

Scobol Solo 2021

Championship II (Phase II: Questions 21-40)

21. This shape is the epi-cycloid generated by rolling a circle around a circle with an equal radius. This shape has one point at which no tangent line can be defined, and all of its chords through that point have the same length. From afar, a visualization of the Mandelbrot set looks like one of these shapes surrounded by some smaller circles. The simplest equation for generating this shape is written in polar coordinates and results in the cusp being at the origin. Name this shape generated by setting the two parameters of a limaçon [lee-mah-sawn] equal to each other, whose name refers to its heart-like shape.
Answer: cardioid [prompt on limaçon]
22. In one novel by this author, the editor Ade [AD-ee] Coker allows the newspaper the *Standard* to run a controversial story and is then killed by a package bomb. The *Standard* is owned by Eugene, who is a strict Catholic whom this writer's protagonist calls Papa. In another novel, one of this author's characters is deported from the United Kingdom when he is reported by Vincent and tries unsuccessfully to arrange a green card wedding. That character's former girlfriend lives in Princeton and is a popular blogger. Name this native of Nigeria who wrote *Purple Hibiscus* and *Americanah*.
Answer: Chimamanda Ngozi Adichie [chi-mah-MAHN-duh un-GOH-zee uh-DEE-chee]
23. This person was convicted in 2013 of embezzling from a state timber company. An app named for this person was released by the Anti-Corruption Foundation, an organization this person founded that is sometimes called "FBK". This person's brother Oleg and other allies have been charged in so-called "sanitary cases" for encouraging protests that violate pandemic restrictions. This person returned to his home country from Germany in February 2021, and he was immediately arrested. While in Germany he recovered from a poisoning attack. Name this opponent of Vladimir Putin.
Answer: Alexei (Anatolievich) Navalny [ah-lek-SAY nah-VAHL-nee]
24. This person planned the assassination of a group of British intelligence officers known as the Cairo Gang. While serving as the Minister for Finance, this person organized the Dáil [dahl] loan that financed the republican government he was part of. This person and Arthur Griffith negotiated a treaty that required an oath and allowed Northern Ireland to be part of the United Kingdom, leading to a civil war in which this person split from Éamon de Valera [AY-mun de vuh-LAIR-uh]. Name this person who was Chairman of the Provisional Government of the Irish Free State until he was killed in a 1922 ambush after being in office for seven months.
Answer: Michael Collins [or Mícheál Ó Coileáin]

25. This piece's overture is broken into four sections labelled *Adagio*, *Allegro*, *Lentement* [lent-mawn], and *Allegro*, and this piece ends with two minuets. A public rehearsal for this piece before its premier was so popular that it caused a three-hour traffic delay on London Bridge. The enormous pavilion built for this piece burned down during the first performance. The original performance of this piece had no string instruments because the king requested "no fiddles", but the composer wrote string parts for later performances. Name this piece whose sections *La Paix* [lah peh] and *La Réjouissance* [rezh-wee-sahnss] celebrate the end of the War of the Austrian Succession, written by George Frideric Handel.

Answer: *Music for the Royal Fireworks*

Check the score.

26. In January 2021, China announced plans to send an orbiter and possibly a lander that will launch in 2029 to go to this moon. The lack of layers of this moon is unexplained, and if it does not have a core, it is the largest undifferentiated object in the solar system. Of the four Galilean [gal-ih-LAY-un] moons, this one is *not* in orbital resonance with the other three and is the furthest from Jupiter. Heimdall and Valhalla are among the craters on this moon that make it the most cratered surface in the solar system. Name this second-largest moon of Jupiter, behind Ganymede [GAN-uh-meed] and ahead of Io ["EYE-oh"] and Europa [yur-OH-puh].

Answer: Callisto

27. This novel states "War, like other dramatic spectacles, might possibly cease for want of a public." That statement occurs after a character in this novel takes home Mr. Poulter's sword. In this novel's next chapter, that character tries to impress a girl with the sword, but drops it and hurts his foot instead, causing Mr. Stelling to enter his room. At the end of this novel, a brother and sister try to find Lucy Deane, but their boat is taken down by debris during a flood. Name this novel set in St. Ogg's that is about Tom and Maggie Tulliver and was written by George Eliot.

