

2015 SCOP Middle School 5

Round 3

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Tossups

1. **In one myth, this figure fell in love with Leuce and turned her into a white poplar tree after her death. Pirithous tried to abduct this god's wife, and was consequently trapped in a rock for eternity. This god abducted his wife from (*) Demeter and forced her to stay with him after she ate pomegranate seeds. For 10 points, name this husband of Persephone, the Greek god of a namesake underworld.**

Answer: Hades (accept Pluto before "Greek" is read)

2. **This man used scotchpak to make his *Silver Clouds* exhibit, and made *Silver Car Crash* as part of his *Death and Disaster* series. This artist did much of his work at The Factory, where he painted a set of fifty images called the (*) *Marilyn Diptych* using silkscreen. He created thirty-two paintings with legends like "Chicken" and "Tomato." For 10 points, name this American Pop artist who painted *Campbell's Soup Cans***

Answer: Andrew "Andy" Warhol(a), Jr

3. **This country's Petsamo province was ceded to its eastern neighbor in 1922, but it recaptured much of Karelia during the Continuation War. This country's Sami people live in its province of Lapland, which was the site of late fighting against the Nazis. Fighters from this country used (*) "Molotov cocktails" against Soviet bombings during the Winter War. For 10 points, name this Scandinavian country with capital at Helsinki.**

Answer: Finland (accept Suomi)

4. **The people of this literary nation do not pray because they have everything they need, and they clothe their guests in hummingbird down feathers. This country's people use red sheep as pack animals, which they give to (*) Candide when he leaves this nation. This small, mountain-bound country was abandoned by the Incas, and its children play ring-toss with emeralds and rubies. For 10 points, name this mythical South American city of gold.**

Answer: El Dorado

5. Pius X [the tenth] justified this practice with the Gospel of John, in which Jesus breathes on his disciples and tells them to “forgive.” Since Vatican II [“two”], this ritual may be performed while facing a priest. The Act of (*) Contrition may be read during this practice, which often ends with an order to pray for forgiveness by reciting a number of Hail Marys. For 10 points, name this Catholic act of admitting one’s sins to a priest.

Answer: confession (accept Sacrament of Penance and Reconciliation; accept Sacrament of Reconciliation; prompt on “penance” alone)

6. This city is home to the Tsing Ma Bridge, and more than 100,000 people live on its Lantau Island. This city, south of Shenzhen on the Kowloon Peninsula, was ceded to Britain in the Treaty of Nanking. This large city on the Pearl River Delta lies east of (*) Macau, a "Special Administrative Region" like this city. For 10 points, name this city, which has existed as “one country with two systems” since it was transferred to Chinese ownership in 1997.

Answer: Hong Kong

7. Amounts of this substance are measured by the GOMOS instrument. This substance is created in the coronal discharge method, although ultraviolet generation methods are used for sanitation of swimming pools. The Montreal Protocol protects this substance by limiting production of (*) CFCs. This substance in the stratosphere absorbs most solar UV radiation. For ten points, name this triatomic oxygen molecule found in a protective atmospheric layer.

Answer: ozone (accept O3 before “triatomic” is read)

8. One office run by this department kept a secret, months-long waiting list and an "official" list that was shown to Washington, D.C.. Former Procter & Gamble CEO Bob McDonald became the Secretary of this department in 2014 after the (*) resignation of Eric Shinseki due to controversy over long delays for treatment. For 10 points, name this Cabinet department that provides benefits, primarily health care, to members of the U.S. armed forces.

Answer: U.S. Department of Veterans Affairs (accept VA)

9. The low density of this body is not explained by the Condensation Theory of its formation. This body’s small magnetic field may have been generated by collisions, such as the one that created its Sea of Showers impact basin. The Ranger 8 crashed into its (*) Sea of Tranquility. The gravity of this body is too weak to hold an atmosphere but large enough to cause ocean tides on Earth. For 10 points, name this only natural satellite of Earth.

