

SCOP Novice 4 | Round 3

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Tossups

1. In this work, Gus and Wes give their superior a check-up and are forced to tell him he's dead. Morphine syringes are removed from a plane by a man who sells chocolate-covered cotton as candy in this novel, leaving (*) Snowden to die without sedatives. World War II helps M&M Enterprises to flourish under Milo Minderbinder, and Yossarian finally escapes to Sweden to avoid honorable discharge. For 10 points, name this novel by Joseph Heller.

Answer: Catch-22

2. Ludwig Wittgenstein's example of this phenomenon was a duck-rabbit. Some of these phenomena caused by lateral neural inhibition include the Hermann grid, which consists of white gridlines, black squares, and (*) apparent grey dots at the intersections of the grids. Another example, the Rubin vase, can appear as the silhouette of two faces. For 10 points, name this type of image that deceives the brain into perceiving something that is not there.
Answer: optical (or visual) illusions (prompt on illusion; prompt on "ambiguous image" or equivalents)

3. This leader's body was hung upside down in the Square of the 15 Martyrs. He led the Republic of Salò after Otto Skorzeny's glider raid on Gran Sasso freed him from Victor Emmanuel III's policemen. In 1935, his army deposed (*) Haile Selassie in an invasion of Ethiopia. He rose to power in 1922 as the Blackshirts marched on Rome. For 10 points, name this fascist dictator, known as "Il Duce," who led Italy during World War II.

Answer: Benito Mussolini

4. These devices pulse their output using Q-switching. They are used in combination with the Doppler effect to cool atoms. They work by inducing population inversion in a gain medium, such as a mixture of (*) helium and neon. These devices reflect off of the "pits" and "lands" on CDs and DVDs to allow the data to be read. For 10 points, name these devices that produce coherent light, often red.

Answer: lasers

5. In this novel, Merridew objects to being given a "kid's name." A man killed in an unseen air battle is blown out to sea by his parachute after frightening "Sam'n'eric," and Simon is mistaken for a "beast" after hallucinating near a sacrificial (*) pig's head in this novel. The conch shell is crushed by a boulder that also kills Piggy when he tries to defend Ralph against Jack in, for 10 points, what novel about a group of stranded boys, written by William Golding?

Answer: Lord of the Flies

6. Each ratio in the law of sines is equal to this measurement for the circle circumscribed about the triangle. Given three points on a circle, Thales' [THAY-leez'] theorem says that if two of the points form this, then the three points can form a (*) right angle. This line segment is the longest possible chord of a circle, since it passes through the center. Pi is defined as the ratio between the circumference and, for 10 points, what measurement equal to twice the circle's radius?

Answer: diameter

7. This city, founded by Pierre Laclède, has a Walk of Fame in the nearby Delmar Loop. The original *Dred Scott* trials were held in this city's Old Courthouse; that Courthouse is now part of the Jefferson National Expansion Memorial, as is this city's tallest building, an (*) Eero Saarinen-designed monument in the shape of an inverted catenary on the Mississippi River. For 10 points, name this large city on the Mississippi River, the home of Missouri's Gateway Arch.

Answer: St. Louis, Missouri

8. The Upanishads describe this concept as bitter fruit being eaten by a bird. In Jainism, this concept is compared to dirt that is attracted to one's soul, and is divided into "harming" and "non-harming" types. This concept is contrasted with (*) fate, since it is created by humans' choices, and this concept drives the cycle of rebirth in Buddhism. For 10 points, name this concept in Indian religion, in which positive actions yield positive results.

Answer: karma

9. One of this man's choral pieces features a boy soprano singing the Psalm of David. This composer of *Chichester Psalms* wrote the songs "Glitter and Be Gay" and "Make Our Garden Grow" for one operetta and the songs (*) "America," "Somewhere," and "Maria" for a 1957 musical about the Jets and Sharks. For 10 points, name this longtime conductor of the New York Philharmonic, the composer of *Candide* and *West Side Story*.

Answer: Leonard Bernstein

10. This man's first Civil War leadership was a loss at Cheat Mountain. Prior to the Civil War, he led the Marines that ended John Brown's raid on Harper's Ferry. He succeeded Joseph Johnston as commander of the Army of Northern (*) Virginia, which he led to tactical victory at Chancellorsville, but his final surrender was given at Appomattox Court House to Ulysses S. Grant. For 10 points, name this general of the Confederate Army.

Answer: Robert E. Lee

11. The contact process produces sulfuric acid using vanadium(V) [vah-NAY-dee-um "five"] oxide in this role. In the Haber process, iron filings act as this type of substance. A device found in cars uses rhodium, palladium, or platinum as one of these substances. They create an alternative (*) transition state and lower a reaction's activation energy, but are not consumed. Proteins that act as these are called enzymes. For 10 points, name these substances that increase the rate of a reaction.

