

2014 SCOP Novice 5

Round 11

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Tossups

1. **This artist depicted a skyscraper at night in *Radiator Building*, but her later work focuses on natural images, including a series of jack-in-the-pulpits. After the death of her husband, Alfred (*) Stieglitz, this artist moved to New Mexico, where she painted *Cow's Skull: Red, White, and Blue*. For 10 points, name this American artist known for depicting close-ups of flowers and bones.**

Answer: Georgia (Totto) O'Keeffe

2. **A piece of this material that "has no earthly business in a Maine hayfield" hides a letter from Andy to Red in *The Shawshank Redemption*. After his foot was eaten, Tezcatlipoca replaced it with a mirror made of this material. This material, formed when flowing (*) water meets a lava source block, can be used to construct a Nether Portal in Minecraft. For 10 points, name this rock, which forms from rapidly cooling lava into a black, shiny volcanic glass.**

Answer: obsidian (prompt on "volcanic glass" before mentioned)

3. **Franklin Sanborn was one of the "Secret Six" who funded this man's actions. He reacted to the sacking of Lawrence by committing the Pottawatomie Massacre, a pivotal moment during the "Bleeding Kansas" conflict. In October 1859, Marines led by (*) Robert E. Lee stopped him from inciting a slave revolt by capturing him in an armory. For 10 points, name this violent abolitionist whose raid on the armory at Harpers Ferry presaged the Civil War.**

Answer: John Brown

4. **Calculations in this theory can be simplified in a manifold named for Minkowski. This theory includes the "pole in the barn" and "twin" paradoxes, and it predicts length contraction and time dilation. This theory assumes the (*) speed of light to be constant in all reference frames; that fact can be used to derive $E = mc^2$. For 10 points, name this theory, proposed by Einstein before its "general" counterpart.**

Answer: special relativity (prompt on "relativity," do not accept "general relativity")

5. **The title event of one of this author's works occurs after the protagonist eats overripe strawberries. He wrote about the hypnotist Cipolla in *Mario and the Magician* and included Settembri and Leo Naphtha in another work. This author described a visit to (*) Joachim Ziemssen and the seven-year sanatorium stay of Hans Castorp. For 10 points, identify this author of *Death in Venice* and *The Magic Mountain*.**

Answer: (Paul) Thomas Mann

6. **The city is home to a federal university on Fundão Island and Tijuca Forest National Park. A 98-foot tall statue tops this city's Corcovado Mountain, found just northwest of the Ipanema and Copacabana beaches and just west of Sugarloaf Mountain. The (*) Rio Maracanã flows through this city, which is home to Christ the Redeemer. For 10 points, name this host of the 2016 Summer Olympics that, behind Sao Paulo, is Brazil's second largest city.**

Answer: Rio de Janeiro

7. **The Eyring-Polyani equation modifies an equation named for this man that contains a pre-exponential factor and relates rate constant to activation energy and temperature. This scientist developed a theory involving increases in (*) hydrogen and hydroxide ion concentrations that was later replaced by the Bronsted-Lowry and Lewis theories. For 10 points, name this Swedish chemist who won a Nobel Prize for his work on acids and bases.**

Answer: Svante Arrhenius

8. **One ruler from this place was the wife of France's Louis XIII, Anne. Another Archduke of this place issued the Patent of Toleration. That ruler's mother came to power after the issuing of the Pragmatic Sanction, was the mother of Marie Antoinette, and ruled during a war (*) of succession named after this country; those rulers were Joseph II and Maria Theresa. For 10 points, name this country where the Habsburgs ruled from Vienna.**

Answer: Austria (or Österreich)

9. **Zeus wanted to wed this figure's mother until a prophecy foretold that this figure would become greater than his father. After his death, Ajax and Odysseus fought over his armor. (*) Paris killed this friend of Patroclus with a carefully aimed arrow, even though his mother had protected him as a child by dipping him in the river Styx. For 10 points, name this Greek mythical hero whose only vulnerability was his heel.**

