

2015 SCOP Middle School 5

Round 5

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Tossups

1. **This disorder results in discoloration of the iris known as Brushfield spots. Sleep apnea is common in this disorder due to an enlarged tongue. This disorder is more common in those born to mothers older than 35 years old, and it is caused by a trisomy, or the existence of (*) three chromosomal copies, of chromosome 21. A flattened nose and face, as well as slanted eyes, are observed in, for 10 points, which genetic disorder that causes severe mental disability?**

Answer: Down's syndrome (accept trisomy 21 before "chromosome")

2. **Raymond Cattell studied this concept with a test measuring 16 primary traits and the "five factors," including agreeableness and extraversion. This concept is measured by self-report inventories like the MMPI test and projective tests like the (*) Rorschach inkblot test. For 10 points, what psychological concept, sometimes divided into Type A and Type B, describes a person's patterns of thought and behavior that distinguish them as an individual?**

Answer: personality

3. **Laelaps was one of these animals who always caught her prey; she was given to Europa by a love-struck Zeus. After spying on Artemis bathing, Actaeon was eaten by these animals, which he used for hunting. Upon Odysseus' return to Ithaca, (*) Argos, an animal of this type, dropped his ears and wagged his tail when he saw his master. The guard of Hades, Cerberus, is a three-headed one of, for 10 points, what kind of domestic animal?**

Answer: dogs

4. **This designer of a planned community at Arthurdale resigned from the D.A.R. and arranged a concert at the Lincoln Memorial for Marian Anderson. This first chair of the UN Commission on Human Rights helped develop the Universal Declaration of Human Rights, which included the (*) "Four Freedoms" proposed by her husband. For 10 points, name this First Lady, the wife of Franklin D. Roosevelt.**

Answer: Eleanor Roosevelt (accept Eleanor alone after "Roosevelt" is read)

5. **The background of this painting shows a cash register in a darkened storefront under half-shaded apartment windows in an orange wall. A yellow door is set into a back wall in this painting, in which two silver canisters rest on a counter next to a woman in red. An ad for (*) five-cent Phillies hangs over a glass-fronted corner shop, where a man in white serves three customers.** For 10 points, name this painting of a late-night diner, created by Edward Hopper.

Answer: Nighthawks

6. **This nation's port cities include Valparaiso and Antofagasta, the latter of which was invaded for its nitrate and copper resources to begin the War of the Pacific. This country is home to Easter Island and the incredibly dry (*) Atacama Desert, which lies in a rain shadow west of the Andes Mountains. This country's border with Argentina runs for 3,300 miles, north to south.** For 10 points, name this South American country with capital at Santiago.

Answer: Chile

7. **PerkinElmer was criticized for its poor work building a part of this object, which will be replaced in 2018 by one named for James Webb. Spherical aberration caused by its flawed mirror required the crew of STS-61 to install a corrective (*) optics system in 1993, greatly refining its images.** The American astronomer who predicted the expansion of the universe is the namesake of, for 10 points, what telescope in low Earth orbit?

Answer: Hubble Space Telescope

8. **Balthasar delivers a sad message in this work, and Benvolio tries to broker peace between two factions. Before being killed by the "Prince of Cats," one character in this play describes Queen Mab, and (*) Tybalt's death causes his killer's exile from Verona. Friar Lawrence marries the title characters, whose joint suicide reconciles the Montague and Capulet families.** For 10 points, identify this Shakespearean tragedy about "a pair of star-cross'd lovers."

Answer: Romeo and Juliet

9. **The last words of one person to die exploring this location were "I am just going outside and may be some time." This region was the subject of the failed Nimrod and Endurance Expeditions, led by Sir Ernest (*) Shackleton, as well as the Terra Nova Expedition, which ended with the death of Robert Scott.** For 10 points, name this continent on which, in December 1911, Roald Amundsen's team first reached the South Pole.