Answer: catalysts

12. This empire was defeated at Ain Jalut in 1260, two years after Hulagu led it in the sacking of Baghdad. Its leaders were protected by bodyguards called keshiks, and its capital was at Karakorum. Near the end of the 13th century, it broke into fragments including the (*) Yuan Dynasty and the Golden Horde. It was united in 1206 by Temujin, who took the title Genghis Khan. For 10 points, name this nomadic Central Asian empire.
Answer: Mongol Empire (accept Mongols; do not accept Mongolia or Mongolian (Empire))

13. In 2013, Steve Darcis and Sergiy Stakhovsky won upsets in the first two rounds of this tournament. Marion Bartoli defeated Sabine Lisicki here to win her first Grand Slam title, then retired a month later. This tournament, which has been won seven times each by (*) Pete Sampras and Roger Federer, had not seen a countryman win it in 77 years prior to Andy Murray's 2013 victory. For 10 points, name this major tennis championship played on grass in London.

Answer: Wimbledon (accept any additional information)

14. In this novel, Pietro Crespi kills himself after failing to marry either Rebeca or her sister, and one character makes golden fish and is the father of seventeen sons who all share his name. Ice brought by the gypsy Melquiades [mel-K"EYE"-eh-deez] is mistaken for a giant diamond by (*) José Arcadia, who, along with Úrsula and Aureliano, is a part of the Buendía family. The town of Macondo is founded in, for 10 points, what novel by Gabriel García Márquez?

Answer: One Hundred Years of Solitude (accept Cien Años de Soledad)

15. The "Antennae" are two of these objects that are colliding with each other. These systems have velocities measurable by Doppler shift that are proportional to their distance from Earth, according to Hubble's law. Sagittarius A* ["A-star"] is a supermassive (*) black hole at the center of the one of these systems nearest to Earth. These systems can be irregular, spiral, or elliptical. For 10 points, give this term for star systems like the Andromeda and our Milky Way.

Answer: galaxy

16. In one of this artist's works, a cornucopia of fruit sits next to a squatting woman near four other prostitutes whose faces are inspired by African masks. In another work by this artist, a man lying on a floor clutches a knife with a (*) flower growing out of it as a lightbulb explodes. This artist painted *Boy with a Pipe* and co-founded Cubism with works like *Les Demoiselles d'Avignon* [lay DAY-mwah-ZELLS dah-veen-YON]. For 10 points, name this Spanish painter of *Guernica* [GAYR-nee-kah].

Answer: Pablo (Ruiz y) Picasso

17. The bundle of His connects to this organ's Purkinje fibers, which cause contractions called systoles. Robert Jarvik developed the first artificial version of it. This organ, composed of muscle called (*) myocardium, contains a tricuspid valve that maintains one-way flow to its right ventricle. Pacemakers may be implanted in this organ to ensure its regular beating. The aorta is a large artery emanating from, for 10 points, what organ that pumps blood?

Answer: heart

18. In one work by this author, the protagonist refuses Mr. Elton's advances and opposes a match between Robert Martin and Harriet Smith. Another novel by this author sees Colonel Brandon wed Marianne (*) Dashwood. *Lady Susan* is an early work by this author, who wrote a novel in which Charles Bingley's friend, Mr. Darcy, falls for Elizabeth Bennett. For 10 points, name this author of *Emma*, *Sense and Sensibility*, and *Pride and Prejudice*.

Answer: Jane Austen

19. Heidhrún [“HIDE”-hroon] stands on top of this place and produces mead for this building’s residents, who are woken daily by Gullinkambi [GOO-lihn-kahm-bee]. This building is contrasted with Fólkvangr [FOHL-k-vahn-gurr], and a boar is slaughtered every day to feed the (*) Einherjar [INE-”hair”-yahr], who live here. This building’s rafters are spears and its ceiling is made of shields. The Valkyries carry half of the heroes slain in battle to, for 10 points, what mythological mead hall ruled over by Odin?

Answer: Valhalla (accept Valhöll)

20. This war was instigated by the “reconcentration” tactics of Valeriano “Butcher” Weyler. Only one American sailor died at a major victory for George Dewey in this war. The losing side ceded (*) Puerto Rico, Guam, and the Philippines to the United States after this “splendid little war.” An explosion on the USS Maine in Havana sparked, for 10 points, what 1898 war in which Teddy Roosevelt’s Rough Riders fought in Cuba against their parent country?