Answer: *The Mill on the Floss*

28. Before the Stoics, this person used the word *logos* [LOH-gohss] to refer to a permeating structure of the universe. This philosopher's own work, which now consists of over 100 fragments of a book he wrote, states "Character is destiny." This person wrote that the world "always was and will be an ever-living fire". In a work by Plato, this person states "You could not step twice into the same river." In contrast to Democritus [deh-MAH-krih-tuss], this person is sometimes called "the weeping philosopher". Name this philosopher from Ephesus [EFF-ih-suss] who wrote *On Nature* and is nicknamed "The Obscure".

Answer: Heraclitus [hair-uh-KLY-tuss] (of Ephesus)

29. These two people are the subject of two Artemisia Gentileschi [ar-tay-MEE-zee-ah jen-tee-LESS-kee] paintings, one of which shows one of these people wearing a bracelet. In those paintings, the maidservant Abra also plays an active role. Abra is older and watches from the right side in a Caravaggio painting of these two people in which the man has his mouth open and has blood streaming onto his pillow. In Gustav Klimt's portrayal of these two people, most of the woman's body can be seen, and she is holding the man's head after removing it. Name this woman and the general she beheads in a story in the Apocrypha.

Answer: Judith and Holofernes [haw-loh-FUR-nee-z] [either order; accept *Judith Beheading Holofernes* or *Judith Slaying Holofernes*]

30. The site of this battle was called "that little thing upon the meadow" by a person who killed an enemy leader five weeks earlier. That statement was by Iroquois Mingo leader Tanaghrisson [tan-ah-GRISS-sun], the Half King, who killed the half-brother of this battle's winner, Louis Coulon de Villiers [loo-ee koo-lohn de vee-yay]. Edward Braddock is buried at the site of this battle even though his disastrous expedition was a year after this battle. This battle reversed the results of the Battle of Jumonville Glen. Name this July 3, 1754 battle near the beginning of the French and Indian War, the only surrender made by George Washington.

Answer: Battle of Fort Necessity [prompt on Battle of the Great Meadows]

Check the score.

31. One poem by this writer repeatedly says "Let this be my parting word" and at one point adds "In this playhouse of infinite forms I have had my play and here have I caught sight of him that is formless." That poem is part of a collection that includes "I am here to sing thee songs". This poet translated that collection into English himself, calling it *Song Offerings*. This poet's collection of 326 very short poems ends with "Let this be my last word, that I trust in thy love" and is titled *Stray Birds*. Name this 19th- and 20th-century writer of *Gitanjali* [git-AHN-jah-lee] who originally wrote his works in Bengali.

Answer: Rabindranath Tagore [ruh-BIN-druh-naht tag-AWR] [or Rabi Thakur]

32. These particles were confirmed by observations of the decay of the Y resonance at Germany's PLUTO detector during the 1970s. While simplistic theories suggest that there are nine types of these particles, one of those nine cannot interact with anything; therefore, there are only eight. Some of the differences between these particles and photons can be explained by the fact that, while photons lack electric charge, these particles have color charge. The confinement of these particles with quarks is allowed by asymptotic freedom, and that confinement forms hadrons [HAY-drahnz]. Name these particles that bind quarks within protons and neutrons, and which are the messenger particles of the strong nuclear force.

Answer: gluons

33. When peasants prevented this goddess from drinking from a well in Lycia [LIK-ee-uh], she turned them into frogs. When Niobe [NY-uh-bee] bragged that she was more worthy of praise than this goddess, this goddess's children got revenge by killing almost all of Niobe's children. Boreas protected this goddess from Python by taking her to Delos [DEE-lohss] to give birth, and this goddess' son eventually killed Python. This goddess was forced to go to Delos because no land would accept her due to Hera's rage. Name this mother of the twins Apollo and Artemis.