Answer: Earth’s moon (accept Luna)

10. In the "Theory of Composition," this poem's author explains why this poem's "Prophet" seems like "a demon that is dreaming" but can only say one word. The speaker asks the title creature to return to “Night’s Plutonian shore,” but it stays on the “pallid bust of (*) Pallas” in his room. This poem's speaker laments the loss of “dear Lenore” while the title bird repeats “nevermore” in, for 10 points, what poem by Edgar Allan Poe?

Answer: The Raven

11. **The 1638 Portsmouth Compact established a settlement that would become part of this colony. Its founder published *The Bloody Tenet of Persecution* in 1644 and purchased land for this colony from the Narragansett Indians. Anne Hutchinson (*) fled religious persecution in Massachusetts to join this colony with the support of Roger Williams, its founder. For 10 points, name this colony in New England with capital Providence.**

Answer: Rhode Island (and Providence Plantations)

12. **The neurotransmitter GABA [GAB-uh] is a gamma-type of this class of organic molecules, which were the most complex products of the Miller-Urey experiment. The substitution of a polar one of these with valine in hemoglobin causes sickle-cell disease, and these molecules can be linked by disulfide bridges and (*) peptide bonds. These molecules are represented by codons and joined together during translation at the ribosome. For 10 points, name this group of 20 building blocks of proteins.**

Answer: amino acids (prompt on protein before “valine” is mentioned)

13. **This leader's sister, Arsinoe, was controversially killed on the steps of the Temple of Artemis. This leader's son, Caesarion, lived briefly as the last Pharaoh of Egypt one year after this leader ordered a decisive retreat from (*) Octavian's navy at the Battle of Actium with her lover, Marc Antony. For 10 points, name this Egyptian Pharaoh who, shortly after Marc Antony's suicide, legendarily killed herself by snakebite.**

Answer: Cleopatra VII Philopator

14. **This man introduced dot notation to indicate derivatives, which are used in a method named for him to recursively find roots of a function. He generalized the binomial theorem to all real exponents. Simultaneously with Gottfried (*) Leibniz [LIBE-nits], he invented calculus, whose principles are outlined in his *Principia Mathematica*. For 10 points, name this English mathematician, whose mathematical insights led him to develop his three laws of motion.**

Answer: Sir Isaac Newton

15. **This instrument's altissimo register is accessed by overblowing on the fifth harmonic, done by lifting the top left finger. Its lowest register is named for the chalumeau, an older version of this instrument. An unusual glissando on this instrument opens (*) Gershwin's *Rhapsody in Blue*. Benny Goodman played, for 10 points, what single reed woodwind whose B-flat version is held and played similarly to the double-reed oboe?**

Answer: clarinet

16. **In one work by this author, Mr. Guest recognizes two characters' similar handwriting and Danvers Carew is murdered. In another work, Squire Trelawney hires Captain Smollett to lead a crew that includes young (*) Jim Hawkins and the pirate Long John Silver in a journey to the title location. For 10 points, identify this author of *Dr. Jekyll and Mr. Hyde* and *Treasure Island*.**

Answer: Robert Louis (Balfour) Stevenson

17. In one video, a bad Arnold Schwarzenegger impersonator sings this song set to scenes from *Batman and Robin*. In one parody of this song, "It's in my head, it's in my dreams," is sung by a tormented father. John Travolta called this song's performer (*) "Adele Dazeem" at the 2014 Oscars, where it won Best Original Song. Idina Menzel sings that "the cold never bothered me anyway" in, for 10 points, what hit song from Disney's 2013 film *Frozen*?

Answer: Let It Go

18. A character in this novel says he is "going to America" before shooting himself, and Lebeziatnikov [leh-bets-yat-nih-koff] reveals the framing of Marmeladov's daughter. Svidrigailov [svih-drih-"guy"-loff] is shot at by Dounia in this work, which sees Porfiry Petrovich's mind games and Sonya's urgings provoke the protagonist to confesses to the murder of the (*) pawnbroker Alyona Ivanova and her sister Lizaveta. Raskolnikov appears in, for 10 points, what Fyodor Dostoyevsky novel?