Answer: Antarctica

10. **Two characters in this novel climb a ferris wheel during a game of capture the flag. In this work, Caleb commits his first selfish act by choosing to leave his parents and sister to join Erudite. That sister later shortens her name after joining (*) Dauntless.** Sixteen-year-olds in dystopian Chicago are sorted into one of five factions, with the exception of the title group in, for ten points, what novel by Veronica Roth, in which Tris Prior shows aptitude for three factions?

Answer: Divergent

11. **This type of interaction is responsible for the high crystallinity of nylon, and it explains why hydrofluoric acid has a higher boiling point than hydrochloric acid. These interactions occur between base pairs in DNA. Ice has lower (*) density than water due to the behavior of, for 10 points, what type of bonding, a strong dipole-dipole interaction named for element 1 on the Periodic Table?**

Answer: **hydrogen bonds** (prompt on “dipole-dipole interaction” before mention; prompt on “bonding” before mention)

12. **One character in this franchise hums *Cara Mia*, but is only heard to speak by Doug Rattman. Another character dies after attempting to make “Conversion Gel” out of lunar rocks, and is the founder of the Take-A-Wish Foundation, Cave Johnson. In these games, (*) GLaDOS taunts Chell with fictional cake as she completes a series of puzzle-platform challenges. For 10 points, name this video game franchise that features namesake orange and blue passageways.**

Answer: **Portal** (accept **Portal 2**)

13. **This novel’s title character witnesses a protest against Pastoral literature at Grisóstomo’s funeral after his books are burned by his niece, and he fights the Knight of the White Moon when he ventures into the country as a knight-errant on Rocinante. This novel’s title figure fights for the love of (*) Dulcinea with the help of his squire, Sancho Panza. For 10 points, identify this novel by Miguel de Cervantes, in which the title knight tilts at windmills.**

Answer: The Adventures of **Don Quixote** (accept The Ingenious Knight (or Gentleman, or Noble) **Don Quixote** of La Mancha; accept El ingenioso hidalgo **don Quijote** de la Mancha)

14. **In this war, a group of immigrant deserters formed Saint Patrick's Battalion and fought against the United States. This war resulted in a cession of land that was later adjusted by the Gadsden Purchase. Winfield Scott led an amphibious assault on (*) Veracruz during this war, which was ended by the Treaty of Guadalupe Hidalgo. For 10 points, name this 1846 to 1848 war against an army led by Santa Anna.**

Answer: **Mexican American** War

15. **This figure experienced the Seven Sorrows, which include misplacing a child in a temple and hearing the prophecy of Simeon. This religious figure was the daughter of Anne, and she caused Elizabeth’s son to leap for joy in her womb. This woman, called Theotokos [thay-oh-toh-kos] in Greek, was (*) conceived immaculately, and she received a prophecy from Gabriel before giving birth in a stable in Bethlehem. For 10 points, name this wife of Joseph, the mother of Jesus.**

Answer: (Blessed) Virgin **Mary** (accept Mother **Mary**; prompt on “Holy Mother” or “Holy Virgin;” prompt on “Our Lady of (Seven) Sorrows” or “Mother of Sorrows”)

16. **Two vectors with a cross product of zero have this relationship, which does not exist in elliptic geometry. Euclid's fifth postulate is named for this property. Two lines with this property are (*)** equidistant from each other and will have congruent corresponding angles if they are crossed by a transversal. For 10 points, give this term that describes two lines with the same slope, in the same plane, that never intersect.

Answer: parallel

17. **In the duet "Tutti i fior," this operatic title character wishes to "bring spring inside" upon the re-arrival of the *USS Abraham Lincoln*. Earlier in the opera, she sings the aria "Un bel di," waiting for "one beautiful day" when Lieutenant (*) Pinkerton will return, but when he returns with an American wife, she commits suicide. For 10 points, name this title character of a Giacomo Puccini opera, whose real name, Cio-Cio, [choh-choh], is Japanese for a certain fluttering insect.**

Answer: Madame Butterfly or Madama Butterfly (accept Cio-Cio San)

