2015 SCOP Middle School 5
Round 6

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Tossups

1. **The English Statute of Laborers set a maximum wage in response to deaths caused by this event. Jews were falsely accused of poisoning wells during this event, whose victims are supposedly described by the nursery rhyme** (*) "Ring Around the Rosie." This event was likely caused by merchant ships transporting flea-infested rats from Asia. For 10 points, name this pandemic that sickened and killed tens of millions of people in Europe in the 14th century.
Answer: bubonic **plague** or **Black Death**

2. **This author wrote "The Disintegration Machine" and *The Lost World*, which feature the rambunctious Professor Challenger. He created "the most indispensable man in the country," and "The Woman," who marries Godfrey Norton. Another of his characters seems to fall to his death off** (*) Reichenbach Falls with Professor Moriarty; that character lives at 221b Baker Street with John Watson. For 10 points, name the author of *A Study in Scarlet* and *The Hound of the Baskervilles*, who created Sherlock Holmes.
Answer: Sir Arthur Conan **Doyle**

3. **This author argued that Moses may have been the pharoah Akenhaten in the book *Moses and Monotheism*. He described behaviors as guided by Thanatos, the death drive, as a companion to sexual drive in his *Beyond the Pleasure Principle*.** (*) Carl Jung opposed this man's theory of the psyche, in which the superego controls one's instincts. For 10 points, name this Austrian psychoanalyst, the author of *The Ego and the Id* and *The Interpretation of Dreams*.
Answer: Sigmund **Freud** (accept Sigismund Schlomo **Freud**)

4. **Husain Abdullah, a player for this city's NFL team, was penalized for a celebratory prayer in August 2014. This city's police tweeted, begging everyone to "not commit crimes," during their baseball team's first playoff game since 1985, a 9 to 8** (*) Wild Card victory over the Oakland A's. For 10 points, name this city, whose Kaufmann and Arrowhead Stadiums are home to the Royals and Chiefs in western Missouri.
Answer: **Kansas City**

5. **This book describes a creature who "launch'd forth, filament, filament, filament out of itself," and a narrator who "look'd up in perfect silence at the stars." This collection contains "A Noiseless Patient Spider" and "When I Heard the Learn'd Astronomer" and this work honors (*)** Lincoln with the poems "When Lilacs Last in the Dooryard Bloomed" and "O Captain! My Captain!" "Song of Myself" appears in, for 10 points, what poetry collection by Walt Whitman?
Answer: **Leaves of Grass**

6. **This artist depicted a skyscraper at night in *Radiator Building*, but her later work focuses on natural images, including a series of jack-in-the-pulpits. After the death of her husband, Alfred (*)** Stieglitz, this artist moved to New Mexico, where she painted *Cow's Skull: Red, White, and Blue*. For 10 points, name this American artist known for depicting close-ups of flowers and bones.
Answer: Georgia (Totto) **O'Keeffe**

7. **The Davisson-Germer experiment scattered these entities, proving their wave-particle duality. The charge-to-mass ratio of these leptons were measured in a cathode ray tube by (*)** J.J. Thomson, and their charge was calculated in the oil drop experiment by Robert Millikan. For 10 points, name this subatomic particle with charge opposite that of a proton, found orbiting the nucleus of the atom.
Answer: **electron**s

8. **This man was born because his father disguised himself as Gorlois [gorl-wah], and was the son of Igraine. At the Battle of Camlann this man was wounded by his own son and taken to Avalon to recover. That son, Mordred, was the child of (*)** Morgan le Fay. This legendary man led knights like Sir Gawain and Sir Lancelot after pulling a sword from a stone, and was advised by Merlin. For 10 points, name this mythical king of Camelot.
Answer: King **Arthur** Pendragon

