

Scobol Solo 2018

Championship II (Phase II: Questions 21-40)



21. This scientist applied the theory of phonons [FOH-nahnz] to develop a model for specific heat that was better than Einstein's model at matching the Dulong-Petit ["DO-long pay-tee"] law. That model uses a temperature named for this person that can be used to find the speed of sound in a material. The length named for this person measures how far it takes a solution to screen a charge and is sometimes also named for Erich Hückel. The force named after this person is a type of van der Waals force between an induced dipole ["DIE-pole"] and a permanent dipole. Identify this person whose namesake unit assumes equal charges of 10^{-10} ["10 to the minus 10th"] stat-coulombs and a distance of one angstrom, and which measures electrical dipole moment.

Answer: Peter (Joseph William) Debye [duh-"BY"] [or Petrus Josephus Wilhelmus Debije]

22. In a short story by this writer, the devil complains about being locked in a cage for 32 days by a carnival barker. In another story by this writer, Robert falls in love with a mannequin. Those stories, "The Devil Was Hot" and "Love for \$17.50", are in this author's collection *South of No North*. This author's last novel is about the private detective Nicky Belane, whom Lady Death hires. This author's other novels are about Henry Chinaski, who first becomes an alcoholic in junior high school. Name this German-American author who set many of his works in California, including *Pulp* and *Ham on Rye*.

Answer: (Henry) Charles Bukowski [or Heinrich Karl Bukowski]

23. This national park's Jordan Cliffs Trail cannot be walked during the summer due to peregrine falcon nesting. This park is partly surrounded by Blue Hill Bay and Frenchman Bay. It is near the Porcupine Islands, which can be viewed from Cadillac Mountain. Among U.S. national parks east of the Mississippi River, this is the oldest. Part of this park is on the Schoodic [SKOO-dik] Peninsula, though most of this park is on Mount Desert Island, including the town of Bar Harbor. Name this national park on the coast of Maine.

Answer: Acadia National Park

24. A painter from this country established six principles for its national painting tradition, the first of which is “spirit resonance”. A son-in-law of a playwright commissioned an instructional painting book from this country that is an early example of color printing, entitled *Manual of the Mustard-Seed Garden*. A traditional painting style from this country uses ink staining to depict birds and flowers, and has a name meaning “boneless”. In a painting considered this country’s *Mona Lisa*, people scramble to unfurl a mast on a boat that is about to crash into the “Rainbow Bridge”. That painting from this country depicts urban and rural scenes during a grave sweeping-festival. Name this country where Zhang Zeduan [zhahng zeh-doo-ahn] painted *Along the River During the Qingming [cheeng-meeng] Festival* during the Song dynasty.

Answer: China or Zhongguo

25. This ancient leather-tanner is sometimes referred to as the first demagogue. This leader and his opponent Brasidas [bruh-SEE-das] were killed at the Second Battle of Amphipolis [am-FIP-oh-lis], which made it easier for both sides to negotiate the Peace of Nicias [NISH-ee-uss]. Earlier, this person criticized Nicias and then worked with his general Demosthenes [duh-MAHSS-thuh-nee] to force a Spartan surrender at the Battle of Sphacteria [s’fak-TEH-ree-uh]. When Athens defeated Mytilene [mee-tee-LEE-nee], this leader proposed killing its men and enslaving its women and children. Name this person who became the leader of Athens in 429 BC after the death of his enemy Pericles.

Answer: Cleon [KLEE-ahn]

Check the score.

26. Although the canonical version of this specific data structure uses modular arithmetic, it is often more efficient to require the size to be a power of 2 and to reduce values using a bit mask rather than finding remainders. This data structure’s load factor is the number of entries divided by the number of buckets. This data structure degenerates to a linked list if the function used to define this structure has too many cases in which different inputs give the same output; that problem can be resolved by open addressing or by chaining [pause] and is called a collision. This structure is commonly used to implement caches and other types in which data can be looked up. Name this data structure that implements an associative array, or dictionary, using a namesake function to relate keys to values.

Answer: hash table or hash map [prompt on hash]

27. One of these animals that is white with green spots was recovered on a journey by Cian [KEE-in], during which he conceives Lugh [loo] with Balor's [BAL-or'z] daughter. A series of stories about quests for these animals are called the Táin Bó [TOYN boh]. One story begins with a pillow-talk scene in which a king and queen compare their wealth and discover that the only difference is that the king owns one of these animals named Finnbhennach [FIN-ben-ahk]. In that story, Dáire mac Fiachna [DAH-rah "mock" FEE-ahk-nah] owns one of these animals that a queen requests to rent for a year before he refuses and Ailill [AH-lil] and Medb [mev] assemble an army. Donn Cuailnge ["don" KOO-lah-nee-yeh] is one of these animals in a story in which the Morrígan [mor-EE-un] interrupts Cú Chulainn's [kuh HOO-lin'z] attempts to fight back the army of Connacht ["CON"-ukt]. Name these animals that kill each other during a raid at Cooley.