Answer: Leto [or Latona; do not accept "Leda"]

34. Long after its apex, this city was the site of the last battle of the Byzantine–Sasanian War of 602 to 628. Much earlier, the destruction of this city was predicted in the Book of Nahum. The last major king to rule from this city was Ashurbanipal [ah-shur-BAH-nih-pahl], who became the namesake of its library. The city of Babylon was rebuilt by Esarhaddon [uh-SAR-huh-dahn] when he was ruling from this city. He was the successor and son of Sennacherib [suh-NAH-kuh-rib], who is credited with building up this city. This city is near present-day Mosul, Iraq, and is where God told Jonah to go. Name this city that was the capital of the Neo-Assyrian Empire.

Answer: Nineveh [accept Ninua or Kouyunjik]

35. A story by this writer asks "Do you accept the festival, the city, the joy?". This writer ends that story by describing the people who walk away, which happens after people see a child living in a small room in a basement with a couple of mops. In a series of works by this writer, it is always Year One in Erhenrang, which is the capital of Karhide ["car-hide"]. That location is visited by a native of Terra named Genly Ai. This author also wrote about the humans and dragons who live on Earth-sea. Name this author who wrote "The Ones Who Walk Away from Omelas" and *The Left Hand of Darkness*.

Answer: Ursula K. Le Guin

Check the score.

36. This type of reaction is the slowest step in the production of acetic acid through the Cativa [kuh-"TIE"-vuh] process, in which this step adds carbon monoxide. This type of reaction is classified by the way it changes the carbon framework, and one of its uses adds carbene to modify the surface of polymers such as nylon. Migratory reactions are often classified as these reactions because the end result is the same. The undoing of this type of reaction is extrusion or elimination. Name this type of reaction in which a new component is placed between two components that had been bonded together.

Answer: insertion reaction

37. Near the end of this opera, a young woman sings “It’s a dream” while a young man sings “I feel only you”, which is the “Ist ein Traum” / “Spür’ nur dich” [ist “eye”n traom, shpoor nur deek] duet. This opera was at first controversial because of its use of waltzes, including “Da Lieg’ Ich” [dah leek ik], which is sometimes called “The Baron’s Waltz”. For much of this opera, Octavian wears a skirt and bonnet, pretending to be Mariandel. Much of this opera revolves around giving a ceremonial silver object to Sophie von Faninal as part of an engagement ceremony. Name this comic opera by Richard Strauss [reek-hart shtraoss].

Answer: *Der Rosenkavalier* [dair ROH-sen-kah-fuh-leer] [or *The Knight of the Rose* or *The Rose-Bearer*]

38. When this legislator served in the U.S. House of Representatives, he was the sponsor and namesake of the law that overrode a law in the Territory of Utah. That 1862 law was this person’s Anti-Bigamy Act. Just after southern states seceded and just before Lincoln’s presidency, this congress-person from Vermont was the sponsor and namesake of a tariff increase; he had the same role for two more tariff increases during the Civil War. Another law named for this person in 1862 led to the creation of Kansas State University, Iowa State University, and eventually agricultural schools throughout the country. Name this congress-person who introduced the Land-Grant Act.

Answer: Justin Smith Morrill

39. This lake is fed from the south by the Kerio [“CARRY-oh”] River. This lake’s Central Island, which is also called “Crocodile Island”, is a dormant volcano. The west shore of this lake is near the archaeological site Lomekwi [LOH-meh-kwee], which is where the oldest known stone tools were found. The east shore of this lake is the site of Sibiloi National Park, where many fossils have been found near Koobi Fora Ridge. There is a controversy over whether the completion of the Gilgel Gibe III [GILG-el GIB-uh “three”] Dam will lower the level of this lake and increase its salinity by taking water from the Omo River. Name this lake in Kenya whose north end extends into Ethiopia.

Answer: Lake Turkana [prompt on Lake Rudolf]

40. This phenomenon is sometimes the namesake of the first phase of shifting balance theory, and in that theory this phenomenon explains how a population moves across an adaptive valley. The importance of both this phenomenon and biased gene conversion have been emphasized by supporters of the neutral theory of molecular evolution, which de-emphasizes natural selection. With small populations, this phenomenon can upset a Hardy–Weinberg equilibrium. Name this change in population alleles due to random sampling.

Answer: genetic drift(ing) [or allelic drift or the Sewall Wright effect; prompt on drift(ing)]

This is the end of the packet.