

2015 SCOP 6 Middle School Edition

Round 4

Waleed Ali • Alston Boyd • Brad Fischer • Clare Keenan • Alec Krueger • Mike Laudermith
Elissa Pape • Anna Phillips • Allison Salach • Andrew Salij • Kristin A. Strey • Tyler Vaughan
Morgan Venkus • Mike Withey • Michael H. Wong

Tossups

1. **Frank Gehry designed a building of this type in Bilbao, Spain, and Frank Lloyd Wright designed an “inverted ziggurat” one of these buildings named for Guggenheim; that building contains a spiralling white walkway around which exhibits are placed. The (*) MoMa is one of these buildings, and contains Calder’s *Lobster Trap and Fish Tail*.** For 10 points, name these buildings designed to hold the creations of artists.

Answer: art museums (accept museums of art; prompt on “Guggenheim” until it is read)

2. **A mythical creature of this type performed a series of tasks for the sky god, Nyame, by capturing the Mmoboro wasp and receiving all of the world’s stories in return. A woman in Greek mythology who lost a weaving contest to Athena was turned into one of these creatures and was named (*) Arachne.** The west African trickster god Anansi was, for 10 points, what kind of eight-legged animal known for spinning webs?

Answer: spiders (accept arachnids)

3. **One side in this war enjoyed victory when the Black Prince ambushed charging cavalry at Poitiers and again when Charles d'Albret was killed at Agincourt. The other side of this war fought the Battle of Orléans under the leadership of (*) Joan of Arc.** For 10 points, name this war fought by England and France from 1337 to 1453, slightly over a century.

Answer: Hundred Years’ War

4. **This author’s only work is set in the *achterhuis* [OK-tayr-hwees], and is mostly addressed to Kitty. This author wrote about her roommate, Albert Dussel, and her sister, Margot. She described her young romance with Peter van Pels and the calisthenics routines she performed in a (*) secret annex in Amsterdam during World War II.** For 10 points, name young girl who wrote a diary while hiding from the Nazis.

Answer: Annelies Marie “Anne” Frank

5. **A character in this book is turned into a pillar of salt when she looks back to see the destruction of Sodom. Characters in this book predict the deaths of a baker and a cupbearer, see a (*) rainbow that promises an end to worldwide flooding, and get cast out of the Garden of Eden. Joseph, Noah, and Adam appear in, for 10 points, what biblical book, in which “God created the heavens and the earth?”**

Answer: Book of Genesis (accept Bereishit)

6. **In this state, the Imperial Canal became blocked, forcing the creation of the Salton Sea. The General Sherman stands 275 feet tall over this state, which includes the western shores of Lake (*) Tahoe and west slopes of the Sierra Nevada. Sequoia National Park is in, for 10 points, what state, where animal bones are preserved in the La Brea tar pits in downtown Los Angeles?**

Answer: California

7. **Volcanic activity in this country's central Itasy and Ankaratra regions has turned the soil red. An endangered primate nicknamed the bandro is threatened in this country by deforestation of reed beds in Lake Alaotra. This nation's Betsiboka River flows westward toward the (*) Mozambique Channel.** The lemur is endemic to, for 10 points, what island in the Indian Ocean, an African country with capital Antananarivo?

Answer: Madagascar

8. **In 2015, Lisa Murkowski's failed proposal regarding this mountain was blocked by Ohio senators; the Secretary of the Interior enacted that proposal just before President Obama discussed climate concerns in a visit to the (*) Arctic.** For nearly 100 years, this mountain commemorated the 25th U.S. president, until it was officially renamed in 2015. For 10 points, name this tallest mountain in North America, formerly known as Mount McKinley.

Answer: Denali (accept Mount McKinley before it is read)

9. **These objects can be "seeded" with silver iodide , and these objects may show "anvil-heads" and "mares' tails." Fog is a ground-level example of the (*) stratus type of these objects, whose cumulonimbus variety is a source of snow and rain.** For 10 points, name these atmospheric masses of condensed water vapor that often have a white, fluffy appearance.

Answer: clouds

10. **This character is "impatient to mount and ride" while he waits for his friend to climb "by wooden stairs with stealthy tread to the belfry." Later in his namesake poem, this character crosses in a "hurry of hoofs" to Medford Town before visiting (*) Lexington and Concord.** For 10 points, name this man, the subject of a Longfellow poem that begins "Listen my children, and you shall hear / of the midnight ride of" this man.