Answer: Crime and Punishment (accept Prestuplenie i nakazanie)

19. The D1 and D2 Fraunhofer spectral lines form this element's namesake "doublet." This metal can be produced via the Castner process or a Downs cell, and its azide is used in the airbags of cars. This element glows bright (*) yellow in the flame test, and baking soda is this element's bicarbonate. For 10 points, name this element which makes up table salt with chloride, has atomic number 11, and has atomic symbol Na.

Answer: sodium (accept Na before mention)

20. Operation Neptune Spear was this event's codename, while the codeword "Geronimo" stood for its main objective. A chance for this event in Kandahar was declined due to civilian danger, according to remarks by Bill Clinton the day before the (*) 9-11 attacks. The *USS Carl Vinson* was used to bury the subject of this event at sea. For 10 points, name this 2011 action of Navy SEAL Team Six in Abbottabad, Pakistan against a former leader of al-Qaeda.

Answer: the killing (or equivalents) of Osama bin Laden

Bonuses

1. In 1845, a British flagstaff was controversially cut down in this modern country, sparking a year of war with the Maori. For 10 points each,

[10] Name this Oceanic nation consisting of a North Island, South Island, and many small islands roughly one thousand miles east of Australia.

Answer: **New Zealand**

[10] The Maori are often compared with this group of indigenous Australians in terms of how they were treated by Western colonists after their discovery in Oceania.

Answer: **Aboriginal** Australians (or **Aborigines**)

[10] The British colonists signed this treaty with the Maori in 1840, giving control of New Zealand to Britain. Wording differences between the English and Maori versions of the treaty have led many to believe it is invalid.

Answer: Treaty of **Waitangi**

2. Answer the following about rate equations, for 10 points each.

[10] When the forward and reverse rate equations are equal, a process is in this balanced state; the concentrations of the chemicals will tend to stay in this state, rather than change.

Answer: chemical **equilibrium**

[10] This measure of concentration, equal to the moles of solute divided the liters of solution, is used in rate laws.

Answer: **molarity** (do not accept “molality”)

[10] Rate laws can predict this quantity, the amount of time in which 50% of the reactant becomes product. In nuclear chemistry, it’s used to measure how quickly an isotope decays.

Answer: **half-life**

3. This quantity was designed in the aftermath of the Great Depression to measure the recovery of the United States' economic power. For 10 points each,

[10] Name this measurement of the total value of all goods and services produced within a country in a year.

Answer: **Gross Domestic Product** (do not accept gross national product or GNP)

[10] The expenditure method of calculating GDP includes the amount of private spending, commonly referred to by this term. This component of GDP includes the value of purchased goods and services, but not the value of new houses or business equipment, which are instead considered investment.

Answer: **consumption**

[10] GDP also includes the net amount of this trade activity, the shipping of goods to foreign countries.

Answer: net **exports** (accept word forms like **exportation**)

4. Identify some authors who favored musical themes, for 10 points each.

[10] This poet of the Harlem Renaissance described walking down Lenox Avenue and hearing a “drowsy syncopated tune” in the poem “Weary Blues.”

Answer: (James Mercer) Langston **Hughes**

[10] In novels like *The Wind-Up Bird Chronicle* and *1Q84* [one-Q-eighty-four], Haruki Murakami frequently refers to both classical music and this twentieth century musical style, which uses syncopated rhythms and virtuosic solos.

Answer: **jazz**

[10] This Russian author wrote about Pozdnyshev [POZ-nuh-shev], who kills his wife after she cheats on him with a violinist in *The Kreutzer Sonata* [KROY-tser sonata]. This man also wrote *War and Peace*.