Answer: Achilles

10. **A parrot in this novel shrieks "Allez Vous-en!" [ah-LAY voo ZON] at passing cottage guests, and this novel's protagonist cries upon hearing Mademoiselle Reisz's [rize's] piano playing. The protagonist compares herself to the motherly Adele Ratignolle [rah-tih-nyoll] in her marriage to Léonce. She has an affair with Alcée Arobin [ah-roh-BAN] and falls in love with (*) Robert Lebrun, which ultimately leads to her suicide in the Gulf of Mexico. For 10 points, identify this novel about Edna Pontellier [pon-tell-ee-ay], a work by Kate Chopin [shoh-PAN].**

Answer: The Awakening

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

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

12. **The "Treaty of Peace and Amity" opened this country to trade with the United States. This country's Charter Oath sought to unify factions of the Boshin War, but nine years later, the Satsuma Rebellion failed at overthrowing the (*) Emperor. In the 1945 Jewel Voice Broadcast, this country's emperor renounced his divinity and surrendered to the Allies. For 10 points, name this country, whose Emperors Meiji and Hirohito ruled from Tokyo.**

Answer: Japan

13. **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

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

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

15. **Leos Janacek dedicated his *Sinfonietta* to the army of this country, his homeland. Bedrich Smetana's *Ma Vlast* depicts this country, including its Vltava River. Another composer from this modern country traveled to America, where he composed the *American* string quartet and the (*) *From the New World* symphony. Antonin Dvorak championed the folk music of, for 10 points, what European country, whose Vltava River flows through the capital of Prague?**

Answer: Czech Republic or Czechoslovakia

16. **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)

17. **In this work, Sergei Koznyshev joins a movement for the Slavs, and another character is upset that his horse Frou-Frou must be put down after a race. Levin impregnates Kitty in this novel, which sees Stiva cheat on his wife, Dolly. After a fight with (*) Count Vronsky, this novel's title character commits suicide by jumping in front of a train. For 10 points, name this novel about a title woman, written by Leo Tolstoy.**

Answer: Anna Karenina

18. **The clergy in this religion include Seventies and the Order of the Twelve, and are divided into Melchizedek [mehl-KIH-zah-deck] and Aaronic [ay-ron-ick] Priesthoods. Urim [oo-rim] and Thummim [thoo-mihm] were used in the translation of holy texts in this religion. The angel (*) Moroni revealed this religion's holy book, written on golden plates, to this denomination's founder, Joseph Smith. For 10 points, name this Christian denomination headquartered in Salt Lake City, Utah.**

Answer: Church of Jesus Christ of Latter Day Saints (accept Mormonism; prompt on LDS)

19. **The truncated icosahedron features 20 faces of this shape and 12 pentagonal faces. The area of this regular polygon is three-halves times root 3 times the side length squared. This is the polygon with the most sides that can regularly tile the (*) plane. If its angles are bisected by its diagonals, equilateral triangles are formed because each of its angles measures 120 degrees. For 10 points, name this regular polygon with six sides.**

Answer: regular hexagon

20. **In one work, this anti-mercantilist philosopher noted that it wasn't benevolence, but self-interest, that made "the butcher, the brewer, or the baker" offer their services. That work by this author notes the power of division of labor and explained how (*) markets regulate themselves with the "Invisible Hand" metaphor. For 10 points, name this Scottish economist, the author of *The Theory of Moral Sentiments* and *The Wealth of Nations*.**

Answer: Adam Smith

Bonuses

1. Temples take on different forms all around the world. For 10 points each, answer the following about places of worship.

[10] Zoroastrian temples are named for this very hot purifying element which, with water, is a cleansing substance in Zoroastrianism.

Answer: holy **fires** (accept **flame** or similar; accept **Atar** or **Atari**)

[10] These step pyramids, similar to Mastaba, were often built in Mesopotamian cities like Ur.

Answer: **ziggurat**

[10] These free-standing Japanese doorways mark the entrances to Shinto shrines, and are named for the birds that often sit on them.

Answer: **torii** [toh-ree]

2. This rebel group, which formed in the mid-20th century in the aftermath of La Violencia, has recently proclaimed an end to ransom kidnappings. For 10 points each,

[10] Name this South American group of guerilla fighters. It has engaged in recent peace talks with President Juan Manuel Santos, who hopes to put an end to this group's violence and illegal drug trafficking.