Answer: Paul Revere (accept Paul Revere's Ride)

11. **This man claimed that "John Brown is no Republican" during a speech at Cooper Union, and he spoke out against the Kansas-Nebraska Act while in Peoria. This man had a series of debates with the creator of that act, (*) Stephen Douglas, and claimed that "a house divided against itself cannot stand."** For 10 points, name this president who gave the Gettysburg Address.

Answer: Abraham Lincoln

12. **Nitrogen-14 and nitrogen-15 isotopes were used in an experiment on this molecule by Meselson and Stahl, which supported the semi-conservative model of its replication. Rosalind Franklin helped disprove a triple-stranded model of this molecule's structure in favor of (*) Watson and Crick's double helix.** For 10 points, name this nucleic acid which carries the genetic instructions for life.

Answer: deoxyribonucleic acid (or DNA)

13. **The Holy League stopped this empire's spread into the Mediterranean at Lepanto. Leaders of this empire were protected by janissaries before that group was dissolved by Mahmud II. This "Sick Man of Europe" was targeted in the World War I (*) Gallipoli campaign near the Dardanelles, then dissolved after the war.** Suleiman the Magnificent one led, for 10 points, what empire that ruled in modern-day Turkey?

Answer: Ottoman Empire (do not accept Turkey)

14. **Rho, phi, and z define points in a coordinate system named after these shapes. Their surface area is found by summing their lateral area, which is a rectangle, with their two circular bases. These shapes' volume formula is (*) pi times their height times the square of the radius. For 10 points, name these three dimensional shapes commonly exemplified by cans.**

Answer: cylinders

15. **This composer wrote sets of violin concertos entitled *L'estro Armonico* and *La stravaganza*. He described “Languor caused by the heat” and “The barking dog” in a set of pieces written as part of *The Contest Between Harmony and Invention* that begins with (*) “La primavera,” or “Spring.” For 10 points, name this Italian composer, nicknamed the “Red Priest,” famous for *The Four Seasons*.**

Answer: Antonio Lucio Vivaldi

16. **This man wrote that “each man kills the thing he loves,” while imprisoned in Reading Gaol [“redding jail”] for homosexuality. In one of this man’s plays, Algernon Moncrieff and Jack Worthing each pretend to have a certain name. *Lady Windermere’s Fan* is by this playwright of *The (*) Importance of Being Earnest*. For 10 points, name this Irish author of *The Picture of Dorian Gray*.**

Answer: Oscar (Fingal O'Flahertie Wills) Wilde

17. **While in the hospital, this character hides a flash drive behind a stick of gum in a vending machine. This man was apparently killed outside a courthouse in the aftermath of a civil war over the (*) Super Hero Registration Act. This former SHIELD member often faces off against the Red Skull with his sidekick, Bucky Barnes. For 10 points, name this patriotic avenger who fights with a star-spangled shield.**

Answer: Captain America (accept either underlined portion of Steven Rogers; prompt on “The Captain” or “Cap”)

18. **This character helps his brother-in-law, Benjamin, save seven children from Tommy Brock, and his blue jacket is laundered by Mrs Tiggy-winkle. In a story named for his cousin, this character retrieves his jacket and shoes from Mr (*) McGregor’s garden, where he had gone instead of picking blackberries with his sisters, Flopsy, Mopsy, and Cottontail. For 10 points, name this mischievous bunny created by Beatrix Potter.**

Answer: Peter Rabbit

19. **A bomb calorimeter measures the result of this process, which is highly exothermic. The spontaneous type of this event does not require an (*) ignition source, while hydrocarbons undergoing this process form water and carbon dioxide as products. Oxygen is needed to produce, for 10 points, what process that may result in a fire?**

Answer: combustion (accept burning)

20. **A five-month-long journey to this city started in San Francisco and brought attention to the historical treatment of Native Americans. Jacob Coxey led an unemployed “Army” to this city after the Panic of 1893. In 1963, (*) Martin Luther King led another march to this city named for Jobs and Freedom, at the end of which he gave his “I have a Dream” speech. For 10 points, name this capital of the United States.**

Answer: Washington, DC

Bonuses

1. Although President, this man let Valentin Gomez Farias focus on the governing of his nation. For 10 points each, [10] Name this one-legged general who ordered the Goliad Massacre and defeated Texan forces under William Travis at the Alamo.