Answer: Lev (or Leo) Nikolayevich **Tolstoy**

5. The revolutionary ten-page paper "On the Number of Primes Less Than a Given Magnitude" introduced an important conjecture in number theory that remains unproven today. For 10 points each,

[10] The paper was written by this German mathematician. He is also the namesake of a method of summation, used to approximate the area of a curved region, that inspired the first conception of an integral.

Answer: Bernhard **Riemann** (accept Riemann hypothesis, Riemann conjecture, Riemann sum, Riemann integral, etc.)

[10] The paper introduces the Riemann zeta function, whose inputs are numbers of the form $a+bi$ (“a plus b i”), where a is called the real part and b is called the imaginary part; therefore, the inputs are this type of number.

Answer: **complex** number(s)

[10] The imaginary unit i is defined as the square root of this number; i can’t be a real number, because there is no way to square any real number and return this value.

Answer: **-1**

6. This poem was originally titled for a "Defense of" a fort that was shelled during the War of 1812, and it was set to the tune of "To Anacreon in Heaven," a contemporary drinking song. For 10 points each,

[10] Name this song written by Francis Scott Key. It was declared the American national anthem by President Hoover in 1931.

Answer: The **Star-Spangled Banner**

[10] Key was inspired to write the lyrics for The Star-Spangled Banner after seeing the flag rise above this fort.

Answer: Fort **McHenry**

[10] Fort McHenry defends this Maryland city's harbor on the Chesapeake Bay.

Answer: **Baltimore**

7. In one work by this author, Lord Henry Wotton gives the protagonist a yellow book. For 10 points each,

[10] Name this author, who wrote of the artist Basil Hallward in *The Picture of Dorian Gray*.

Answer: Oscar Fingal O'Flahertie Wills **Wilde**

[10] Wilde also wrote this play, in which Algernon Moncrief proposes to Cecily, Jack Worthing proposes to Gwendolen, and Lady Bracknell's cucumber sandwiches are eaten.

Answer: The **Importance of Being Earnest**

[10] After having an affair with Lord Douglas, Wilde wrote *De Profundis* from this location, Henry David Thoreau wrote "Civil Disobedience" after being sent to this kind of place for not paying taxes.

Answer: **jail** (accept equivalents, such as **prison**)

8. For 10 points each, give the following about attempts to make children listen to classical music.

[10] The title boy of this Sergei Prokofiev work is warned by his grandfather to be careful in the meadow, lest he be eaten by the other title character, an animal represented orchestrally by French horns.

Answer: **Peter and the Wolf**

[10] In one movement of this 1940 Walt Disney film, Leopold Stokowski's Philadelphia Orchestra plays Paul Dukas' [doo-KAH's] *The Sorcerer's Apprentice* as Mickey Mouse fails to control his magic spells.

Answer: **Fantasia**

[10] This English composer's *The Young Person's Guide to the Orchestra* opens with a theme, then has each section of the orchestra play a variation on that theme.

Answer: Benjamin **Britten**

9. This species' genome has four pairs of chromosomes and the males have sex combs on their legs. For 10 points each,

[10] Name this model organism whose traits like white eyes and curly wings were extensively studied by a Columbia University professor.

Answer: **Drosophila** melanogaster or the common **fruit fly** (accept **vinegar fly**)

[10] This scientist's studies of *Drosophila* mutations inspired his concept of chromosomal crossing over.

Answer: Thomas Hunt **Morgan**

[10] Fruit flies, like humans, utilize these two chromosomes for determining the sex of individuals.

Answer: **X** and **Y** chromosomes

10. In one short story, Elizabeth Spencer writes that “August in [this state] is different than July...July heat is furious, but in August the heat has killed even itself and lies dead over us.” For 10 points each, [10] Name this U.S. state, the setting of Eudora Welty's "A Worn Path." The novels *Absalom, Absalom!* and *As I Lay Dying* are set in this state's fictional Yoknapatawpha [yawk-nah-pah-taw-fah] County.

