

2015 SCOP Middle School 5

Round 1

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Tossups

1. **The *Jeanie Johnston* had a perfect safety record while transporting refugees of this event, who often fled in coffin ships. "Souperism" was the practice of providing food and Protestant teaching to Catholic children who suffered in this event. It was ended in part by Robert (*) Peel's 1846 revoking of the Corn Laws, allowing cheaper food imports. For 10 points, name this mass starvation in 19th century Ireland, caused by a blight of a certain crop.**

Answer: (Great) **Irish Potato Famine** (accept any answer that describes **hunger** in **Ireland** related to bad **potatoes**, though "Irish" is not needed after "Ireland" is mentioned; prompt on partial answer)

2. **One poem by this author relates "The Death of the Hired Man," and another discusses "Fire and Ice" causing the end of the world. The speaker of one of this man's poems believes he "shall be telling this with a sigh / somewhere ages and ages hence" while he discusses what happend in a "yellow wood," (*) and another of his poems begins, "whose woods these are I think I know / his house is in the village, though." For 10 points, name this American poet of "Stopping By Woods on a Snowy Evening" and "The Road Not Taken."**

Answer: Robert Lee **Frost**

3. **This country lies southeast of Mayotte, a French département that is claimed by Comoros. While it itself was under French control, this country became known as the Malagasy Republic for two decades before its full independence. This fourth largest (*) island in the world is separated from the mainland by the Mozambique Channel. For 10 points, name this African island nation with capital Antananarivo, home to many lemurs.**

Answer: **Madagascar**

4. **An ideal gas of these particles cooled near absolute zero shows quantum effects on a large scale. The W and Z particles are subtypes of these particles that carry the weak force, and in 2013, the Large Hadron Collider tentatively (*) confirmed the existence of one of these particles that carries mass. For 10 points, name these elementary particles with integer spin, contrasted with fermions and exemplified by the mass-carrying "Higgs" type.**

Answer: **bosons**

5. A scout quit his job when Houston didn't pick this player #1 overall in 1992. In 2011, he homered off David Price for his 3,000th hit. A recording of Bob Sheppard's voice introduced this player's home at-bats, including a (*) walk-off single in his final home game. For 10 points, name this captain who wore number 2 as the starting shortstop for five World Series-winning New York Yankees teams before retiring in 2014.

Answer: Derek Jeter

6. In one work by this author, the fake doctor Callimaco tricks Nicia and sleeps with his wife, Lucrezia. This author of *The Mandrake* praised Roman republics, and another work compared fortune to a lady who must be beaten. He noted Cesare Borgia as a rare case of a successful (*) ruler who gained power through luck, rather than force, as it is "safer to be feared than loved." For 10 points, name this 16th century Italian author of *The Prince*.

Answer: Niccolo Machiavelli

7. Ireland's Giant's Causeway consists of hexagonal columns of this type of rock. It can be divided into felsic rocks, like rhyolite, and mafic rocks, like scoria, which may have gas bubbles trapped within it during its rapid formation. Other examples of this type of rock include (*) basalt and pumice, which form from the cooling of lava. For 10 points, name this classification of rocks, one of three main types with sedimentary and metamorphic.

Answer: igneous rocks (accept basalt before "felsic")

8. This man stabbed Henry Rathbone to begin his escape. Boarding house owner Mary Surratt was one of four people hanged for conspiring with this man, who was shot and killed in a burning barn. Samuel Mudd was arrested for treating this man's (*) leg, which was broken after he fell to the stage of Ford's Theater, shouting "Sic semper tyrannis!" For 10 points, name this actor and Confederate supporter who, on April 14th, 1865, shot and killed Abraham Lincoln.

Answer: John Wilkes Booth

9. Both ammonia and this element bond to platinum in the chemotherapy drug cisplatin. The insecticide DDT contains carbon, hydrogen, and this element. An acid of this element combines with nitric acid to give (*) aqua regia; that acid is also found in the stomach and is commonly used in titration. For 10 points, name this element, commonly used to clean swimming pools, whose atomic symbol is Cl.

Answer: chlorine

10. On the right side of this painting is a red barn, and on the left, a green railing can be seen on the porch of the Dibble House, which the artist encountered in Iowa. One of the two central figures in this work wears a colonial apron, and the other wears (*) overalls. The artist's sister and dentist modeled for, for 10 points, what Grant Wood painting, in which a sad-looking woman and a farmer holding a pitchfork stand in front of a house?