18. **This quantity is constant in incompressible fluids. The ratio between this quantity for a sample and for water is called the specific gravity. Pressure in a fluid is equal to g times height times this quantity according to Pascal's law, and (*) buoyant force is equal to displaced volume times g times this quantity according to Archimedes' principle. For 10 points, name this quantity, symbolized ρ [rho], which is the ratio of mass to volume.**

Answer: (mass) density

19. **This person was impersonated after death by Claude des Armoises [Claude day-sahr-mwah]. Pope Callixtus III ordered a trial which found this person innocent 25 years after death. This person accompanied Charles VII to Reims for his coronation. This person was captured at the (*) Siege of Compiègne [com-payn], held in trial in Rouen, and convicted of heresy and cross-dressing. For 10 points, name this woman who, after helping end the siege of Orleans, was burned at the stake.**

Answer: Saint Joan of Arc (accept Jeanne d'Arc)

20. **A character in this novel can only be killed by hemp, according to the Parsee Fedallah; that character throws his pipe overboard and nails a gold doubloon to the mast of his ship. An unused coffin once carried by (*) Queequeg serves as the narrator's lifeboat when the *Pequod* sinks in this novel, which begins "Call me Ishmael." For 10 points, name this Herman Melville novel about Captain Ahab's quest for the title white whale.**

Answer: Moby Dick; or, The Whale

Bonuses

1. Saul Bellow set many of his novels in this city. For 10 points each,

[10] Name this city. Bellow's novel *The Adventures of Augie March* begins "I am an American, [this city] born," and Edna Ferber's *So Big* is set in a Dutch suburb of this large Illinois city on Lake Michigan.

Answer: **Chicago**, Illinois

[10] This man wrote a poem named for Chicago that calls the city the "hog-butcher for the world." This author also wrote a poem in which fog comes in "on little cat feet."

Answer: Carl August **Sandburg**

[10] Sandburg's poem "Chicago" also calls the city the "Player with" these transit lines. Anna Karenina throws herself onto one of these passageways, and is run over at the end of her namesake novel.

Answer: **railway** (accept clear equivalents like **railroad**; prompt on "train")

2. The spike of this tool marks the center; then, widen the hinge to increase the radius, set the pen down to the paper, and rotate around completely to draw a perfect circle. For 10 points each,

[10] Name this mathematical tool, used with an unmarked straightedge in classical geometric construction, and with a protractor in modern geometry classes.

Answer: unmarked **compass**

[10] Compasses can be fixed so that circles of the same radius can be drawn in different places, but in classical compass and straightedge construction, the compass "collapses" upon being picked up. This ancient Greek mathematician showed how to get around that issue in the second Proposition of his work *Elements*.

Answer: **Euclid** of Alexandria

[10] Some things are just impossible to do with a compass and straightedge, like constructing a square and a circle that have equal values for this property.

Answer: **area**

3. Most of the poems contained in *Il Canzoniere* [kan-zoh-nee-ayr-ay] are written in this poetic form. For 10 points each,

[10] Identify this poetic form that consists of fourteen lines. The Elizabethan version of this poetic form consists of three quatrains and a couplet.

Answer: **sonnet**

[10] This Italian author of *Il Canzoniere* names a type of sonnet. Many of his poems are addressed to the beautiful Laura.

Answer: **Petrarch** (accept Francesco **Petrarca**; accept **Petrarchan Sonnet**)

[10] This author wrote the sonnet "life is more true than reason will deceive." He used unconventional grammar in poems like "anyone lived in a pretty how town" and wrote of the title "conscientious objector" in "i sing of Olaf glad and big."

Answer: E(dward) E(stlin) **Cummings**

4. Answer the following about death in Asian religions, for 10 points each.

[10] Unlike Abrahamic religions, which prohibit or discourage this in favor of burial, this is the typical means of disposing of a body in religions with Indian origins, like Hinduism and Buddhism.

Answer: **cremation** (accept clear equivalents like **burning**)

[10] In Hinduism and Sikhism, the ashes of the deceased are usually placed in this type of location. The Punjab region, where Sikhism originated, is named for five of these watery features.