9. **One issue in this case was Dr. John Emerson's purchase of Harriet Robinson in the Wisconsin territory. This case was dismissed because the plaintiff did not have standing to sue; the opinion in this case then ruled that Congress could not ban (*)** slavery in territories and ruled the Missouri Compromise unconstitutional. For 10 points, name this controversial 1857 Supreme Court case that ruled people of African descent could not be U.S. citizens.
Answer: **Dred Scott** v. (John) Sanford (or Sandford)

10. **The complexometric type of this process is used for solutions of metal ions. PKa [P-K-A] equals pH halfway to the equivalence point on a namesake curve in the acid-base kind of this technique, which often uses indicators like (*)** phenolphthalein [fee-nol-THAY-leen] to find the endpoint. For 10 points, name this lab technique in which a solution of known concentration is added to a solution of unknown concentration using a buret [byur-ET].
Answer: **titration**

11. **A hunt in this work is reenacted by Maurice and Roger, who had skewered his quarry from behind, In this novel, Simon is killed while telling his companions about a dead parachutist, and (*)** Piggy is killed by a boulder that crushes the ceremonial conch. Jack and Ralph struggle for control in, for 10 points, what William Golding novel about a group of shipwrecked boys?
Answer: **Lord of the Flies**

12. **The Casparian strip acts as a screen within the cortex of this structure, and the strangler fig kills trees by growing the adventitious type. Mycorrhizae [my-kuh-RYE-zee] are symbiotic relationships between fungi and these plant organs, which can harbor (*)** nitrogen-fixing bacteria nodules. The carrot is a tap variety of, for 10 points, what commonly underground plant structures that absorb water and nutrients and support the plant in the ground?
Answer: **root**s

13. **In 1984, Bernard Goetz shot four black teenagers on this city's subway, claiming self-defense. In 1976 and 1977, six murders by the "Son of Sam" terrorized this city. The zero-tolerance for "broken windows" policy used by this city in the (*)** 1990s corresponds with a drop in the crime rate under mayor Rudolph Giuliani. For 10 points, name this city, whose failed 2013 law banning large soft drinks was supported by former mayor Michael Bloomberg.
Answer: **New York** City (or **NYC**)

14. **In a flashback in this novel, Igor Barkov is almost defeated for Myra Menke's hand in marriage. This novel's protagonist fondly remembers a lullaby that begins "If only, if only" as he unknowingly works to find Kate Barlow's buried treasure at (*)** Camp Green Lake. Madame Zeroni's curse on the Yelnats family is finally broken by Stanley in, for 10 points, what novel by Louis Sachar, set in a desert where lawbreaking children are forced to dig?
Answer: **Holes**

15. **The "Ballroom of Death" and the "Popcorn Field" are treacherous areas on the path through this mountain's Khumbu Icefall. The South Col is a pass from Lhotse to this mountain within the "death zone" over (*)** 8,000 meters. An April 2014 avalanche on this mountain killed sixteen Sherpa guides. For 10 points, name this peak in the Himalayas first summited by Tenzing Norgay and Sir Edmund Hillary, the tallest mountain in the world.
Answer: Mount **Everest**

16. **Zeus wanted to marry this figure's mother until a prophecy foretold that this man would become greater than his father. After his death, Ajax and Odysseus fought over his armor. Paris killed this friend of Patroclus with a carefully aimed arrow, even though his mother had protected him as a child by (*)** dipping him in the river Styx. For 10 points, name this Greek mythical hero whose only vulnerability was his heel.
Answer: **Achilles**

17. **These events can be caused by rear flank downdrafts reaching a mesocyclone within a supercell. As rain wraps around the mesocyclone, it creates a "hook echo" pattern on Doppler radar; that is one criterion for the National Weather Service to issue a (*)** "Warning" that one of these events is imminent. The Fujita scales measure the impact of, for 10 points, what funnel-shaped columns of air whose debris clouds can reach the ground?
Answer: **tornado** (prompt on twister or other colloquial names, but do not prompt on cyclone)