Answer: American Gothic

11. In one novel by this author, George Ponderevo helps his uncle sell the title fake drug, *Tono Bungay*. He wrote about Prendrick and human-animal hybrids in *The Island of Doctor Moreau*. In one novel, the protagonist loses an Eloi named Weena in a fire he sets to escape the (*) Morlocks, and in another, Martians invade Earth but are killed by common disease. For 10 points, name this author of *The Time Machine* and *The War of the Worlds*.

Answer: H(erbert) G(eorge) Wells

12. In Judaism, one of these creatures is a transformed man named Enoch, and another creature of this type stood in the way of Balaam's donkey. Two of these creatures visited Lot's home before the destruction of Sodom. These creatures are organized into (*) "hosts," which include seraphim and cherubim. For 10 points, name these holy beings, whose leaders include Michael and Gabriel, and who are often depicted wearing halos.

Answer: angels (accept archangels before "Balaam" is read)

13. In this leader's farewell address, he noted that, until World War II, "American makers of plowshares could [...] make swords as well." He used the Army to desegregate Central High School in Little Rock, and he was inspired by the Autobahn to develop the national (*) Interstate system. This Supreme Commander of the Allied Forces led the invasion of Normandy on D-Day. For 10 points, name this general who served as U.S. President following Harry Truman.

Answer: Dwight David Eisenhower

14. Due to this country's nearly \$2 billion debt, Gazprom shut off delivery of natural gas in June 2014. This country was led by Viktor Yanukovich until February 2014; one month later, its peninsula on the Black Sea, including its city of (*) Sevastopol, was annexed by its eastern neighbor. For 10 points, name this Eastern European country, now led by Petro Poroshenko from its capital of Kiev, which has recently struggled with pro-Russian separatists.

Answer: Ukraine

15. Alberich forges the title object of one opera by this composer. He's not John Philip Sousa, but he invented a new tuba and built a special theater in Bayreuth [bi-ROYT] for his music. He was inspired by Norse myth to write a set of four operas which ends with the burning of (*) Valhalla. For 10 points, name this German composer of *Tannhauser*, *Lohengrin*, and *Tristan und Isolde*, whose *Das Rheingold* begins his 16-hour long *Ring of the Nibelung* cycle of operas.

Answer: Richard Wagner (accept *Das Rheingold* or the Ring Cycle before "this composer")

16. This author wrote about an old woman who refused payment to a thieving doctor because she couldn't see her belongings. In other stories by this man, a mouse saves a lion from hunters and a farmer kills a goose that lays (*) golden eggs. Another of his tales teaches that "slow and steady wins the race." "The Tortoise and the Hare" and "The Boy who Cried Wolf" are by, for 10 points, this ancient Greek author of namesake fables.

Answer: Aesop

17. **These mathematical objects have inverses if and only if they are bijective. If one of these objects is “onto,” then its entire range is covered; if it is “one-to-one,” it can pass the horizontal line test in addition to the (*) vertical line test, which all of these objects can pass. For 10 points, give this mathematical term describing a relation for which each input has exactly one output, often written $f(x)$ [“f of x”].**

Answer: function (prompt on “map” or “mapping;” prompt on “graph”)

18. **Levels of this molecule in the liver are reduced by HMG CoA [koh-ay] reductase inhibitors, better known as statins. This molecule, which is transported through the circulatory system by lipoproteins, is a precursor of vitamin D and estrogen. A build-up of this waxy substance can cause (*) atherosclerosis, the hardening of arteries. For 10 points, name this modified steroid molecule whose LDL, or low-density, form is known as its “bad” type for its role in heart disease.**

Answer: cholesterol

19. **The exile Hippias advised the losing side in this battle, whose men panicked and ran into swamps. The winning general of this battle, Miltiades [mill-tye-ah-dees], organized troops to defend the only two paths off the beach, then ordered a devastating phalanx assault. After this loss for (*) Darius the Great, the Persian army retreated from Greece for 10 years. For 10 points, name this 490 BCE battle, after which Pheidippides [fay-ih-dip-ih-dees] legendarily ran 26 miles to Athens.**

Answer: Battle of Marathon

20. **This goddess turned the spilled blood of her lover into sea anemones after he was killed by a boar. This goddess, who was worshipped at Cythera, was offered to a misshapen god, but her infidelity was exposed by Helios. She was the lover of (*) Adonis, and was trapped by her husband when this mother of Eros had an affair with Ares. For 10 points, name this wife of Hephaestus, the Greek goddess of love and beauty.**

Answer: Aphrodite (accept Venus before “Cythera” is read)

Bonuses

1. This god was the father of Thor and the head of the Norse Pantheon. For 10 points each,
[10] Name this chief god of the Norse pantheon and wielder of Gungnir, who hung himself for nine days from Yggdrasil to gain knowledge.