Answer: Antonio Lopez de **Santa Anna**

[10] Santa Anna led this nation in a war against its northern neighbor, the United States. Under Stephen Austin, Texas seceded from this Spanish-speaking nation.

Answer: **Mexico**

[10] With the support of Napoleon III, this Austrian nobleman ruled Mexico as its Emperor for three years.

Answer: **Maximilian I** (prompt on “Maximilian”)

2. This band was originally called Sweet Children, and they performed their song “Basket Case” at their 2015 induction into the Rock and Roll Hall of Fame. For 10 points each,

[10] Name this pop punk band that, in 2012, released three albums titled *¡Uno!*, *¡Dos!*, and *¡Tré!*. Their album *21st Century Breakdown* was released five years after their album *American Idiot*.

Answer: **Green Day**

[10] This lead vocalist and guitarist of Green Day founded the band with Mike Dirnt in 1986.

Answer: Billie Joe **Armstrong**

[10] Billie Joe Armstrong wrote this song about the death of his father. In it, Armstrong notes that “Summer has come and passed / the innocent can never last.”

Answer: **Wake Me Up When September Ends**

3. In Lewis Carroll's novel *Through the Looking Glass*, this girl learns the words "brillig" and "slithy" from a poem recited by Humpty Dumpty. For 10 points each,

[10] Name this little girl, who has many strange *Adventures in Wonderland*.

Answer: **Alice** Liddell

[10] This *Wonderland* character's insanity may have been caused by the mercury used in his profession. He recites the poem "Twinkle, Twinkle, Little Bat" to Alice, the March Hare, and a Dormouse.

Answer: the Mad **Hatter**

[10] In *Through the Looking Glass*, Tweedledee and Tweedledum recite a poem called “The Walrus and the Carpenter” to Alice. The two title characters talk of "cabbages and kings" before befriending a group of these mollusks and then eating them.

Answer: **oysters**

4. This empire developed out of the Eastern Roman Empire. For 10 points each,

[10] Name this empire that, despite employing generals like Belisarius, was conquered by the Ottoman Empire. After the fall of this empire, its capital was renamed Istanbul.

Answer: **Byzantine** Empire

[10] This Byzantine Emperor tasked Belisarius with reconquering the Mediterranean, and this husband of Theodora was targeted in the Nika Riots.

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

[10] Justinian names one of these epidemics which killed over fifty million people. However, his event pales in comparison to a “bubonic” one of these.

Answer: **plagues** (prompt on answers like “illness”)

5. Some chemicals are used as weapons. For 10 points each,

[10] Soldiers were burned in World War I when this gas, containing impure sulfur, was dropped from planes. Its yellow-brown color gave this substance its name.

Answer: **mustard** gas (accept sulfur **mustards**)

[10] The first poison gas deployed in World War I consisted of this gaseous element. In small quantities, this element can be used to disinfect water supplies.

Answer: **chlorine** (accept **Cl** or **Cl₂**)

[10] Sarin, an organophosphorus nerve agent that causes a rapid loss in muscle function, was infamously used in a 1995 subway attack in what Asian city?

Answer: **Tokyo**

6. This organelle exists in rough and smooth variations. For 10 points each,

[10] Name this organelle, whose rough form is studded with ribosomes and which transports proteins to the Golgi body.

Answer: **Endoplasmic Reticulum**

[10] The ER forms enzymes used in this other organelle, whose interior is highly acidic so that those enzymes can break down biomolecules.

Answer: **lysosome**

[10] These cells, also called erythrocytes, lack the ER and lysosomes. They deliver oxygen throughout the body, as opposed to white blood cells, which fight infection.

Answer: **red** blood cells

7. West Egg, East Egg, and the Valley of Ashes are locations in this highly symbolic novel. For 10 points each,

[10] Identify this F. Scott Fitzgerald novel about a mysterious bootlegger and his love for Daisy Buchanan. This novel is narrated by Daisy’s cousin, Nick Carraway.

Answer: The **Great Gatsby**

[10] In *The Great Gatsby*, a fading billboard representing God looms over the Valley of Ashes and advertises the services of Dr T.J. Eckleburg by displaying these body parts.