Answer: Mississippi

[10] This Mississippi author wrote *Absalom, Absalom!* and *As I Lay Dying*, as well as *Light in August* and several works about Quentin Compson.

Answer: William Cuthbert Faulkner (or William Cuthbert Falkner)

[10] The Compson family also appears in Faulkner's *The Sound and the Fury*, in which Quentin, a student at this Massachusetts university, drowns himself in the Charles River.

Answer: Harvard University

11. The Stanley Cup isn't the only hardware the NHL gives out! For 10 points each,

[10] The Hart Memorial Trophy is the official name of this NHL award, given to Sidney Crosby in 2014 and eight consecutive times to Wayne Gretzky.

Answer: Most Valuable Player

[10] The Vezina Trophy is given to the best player of this position. The league's GM's vote to decide this award now, but until 1964, it was simply given to the primary player of this position for whichever team gave up the fewest goals.

Answer: goaltender (or goalie)

[10] This trophy is awarded to the NHL "regular season champion" -- that is, the team with the most standings points. The Boston Bruins won this in 2014 with 54 wins, 19 losses, and 9 shootout losses for 117 points.

Answer: Presidents' Trophy

12. Brutalism is an architectural style that uses massive concrete buildings to give an impression of strength and modernity but, to many, it's incredibly outdated and ugly. For 10 points each,

[10] This city saw a seven-year debate over demolishing a Brutalist-inspired church on K Street; its parishoners wanted to replace it with an updated building. Other Brutalist buildings here include FBI Headquarters.

Answer: Washington, D.C.

[10] The Prentice Women's Hospital at Northwestern University in Evanston, just north of this large Midwestern city, is also being torn down. This city's mayor, Rahm Emanuel, has supported its replacement with a new medical facility.

Answer: Chicago, Illinois

[10] This city's downtown Mummers Theater was scheduled for demolition in 2014 thanks to flooding. The site is roughly a mile from a memorial at the former Alfred P. Murrah Federal Building, site of a 1995 bombing.

Answer: Oklahoma City, Oklahoma (prompt on "OKC")

13. When subjected to tensile stress, gold and silver generally have this property, while lead does not. For 10 points each,

[10] Give this term for the ability of a metal to be stretched into a wire. It's often compared with malleability, the ability to be compressed into a flat sheet.

Answer: **ductility** (accept word forms like **ductile**)

[10] Tensile and compressive stresses, as well as twisting, bending, and changes in temperature, can cause the metal to strain and change its shape, a process known by this general term. Rigid bodies do not undergo this process.

Answer: **deformation** (accept word forms like **deform**)

[10] As stress increases, deformation goes through two stages: this stage, when the shape change can be reversed, and plastic, when the shape change is irreversible. This adjective often describes materials, like rubber, that return to their original shape when deformed.

Answer: **elastic** (accept word forms like **elasticity**)

14. [MODERATOR: Do not reveal the alternate answers to part 1 if they are not given by players]

This structure was likely built on or near its namesake Mount in Jerusalem. For 10 points each,

[10] Name this building, which was planned by a warlike King of Israel and built by his son. This building housed the Ark of the Covenant, which had formerly rested in the Tabernacle of Moses.

Answer: **First Temple** (accept **Solomon's Temple** or **Temple of Solomon**; prompt on "Temple in Jerusalem;" prompt on "Holy Temple;" prompt on "Temple" alone)

[10] The First Temple was built by this wise King of Israel, who consorted with the Queen of Sheba and discovered a child's real mother by threatening to cut the baby in half.

Answer: King **Solomon** (accept **Schlomo**; accept **Suleyman**; accept **Jedediah**)

[10] Solomon was Bathsheba's second son by this king, who defeated the giant Goliath as a young man.

Answer: King **David** (accept **Dawud**)

15. This power was the subject of the 2005 Supreme Court case *Kelo v. City of New London*, which resulted in ninety acres of homes being bulldozed; after the Great Recession, the land currently sits vacant. For 10 points each,

[10] This two word phrase refers to the power of local governments to seize private property for public use, such as the building of schools.