Answer: **Odin** (accept **Wotann**)

[10] Odin's steed was this eight-legged horse, who was born after Loki turned himself into a mare to distract Svadilfari [svahd-eel-fah-ree] from constructing Asgard's walls.

Answer: **Sleipnir** [SLIPE-neer]

[10] Odin was also served by two of these dark birds, Huginn [HOO-gihn] and Muninn [MOO-nihn], who flew around the world and gathered information.

Answer: **ravens**

2. This composer commemorated the 300th anniversary of the Augsburg Confession by composing the *Reformation* Symphony, though he didn't publish it during his lifetime. For 10 points each,

[10] Name this German composer, whose other works include the *Italian* and *Scottish* symphonies.

Answer: Felix **Mendelssohn**-Bartholdy

[10] Mendelssohn was a prolific player of this keyboard instrument, which blows air through pipes to create sound.

Answer: pipe **organ**

[10] Mendelssohn may be best known today for a set of incidental music for this Shakespeare play, including a Wedding March, indicating that Theseus and Hippolyta, Lysander and Hermia, and Demetrius and Helena have all been married.

Answer: A **Midsummer Night's Dream**

3. The Islamic Courts Union once controlled much of the southern part of this country, but in 2006 it splintered into groups like al-Shabaab. For 10 points each,

[10] Name this country on the Horn of Africa. It has been considered a failed state for its inability to control a civil war in its territory or piracy in its waters.

Answer: **Somalia**

[10] Al-Shabaab was ousted from this capital of Somalia in 2011.

Answer: **Mogadishu**

[10] [10] Though Somalia has clashed with this neighbor country in the past, they have recently collaborated on joint attacks against al-Shabaab, who attacked the Westgate Mall in this country's capital city of Nairobi in 2013.

Answer: **Kenya**

4. In one work by this author, Tom Canty and Edward VI ["the sixth"] switch places, and both are accused of insanity. For 10 points each,

[10] Identify this author of *The Prince and the Pauper*. The title character of another of this man's novels proposes to Becky Thatcher and witnesses his own funeral.

Answer: Mark **Twain** (accept Samuel Langhorne **Clemens**)

[10] This Mark Twain character titles a novel in which he discovers hidden gold in a cave and proposes to Becky Thatcher by giving her a doorknob. He is the older brother of Sid, and is raised by Aunt Polly.

Answer: Thomas "**Tom**" **Sawyer** (accept either underlined name; accept The Adventures of **Tom Sawyer**)

[10] In this Twain short story, Simon Wheeler tells a story about the title animal, who is fed buckshot so it will lose a contest for Leonidas W. Smiley.

Answer: The Celebrated **Jumping Frog** of Calaveras County (accept **Jim Smiley and his Jumping Frog**)

5. When the Taniyama-Shimura conjecture about the modularity of semistable elliptical curves was proven true, it combined with Ken Ribet's proof of the epsilon conjecture to prove this theorem true. For 10 points each,

[10] Name this theorem, which was claimed without proof by a Frenchman in the margins of a textbook in 1637. The aforementioned 150-page proof was finished by Andrew Wiles in 1995.

Answer: **Fermat's Last** Theorem (prompt on "Fermat's Theorem;" do not accept Fermat's little theorem)

[10] Fermat's Last Theorem is concerned with an equation that traditionally uses the letters a, b, c, and n, where n serves this role.

Answer: the **exponent** (or **power**) of a, b, and c (accept answers describing "**to the n** power," such as "a to the n plus b to the n equals c to the n")

[10] This is the smallest exponent n for which Fermat's Last Theorem states there is no solution; that is, Fermat's Last Theorem says that the sum of two cubes cannot equal another cubic number.

Answer: **3**

6. An incredible stock market bubble, agricultural failures, a high amount of personal debt, and numerous other factors contributed to this decade-long economic catastrophe. For 10 points each,

[10] Give this two-word term for the massive recession of the world's economy in the 1930's.

Answer: **Great Depression**

[10] This U.S. President was in office during the stock market's crash in 1929 and the start of the Great Depression.

Answer: Herbert **Hoover**

[10] Hoover opened this governmental agency in 1932 to loan nearly two billion dollars per year to banks and businesses to re-start the nation's economy.

Answer: **R**eco**n**struction **F**inance **C**orporation

7. Famous examples of these include the giant panda's "thumb" and the beak shapes of Darwin's finches. For 10 points each,

[10] Give the term for these inherited traits that enhance the survival of an organism in its environment. Larger brains and walking upright were such traits in human ancestors.