18. **This empire crumbled after the Battle of Nedao. These people, who originated east of the Volga in Scythia, also lost to Flavius Aetius at the 451 Battle of Chalons [sha-LONE]. One ruler of these people came to power after possibly murdering his brother (*)** Bleda; that leader was known as the "Scourge of God" for his cruelty. For 10 points, name these nomadic people who frequently battled the Romans and were led by Atilla.
Answer: **Huns** (or the **Hunnic** Empire)

19. **Just before the final pas de deux of *The Nutcracker*, the flowers perform this type of dance. One of Chopin's works in this genre was labeled "grand" and "brilliant," while another was dedicated to Countess Delfina Potocka and inspired by a dog (*)** chasing its tail. Johann Strauss was considered the "King" of, for 10 points, what triple-time style of music, exemplified by "On the Beautiful Blue Danube." and Chopin's "Minute?"
Answer: **waltz**

20. **For a set with *n* elements, one type of this quantity is equal to *n* times the reciprocal of the sum of the reciprocals of each number in the set. Another type of this quantity takes the *n*th root of the product of *n* numbers and is always less than the aforementioned harmonic type. A (*)** third type of this quantity is equal to the sum of *n* numbers divided by *n*. For 10 points, give this term, whose arithmetic type is often called an average.
Answer: **mean** (accept harmonic, geometric, or arithmetic mean; prompt on average before mentioned)

Bonuses

1. For 10 points each, answer the following about a mythical singer from Thrace.
[10] This man descended into the Greek underworld to retrieve his dead wife, Eurydice [yoo-rih-dih-see], but lost her when he looked behind him to see if she was following.
Answer: **Orpheus**
[10] After losing Eurydice a second time, Orpheus unsuccessfully begged this underworld ferryman to allow him to cross back over the river Styx to see his wife again.
Answer: **Charon**
[10] In order to board the ferry to the underworld, Charon had to be given one of these. These items were placed in the mouth of the dead to pay their fare
Answer: **coin**s (Accept **obolus**, **danake**, or **drachma**)

2. This woman met her teacher and lifelong friend after a meeting with Alexander Graham Bell when she was six years old. For ten points each:
[10] Name this deaf and blind girl who was taught language and speech by Anne Sullivan.
Answer: Helen Adams **Keller**
[10] In her autobiography *The Story of My Life*, Keller wrote that learning this word opened up language for her. Her learning of this word was the focus of a memorable scene in the movie *The Miracle Worker*.
Answer: **water**
[10] Keller became the first deaf and blind person to earn a Bachelor degree when she graduated from this college for women. This member of the Seven Sisters merged with Harvard in 1999.
Answer: **Radcliffe** College

3. This holy book is divided into 114 chapters called suras. For 10 points each,
[10] Name this holy book that was revealed to Muhammad by the angel Jibril [jee-breel]. It is the primary religious text of Islam.
Answer: **Quran**
[10] A Muslim who has become a hafiz must have done this with the text of the Quran.
Answer: **memorize**d it (accept obvious equivalents such as "**learned it** from **memory**")
[10] The Quran frequently mentions these invisible creatures made of "smokeless fire." One of these creatures, Iblis [ee-bliss], refused to bow to Adam and became Shaitan, the Islamic version of the Devil.
Answer: **jinn** (accept **genie**s)

4. Enjolras [on-johl-RAH] leads the Friends of the ABC in this novel. For 10 points each,
[10] Identify this novel, in which Jean Valjean [jahn val-JAHN] is pursued by Inspector Javert [zhah-VAYR]. Valjean raises Fantine's daughter Cosette after Fantine dies in this novel.
Answer: **Les Misérables**
[10] This French author wrote *Les Misérables* [lay mis-ay-RAHB]. He wrote about the bell-ringer Quasimodo and the gypsy Esmeralda in *The Hunchback of Notre Dame*.
Answer: Victor Marie **Hugo**
[10] In *Les Misérables*, this plucky young boy leaves the barricade to collect rifle cartridges and is shot by the French National Guard.
Answer: **Gavroche** Thénardier (prompt on Thenardier)