Answer: **eyes** (prompt on “glasses”)

[10] Gatsby’s longing for Daisy is represented in the novel by a light of this color that sits at the end of the Buchanan’s dock.

Answer: **green**

8. This river creates Horseshoe Bend in Arizona and flows into two of the largest reservoirs in America, including Lake Powell and one formed by the Hoover Dam. For 10 points each,

[10] Name this western US river, whose water supply provides hydroelectric power and irrigation for much of the West.

Answer: **Colorado** River

[10] The Colorado River carved this 277-mile long feature in northern Arizona, now visited by millions of tourists each year.

Answer: **Grand Canyon**

[10] This reservoir behind the Hoover Dam has the largest maximum water capacity in the United States, but due to drought and overuse, hasn't been full since 1983.

Answer: Lake **Mead**

9. Peter Paul Rubens lends his name to the term “rubesque” because of his paintings of large women in this style. For 10 points each,

[10] Name this type of painting, which shows one or more people with no clothes on.

Answer: **nudes**

[10] A nude man is inscribed in a square and a circle in *The Vitruvian Man*, a work by this Italian scientist and artist, who also painted *The Last Supper*.

Answer: **Leonardo da Vinci** (accept either underlined portion)

[10] This half-nude statue of a Greco-Roman love goddess may once have held an apple to represent the judgment of Paris, but is currently missing her arms.

Answer: **Venus de Milo** (accept **Aphrodite of Milos**; prompt on “Venus” or “Aphrodite” alone)

10. Eros used this type of weapon to turn Daphne’s heart to stone. When he accidentally cuts himself with a golden one, he falls in love with Psyche. For 10 points each,

[10] Name these objects that come in gold and lead varieties, which Eros shoots from his bow to create love or hate.

Answer: **arrows**

[10] This man reveals his identity to his wife’s suitors by shooting an arrow through the sockets of twelve axes. He then uses the bow to kill the suitors and reclaim the throne of Ithaca.

Answer: **Odysseus**

[10] The bow and arrow were symbols of this Greek hunter goddess.

Answer: **Artemis** (do not accept Diana)

11. This psychologist discussed the “pleasure principle” in *Civilization and its Discontents*. For 10 points each,

[10] Name this Austrian founder of psychoanalysis who theorized that the mind is made up of the id, the ego, and the superego.

Answer: Sigmund **Freud** (accept Sigismund Schlomo **Freud**)

[10] “Irma’s Injection” was one of the title events that Freud analyzed in his book on the *Interpretation of these events*. Freud argued that these experiences, which happen during sleep, are forms of “wish-fulfilment.”

Answer: **dreams** (accept The **Interpretation of Dreams**)

[10] Freud paired this concept with “totem” in the title of a collection of his essays. This term refers to practices that are forbidden by societal rules, such as cannibalism.

Answer: **taboo**

12. In this work, Shahryar beheads all of his wives except one. For 10 points each,

[10] Name this collection of Persian stories, including the tale of “Ali Baba and the Forty Thieves” and the story of Aladdin.

Answer: One **Thousand and One Arabian Nights** (accept The **Thousand and One Nights** or A **Thousand and One Nights**; accept The **Arabian Nights**)

[10] This sister of Dunyazad is the narrator of the *Thousand and One Nights*. She leaves her stories on cliffhangers every night to stop her husband, Shahryar, from beheading her.

Answer: **Scheherazade** [sha-HARE-ah-zod] (accept **Shahrazad**)

[10] The *Thousand and One Nights* describes the travels of this sailor, who encounters enormous birds called rocs [“rocks”] in his seven voyages.

Answer: **Sinbad** the Sailor (accept **Sindbad** the Sailor)

13. A common quip among academics is that mathematicians are simply machines for turning coffee into these mathematical statements. For 10 points each,

[10] Name this type of statement, which has been proven from definitions, axioms, and postulates, or from other assumed information.

Answer: **theorems**

[10] The theorem that this number, which is approximately 3.14 and is equal to a circle's circumference divided by its diameter, was irrational wasn't completed until the 18th century.

Answer: **pi**

[10] The proof of this French mathematician's "Last Theorem" took centuries to finish, before Andrew Wiles tackled it in the 1990s.

Answer: Pierre de **Fermat**

14. After his treatment during this battle, an American general plotted to surrender West Point to the British. For 10 points each,

[10] Name this battle of the American Revolution, in which American forces successfully defended a British invasion of upper New York. After this battle, John Burgoyne arranged for his troops to be returned to England.

