

2015 SCOP Novice 6

Round 4

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Tossups

1. **One of these buildings, designed by Frank Gehry, contains a “Flower” atrium and is located in Bilbao, Spain. An “inverted Ziggurat” building of this type designed by Frank Lloyd Wright is named for (*)** Guggenheim and 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. **In one story, this figure uses yam hills to trick passersby into counting to nine, causing them to vanish. This mythical man performed a series of tasks for the sky god, Nyame, capturing the Mmoboro wasp in a calabash and receiving all of the world’s (*)** stories in return. This god’s legs became long and thin after they were pulled by eight ropes in a story told in Ghana. For 10 points, name this African trickster, often portrayed as a spider.

Answer: Kwaku Anansi

3. **This war was paused by treaties signed at Bruges and Troyes before essentially ending at the Battle of Castillon. 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 was inspired at Orléans by 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 work, which was discovered by Miep Gies [meep gees], is set in the *achterhuis*. Most of this author’s work is addressed to Kitty. This author’s roommate, Albert Dussel, and her sister, Margot, feature in her (*)** only book, which discusses a young romance with Peter van Pels and calisthenics routines in a secret annex in Amsterdam. For 10 points, name young girl who wrote a diary while hiding from the Nazis.

Answer: Annelies Marie “Anne” Frank

5. In this work, Abimelech of Gerar swears an oath at Beersheba. This work includes the births of Ben-Ammi and Moab to a man who had protected two angels from a mob in 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. This force is zero in d'Alembert's [dal-uhm-BAIR's] paradox, and Lord Rayleigh [RAY-lee] described its quadratic form. This force is negative six pi, times viscosity, times radius, times velocity at low Reynolds numbers, in (*) Stoke's law. This force is found by solving Bernoulli's equation for force and the science of aerodynamics seeks to minimize it. For 10 points, name this force that is opposed by thrust in aircraft.

Answer: drag force (accept air resistance or fluid resistance; prompt on “friction”)

8. Lisa Murkowski's 2015 proposal regarding this object was blocked in Congress by the Ohio delegation; Sally Jewell, the Secretary of the Interior, enacted that Athabascan-championed proposal just prior to a presidential visit focusing on climate concerns in the (*) Arctic. After nearly one century of commemorating the twenty-fifth US president, it was 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. The use of manmade sulfate aerosol types of these objects to combat global warming is discussed in the final chapter of *SuperFreakonomics*. Silver iodide is traditionally used to “seed” the formation of these objects, that 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

11. One of this man's “four great measures” was the passing of the Walker Tariff, and he was challenged by Abraham Lincoln's Spot Resolutions. During this man's administration, a dispute over Oregon made (*) “Fifty-four forty or fight!” a rallying cry. This Tennessee politician was labeled a “dark horse” after defeating Henry Clay in the Election of 1844. For 10 points, name this President who started the Mexican-American War.

Answer: James K(nox) Polk

12. New phosphodiester bonds are formed by ligase enzyme at the end of this process. *E.coli* grown in different isotopes of nitrogen were used by Meselson and Stahl to show that this process is semi-conservative. This process generates both a (*) leading and lagging strand, the latter containing Okazaki fragments. For 10 points, name this biological process in which polymerase pairs adenine to thymine and guanine to cytosine to duplicate genetic material.

Answer: **DNA replication**

13. An admiral from this empire, Hayreddin Barbarossa, assisted France in the Siege of Nice. This empire's spread into the Mediterranean was limited by a loss at Lepanto to the Holy League. Leaders of this empire were protected by (*) Janissaries before they were dissolved by Mahmud II, and this "Sick Man of Europe" was targeted in the Gallipoli campaign. For 10 points, name this empire that was led by Suleiman the Magnificent out of Istanbul.

Answer: **Ottoman** Empire (do not accept Turkey)

14. Rho, phi, and z define points in a coordinate system named after these shapes. This shape can be created in three-dimensional Cartesian coordinates by setting the sum of the squares of any two of the three variables equal to a constant. Their surface area is found by summing their lateral area, which is a (*) rectangle, with their two circular bases. For 10 points, name these three dimensional shapes with volume equal to pi times radius squared times height, commonly exemplified by cans.

Answer: **cylinders**

15. This composer wrote an opera including the magician Alcina on the Orlando Furioso story, as well as 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 *De Profundis*, as well as a poem that claims "each man kills the thing he loves," during his time in Reading Gaol ["redding jail"]. In one of this man's plays, Mrs Erlynne recovers a misplaced object, and in another (*) Algernon Moncrieff and Jack Worthing each pretend to have a certain name. Those plays are *Lady Windermere's Fan* and *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. He 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 sidekick Bucky Barnes. For 10 points, name this patriotic avenger who fights with a star-spangled shield.

Answer: **Captain America** (accept either name of **Steven Rogers**; prompt on "The Captain" or "Cap")

18. **This book is dedicated to a taxi driver and the woman who gave the story its subtitle. In one scene from this book, a character obtains a pair of silver boots after a production of Cinderella, and that man later lives in a zoo with Montana Wildhack after being abducted by (*) Tralfamadorians. Throughout this novel, a bird cries “Poo-tee-weet” and deaths are followed by the comment “so it goes.”** For 10 points, identify this Kurt Vonnegut novel about Billy Pilgrim and the bombing of Dresden.