5. These events may occur when the object falls into shadow or simply when another object passes between the viewing area and the object. For 10 points each,
[10] Name this event, in which an astronomical body is obscured from view. On Earth, the lunar and solar types of these events create remarkable visual displays.
Answer: **eclipse** (accept **transit**)
[10] Any event where three or more astronomical bodies lie along a straight line, as during an eclipse or a transit, is referred to by this six letter word. The moon, Sun, and Earth experience these events roughly twice a month, causing spring tides on Earth.
Answer: **syzygy**
[10] Eclipses of the Sun or Moon can be seen on Earth, but not on every planet. Name both of the two planets in our Solar System which cannot view an eclipse.
Answer: **Mercury and Venus** (prompt on partial answer)

6. This kind of artwork includes the *Mona Lisa, Blue Boy*, and one "of Madame X." For 10 points each,
[10] Name this type of painting that depicts a likeness of a person. A "self" kind of these paintings is the artist's depiction of himself or herself.
Answer: self-**portrait**
[10] This man painted portraits of many American leaders including George Washington. His portrait of Washington appears on the American one-dollar bill.
Answer: Gilbert **Stuart**
[10] This man created many paintings featuring Napoleon, including *The Coronation of Napoleon, Napoleon Crossing the Alps,* and *Napoleon in His Study*. This man also painted an idealized *Death of Marat.*
Answer: Jacques-Louis **David** [zhak loo-EE dah-VEED]

7. For 10 points each, give the following about the aftermath of the 405 BCE Battle of Aegospotami [ay-gus-pah-tuh-mee].

[10] At Aegospotami, Lysander led a rout of the Athenian navy, thus essentially ending this war over control of the Greek mainland.

Answer: (Second) **Peloponnesian** War

[10] Lysander was an admiral from this militaristic Greek city-state, which was traditionally more of a power in ground combat. After the Peloponnesian War, this city-state installed the Thirty Tyrants in Athens.

Answer: **Sparta** (or **Lacedaemon**)

[10] In addition to Sparta's installing of the Thirty Tyrants, they insisted that Athens tear down a set of these defensive structures. Sparta itself lacked these structures, claiming that their army itself was protection enough.

Answer: city **wall**s (accept the **Long Wall**(s))

8. For 10 points each, give the following about Sergei Diaghilev's Ballets Russes ["ballet" ROOS].

[10] The Ballets Russes performed numerous works by this Russian composer, including *Pulcinella*, *Petrushka*, *Firebird*, and the controversial *Rite of Spring*.

Answer: Igor **Stravinsky**

[10] The Ballets Russes' production of Stravinsky's *Pulcinella* featured sets and costumes designed by this Spanish cubist artist of *Boy With a Pipe*.

Answer: Pablo (Ruiz y) **Picasso**

[10] One of the Ballets Russes' most prolific choreographers, Vaslav Nijinsky, was one of few men known for using this ballet technique. This technique requires special shoes, as all of the body's weight is supported on the tips of the dancer's toes.

Answer: (en) **pointe** (accept elaborations, such as **pointe** work)

9. For 10 points each, answer the following about the work of an American playwright.

[10] Willy Loman believes himself to be "worth more dead than alive" and commits suicide for insurance money at the end of this 1949 play.

Answer: **Death of a Salesman**

[10] This author of *All My Sons* wrote *Death of a Salesman*.

Answer: Arthur Asher **Miller**

[10] Arthur Miller's play *The Crucible* is based on accounts of this historical Massachusetts event, in which Abigail Williams accused Tituba and Sarah Good of performing supernatural acts.

Answer: **Salem Witch Trials**

10. Harry Truman visited this city nearly a dozen times as President, establishing a "Little White House." For 10 points each,

[10] Name this southernmost city of the continental United States. The 2,300-plus miles of U.S. Route 1 run from Fort Kent in Maine south through Miami to this city.