Answer: **adaptation** (accept **adaptive** traits)

[10] The almost identical adaptations seen in the bodies of dolphins and extinct ichthyosaurs result from this type of evolution in which unrelated species evolve in similar environments.

Answer: **convergent** evolution

[10] Convergent evolution among birds produced the now extinct North Atlantic great auk and these living flightless birds of Antarctica. Both groups had the same black-and-white color pattern.

Answer: **penguins**

8. A Dinosaur Comics strip about "[this game] AS SHE IS PLAYED" notes that its object is to "fully explore the sensations of boredom, sorrow, and rage." For 10 points each,

[10] Name this classic Parker Brothers board game in which you seek to buy properties like Park Place and Boardwalk.

Answer: **Monopoly**

[10] A common house variation, but not an official Monopoly rule, is to award \$500, or some other amount, to anyone who lands on this corner space between New York and Kentucky Avenues.

Answer: **Free Parking**

[10] On television, the Simpsons own five versions of the game: "regular Monopoly, Star Wars Monopoly, Rasta-Monopoly, Galip-olopoly, and" one named for this character, Bart Simpson's 4th grade teacher. She was retired from the show when her voice actress, Marcia Wallace, passed away.

Answer: **Edna Krabappel**-Flanders (accept either underlined name; accept **Edna Krabappoly**; be lenient and accept **Krabappoly**)

9. This author was a fighter pilot in World War II, and included the bomb-crazy Head of the Air Force in a novel about a Big Friendly Giant. For 10 points each,

[10] Name this author of the novel *Matilda* and *James and the Giant Peach*.

Answer: Roald **Dahl**

[10] In this Roald Dahl novel, Augustus Gloop, Mike Teavee, and Violet Beauregarde are among the children who win a tour of the title, oompa-loompa-infested building.

Answer: **Charlie and the Chocolate Factory** (do not accept "Willie Wonka and the Chocolate Factory")

[10] This Dahl novel about a boy and his grandmother is named for people who "look very much like ordinary women," but who "[hate] children with a red-hot sizzling hatred that is more sizzling and red-hot than any hatred you could possibly imagine."

Answer: The **Witches**

10. The European Space Agency launched the Planck spacecraft to measure the CMBR and estimate this value. For 10 points each,

[10] Name this quantity, estimated to be a bit less than 14 billion years.

Answer: **age of the Universe** (accept clear knowledge equivalents)

[10] This event occurred 14 billion years ago and is currently the best model for how the Universe came into existence. It was followed by cosmic expansion.

Answer: the **Big Bang**

[10] This event, the creation of heavier-than-hydrogen elements like helium-4 and lithium-7, took place within minutes after the Big Bang. This term can also refer to the creation of elements within stars.

Answer: Big Bang (or primordial) **nucleosynthesis** (accept stellar **nucleosynthesis**; prompt on "nuclear fusion")

11. In some stories, this Hindu god was born from a golden egg, and became the father of humanity. For 10 points each,

[10] Name this creator god, who is a member of the Trimurti along with Shiva and Vishnu.

Answer: **Brahma** (do not accept "brahman")

[10] The Trimurti is often called the Hindu version of this Christian concept, which defines God as one being that is comprised of the Father, Son, and Holy Spirit.

Answer: holy **trinity**

[10] In some legends, Brahma was born from one of these Indian water flowers, which represent purity and are also symbolic to Buddhism.

Answer: sacred **lotus** (accept "Indian **lotus**")

12. This quantity is not a form of energy, but it is measured in the same units as energy, Newton-meters. For 10 points each,

[10] Name this rotational analog of force that causes movement around an axis of rotation, symbolized τ [tau].

Answer: **torque**

[10] Calculating the torque about the fulcrum of one of these systems can help you find its mechanical advantage. These systems come in three classes, which differ by how the fulcrum, load, and force are positioned.

Answer: **lever**

[10] The lever is one of six classical devices known by this name. Each of these devices, including the wedge and pulley, manipulate the direction or amount of an applied force.

Answer: **simple machine** (prompt on machine)

13. This novel's protagonist is expelled from Pencey Prep and repeatedly expresses his hate for "phonies." For 10 points each,

[10] Name this novel by the author of *Franny and Zooey*, whose title refers to Holden Caulfield's desire to protect his sister, Phoebe.

Answer: The **Catcher in the Rye**

[10] *Franny and Zooey* and *The Catcher in the Rye* are by this American author.

