strongly held delusion becomes real in its consequences. Name this concept in which a prediction causes an event to come true.

ANSWER: self-fulfilling prophecy or self-fulfilling prophecies

7. One man with this surname led the siege that successfully destroyed the Basing House. The nickname “Tumbledown Dick” was given to one man with this surname, which was used by the organizer of Barebone’s Parliament. Another man with this surname was executed after arranging the failed marriage between Anne of Cleves and Henry VIII (the “8th”). The best known man with this surname led the cavalry of the New Model Army while fighting the Royalists in the English Civil War. Give this surname of the English Lord Protectors Richard and Oliver.

ANSWER: Cromwell [accept Oliver Cromwell or Richard Cromwell or Thomas Cromwell]

8. A poet born in this country is currently working on a poetry collection about everyone he has ever met called *Ten Thousand Lives*. In David Mitchell’s novel *Cloud Atlas*, an Orison of Sonmi-451 leads an insurrection against a futuristic version of this country. Like its only neighboring country, writers in this nation use the *hangul* (hahn-gool) script. Name this Asian country that produced the poet Ko Un, who previously lived in Seoul (“soul”).

ANSWER: South Korea [or Republic of Korea or ROK or Taehan-min’guk or Han’guk; prompt on “Korea”; do not accept or prompt on “North Korea” or “Democratic People’s Republic of Korea”]

9. Schilling names an efficient profile for these devices. These devices are used to counteract the p-factor shortly after takeoff. A combination of these devices and ailerons (AY-luh-ronz) are used to maintain sideslip. These control surfaces are turned using a tiller, which allows these things to change the yaw angle. Name these vertical objects at the back of an airplane or boat which are used for steering.

ANSWER: **rudders** [accept Schilling **rudders**]

10. This country contains the world's largest ice cave, named Eisriesenwelt ("ice"-REE-zen-velt). Starting in this 1850s, the defensive walls of this nation's capital city were removed and replaced with a circular road called Ringstrasse (RING-stross-uh). This nation borders the far eastern end of Lake Constance. On the north side of Brenner Pass is this nation's state of Tyrol (tih-ROLL), whose capital city hosted the 1964 and 1976 Winter Olympics. The city of Innsbruck is in what European nation whose capital is Vienna?

ANSWER: Republic of **Austria** [or Republik **Osterreich**]

11. One song by this composer is an elegy for jazz musician Lester Young, who wore the title piece of headgear. This composer of "Goodbye Pork Pie Hat" protested the suppression of the Little Rock Nine integration movement with a song called "Fables of Faubus." This composer of an album named after him and the syllables "ah" and "um" also depicted evolution using jazz in his song *Pithecanthropus Erectus*. Name this jazz musician who played the double bass ("base").

ANSWER: Charles **Mingus** Jr.

12. During one of these conflicts, the kidnapping and torture of a delegation led by Harry Parkes resulted in one side destroying the Old Summer Palace. Another of these conflicts saw one side blockade the Pearl River. The seizure of a ship named *Arrow* sparked one of these conflicts that was ended by the Treaty of Tientsin (tin-tsin). The first of these conflicts was ended by the 1842 Treaty of Nanking, which ceded Hong Kong to the victors. Name these two 19th century wars between Britain and China over the importing of a certain drug.

ANSWER: **Opium** Wars [prompt on "Anglo-Chinese Wars" or equivalents]

13. The style utilized by this author provided the inspiration for the early English comedy *Gammer Gurton's Needle*. This author opened one of his plays with Chremes withdrawing the marriage proposal of Glycerium to Pamphilus after the latter behaves lewdly at a funeral. A man named Menedemus is the title "self-tormentor" in another play by this author, who wrote about a courtesan named Thais in a play in which Chaeris (CHY-riss) disguises himself as the title character. Name this Roman playwright who authored *The Eunuch* and *Phormio*.

ANSWER: **Terence** [or Publius **Terentius** Afer]

14. One man with this surname asked whether African-Americans were "better off as slaves" or "under government subsidy"; that man was at the center of a dispute over a piece of land known as the Bunkerville Allotment. To protest the arson conviction of two ranchers, in January 2016 two men with this surname seized and briefly occupied the Malheur National Wildlife Refuge in Oregon. Those two men were the son of a rancher who had a 2014 standoff with the BLM over grazing rights in Nevada. Give this surname of anti-government protestors Ryan, Ammon, and Cliven.

ANSWER: **Bundy** [accept Cliven **Bundy** or Ammon **Bundy** or Ryan **Bundy**]

15. The namesake of the law concerning this process is often considered the "father of colloid chemistry." The rate of this process increases with the square root of temperature and is directly proportional to the average velocity of the molecules. The rate of this process is inversely proportional to the square root of a molecule's molar mass according to Graham's Law. Name this process in which gas molecules (*) diffuse through a barrier via a small hole.

ANSWER: **effusion** [accept word forms; prompt on "diffusion" or other word forms before (*)]

16. While running for president, this politician utilized the slogan "Hurray, hurray, the country's risin' – vote for [this man] and Frelinghuysen (FREH-ling-"high"-zihn)." This man first became a Senator by succeeding John Adair at the age of 29. In the election of 1844, James K. Polk defeated this man, who formulated the economic plan known as the American System. This man drafted the Compromise of 1850, which helped lead to him becoming known as the "Great Compromiser." Name this longtime 19th century politician from Kentucky.

ANSWER: Henry **Clay** Sr.

17. One legend states that after this god violated his own sister, he sailed east on a raft of serpents before being consumed by flames; at the end of that story, this god's heart rose into the sky and became Venus, the Morning Star. This deity was equivalent to the Mayan god Kukulcan (KOO-kull-can), and his chief rival was Tezcatlipoca (tayz-kaht-lee-POH-kah). Hernan Cortes was believed to be a reincarnation of this god when he conquered Mexico. Name this "feathered serpent" god worshiped by the Aztes.

ANSWER: Quetzalcoatl (KWET-zahl-COH-aht-ull)

18. This artist painted several portraits of his wife, including one "with Loosened Hair." He depicted the stacked remains of four individuals in the painting *Pyramid of Skulls*. In one of his paintings, a bottle of wine and plate of cookies sit next to the title fruit-holding container. This artist of *The Basket of Apples* is better known for several paintings in which over a dozen nude figures gather along the shore of a lake. A series of paintings that depict Mont-Sainte-Victoire (mawn sant-vik-TWAR) were created by what French Post-Impressionist artist of *The Bathers*?

ANSWER: Paul Cezanne (say-ZAHN)

19. The antagonist of this novel pins a photograph of a "plump" character next to that of a photograph of James Calver, who is a wanted bank robber known as "The Gringo." A little girl in this novel named Coral Fellows appears to die when a banana station is raided. In this novel, the Mestizo assists the Lieutenant in hunting down the protagonist, a "whiskey priest," in Mexico. The doxology of the Lord's Prayer provides the title to what 1940 novel by Graham Greene?

ANSWER: *The Power and the Glory*

20. One open source version of this kind of software is Nginx ("engine X"), while Microsoft puts out one called IIS ("I-I-S"). The "E" in the acronym MEAN ("mean") represents this kind of computer program, which is often not accessed when material is cached ("cached"). These programs work by processing an HTTP request and usually sending information back in HTML. Name these programs, such as Apache (uh-"PATCH"-ee), which deliver web pages to clients.

ANSWER: web server [prompt on "server"; do not accept or prompt on "web browser"]