Answer: **river**

[10] After a Japanese corpse is cremated, the family picks out bones using these utensils. They are used to eat in Japan and China, but are never left standing vertically in rice because of funerary connotations.

Answer: **chopsticks** (accept **hashi**; accept **kuaizi**)

5. After failing to accomplish this event with a bomb, Nedeljko Cabrinovic [neh-dyell-koh kah-bree-noh-vich] failed to commit suicide by swallowing weak cyanide and jumping into a five-inch deep river. For 10 points each,

[10] Name this June 28, 1914 event that was accomplished by Gavrilo Princip. It triggered anti-Serbian demonstrations in Austria-Hungary, the July Crisis, and, eventually, World War I.

Answer: **assassination** (or **murder** or equivalents) of Franz **Ferdinand** (prompt on partial answer)

[10] The assassination took place in this Austro-Hungarian city, now the capital of Bosnia and Herzegovina.

Answer: **Sarajevo**

[10] Princip was a member of this pro-Serbian terrorist group, which organized the attack of Franz Ferdinand's motorcade.

Answer: **Black Hand** (or **Unification or Death**; accept **Young Bosnia**)

6. The “shocked” variety of this mineral is found in impact craters. For 10 points each,

[10] Name this mineral with a value of 7 on the Mohs hardness scale. Composed of silicon dioxide, this mineral is the second most abundant on Earth, after feldspar.

Answer: **quartz**

[10] Quartz exhibits this property, in which applying mechanical stress to a crystal produces a voltage. Rochelle salts also exhibit this property.

Answer: **piezoelectricity**

[10] Two brothers of this surname discovered piezoelectricity. One of those brothers, Pierre, also discovered radioactivity with his wife, Marie.

Answer: **Curie**

7. A 2014 article in *Vulture* explains and defends "schlock:" overwrought, melodramatic music where "bad taste becomes great art." For 10 points each,

[10] The article heaps praise on this 1981 song by Journey, even as it laughs at lyrics like "streetlight people / Livin' just to find emotion." This song was used for the iconic ending of *The Sopranos'* final episode, and is ranked third on *Vulture*'s list of the best schlock songs.

Answer: **Don't Stop Believin'** (accept **Don't Stop Believing**)

[10] The top spot is held by Judy Garland's 1961 performance "Over The Rainbow," which she had originally performed as Dorothy in this 1939 film.

Answer: The **Wizard of Oz**

[10] The runner-up is 1984's "Purple Rain," by this Minneapolis-born rocker with his band, the Revolution. Later in his career, he changed his name a number of times.

Answer: **Prince** Rogers Nelson (accept The **Artist Formerly Known as Prince**; if someone draws a reasonable Prince symbol and shows that to you, accept it. The Prince symbol is printed below for your convenience.)



8. For 10 points each, give the following about labor practices in 19th century America.

[10] Many Europeans migrated to the Americas by becoming this type of laborer, in which they exchanged several years of labor for their passage and were guaranteed their freedom at the end of the contract.

Answer: **indentured servants** (accept word forms, like **indentured servitude**; prompt on servant)

[10] After the abolition of slavery, many former slaves worked as this type of farmer, being allowed to work a former plantation in return for a portion of the harvest.

Answer: **sharecroppers** (accept word forms, like **sharecropping**; accept **tenant farmers** and word forms, like **tenant farming**)

[10] The 1842 Massachusetts Supreme Court case *Commonwealth v. Hunt* ruled that these labor organizations were not subject to anti-conspiracy rules. One of these led by Samuel Gompers organized cigar makers and was part of the AFL.

Answer: labor **unions**

9. The inverse of this quantity is electrical conductance, and a Wheatstone bridge can be used to find unknown values of this quantity. For 10 points each,

[10] Name this quantity, measured in Ohms, that describes how much a circuit element will oppose the flow of current.

Answer: **resistance**

[10] In this circuit setup, the equivalent resistance is equal to the sum of the individual resistances, in contrast with the more complicated parallel circuit.