Answer: Spanish-American War

Bonuses

1. An acrosome [AAK-roh-sohm] covers this type of cell's head. For 10 points each,
[10] Name the microgamete that is formed in the testes.

Answer: sperm cells (or spermatozoa or spermozoon)

- [10] A sperm cell joins with an egg cell in this process, creating a zygote.

Answer: fertilization (accept fecundation; accept syngamy; prompt on conception; treat word forms of any listed response the same way as the listed response)

- [10] In vertebrates, the zygote then divides to form a morula, then reaches this stage in which differentiation begins. Its outer part develops into the placenta, and its inner part develops into the embryo.

Answer: blastocyst (accept blastula)

2. Identify some Biblical people who had trouble with animals, for 10 points each.

- [10] This woman was persuaded by a serpent to eat from the Tree of the Knowledge of Good and Evil, causing her and her husband, Adam, to be expelled from the Garden of Eden.

Answer: Eve (accept Hawwah or Khavah)

- [10] God sent this man to preach to the people of Nineveh, but he ran away instead and was swallowed by a huge fish.

Answer: Jonah (accept Jonas; accept Yona or Yonus)

- [10] In the Book of Numbers, this man spoke to Balak about the fate of the Israelites without God's permission; God punished this man by "opening the mouth" of this man's donkey.

Answer: Balaam (accept Bilam)

3. This man's fairy tale-inspired operas include *The Snow Maiden*, *The Golden Cockerel*, and *The Tale of Tsar Saltan*. For 10 points each,

- [10] Name this member of the Mighty Five, who also composed the symphonic suite *Scheherazade*.

Answer: Nikolai Rimsky-Korsakov

- [10] *The Tale of Tsar Saltan* includes this musical interlude, in which the Tsar's son is transformed into the title insect, who flies to the tune of frantic runs of chromatic sixteenth notes.

Answer: The Flight of the Bumblebee

- [10] Rimsky-Korsakov was not the only Russian composer inspired by fairy tales; in this Tchaikovsky ballet, Princess Aurora is cursed by the evil fairy Carabosse to prick her finger on a spindle and die.

Answer: The Sleeping Beauty

4. In 1952, this leader ascended to the throne while touring Kenya with her husband, Philip. For 10 points each,

[10] Name this Queen of England, who celebrated her Diamond Jubilee in 2012.

Answer: Queen Elizabeth II (prompt on Queen "Elizabeth")

[10] Elizabeth II was proclaimed Queen after the death of this King, her father, who remained in Buckingham Palace during German bombings in World War II.

Answer: King George VI (prompt on King "George")

[10] George VI took the throne after Edward VIII, seeking a marriage to American divorcee Wallis Simpson, performed this action, leaving the throne vacant.

Answer: abdication (accept word forms)

5. This quantity is conserved in both elastic and inelastic collisions. For 10 points each,

[10] Name this quantity calculated as an object's mass times its velocity.

Answer: momentum (prompt on *p*)

[10] This quantity, however, is conserved in elastic collisions but not in inelastic collisions.

Answer: (total or kinetic) energy (prompt on *E* or *KE*; prompt on "kinetic")

[10] This quantity is the change in an object's momentum, caused by an application of force for a time.

Answer: impulse (prompt on *J*)

6. The speaker of this poem has "bathed in the Euphrates," "built [his] hut near the Congo," and "raised the pyramids above" the Nile. For 10 points each,

[10] Identify this poem, which concludes "my soul has grown deep like" the title objects.

Answer: The Negro Speaks of Rivers

[10] "The Negro Speaks of Rivers" is a work by this African-American poet who described hearing a "drowsy syncopated tune" in "The Weary Blues."

Answer: (James Mercer) Langston Hughes

[10] Hughes was a member of this literary movement. Other poets from this movement included Claude McKay and Countee Cullen, and it was named for a neighborhood in New York.

Answer: Harlem Renaissance (accept New Negro Movement)

7. A 1946 earthquake near Alaska caused one of these events, which flooded a Hawaiian island. For 10 points each,

[10] Give this natural phenomenon, whose name comes from the Japanese for "harbor wave."

Answer: tsunami (accept tidal wave)

[10] The primary difference between tsunami waves and usual oceanic waves is that tsunamis have a significantly higher value for this wave property, the distance between two crests of the wave. This property is inversely related to the wave's frequency.

Answer: wavelength

[10] As a wave enters shallower water, it undergoes this effect, in which its height increases and its wavelength shortens, but its frequency stays the same. This term can also refer to sandbars that cause that effect.

