

Scobol Solo 2020

Championship I (Phase I: Questions 1-20)



1. The albedo of this object is 0.96, the second-highest in the Solar System, behind Enceladus [en-SELL-uh-duss]. Other than near-parabolic comets and objects discovered since 2017, this is the farthest away known natural object in our Solar System. This object is the largest scattered-disc object. The person who discovered this object, Michael Brown, wrote a book titled *How I Killed Pluto and Why It Had It Coming*. For a time, this object was named Xena [ZEE-nuh] because it was believed to be the tenth planet. Its only known moon is Dysnomia [diss-NOH-mee-uh]. Name this object that is slightly smaller than Pluto but is otherwise the largest dwarf planet, because it is larger than Haumea [“how”-MAY-uh] and Makemake [mah-kay-MAH-kay].

Answer: Eris

2. At the beginning of one novel by this author, the title character follows Bo Weinberg onto a boat, where Bo is forced to step into wet cement before being thrown into the East River. This author wrote about the title character finding Dutch Schultz’s money and tricking Lucky Luciano [loo-chee-AH-noh]. Another novel by this author is about a family that lives in New Rochelle and whose father joins Robert Peary’s expedition to the North Pole. In that novel, this author wrote about the impact of racism on Coalhouse Walker. This author named that novel after the music that Coalhouse played. Name this author of *Billy Bathgate* and *Ragtime*.

Answer: E(dgar) L(awrence) Doctorow

3. When John Quincy Adams was a lame-duck president, he nominated this person to the Supreme Court, but the Senate ignored the nomination. This person was the Attorney General for William Henry Harrison, John Tyler, and Millard Fillmore. While serving in the U.S. Senate, this person proposed a series of six constitutional amendments, including one stating that Congress could not interfere with slavery in a slave state. This person’s proposals were rejected by both Houses of Congress and president-elect Abraham Lincoln. Name this Kentucky Whig and Know-Nothing who tried to avert the Civil War with a namesake “compromise”.

Answer: John (Jordan) Crittenden

4. This country is where the Aras and Kura Rivers join and is the last country their waters go through. The Kura River was used to form this country's Mingachevir [meen-guh-CHEH-veer] reservoir. The most populous city in the west part of this country, which contains a large mausoleum for the poet Nizami Ganjavi [nee-ZAH-mee GAN-juh-VEE], is Ganja. The capital and most populous city in this country contains the Palace of the Shir-van-shahs and the Maiden Tower, and is on its east coast. This country is south of the Republic of Dagestan [dag-ih-STAN] in Russia, and it is east of Georgia and Armenia. Name this country that is north of Iran on the Caspian Sea coast and whose capital is Baku.

Answer: (Republic of) Azerbaijan or Azerbaijan (Respublikasi)

5. Tetrahydrofuran is a cyclic example of this class of compounds and is used to stabilize Grignard [grin-yard] reagents. An alkoxide ion and an alkyl halide are combined to create one of these compounds in Williamson synthesis. The methyl tert-butyl example of this type of compound was a gasoline additive until many states banned it because of environmental concerns. Compounds in this class are similar to water and alcohols, but with both hydrogen atoms from water being replaced by alkyl or aryl groups. Name these chemical compounds that since the 19th century have been used as anesthetics.

Answer: ethers

6. The epilogue of one poem by this writer states "We would rather die in our dread than climb the cross of the moment and let our illusions die." This writer set that poem in a New York City bar and Rosetta's apartment, where Emble falls asleep after Malin and Quant leave. Another poem by this writer begins "I sit in one of the dives on Fifty-second Street" and later states "We must love one another or die." This writer wrote that poem at the beginning of World War II. Name this writer of "The Age of Anxiety" and "September 1, 1939".

Answer: W(ystan) H(ugh) Auden

7. Several compilations of this person's music were titled *Genius of Modern Music: Volume 1*. Even though they are compilations, they also contain the first recordings of some of this performer's songs, such as "Well, You Needn't". According to legend, a policeman hit Bud Powell in the head with a nightstick while Powell was defending this person, which is why this person recorded the song "In Walked Bud". This musician's signature number, which he changed based on work by Dizzy Gillespie, was "Round Midnight". Name this jazz pianist.