Answer: **FARC** (accept, but do not otherwise reveal, **Revolutionary Armed Forces of Colombia**)

[10] Days after Juan Manuel Santos took office as this nation's President, a car bomb believed to have been planted by FARC exploded in this nation's capital of Bogota.

Answer: **Colombia**

[10] Much of FARC's funding comes from trade in this illegal drug, a stimulant synthesized from namesake leaves.

Answer: **cocaine**

3. He wrote "All animals are equal, but some are more equal than others" in one work. For 10 points each,

[10] Identify this author of *Animal Farm* who wrote about Winston Smith, O'Brien, and Big Brother in 1984.

Answer: George **Orwell** or Eric Arthur **Blair**

[10] Orwell wrote about shooting this animal in Burma. Kipling created Hathi, one of these animals, in *The Jungle Book*. In *Just So Stories*, one of these animals elongates its nose to escape a crocodile.

Answer: **elephant**

[10] Orwell called this author's *A Passage to India* "the best [novel about India] we are likely to get." This author also wrote *A Room with a View* and *Howard's End*.

Answer: E(dward) M(organ) **Forster**

4. Socrates was convicted of corrupting the youth of Athens and of holding a form of this philosophy. For 10 points each,

[10] Give this term for the disbelief of the existence of supernatural deities. It is often compared with agnosticism, the idea that one cannot know whether deities exist or not.

Answer: **atheism** (accept word forms)

[10] This Ancient Greek school of philosophy argued that the gods did not interfere with mortal affairs. This school argues that freedom from fear and pain is the highest form of pleasure and the goal of life.

Answer: **Epicureanism** (accept word forms)

[10] Epicureanism's belief in non-interfering deities influenced this modern belief that flourished during the Enlightenment under thinkers like Voltaire. This "natural religion" disputes miracles and other supernatural events, and takes its name from the Latin for "god."

Answer: **deism** (accept word forms)

5. For 10 points each, give the following about inflection points.

[10] Inflection points will be found where this property of a function changes its sign. In geometry, this property is the opposite of convexity.

Answer: **concavity** (accept word forms; prompt on curvature)

[10] This type of polynomial has constant, non-zero concavity, and therefore will never have a point of inflection. As a result, these polynomial functions are either always concave up or always concave down.

Answer: **quadratic** polynomials (or polynomials of degree **2**; accept **parabolas**)

[10] This curve, commonly used in statistics, has two inflection points, each lying exactly one standard deviation away from the mean.

Answer: **normal** distribution or curve (accept **bell** distribution or curve; accept **Gaussian** distribution or curve)

6. This symphony was premiered at the same concert as the next numbered symphony by its composer, which is subtitled "Pastoral." For 10 points each,

[10] Name this symphony, whose opening "short-short-short-long" motif is often described as "Fate knocking at the door."

Answer: Ludwig van **Beethoven**'s Symphony No. **5** in C minor, Opus 67 (prompt on partial answer)

[10] The first movement of Beethoven's fifth symphony, like many works in sonata-allegro form, begins with the exposition of the theme. It then develops the theme, then it gives a straight-forward repeat of the exposition; that last section is described by this term. This section is usually followed by a coda.

Answer: **recapitulation**

[10] Beethoven's fifth and sixth symphonies were completed as his deafness progressively worsened; he completed this many symphonies in his career before dying at age 56. His final symphony famously incorporated vocalists.

Answer: **9**

7. The title objects of this story are combs and a fob. For ten points each:

[10] Name this story in which Della sells her hair and Jim sells his watch in order to buy each other Christmas presents.

Answer: The **Gift of the Magi**

[10] "The Gift of the Magi" is a story by this author, who included it with "The Cop and the Anthem" in his collection *The Four Million*.

Answer: **O. Henry** (accept William Sidney **Porter**)

[10] O. Henry also wrote this short story, in which the title child terrorizes his would-be kidnappers until they pay for him to go home.

Answer: The **Ransom of Red Chief**

8. In 2014, shortly after being diagnosed with Marfan syndrome, Isaiah Austin ceremonially took part in this event. For 10 points each,

[10] Name this annual event. From 2011 to 2014, the Cleveland Cavaliers started this event three times, selecting Kyrie Irving and two Canadians, Anthony Bennett and Andrew Wiggins.