Answer: **Key West**

[10] Even though Key West is geographically closer to Havana, Cuba, than it is to Miami, it's still part of this U.S. state.

Answer: **Florida**

[10] On April 23, 1982, Key West protested Border Patrol actions relating to Cuban immigration by seceding from the United States, forming this "republic" inspired by a beach shell. This republic declared war, surrendered within a minute, then applied for one billion dollars of foreign aid.

Answer: **Conch** Republic

11. A 1950s government led by this party saw Minister of Housing Harold Macmillan lead a construction boom and Foreign Secretary Anthony Eden support a coup d'etat in Iran. For 10 points each,

[10] Name this British political party, which defeated the Labour Party of Clement Attlee in 1951 elections.

Answer: **Conservative** Party (prompt on Tories)

[10] This man became Prime Minister for a third time in 1951, having led the United Kingdom during much of World War II.

Answer: Sir Winston Leonard Spencer-**Churchill**

[10] During his third Prime Ministership, Churchill sent British troops to capture Dedan Kimathi and put down the Mau Mau Rebellion in this African country.

Answer: **Kenya**

12. These particles were first theorized by Murray Gell-Mann. For 10 points each,

[10] Name these elementary particles that come in six flavors - up, down, charm, strange, top, and bottom.

Answer: **quark**s

[10] This particle, discovered by James Chadwick in 1932, contains one up quark and two down quarks; thus, it has 0 charge. Some of them can be found along with protons in the nucleus.

Answer: **neutron**s

[10] This class of particles contain a quark-antiquark pair. An example of one is J/psi [jay-sigh], which contains one charm quark and one charm antiquark.

Answer: **meson**s

13. This play's title character discovers that he is the half-brother of Antigone [an-tih-goh-nee], Ismene [is-may-nay], and their two brothers. For 10 points each,
[10] Name this play, in which the title king solves the riddle of the sphinx and fulfills a prophecy by killing his father and marrying his mother.
Answer: **Oedipus** Rex (accept **Oedipus** the King)
[10] *Oedipus Rex* is by this Greek playwright of *Antigone,* who also wrote about Oedipus's death in *Oedipus at Colonus.*
Answer: **Sophocles**
[10] In *Oedipus at Colonus*, the elderly Oedipus promises Theseus that his death will bestow a blessing on this city-state, the home of Sophocles [sah-fah-cleez].
Answer: **Athens**

14. This man's Twitter description simply says "You know... the 'Eat It' Guy." For 10 points each,
[10] Name this polka musician, whose 2014 album *Mandatory Fun* features the songs "Handy" and "Word Crimes," which are parodies of Iggy Azalea and Robin Thicke songs.
Answer: Weird Al **Yankovic** (or **Weird Al**)
[10] Weird Al released eight music videos for *Mandatory Fun*, beginning with this parody of Pharell Williams' song "Happy." This music video features Jack Black wearing a glittery fanny pack backwards.
Answer: **Tacky**
[10] A 1992 Weird Al parody includes the lyrics "Now I'm mumblin'/ and I'm screamin'" and "It's hard to bargle nawdle zouss/with all these marbles in my mouth." You can give either the name of the Weird Al song title OR the title of the song it's parodying.
Answer: **Smells Like Nirvana** OR **Smells Like Teen Spirit** (accept either or both)

15. Two air tragedies struck the same Southeast Asian airline in 2014. For 10 points each,
[10] This airline lost its Flight 370 in March over the Indian Ocean and its Flight 17 to an attack over Ukraine in July.
Answer: **Malaysia** Airlines
[10] Both airplanes were 777 models manufactured by this American company, a rival to the European aircraft maker Airbus.
Answer: **Boeing** Company
[10] Early, false reports of the crash of Flight 17 indicated that over 100 of its passengers were en route to a conference studying this disease.
Answer: **AIDS** (or **Acquired Immunodeficiency Syndrome**)