Answer: Thelonius (Sphere) Monk

8. While serving under this major general, Johann de Kalb died of numerous injuries at this leader's 1780 loss to Lord Cornwallis, the Battle of Camden. This person apologized both for refusing a request from Alexander Hamilton to send three brigades to Philadelphia to help George Washington and, before Thomas Conway resigned, for allowing his name to be floated as a replacement for Washington. Some historians credit this leader's biggest victory to the actions of Philip Schuyler [SKY-lur] and Benedict Arnold. Name this major general who defeated John Burgoyne at the Battle of Saratoga.

Answer: Horatio (Lloyd) Gates

9. This person wrote that "Anything that can be taught to another is relatively inconsequential" and "The only learning which significantly influences behavior is self-discovered." Those findings explained why he did not want to teach, which he elaborated on in *Personal Thoughts on Teaching and Learning* and *Freedom to Learn*. The type of "argument" named for this person is a problem-solving technique based on common goals and empathy. The type of therapy developed by this psychologist focuses on acceptance and genuineness. Name this American psychologist who developed a humanistic approach that is called client-centered therapy.

Answer: Carl (Ransom) Rogers

10. This specific shape can be generated using a Thue-Morse [too morss] sequence, with the instructions to reverse direction for each 0 and move forward and rotate 60 degrees for each 1. The area of this figure is calculated by multiplying an original length squared times $\frac{2}{5}\sqrt{3}$ ["two-fifths root 3"] or by multiplying the area of another figure by $\frac{8}{5}$. Because a geometric sequence with a ratio of $\frac{4}{3}$ diverges, the perimeter of this figure is infinitely large. The dimension of this figure is approximately 1.262, or more precisely, $\log_3 4$ ["the log, base 3, of 4"]. Name this fractal that is constructed by recursively changing each side of an equilateral triangle into a segment with an equilateral triangle popping out from the middle.

Answer: (von) Koch(’s) snowflake [or Koch curve or Koch star or Koch island]

Check the score.

11. A nearly vertical arm and hand near a moon are the most easily recognizable objects in one of this painter's works that uses only shades of ochre [OH-kur], gray, and brown. A little later, this painter made a similar piece with many horizontal, vertical, and diagonal lines. Those works are *Woman with a Mandolin* and *Man with a Guitar*. The same type of fragmentation can be seen in a 1910 work by this artist that shows several versions of the two title objects. Name this painter of *Violin and Candlestick* who worked with Pablo Picasso to develop analytic cubism.

Answer: Georges Braque [zhorzh brahk]

12. The narrator of this novel often refers to the smell of rancid butter. In this novel, Corporal Lankes [LAHN-kess] is an artist who works on concrete pill-boxes called *Oblique Formations* and that are referred to as *Barbaric, Mystical, Bored*. This novel's narrator considers himself to have two fathers, one of whom is killed by invading Russians after swallowing his Nazi pin. This novel is sometimes placed in a trilogy before *Cat and Mouse* and *Dog Years*; that group is collectively called the *Danzig* trilogy. Name this novel about a boy who stops growing, named Oskar Matzerath, and which was written by Günter Grass.

Answer: *The Tin Drum* [or *Die Blechtrommel*]

13. Though this god's wife is never named, Loki claims that this god's wife gave birth to Loki's son. This god's grandmother confused Thor because she had 900 heads that sometimes spoke one at a time and sometimes simultaneously. Thor and this god hid under a cauldron from Hymir, who in some sources was this god's father. When the gods bound the wolf Fenrir, the animal responded by biting off this god's right hand. During Ragnarök, this god both kills and is killed by the wolf Garmr. Name this member of the Aesir ["EYE-sear"] who represented war and is the namesake of a day of the week.