Answer: **National Basketball Association Draft** (prompt on "the Draft")

[10] This ACC school had two first round draft picks in the 2014 Draft: Rodney Hood and the #2 overall selection, Jabari Parker. This school has been coached since 1980 by Mike Krzyzewski [shuh-SHEF-ski].

Answer: **Duke** University

[10] Near the end of the 2014 Draft's first round, the Miami Heat traded up to acquire this Connecticut Huskie. LeBron James tweeted was his "favorite player in the draft," but drafting this player apparently wasn't enough to keep LeBron in Miami.

Answer: Shabazz **Napier**

9. This program, introduced in 2009 and adopted by 46 states before Indiana withdrew, does not address science or social studies. For 10 points each,

[10] Name this national program, which prescribes a series of standard topics and ideas in English and mathematics that students should know, organized by grade level.

Answer: **Common Core** State Standards Initiative (accept any combination of extra information)

[10] The Common Core is not the first national educational initiative; this 2001 law required states to develop their own sets of standards and labels schools as "in need of improvement" if they failed to meet Adequate Yearly Progress on standardized tests.

Answer: **No Child Left Behind** (Law, Bill, or Act; accept **NCLB**)

[10] The No Child Left Behind Bill was proposed on January 23rd, 2001, within the first week of this President's first term.

Answer: **George Walker Bush** (prompt on Bush; prompt on George Bush; accept anything that clearly indicates him instead of his father; do not accept George H.W. Bush)

10. For 10 points each, answer these questions about ailments of the digestive system.

[10] The bacteria *H. pylori*, rather than stress, causes most of these lesions that wear away the lining of the stomach. These can cause chronic pain and bleeding in the stomach.

Answer: gastric/peptic **ulcers**

[10] Cholesterol crystallizes to form stones within this small, green organ that stores bile produced in the liver before releasing it to the intestine.

Answer: **gallbladder**

[10] The growth of bacterial plaque that traps acid is the main cause of cavities in these structures. The addition of fluoride to drinking water helps these structures retain calcium.

Answer: **teeth**

11. This state includes the easternmost point of its country, Isla Mujeres, and its tourist destinations include Playa del Carmen, Cozumel, and Cancun. For 10 points each,

[10] Name this state, east of the state of Campeche and north of Belize.

Answer: **Quintana Roo**

[10] Quintana Roo and Campeche are among the states of this largest country in Central America.

Answer: **Mexico**

[10] Quintana Roo lies on this peninsula, named for the state directly to its northwest. This peninsula juts into the Gulf of Mexico.

Answer: **Yucatan** Peninsula

12. A charged particle in one of these entities will undergo uniform circular motion. For 10 points each,

[10] Name these fields that arise from moving charges. They are described by the Biot-Savart [bee-OH sah-VAR] law and measured in Teslas, unlike their electric counterparts.

Answer: **magnetic** fields

[10] This rule determines the direction of the force on a particle given the magnetic field and velocity. A similarly named rule gives the direction of the magnetic field around a current-carrying wire.

Answer: **right-hand** rule

[10] This law, one of Maxwell's equations, relates the line integral of the magnetic field to enclosed current. It can be used to write magnetic field as a function of current for solenoids.

Answer: **Ampere's** law

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

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

Answer: **spider** (prompt on "arachnid(s)")

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

Answer: **Muses**

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

Answer: **Scheherazade**

14. One character in this novel, Fanny Robin, goes to the wrong church on what should have been her wedding day. For 10 points each,

[10] Identify this Thomas Hardy novel in which William Boldwood kills Sergeant Troy, and Bathsheba Everdene marries Gabriel Oak.

Answer: **Far from the Madding Crowd**

[10] “Far from the Madding Crowd” is a line from this English author’s poem “Elegy Written in a Country Churchyard.”

Answer: Thomas **Gray**

[10] This author italicized five lines of Gray as the only part of a sonnet “of any value” in the preface to *Lyrical Ballads*, which included this author’s “Tintern Abbey” and Samuel Taylor Coleridge’s “The Rime of the Ancient Mariner.”