Answer: cows [or cattle or bulls or kine]

28. One play by this writer contains the line "In this part he most shows himself a man, whoever tolerates making himself equal to another, rich to poor", spoken by Gorgias [GOR-jee-us]. Another play by this writer begins with a prologue narrated by Moschion [MAHSS-kee-ahn], who talks about impregnating Plangon and having the child taken care of by Demeas' [DEM-ee-uss'z] mistress, Chrysis ["crisis"]. That play, which is still missing some lines, was found in the Bodmer Papyri and Cairo Codex. Another play by this writer begins with Pan talking about Knemon [k'-NEE-mahn], who lives with his servant Simiche [SIM-ih-kee] and daughter Girl. Name this New Comedy writer of *Samia* and *Dyskolos*.

Answer: Menander [or Menandros]

29. Some of the inhabitants of this city migrated to start the Kingdom of Mutapa. An all-female archeological team led by Gertrude Caton Thompson was criticized for concluding that this city was a native civilization. A soapstone carving found in this area also appears on the flag of the modern country in which this ancient city can be found. David Randall-MacIver's research found that the Shona created this city, which is characterized by mortar-less stone construction. Name this ruined city that included the the Hill Complex, the Great Enclosure, and the Valley Ruins in Southeast Africa.

Answer: Great Zimbabwe

30. Pairs of these molecules with identical function are called iso-schizomers ["ice"-oh-SKIZ-oh-murz]. Cognate methyl-ases ["METH-uh-laces"] block the action of these molecules. The online tool Webcutter predicts the activity of these molecules. Plasmid recombination and RFLP fingerprinting first require a digest with these molecules. They evolved as a defense against bacteriophages and they often produce "sticky ends" when they cut at palindromic base sequences. Name these proteins, such as Hind·III ["hind 3"] and Eco·R·I ["eco R 1"], that are used to fragment DNA prior to gel electro-phoresis ["elect-row-for"-EE-siss].

Answer: restriction enzymes [or restriction endonucleases; prompt on partial answer]

Check the score.

31. In a film from this country, a row of men in white hit trees with sticks to chase out rabbits, who are promptly shot. Another film from this country ends by zooming in on a freeze-frame of a boy's face after he has run out to the ocean. The schoolteacher Sourpuss admonishes the protagonist for copying Balzac in a film from this country in which that protagonist steals a typewriter to try to sell to escape from home. Patricia betrays her love interest to the police in a film from this country. The films *The Rules of the Game* and *The 400 Blows* are from the New Wave film movement from this country. Name this country in which the filmmakers Jean Renoir [zhahn ren-wah] and François Truffaut [fran-swah troo-foh] worked.

Answer: France [or French Republic or République française]

32. John Boehner [BAY-nur] called this person a “legislative terrorist”. Russ Hellickson asked Dunyasha Yetts to support this person when discussing allegations against Richard Strauss. This person asked Rod Rosenstein [“ROSE”-un-styn] “Did you threaten to subpoena their calls and emails?” in reference to Congressional staffers. This person preceded Mark Meadows as the chair of the Freedom Caucus. He announced his intention to run for Speaker of the House but ended up losing a bid to become Minority Leader. Name this conservative Republican who ignored sexual abuse of the wrestling team at Ohio State University.

Answer: (James Daniel) “Jim” Jordan

33. The narrator of one poem by this writer flees a riot, saying “My metabolism already over-taxed.” That poem is about an alien preparing reports about the United States for The Counselors. For over a decade, this poet was an editor of *World Order* magazine, which is for Bahá'í people. This poet described freedom as a “needful thing” in his sonnet about Frederick Douglas. This poet asks “What did I know of love’s austere and lonely offices?” in a poem in which he states that “no one ever thanked” his father. Name this African-American poet who wrote “American Journal” and “Those Winter Sundays”.

Answer: Robert Hayden [or Asa Bundy Sheffey]

34. A surface named for Pierre Fermat [fair-mah] and this operation takes a sum in which this operation is used three times, then the results are summed and the sum is set equal to 1. Performing this operation separately on the first n natural numbers, then adding the result, gives the same value as the square of the sum of the first n natural numbers. Taxicab numbers are numbers that can be written as the sum of this operation being applied twice, in two different ways, as described by Srinivasa Ramanujan [sree-nee-VAH-sah rah-MAH-noo-jahn]. This operation applied to x , minus this operation applied to y , equals the quantity $x - y$, end quantity, times the quantity $x^2 + xy + y^2$ [“ x squared plus $x y$ plus y squared”]. Identify this operation, named for one of the Platonic solids, whose first few results for natural numbers are 1, 8, 27, and 64.