Answer: shoaling (accept word forms)

8. In *Trop v. Dulles*, the Supreme Court held that stripping one's citizenship is unconstitutional, as it violates this part of the Bill of Rights. For 10 points each,

[10] Name this amendment to the U.S. Constitution, which states that "cruel and unusual punishments" shall not be inflicted.

Answer: Eighth Amendment to the U.S. Constitution (or Amendment 8)

[10] The defendant in that case, Albert Trop, was an Army private who left his military base in Casablanca without official leave and was therefore charged with this crime.

Answer: desertion (accept word forms; prompt on "going absent-without-official-leave", or "AWOL," or abandonment, or similar equivalents)

[10] This is the maximum penalty for desertion from the Army; it was last applied to Eddie Slovik in 1945. Justice Felix Frankfurter, in his dissent in *Trop v. Dulles*, noted the absurdity that loss of citizenship is "cruel and unusual punishment" while this form of punishment is not.

Answer: death penalty or capital punishment (accept logical equivalents; accept any specific forms, such as "death by firing squad")

9. This character provides her lodger with a low rent because he made sure that her husband was executed in Florida; that lodger later throws a man who attacked this woman out a window. For 10 points each,

[10] Name this fictional landlady, played by Una Stubbs, who warns Mycroft that "family is all we have in the end."

Answer: Mrs. Hudson

[10] Mrs. Hudson appears in this BBC show based on the works of Sir Arthur Conan Doyle. Benedict Cumberbatch plays this show's title character, opposite Martin Freeman's Dr. Watson.

Answer: Sherlock (do not accept "Sherlock Holmes")

[10] Cumberbatch played this English physicist in a 2004 TV movie and provided his voice in the Discovery series *Curiosity*, in which this man says, "Although...I have to speak through a computer, in my mind I am free."

Answer: Stephen (William) Hawking

10. In this novel, the goat Djali ["jolly"] rearranges letters to spell "Phoebus," [FEE-bus] the name of a man who betrays the gypsy Esmeralda. For 10 points each,
[10] Identify this novel about a deformed Parisian bellringer named Quasimodo.

Answer: The Hunchback of Notre Dame (or Notre Dame de Paris)

[10] *The Hunchback of Notre Dame* is a work by this French author of *Les Misérables*.

Answer: Victor Hugo

[10] This Archdeacon raises his orphaned brother, Jehan du Moulin [jeh-ahn doo moo-LAAN], and adopts Quasimodo. He dies when Quasimodo pushes him off Notre Dame Cathedral for laughing at Esmeralda's hanging.

Answer: Dom Claude Frollo (accept either underlined name; accept Archdeacon Claude Frollo)

11. Usury is the practice of charging an unacceptable rate of this concept. For 10 points each,
[10] Give this term for a fee paid to a lender in exchange for borrowed money. It is usually calculated as a percentage of the borrowed principal.

Answer: interest

[10] This 1936 work by a British economist described how a reduction in interest rate by a central government could generate increased investment and economic growth. As its title suggests, it also discusses employment and money.

Answer: The General Theory of Employment, Interest, and Money

[10] This British economist wrote *The General Theory*, as well as a *Treatise on Money*. His economic philosophy holds that, thanks to the multiplier effect, government spending has a strong influence on economic stability.

Answer: John Maynard Keynes

12. This commodity was transported underground in Persia with qanats and by a karez in the Turpan Depression in China. For 10 points each,

[10] Name this resource that is provided to farms by irrigation systems.

Answer: (fresh) water

[10] The Romans built 11 of these large structures, including the Aqua Appia, to supply Rome with water from faraway springs. These structures often transported the water along bridges also used for foot-traffic.

Answer: aqueduct

[10] This is the downward slope of an aqueduct. Aqueducts with high values for this are steeper and can transport more water, but the water's force can damage the stone.

Answer: gradient (accept percent grade; accept pitch; accept lie; prompt on "incline" or similar answers; prompt on "slope" or similar answers)

13. For 10 points each, give the following about unappetizing food in British literature.
[10] In this author's remarkably violent play *Titus Andronicus*, nine characters are killed on stage; two of them are baked into a pie that Titus serves to Tamora, Queen of the Goths. Other violent works by this playwright include *Julius Caesar* and *Othello*.

Answer: William Shakespeare

[10] The true story of Alexander Selkirk inspired this novel, in which the title sailor saves the prisoner Friday from being eaten by cannibals.

Answer: Robinson Crusoe

[10] This satirical essay by Jonathan Swift suggests that the Irish should sell their children as food to British nobles.