16. Excitable cells are needed to transmit the nerve impulses of this event. For 10 points each,
[10] Name this all-or-nothing event that results from depolarization of the neuron membrane.
Pufferfish venom can turn people into "zombies" by inhibiting these events.
Answer: **action potential**
[10] The influx of the sodium ion causes an action potential; after which an outward flux of an
ion of this other alkali metal with atomic symbol K.
Answer: **potassium**
[10] An action potential triggers this type of movement in muscles. Relaxation follows this
movement.
Answer: **contraction**

17. This document is wary of European "ambition" and "rivalship," noting "It is our true policy
to steer clear of permanent alliances with any portion of the foreign world." For 10 points each,
[10] Name this letter, published in 1796, which opens by announcing that its author would not
seek a third term as President.
Answer: George **Washington's Farewell Address** (there is no official title to this work, so
accept any equivalent that describes "the **farewell letter** (or **speech**) written by George
Washington;" prompt on partial answers, such as "Washington's speech" or "Farewell Address"
alone; accept reasonable equivalents to "farewell" in all of the above directions)
[10] Washington's Farewell Address also warns against the danger of rival political parties.
During Washington's presidency, the Federalist Party had been founded by Alexander Hamilton
and this rival party had been founded by Thomas Jefferson.
Answer: **Democratic-Republican** Party (do not accept or prompt on partial answer)
[10] Washington's worries about party conflict came true in the Election of 1796, which
Jefferson lost to this Federalist, who became the second U.S. President.
Answer: **J**ohn **Adams** (prompt on Adams; do not accept John Quincy Adams)

18. For 10 points each, name these laboratory separation methods.
[10] The Büchner [BYOUK-ner] type of this piece of lab equipment is often used in vacuum
filtrations. Its simpler version is conical and eases the transfer of samples to containers with
small necks.
Answer: **funnel**
[10] This method of separation involves heating a solution of components with different boiling
points. This process does not work on azeotropic solutions.
Answer: **distillation**
[10] "Thin-layer" and "column" are versions of this separatory method which uses a mobile
phase flowing past a stationary phase to separate solution components.
Answer: **chromatography**

19. Identify the following people related to the writing of *Frankenstein,* for 10 points each.
[10] This author of *Frankenstein* reportedly formulated the novel's plot for a friendly competition with her husband and friends.
Answer: Mary Wollstonecraft Godwin **Shelley**
[10] This early feminist and author of *The Vindication of the Rights of Woman* was the mother of Mary Shelley.
Answer: Mary **Wollstonecraft**
[10] Mary Shelley's husband, Percy, wrote the poem "Ozymandias" about this Egyptian pharaoh, also known as "The Great."
Answer: **Ramses II** (accept **Ramses the Great**; prompt on "Ramses")

20. In the game 2048, tiles with the number 2 or 4 are randomly generated; when two tiles of the same number combine, they combine into a single tile with the sum of the original tile. For 10 points each,
[10] Every tile in the game will display one of these numbers. The smallest examples of these numbers -- and, therefore, the earliest numbers seen in the game -- are 2, 4, 8, 16, and 32.
Answer: (positive integer) **power**(s) **of 2** (do not accept or prompt "integers" or "even integers;" prompt on "power(s)")
[10] Because every power of 2 is divisible by 2, every power of 2 is congruent to zero with respect to 2 in this system of arithmetic which distinguishes numbers based on their remainder when divided by a given number.
Answer: **mod**ular arithmetic (accept word forms; accept "**integers mod**(ulo) **2**;" accept **Z sub 2** or **Z mod 2Z**)
[10] You will never see an odd tile in the game, because the set of even numbers has this property under addition -- meaning that the sum of 2 even numbers will always be even. Another term of this name refers to intervals that include their endpoints.
Answer: (operational) **closure** (accept word forms)