Answer: cubing or taking the cube [or raising to the 3rd power or raising to the power of 3; accept (Fermat) cubic]

35. This city was the home of Carl Stokes, its first African-American mayor, and his brother Louis, who was the second chair of the Congressional Black Caucus. After Eugene Debs went to jail, this city was the site of the violent May Day Riots of 1919. In 1870, John Rockefeller established the Standard Oil Company in this city. This city defaulted on its debts in 1978 when it was headed by Mayor Dennis Kucinich [“cue-SIN-itch”]. The Environmental Protection Agency was created shortly a fire on this city’s Cuyahoga [ky-uh-HOH-guh] River. Name this city that was part of the Western Reserve.

Answer: Cleveland, Ohio

Check the score.

36. This thinker argued that *vita contemplativa* [VEE-tah kohn-temp-lah-TEE-vah] had been overtaken by *vita activa* [VEE-tah ak-TEE-vah] as examples of modernity. This author of *The Human Condition* argued against the scapegoat theory of anti-Semitism in a work that compared the conditions of the Soviet Union and Nazi Germany in the 1930s. An earlier work by this thinker claimed that the central figure had misinterpreted the categorical imperative and described that defendant as repeating “stock phrases”. Name this German-American philosopher who wrote *The Origins of Totalitarianism* and used the phrase “banality of evil” in the subtitle of her book *Eichmann [“EYE”K-mun] in Jerusalem*.

Answer: (Johanna) “Hannah” (Cohn) Arendt (Bluecher) [accept either underlined name]

37. At one point in this novel, the Collar of the Most Noble Order of the Bath is placed around the neck of the title character by Sir Adrian Scrope, and the title character then places the golden circlet of strawberry leaves upon his brows. A few days later, the Lady of Purity, Lady of Chastity, and Lady of Modesty dance around the title character, causing his body to transform. Earlier in this novel, the title character falls in love with the Russian princess Sasha after his stormy relationship with Queen Elizabeth causes her to break a mirror. Name this novel about a man who changes into a woman and stops aging, written by Virginia Woolf.

Answer: Orlando(: A Biography)

38. A society of contemporary composers from this country called “Ears Open” was co-founded by a composer from this country who wrote the piece *Lonh* for soprano and electronic instruments, and who also wrote the opera *L’amour de loin*. A past music director of the L.A. Philharmonic who wrote the piece *L.A. Variations* is from this country. A composer from this country was haunted by the spirit of Don Juan while writing the second movement of one of his symphonies; that movement begins with pizzicato [pit-sih-KAH-toh] double bass. That composer from this country wrote his *Symphony No. 2* while in Italy and was accused of writing a “polonaise for polar bears” in his violin concerto’s third movement. Kaija Saariaho [KY-ah SAR-ee-ah-hoh] and Esa-Pekka Salonen are from this country, as is a composer who was inspired by this country’s national myth to write his *Lemminkäinen Suite*. Name this country in which Jean Sibelius lived and worked.

Answer: Finland [or Suomi; accept Republic of Finland or Suomen tasavalta or Republiken Finland or Grand Duchy of Finland or Suomen suuriruhtinaskunta or Velikoye knyazhestvo Finlyandskoye or Storfurstendömet Finland]

39. This organization's candidates won 99 out of 100 seats when its country's senate was re-established. A secret meeting between this organization and the government led to that election, which led to the Round Table Agreement and the Contract Sejm ["same"]. This group led a coalition with the United Workers' Party, though a disagreement over how to convert to a market economy led that coalition to split in 1990. This group was formed after a strike at an electrical shipyard in Gdańsk [guh-DAHNSK]. Name this union and political party that was led for much of its early existence by Lech Walesa [lek vah-WEN-sah] in Poland.

Answer: Solidarity [or Solidarność]

40. The Fries ["frees"] rearrangement converts phenolic [fee-NAW-lik] examples of this class of compounds. The erythromycin [uh-RITH-roh-MY-sin] family of antibiotics are all cyclic examples of these compounds, called lactones ["LACK-tones"]. It is not a ketone ["key-tone"], but Grignard [GREEN-yar] reagents attack this functional group to yield tertiary alcohols. Saponification [suh-PAH-nih-fih-KAY-shun] makes soap by breaking this functional group in tri-glycerides ["try-GLISS-uh-rides"], while polymerizing these compounds produces both Mylar and Dacron fibers. The simplest examples of these compounds are formed by combining an alcohol and a carboxylic acid in the Fischer reaction. This class of fragrant organic compounds has the general formula "R-C-O-O-R" ["R, C, O, O, R prime"]. Name this class of compounds such as ethyl butyrate ["Ethel" byoo-TEER-"ate"] and iso-pentyl acetate ["ice-oh-PEN-till ASSET-ate"], which are found in artificial pineapple and banana flavoring.

Answer: esters

This is the end of the packet.