Answer: A Modest Proposal

14. The country of Georgia lies on the east bank of this sea, and the Crimean Peninsula juts into it from the north. For 10 points each,

[10] Name this sea, also bordered by Bulgaria and Romania in the west. Cities on its shore include Odessa, Ukraine, and Sochi, Russia, the site of the 2014 Winter Olympics.

Answer: Black Sea

[10] The Black Sea is the site of this river's delta. This river begins in Germany's Black Forest before flowing through Vienna and three other European capital cities.

Answer: Danube River (accept Donau)

[10] The Black Sea is connected to the Sea of Marmara via the Bosphorus, on which this country's largest city, Istanbul, lies. This country makes up the southern shore of the Black Sea.

Answer: Republic of Turkey

15. Many echinoderms have the radial type of this property. For 10 points each,

[10] Name this mathematical concept that also has translational and reflectional varieties, the latter of which exists along four different axes in a square.

Answer: symmetry (accept word forms)

[10] Consider the function y equals f of x . If the function is odd, then negative y equals f of negative x and the function has rotational symmetry with respect to this point at the center of the Cartesian plane.

Answer: symmetric with respect to the origin (or the point (0,0))

[10] In calculus, taking this operation of every odd function $f(x)$ with respect to x over every interval symmetric about zero will return zero, provided that this operation is defined for that interval.

Answer: definite integration (accept Riemann integration; accept word forms like integral; do not accept "indefinite integration/integral" or "antidifferentiation")

16. In this work, a red watch covered with ants sits on a brown box-like structure that has a branch growing out of it. For 10 points each,

[10] Identify this painting showing three melting clocks in a desolate landscape.

Answer: The Persistence of Memory

[10] Give the name of the surrealist artist who painted *The Persistence of Memory*. Besides being remembered for his outrageous moustache, he also painted *The Metamorphosis of Narcissus* and *The Hallucinogenic Toreador*.

Answer: Salvador (Domingo Felipe Jacinto) Dalí (i Domènech)

[10] This other surrealist wrote the words "This is not a pipe" in French under a painting of a pipe in his *The Treachery of Images*. He also painted an apple in front of a man wearing a bowler hat in *Son of Man*.

Answer: Rene Magritte [mah-GREET]

17. In a Wole Soyinka [woh-lay soh-yin-kah] play, Simon Pilkins stops Elesin, the King's horseman, from performing this action in a ritual; in a Sophocles play, Haemon performs this action after finding Antigone's dead body. For 10 points each,

[10] Name this action, which was committed by Virginia Woolf, who walked into a river with weights in her pockets shortly after finishing her final novel, *Between the Acts*.

Answer: suicide (accept word forms and clear-knowledge equivalents)

[10] Okonkwo commits suicide to avoid being tried for killing a white colonist in a failed uprising in this novel by Chinua Achebe [chin-wah ah-chay-bay].

Answer: Things Fall Apart

[10] This protagonist of Kate Chopin's *The Awakening* drowns herself off the coast of Grand Isle after being abandoned by her lover, Robert LeBrun.

Answer: Edna Pontellier (accept either name)

18. This god was killed by his brother and brought back to life by his wife. For 10 points each,

[10] Name this Egyptian god, the husband of Isis, who became the god of the dead after being resurrected.

Answer: Osiris (accept Usiris)

[10] Osiris was killed by this god of chaos, who trapped Osiris in a chest and later cut him into pieces.

Answer: Set (accept Seth)

[10] Osiris, Isis, and Set were all children of Geb, who represented the earth, and Nut, who represented this.

Answer: sky (accept logical equivalents)

19. In one instance, this group opposed taxation without representation by dressing up as Mohawk Indians and boarding three ships in Boston Harbor. For 10 points each, [10] Name this revolutionary group that included Samuel Adams and John Hancock that was responsible for the Boston Tea Party.

Answer: **Sons of Liberty**

[10] The Sons of Liberty were also responsible for the 1772 boarding, looting, and burning of the *HMS Gaspée* in the waters of this small colony, which included Roger Williams' Providence Plantations.

Answer: **Rhode Island** and Providence Plantations

[10] In response to the Sons of Liberty's shenanigans, this British Prime Minister proposed and signed the Intolerable Acts.

Answer: Lord (Frederick) **North**

20. Organic chemistry is the study of compounds containing bonds between carbon and hydrogen. For 10 points each,

[10] Specifically, this kind of bond exists between carbon and hydrogen molecules. In it, electrons are shared.

Answer: **covalent** bond

[10] The simplest organic molecule is this gas used to fuel Bunsen burners, whose formula is CH₄.

Answer: **methane**

[10] Methane features this type of hybridization, since its molecular geometry is tetrahedral.

Answer: **sp₃** ["S-P-three"]