Answer: J(erome) D(avid) **Salinger**

[10] The title of *Catcher in the Rye* comes from the song "Comin' Thro' the Rye," a poem that is often sung to the same tune as this New Year's song that begins "should auld acquaintance be forgot."

Answer: **Auld Lang Syne**

14. Bridges are often important military objectives, as they can create chokepoints to slow an army's advance or retreat. For 10 points each,

[10] In 312 CE, Constantine I soundly defeated Maxentius at the Battle of the Milvian Bridge, which spans this major river of Rome. Maxentius drowned in this river's waters during the battle.

Answer: **Tiber** River

[10] Harold Godwinsin defeated Harald Hardrada at the Battle of Stamford Bridge just a month before dying to William the Conqueror's forces at this 1066 battle.

Answer: Battle of **Hastings**

[10] In 1297, this kingdom defended its freedom at Stirling Bridge by routing a surrounded English army. This kingdom's forces at Stirling Bridge were led by Andrew Moray and William Wallace.

Answer: Kingdom of **Scotland**

15. [MODERATOR: do not reveal the alternate answer to Part 1 if teams do not give it.]

This theory allows for the geometries of molecules to be determined from their Lewis structures. For 10 points each,

[10] Name this theory which assumes that electron domains in a molecule will arrange themselves so they experience the least repulsion.

Answer: **VSEPR** theory ["vesper" theory] (also accept valence-shell electron pair repulsion theory)

[10] These kinds of electrons, which come from their namesake "shell," appear in Lewis structures and affect molecular geometries. Oxygen has six of this kind of electron, while sodium has one.

Answer: **valence** electrons

[10] A water molecule has this geometry because it has two bonding and two nonbonding electron domains.

Answer: **bent**

16. For 10 points each, answer the following about a painter of landscapes.

[10] This French artist accidentally named the Impressionist movement with his landscape of a harbor named *Impression: Sunrise*.

Answer: Claude(-Oscar) **Monet**

[10] Monet's Impressionist paintings include several studies of the effect of light and seasons on these grain-based objects in farmers' fields.

Answer: **haystacks** (accept **wheatstacks**; accept **grainstacks**)

[10] Monet created a series of paintings depicting these floating flowers in the ponds near his home at Giverny [jee-vayr-NEE].

Answer: **waterlilies** (accept **Nymphéas**)

17. The cities of Saint Petersburg and Tallinn lie on the shores of this body of water, which is the southern border of its namesake country. For 10 points each,

[10] Name this European gulf on which Helsinki also lies.

Answer: Gulf of **Finland**

[10] Another city on the Gulf of Finland is Narva, which lies roughly equidistant between Tallinn and St. Petersburg on the border between these two nations.

Answer: **Estonia** and **Russia** (both underlined parts required)

[10] The Gulfs of Finland and Bothnia are arms of this sea, which lies west of Estonia, Latvia, and Lithuania.

Answer: **Baltic** Sea

18. For 10 points each, give the following about the work of Emile Durkheim.

[10] Durkheim sought to create a purely scientific approach to this social science, the study of human behavior in group settings.

Answer: **sociology**

[10] Durkheim's most famous sociological study dealt with this phenomenon, the intentional ending of one's own life. Durkheim's study showed that, among other comparisons, soldiers performed it more often than civilians.

Answer: **suicide**

[10] In *Suicide*, Durkheim sought to explain his finding that members of this religion were less likely to commit suicide than members of Protestant religions.

Answer: (Roman) **Catholicism** (accept word forms)

19. For 10 points each, give the following about early American agriculture.

[10] The Jamestown colony was heavily supported by the export of this crop, which was grown by John Rolfe and introduced to Europe by Sir Walter Raleigh.

Answer: **tobacco**

[10] Tobacco rivaled a certain textile crop as the primary export of the South until 1793, when this machine simplified production of a certain textile crop by quickly separating the seeds from the fiber.

Answer: **cotton gin** (prompt on "gin")

[10] This businessman invented the cotton gin in 1793.

Answer: Eli **Whitney**

20. This technique was used to decorate the *Book of Hours*. For 10 points each,

[10] Name this technique, in which the images, borders, or letters of a book are decorated with bright paint or gold and silver leaf. It creates namesake “manuscripts” and can also mean “to light up.”

Answer: **illumination** (accept word forms such as **illuminate**; accept **illuminated manuscripts**)

[10] Medieval monks frequently illuminated this holy book of Christianity, which is composed of Old and New Testaments.

Answer: Holy **Bible**

[10] Illuminated Bibles largely stopped being produced with the invention of moveable type, which was first used by this German printer.

Answer: Johannes (Gensfleisch zur Laden zum) **Gutenberg**