Answer: William **Wordsworth**

15. This type of matter is thought to make up more than 25% of all matter in the Universe. For 10 points each,

[10] Name this unobservable type of matter that can only be detected through gravitational interactions. It was discovered by Fritz Zwicky and has cold, warm, and hot subtypes.

Answer: **dark matter**

[10] Vera Rubin obtained strong evidence for the existence of dark matter by studying the rotation curves of these groups of billions of stars. The Milky Way is an example of one.

Answer: **galaxy**

[10] These particles are prime candidates for dark matter. They’re not MACHOs, but these supersymmetric particles are being searched for by scintillation detectors far underground.

Answer: **WIMPs** (accept **Weakly Interacting Massive Particle**, accept **neutralinos**)

16. This man survived a 1962 assassination attempt by the OAS, a group of French dissidents who wanted to stop the negotiation of the Évian Accords. For 10 points each,

[10] Name this French President, the founder of the Fifth Republic, who had earlier led the Free French forces during World War II.

Answer: Charles André Joseph Marie **de Gaulle**

[10] The Évian Accords granted independence to this French colony in northern Africa. The independence movement here was led by Ahmed Ben Bella’s National Liberation Front, or the FLN.

Answer: **Algeria**

[10] The FLN’s use of terrorism to oppose French rule, and the French paramilitary response, were dramatized in the 1966 film *The Battle of* this Algerian capital city.

Answer: The Battle of **Algiers**

17. In one of this author's works, the Tiger leads an army north to overthrow the army of the warlord the Leopard. For 10 points each,

[10] Identify this author of *Sons* who wrote about Wang Lung and his family in *The Good Earth*.

Answer: Pearl S(ydenstricker) **Buck** (accept John **Sedges**; accept **Sai** Zhenzhu)

[10] Buck's parents had this profession, which took them to China in an attempt to convert the local people to Christianity.

Answer: **missionary**

[10] In *The Good Earth*, Wang Lung has to pull one of these vehicles around to support his family. In a Kipling short story, Jack sees Mrs. Wessington's ghost riding in one of these vehicles.

Answer: **rickshaw**

18. He created a 76-foot-long structure that hangs in the atrium of a building of the National Gallery of Art, which also houses his works *Triple Gong* and *Cascading Flowers*. For 10 points each,

[10] Name this American artist known for creating mobiles.

Answer: Alexander **Calder**

[10] Calder also created stationary sculptures called "stabiles." Many of his stabiles, including his *Flamingo* stabile in Chicago and *Eagle* stabile in Seattle, are painted in his signature shade of this bold primary color.

Answer: (Calder) **red**

[10] One of Calder's mobiles is named for this animal's "trap" "and Fish Tail." Salvador Dalí attached a plastic version of this animal to a telephone in one of his works.

Answer: **lobster**

19. In 1861, a Confederate officer, John Merryman, was illegally arrested for treason by a Union military officer, then was illegally held when this writ was ignored. For 10 points each,

[10] Name this legal action, in which a prisoner complains to a judge that his or her imprisonment is illegal. Its two-word name comes from the Latin for "you may have the body."

Answer: writ of **Habeas Corpus**

[10] This U.S. President suspended the writ of habeus corpus in Maryland in 1861 to protect a supply line, resulting in the illegal arrest of John Merryman. He expanded the suspension of habeus corpus to the entire country later in the Civil War.

Answer: Abraham **Lincoln**

[10] This Chief Justice ruled in *Ex parte Merryman* that only Congress, not the President, has the authority to suspend the writ of habeus corpus. He was also Chief Justice for the *Dred Scott* decision.

Answer: Roger B. **Taney**

20. For 10 points each, give the following about calcium.

[10] The atomic number of calcium is 20, which means an atom of calcium has 20 of these positively charged particles in its nucleus.

Answer: **protons**

[10] Calcium has this many valence electrons. It also forms a cation with this charge, which can form compounds like CaCl_2 [C-A-C-L-2].

Answer: **two** (accept **plus two**, do not accept “minus two”)

[10] This quantity is the amount of energy required to remove an electron from an atom. After calcium has two electrons removed, this quantity becomes very high due to a full valence shell.

Answer: first **ionization energy**