Answer: Battle of **Saratoga**

[10] This man was grudgingly made Major General after the Battle of Saratoga, but personal slights from Congress led him to defect to the British side.

Answer: Benedict **Arnold**

[10] After the surrender of John Burgoyne at Saratoga, this European nation formalized its alliance with the United States, and that alliance with this country brought the aid of the Marquis of Lafayette.

Answer: Kingdom of **France**

15. Frederic Chopin's [shoh-PAN's] Opus 10, Number 5 only uses the black keys on this instrument to play the right hand triplets. For 10 points each,

[10] Name this instrument, on which Chopin was a virtuoso.

Answer: **piano**

[10] Chopin's *Black Key* work is this type of short, difficult piano composition meant to practice technical skills and challenge a student.

Answer: **étude**

[10] In addition to his études, Chopin wrote a number of these triple-meter dances, including the Minute. These dances are often in three-four time.

Answer: **waltz**

16. This planet is the densest of our solar system's gas giants. For 10 points each,

[10] Name this eighth planet from the sun, known for its deep blue color.

Answer: **Neptune**

[10] Neptune's southern hemisphere contains this giant storm. This storm shares a similar name with one found on Jupiter.

Answer: **Great Dark Spot**

[10] The only sizable moon in our solar system to have a retrograde orbit is this largest moon of Neptune.

Answer: **Triton**

17. This god is often depicted holding a Sudarshana Chakra in one of his four hands. For 10 points each,

[10] Name this god of destruction and rebirth, whose consort is Parvati. This god forms the Trimurti alongside Brahma and Vishnu, and is the father of Ganesh.

Answer: **Shiva** (accept **Siva**)

[10] Shiva is often depicted with a throat of this color, since he drank the poison Halahala to save the universe from its destruction. Vishnu is often depicted with skin of this color.

Answer: **blue**

[10] Vishnu, Brahma, and Shiva form the Trimurti in this Indian religion, whose religious texts include the Vedas and Upanishads.

Answer: **Hinduism**

18. This event was fictionalized in *Inherit the Wind*. For 10 points each,

[10] Name this event in which a Tennessee school teacher was accused of violating the Butler Act. During this trial, Clarence Darrow argued that the Butler Act was unconstitutional

Answer: The **Scopes** Monkey **trial** (both underlined portions required; accept The State of Tennessee vs John Thomas **Scopes**)

[10] John Scopes violated the Butler Act by teaching this scientific theory. According to the law of the time, teaching this theory denied the Bible's origin of man.

Answer: human **evolution**

[10] William Jennings Bryan served as the prosecutor in the Scopes trial. Bryan had earlier served as Secretary of State under this American president, but resigned because of this president's aggressive stance toward Germany at the start of World War I.

Answer: (Thomas) Woodrow **Wilson**

19. This effect causes police sirens to change pitch as they pass you. For 10 points each,

[10] Name this effect that increases the observed frequency of waves from an approaching source.

Answer: **Doppler-Fizeau** effect

[10] In this phenomenon, an example of the Doppler effect, light from astronomical objects moving away from the observer decreases in frequency. In the opposite phenomenon, light appears more blue than it actually is.

Answer: **redshift**

[10] Special relativity explains the Doppler effect because of the dilation of this phenomenon. Relative differences in this quantity also cause the twin paradox.

Answer: **time**

20. This satirical novel begins with its title character being thrown out of Castle Thunder-ten-Tronck and ends with him declaring “let us cultivate our garden.” For 10 points each,

[10] Name this novel by Voltaire, in which the pure-hearted title character ends up living on a farm with Cunégonde [koo-nay-GOND], Martin, Cacambo, and his mentor.

Answer: **Candide** [kan-DEED]; or, Optimism (accept **Candide** ou l’optimisme)

[10] This mentor to Candide is a parody of Gottfried Leibniz’s [LYB-nits] optimistic philosophy. This character repeatedly declares that “all is for the best in this best of all possible worlds.”

Answer: Dr **Pangloss**

[10] Voltaire wrote *Candide* in this language. This is also the native language of Guy de Maupassant [gee duh moh-pah-SAWN], who legendarily ate his lunch under the Eiffel Tower to avoid having to look at it.

Answer: **French** (accept le **français**)