Answer: **series** circuit

[10] When discharging, this type of circuit will exponentially lose charge and current. It contains only resistors and capacitors, and the time constant equals resistance times capacitance.

Answer: **RC** circuit

10. In June 2014, this organization declared an expanded role and shortened its name to reflect a worldwide scope, though its territory remains limited to two war-torn nations. For 10 points each, [10] Name this militant Sunni group that has taken control of much of northwestern Iraq and eastern Syria.

Answer: **Islamic State** of Iraq and Syria (accept **IS** or **ISIS**; accept **Islamic State** of Iraq and (the) Levant or **ISIL**; accept **ad-Dawlah l-'Islāmiyyah**)

[10] In that June 2014 announcement, ISIS leader Abu Bakr al-Baghdadi declared that ISIS was this type of state, representing and ruling over all Muslims worldwide. ISIS' claim to this type of state was roundly criticized by the global community.

Answer: **caliphate**

[10] Some news outlets initially claimed that a December 2014 hostage crisis at a cafe in this Australian city was organized by ISIS.

Answer: **Sydney**, Australia

11. Fans of two chariot racing teams, the Blues and the Greens, rioted in support of two condemned murderers in this event. For 10 points each,

[10] Name this 532 CE riot, which burned nearly half of the capital of the Eastern Roman Empire.

Answer: **Nika** Riots (accept equivalents for "riots," such as "revolts")

[10] The Nika Riots burned nearly half of this capital city, formerly known as Byzantium and currently known as Istanbul.

Answer: **Constantinople** (do not accept "Byzantium")

[10] This emperor almost fled from Constantinople during the Nika Riots, but his wife Theodora convinced him to stay.

Answer: **Justinian I** (accept **Justinian the Great**; prompt on "Justinian")

12. For 10 points each, give the following about *The Carnival of the Animals*, a 14-movement suite for pianos and various other instruments.

[10] This Frenchman used his *Danse Macabre* as a theme in the "Fossils" movement of *The Carnival of the Animals*. This composer thought that *Carnival* was too frivolous and didn't allow it to be published during his lifetime.

Answer: Camille **Saint-Saens**

[10] Saint-Saens did allow public performances of *Carnival's* second-to-last movement, "The Swan," a solo for this large string instrument.

Answer: **cello**

[10] The movement "Tortoises" includes an unusually slow take on Offenbach's "Galop Infernal," famously known as the music for this high-energy dance performed by kicklines at the Moulin Rouge and by the Rockettes.

Answer: **can-can**

13. For 10 points each, name these materials used in art.

[10] Architect Philip Johnson built a transparent house of this material. Dale Chihuly creates sculptures out of the "blown" kind of this material.

Answer: **glass**

[10] Benvenuto Cellini [cheh-lee-nee] made a salt cellar covered in this metal, which Gustav Klimt used to produce a shimmery effect in paintings like *The Kiss* and *Danae*.

Answer: **gold** leaf

[10] Christo and Jeanne-Claude produced works like Central Park's *The Gates*, *Surrounded Islands*, and *Wrapped Reichstag* with this material.

Answer: **cloth** (accept clear equivalents like **fabric**; accept **plastic** sheeting)

14. Answer the following about the Romantic literary movement, for 10 points each.

[10] This Romantic author of "She Walks in Beauty" and *Childe Harold's Pilgrimage* also wrote the long poem *Don Juan* [don JOO-an].

Answer: George Gordon, Lord **Byron**

[10] This offshoot of Romanticism shares its name with an elaborate architectural style. Horace Walpole's *Castle of Otranto* and Ann Radcliffe's *Mysteries of Udolpho* are examples of this genre, which frequently includes elements of horror.

Answer: **gothic** fiction (accept **gothic** horror)

[10] Edgar Allan Poe drew on gothic themes to write this short story, whose narrator is driven mad by what he believes is the beating of a title organ belonging to his dead landlord.