Answer: Týr ["tier"] [or Tiw]

14. The result of this experiment was similar to one conducted by the son of J. J. Thomson, resulting in a shared Nobel Prize. This experiment showed that particles could obey Bragg's law, which was developed for X-rays. This experiment used a Faraday cup detector that could be rotated around the front of a flat nickel surface. When the detector was rotated, it picked up several peaks, which provided evidence of the inverse relationship between momentum and particle wavelength, as predicted by de Broglie [duh broy]. Name this experiment that detected a diffraction pattern generated by electrons.

Answer: Davisson-Germer experiment

15. In 1973 the Saudi embassy in this city was attacked by the Black September Organization, leading to the deaths of two Americans. Osama bin Laden lived in this city from 1991 to 1996, and in 1998 the U.S. bombed a pharmaceutical factory just north of this city in response to embassy bombings in other cities. This city is next to Omdurman, where Herbert Kitchener defeated Abdullah al-Taashi in 1898. Charles "Chinese" Gordon was killed in this city in 1885 by forces under Muhammad Ahmad, who had been proclaimed the Mahdi. Name this city at the confluence of the White Nile and Blue Nile, the capital of Sudan.

Answer: Khartoum, Sudan

16. Music from an opera by this composer was developed into a set of so-called “dances” by Nikolai Rimsky-Korsakov and Alexander Glazunov. Several pieces by this composer, including those dances, were used to make the musical *Kismet*. This composer wrote a symphonic poem that ends with the instruments holding high notes that fade away, and which represent a Russian caravan riding off after joining with Asians. This composer was the oldest and last to join the Mighty Handful. Name this Russian composer of *In the Steppes of Central Asia* who also wrote the opera *Prince Igor*.

Answer: Alexander (Porfiryevich) Borodin

17. This person dedicated her 2019 book *Blowout* “to the bots and trolls, all of you, with love”. That book criticized the oil industry and Russia. In her main job, this person replaced Dan Abrams in 2008 after successful stints substituting for Keith Olbermann. In 2017, this person helped David Cay Johnston release two pages from Donald Trump’s 2005 tax returns. This person spoke openly about the near death from COVID of Susan Mikula, her partner. This person is often on television before Lawrence O’Donnell and after Chris Hayes. Name this first openly lesbian anchor of a news program, whose show airs on prime time on MSNBC.

Answer: Rachel (Anne) Maddow

18. After flaps are removed, these objects are processed by flap structure-specific endo-nuclease 1. Those steps occur during both the short-flap and the long-flap pathways. Ribo-nuclease H removes the RNA primer from these objects, which are then finished off by DNA ligase [“LIE”-gayss]. That primer was discovered by the woman who was part of the husband and wife team that these objects are named for. These objects are needed because 5-prime to 3-prime directionality is incompatible with continuous replication. Name these DNA sequences that are added to lagging strands during DNA replication.

Answer: Okazaki fragments

19. Several stories about this character take place after she is invited to the Bantry home by Sir Henry Clithering. Earlier stories featuring this character are at her house, where she hosts the Tuesday Night Club. In a novel, this character is assisted by her nephew Raymond West because Raymond knows what Dr. Stone looks like. In another novel, Elspeth McGillicuddy tells this character that she saw a man strangling a woman on a train. Name this protagonist of *The Thirteen Problems*, *4.50 from Paddington*, and *The Murder at the Vicarage*, an amateur detective created by Agatha Christie.

Answer: Miss Jane Marple [accept either underlined name]

20. When this person became king he was nine years old, so William Marshal, 1st Earl of Pembroke, and then Hubert de Burgh [duh BURG] headed a council of regency that ran the country. Much later, this king made a deal with Pope Innocent IV that this king's son Edmund Crouchback would become the King of Sicily, but it did not work out, and this king eventually feuded with Pope Alexander IV. This king was forced to give up some of his powers in the Provisions of Oxford in 1258. This king's son Edward I took control when this king was taken prisoner during the Second Barons' War. Name this son and successor of King John.

Answer: Henry III [or Henry of Winchester; prompt on Henry]

This is the end of the packet.