Answer: **eminent domain**

[10] The city of New London is about an hour's drive southeast of this state's capital city of Hartford.

Answer: **Connecticut**

[10] In 1965, the Supreme Court ruled in favor of Estelle Griswold, a Planned Parenthood director who argued that Connecticut's ban on this type of medicine was illegal. Foreshadowing *Roe v. Wade's* legalization of abortion, the Supreme Court argued that the ban on this type of health care violated the right to privacy.

Answer: **contraception** (accept **birth control** and any other equivalent that describes the *prevention* of pregnancy; prompt on "the pill;" do not accept "abortion")

16. El Greco painted a city from this country in his *View of Toledo*. For 10 points each,

[10] Name this European country, home to artists Salvador Dalí and Pablo Picasso.

Answer: Spain

[10] The Infanta Margarita poses in the center of *Las Meninas*, a painting by this Spanish court painter.

Answer: Diego (Rodríguez de Silva y) Velázquez

[10] This artist depicted Spanish citizens under attack from Napoleonic soldiers in his painting *The Third of May, 1808*. His “Black Paintings” include a depiction of *Saturn Devouring His Son*.

Answer: Francisco (José de) Goya (y Lucientes)

17. These wars began at the First Battle of St. Albans, and they are named for the flowery badges of the competing factions. For 10 points each,

[10] Name these wars between the House of Lancaster and House of York. They ended with the rise of the House of Tudor.

Answer: War(s) of the Roses

[10] At the First Battle of St. Albans, the Yorkists captured the Lancastrian king, the sixth of this regnal name. The House of Tudor provided the seventh and eighth kings of this name.

Answer: Henry (accept Henry VI, VII, and/or VIII)

[10] Richard III died at this 1485 battle when the relatively-neutral Stanley family, seeing Richard in single combat, rushed in to assist Henry Tudor, who was then crowned King Henry VII. This decisive battle essentially ended the War of the Roses.

Answer: Battle of Bosworth Field

18. This phenomenon travels through air at a speed of 343 meters per second at sea level. For 10 point each,

[10] Name this audible vibration whose loudness can be expressed on the decibel scale.

Answer: sound

[10] Unlike light, sound traveling through air is this type of wave, because the air molecules are displaced in the same direction the wave is moving.

Answer: longitudinal wave

[10] Dividing an object’s speed through air by the speed of sound yields this dimensionless number. The supersonic Concorde reached 2 and the Space Shuttle reached 25 for this number.

Answer: Mach number (accept M or Ma)

19. At the end of this play, the title character is lauded as “the noblest Roman of them all.” For 10 points each,

[10] Name this historical play by Shakespeare, in which the title Roman emperor is betrayed by senators led by Cassius and Brutus.

Answer: The Tragedy of Julius Caesar

[10] In the play, a soothsayer warns Caesar to “beware” this day, on which he is assassinated.

Answer: the Ides of March (accept clear equivalents, like March 15)

[10] In the play, this wife of Caesar also foresees his death and tries to stop him from going to the Senate.

Answer: Calpurnia

20. This god's heart became the morning star after he threw himself on a funeral pyre. For 10 points each, [10] Identify this Mesoamerican god, a feathered serpent who was the rival of Tezcatlipoca [tets-kaht-lee-poh-kah].

Answer: **Quetzalcoatl**

[10] Quetzalcoatl [keht-sahl-koh-ah-tul] was a god of these people, who may have confused the arrival of Hernan Cortes with the god's return.

Answer: **Aztec**

[10] The Aztecs performed this religious practice in tribute to Huitzilopochtli [hoo-eets-ee-loh-pahk-tee]. When this practice was performed for Tlaloc, it required the death of crying children.

Answer: **human sacrifice** (accept clear equivalents, such as **child sacrifice**; prompt on "sacrifice")