Answer: The **Tell-Tale Heart**

15. The Bight of Benin is an indentation of this body of water, whose coast became known as the "Slave Coast" for its role in the slave trade. For 10 points each,

[10] Name this gulf, in which the island nation of Sao Tome and Principe lies, and on whose shores lie the cities of Accra, Ghana and Libreville, Gabon.

Answer: Gulf of **Guinea**

[10] Lagos is both the largest city on the Gulf of Guinea and the largest city in this country. This country's capital moved from Lagos in 1991.

Answer: **Nigeria**

[10] According to the theory of continental drift, the Gulf of Guinea now exists where this South American country once connected with Africa.

Answer: **Brazil**

16. By the third law of thermodynamics, a perfect crystal at 0 kelvin will lack this quantity. For 10 points each,

[10] Name this quantity, symbolized S or ΔS [delta-S], that measures the amount of disorder in a system.

Answer: change in **entropy**

[10] This law of thermodynamics states that entropy in an isolated system will always increase with time.

Answer: **second** law of thermodynamics

[10] This man's equation relates entropy to the logarithm of the number of microstates. His namesake constant is the ideal gas constant over Avogadro's number.

Answer: Ludwig **Boltzmann**

17. *Firs* [feers] is abandoned by Ranevskaya when she loses her property at the end of this play. For 10 points each,

[10] Name this Russian play, in which Lopakhin [loh-pah-keen] oversees the chopping down of the title fruit grove.

Answer: The **Cherry Orchard** (accept **Vishnevyi sad**)

[10] Name this Russian playwright of *The Cherry Orchard* and *Three Sisters*, who wrote about Treplev's death in *The Seagull*.

Answer: Anton Pavlovich **Chekhov**

[10] In *The Seagull*, Treplev kills himself with one of these weapons. A literary trope named for Chekhov states that if one of these weapons is seen on stage, it must eventually be fired.

Answer: Chekhov's **gun** (accept Chekhov's **rifle**)

18. This set of documents was discovered by Daniel Ellsberg, who blew the whistle on their contents by publishing them in the *New York Times* in 1971. For 10 points each,

[10] Name this collection of papers that detailed the history of U.S. military intervention in Southeast Asia. Their leaking showed that the government extensively lied to the public about their actions.

Answer: **Pentagon Papers**

[10] The Pentagon Papers detailed the history of this war. Lyndon Johnson sent American troops into this war after the Gulf of Tonkin incident, and it ended with the 1975 fall of Saigon.

Answer: **Vietnam** War

[10] This President hired a group of so-called "Plumbers" to harass Ellsberg after he leaked the Pentagon Papers. The group CREEP sought to get this President re-elected by breaking into Democratic headquarters at the Watergate hotel.

Answer: Richard Milhous **Nixon**

19. Answer the following about mythological storytellers, for 10 points each.

[10] In West African myth, the trickster Anansi, who bought all the stories of the world from Nyame, had the form of this creature. Arachne was turned into this animal when she wove a tapestry showing gods abusing mortals.

Answer: **spider** (prompt on “arachnid(s)”)

[10] These children of Zeus and Mnemosyne were responsible for literary inspiration and oral knowledge. These nine goddesses, representing various arts, included Clio and Calliope.

Answer: **Muses**

[10] This legendary Persian queen avoided her execution by telling her sister, Duniyazad, and husband, Shahryar, stories, such as those about Sinbad the Sailor and Ali Baba.

Answer: **Scheherazade**

20. During the 1950s, public swimming pools were often closed to prevent the spread of this disease. For 10 points each,

[10] Name this illness that mainly infects children, destroying motor neurons in the spinal cord which causes paralysis. Franklin D. Roosevelt notably survived this disease.

Answer: **poliomyelitis** (prompt on “infantile paralysis”)

[10] In 1955, this physician announced the development of the first successful polio vaccine, which he refused to patent.

Answer: Jonas **Salk**

[10] In cases where the disease paralyzed the diaphragm muscle, polio patients might spend the rest of their lives inside these large, sealed chambers that force air into the chest.

Answer: **iron lung** (accept **negative pressure ventilator**)