Answer: Slaughterhouse-Five, or The Children’s Crusade: A Duty-Dance with Death

19. **A bomb calorimeter measures the result of this process, which is highly exothermic. The incomplete form of this process produces harmful substances such as acetaldehyde or carbon monoxide. 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 a necessary reactant in, for 10 points, what process that may result in a fire?**

Answer: combustion (accept burning)

20. **A five-month-long one of these events started in San Francisco and was an attempt to bring attention to the historical treatment of Native Americans. One of these events was led by Jacob Coxey after the Panic of 1893 caused widespread unemployment. In 1963, (*) Martin Luther King led one of these events named for Jobs and Freedom, at the end of which he gave his “I have a Dream” speech. For 10 points, name this act of walking to the capital of the United States.**

Answer: marches on Washington DC (accept descriptions like “walking to Washington, DC” or “protesting by marching on Washington DC;” prompt on “marches” alone or anything that doesn’t specify 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. 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] This organophosphorus nerve agent causes a rapid loss in muscle function and was infamously used in a Tokyo subway attack in 1995.

Answer: **sarin** (accept **GB**)

4. This psychologist discussed the “pleasure principle” in his book *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 incest and cannibalism.

Answer: **taboo**

5. 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 Duniyazad 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)

6. For 10 points each, name the following types of mathematical statements.

[10] Mathematical systems begin with these basic assumptions that cannot be derived or proven from the other statements in a system. Euclid's *Elements* opens with twenty-three definitions of terms and five of these statements.

Answer: **postulates** (accept **axioms**)

[10] A common quip is that mathematicians are simply machines for turning coffee into these mathematical statements. These statements have been proven from definitions, axioms, and postulates, or from other assumed information.

Answer: **theorems**

[10] Sometimes, you need to prove a small fact to assist the proof of your larger theorem; in that case, the small fact is called one of these statements, rather than a theorem.

Answer: **lemmas**

7. Benedict Arnold's treatment during this battle led him to defect 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.

Answer: Battle of **Saratoga**

[10] During the Battle of Saratoga, this British general was forced to surrender, and rather than let them be taken prisoner, this man arranged for his troops to return to England.

Answer: John **Burgoyne**

[10] After the surrender of John Burgoyne, 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**

8. 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 this poem to Alice. The two title characters talk of "cabbages and kings" before befriending a group of oysters and then eating them.

Answer: The **Walrus and the Carpenter**

9. Frederic Chopin's [shoh-PAN's] Opus 10, Number 5 only uses these objects to play the right hand triplets. For 10 points each,

[10] Name these objects, of which thirty-six are present on standard pianos.

Answer: the **black keys** of a piano or keyboard (do not accept or prompt on "piano keys")

[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] Chopin's 12th étude, nicknamed *Revolutionary*, was dedicated to this friend, the Hungarian composer of the *Hungarian Rhapsodies*.

Answer: Franz **Liszt**

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

[10] Name this organelle crucial to transport within the cell whose rough form is studded with ribosomes.

Answer: **Endoplasmic Reticulum**

[10] This digestive organelle is formed by the ER and has an acidic interior where enzymes break down biomolecules.

Answer: **lysosome**

[10] A lack of the lysosomal enzyme hexosaminidase A results in this disease, that causes nerve cells to degenerate and lipids to accumulate in the brain. This disease is prevalent in people of Ashkenazi Jewish descent.

Answer: **Tay-Sachs** disease

11. 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**

12. 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**

13. 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**

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

[10] Name this preserver god, whose consort is Lakshmi. This god forms the Trimurti alongside Brahma and Shiva.

Answer: **Vishnu**

[10] This avatar of Vishnu drives Arjuna's chariot in the *Bhagavad Gita*. A group that chants "Hare" [HAH-ray] worships this figure.

Answer: **Krishna** (accept **Govinda**; accept **Gopala**)

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

Answer: **Hinduism**

15. 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** (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, teaching this theory denied the Bible's origin of man.

Answer: human **evolution**

[10] The prosecutor in the Scopes Monkey Trial was this man. This former Secretary of State had resigned after Woodrow Wilson's aggressive stance towards Germany.

Answer: William Jennings **Bryan**

16. Answer the following about nudes in art, for 10 points each.

[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] This Flemish painter is known for his paintings of curvy, nude women and a dramatic *Descent from the Cross*.

Answer: Peter Paul **Rubens**

17. This man remained Commander-in-Chief of the British Army until his death in 1852. For 10 points each,

[10] Name this British general, and later Prime Minister, who led troops during the Napoleonic Wars.

Answer: Arthur **Wellesley**, First Duke of **Wellington** (accept either underlined name; accept Earl or Marquess of **Wellington**)

[10] The Duke of Wellington also led troops during the Peninsular War, a war over control of this location. This region contains Spain and Portugal, and is separated from France by the Pyrenees.

Answer: **Iberian** Peninsula

[10] In yet another war, The Duke of Wellington defeated the Maratha Confederacy in this country. In the aftermath of his victory in this country, Delhi was ceded to the British Empire.

Answer: **India**

18. 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 as a consequence of this phenomenon, seen when a clock on the Space Shuttle ran slightly slower than a reference clock on Earth. It is also the cause of the twin paradox.

Answer: **time dilation**

19. 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**)

20. 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] This man is killed by a well-aimed arrow that hits the only part of this man that isn’t immortal, his heel.

Answer: **Achilles**