

Scobol Solo 2015

Packet 2 (Round 2)



1. A hypervalent atom of this element in the center of a reagent used to oxidize alcohols is named for Dess and Martin. A mixture of this element with hydrogen per-oxide and sulfuric acid is the basis for a chemical clock reaction that turns dark blue. This element and potassium are found in the starch staining Lugol's solution. A deficiency of this element in humans can cause goiter. Intake of this element is required for proper function of the thyroid, which is why it is added to table salt. This element and astatine [AS-tuh-teen] are the two solid halogens. Name this purple element found below bromine [BROH-meen] on the periodic table, whose symbol is I.

Answer: iodine [accept I before the end]

2. The Norse goddess Freya had a cloak made of these objects that she loaned to other deities. Eribotes [air-ih-BOH-teez] pulled out one of these objects from the shoulder of Oileus [oh-ih-LEE-uss]. Pliny [PLY-nee] the Elder stated that the phoenix had a cap of these objects on its head. In Egyptian mythology, the hearts of the dead are weighed in comparison to one of these objects belonging to Ma'at. Quetzalcoatl [KETS-ul-koh-AH-tull] is often nicknamed as a serpent covered in these objects. Daedalus [DED-uh-luss] combined these objects with wax in an invention that led to the death of his son Icarus. Name this object stuck into the cap of Robin Hood and often put in headdresses by Native Americans.

Answer: feathers

3. In this location, thousands of students protested the Twenty-One Demands and the Treaty of Versailles ending World War I as part of the May Fourth Movement. In 2013, the Turkistan Islamic Party took credit for a suicide car crash at this location. Some of the actions in this location have been next to the Monument to the People's Heroes. In 1976, a protest in this location followed the death of a premier and was against the Gang of Four. During the June Fourth Incident, a protester stood in the middle of a street to block tanks going to this location. That incident ended violently due to hardliner Deng Xiaoping [tong shaw-peeng]. Name this public square in Beijing.

Answer: Tiananmen Square [prompt on Beijing or China]

4. This author made a chart for Stuart Gilbert associating different colors, body organs, and arts with various sections of one of his novels. Joseph Campbell wrote a “Skeleton Key” explaining another novel by this author. A collection by this author ends with Gabriel Conroy watching snow fall in the story “The Dead”. One of this author’s novels begins with the father telling a story about Baby Tuckoo meeting a “moo·cow”. The protagonist of that novel lives with Buck Mulligan and meets Leopold Bloom in a later novel which takes place during a single day. Name this Irish author of *Finnegans Wake*, *Ulysses*, and *A Portrait of the Artist as a Young Man*.

Answer: James Augustine Aloysius Joyce

5. The Riemann [REE-mahn] sphere represents a “point at infinity” and all of the numbers in this set. These numbers are represented on an Argand diagram, which can be called a “plane” of these numbers. These numbers can be raised to real-number exponents using de Moivre’s [duh mwahv’z] theorem, for which it is helpful to write them in polar form, which often uses “cis” [siss] notation. These numbers can be reflected over the real axis to find their conjugate. Name these numbers that have real and imaginary components, and are often expressed in the form $a + bi$ [“a plus b i”].

Answer: complex numbers [or complex plane; prompt on C]

Check the score.

6. In 2006, Patricia Dunn resigned as the leader of this company during a controversy over how it obtained phone records of its board members. During 2015, this company has taken over Voltage Security, Contexstream [kon-TEX-tream], and Aruba Networks, and its past acquisitions include E.D.S., Palm, and 3Com [“three”-kahm]. This company was the world’s leading PC manufacturer until being surpassed by Lenovo [lih-NOH-voh] in 2013. Meg Whitman split up this company in 2015. After hiring away the president of Lucent Technologies in 1999, this company merged with Compaq in 2002. Name this information technology company that was once run by Carly Fiorina.

Answer: Hewlett-Packard Company [or HP]

7. A congressional act invoking this amendment was held to be constitutional in *Brushaber v. Union Pacific Railroad*. Philander Knox certified this amendment near the end of his term as secretary of state. It made the case of *Pollock v. Farmers’ Loan & Trust Company* obsolete. This amendment explicitly allows Congress to ignore “any census or enumeration” and “apportionment among the several States” when carrying out the action it permits. It passed in 1913, two months before an amendment requiring the popular election of senators. Name this amendment that allows Congress to levy an income tax.

Answer: 16th Amendment

8. This person wrote an Independence Day Manifesto also called “Poetry, Violence, and the Trembling Lambs”, which opens his essay collection *Deliberate Prose*. One of this person’s poems begins, “America I’ve given you all and now I’m nothing.” This person said he had “no more to say, and nothing to weep for but the Beings in the Dream” in a poem remembering his mother Naomi. The second part of another poem by this writer repeatedly references a “sphinx of cement and aluminum” named Moloch. That poem opens “I saw the best minds of my generation destroyed by madness.” Name this poet who wrote “Kaddish” and “Howl”.

Answer: Allen Ginsberg

9. These events can be produced by motion in a Wadati-Benioff [wah-DAH-tee BEN-ee-off] zone. These events are modeled using nine sets of two vectors called moment tensors. PAGER is a system to monitor them. A swarm of these events took place in the Mammoth Lakes, California region in 2014. One of the first methods to measure these events was the Rossi-Forel scale, which is similar to the more modern Mercalli intensity scale. The moment magnitude scale is now more common. Along with volcanic eruptions, these events often occur along the “ring of fire” and at other places along geological faults. Name these events often followed by aftershocks that can be measured on the Richter scale.

Answer: earthquakes [or tremor or temblor or seismic events or seisms]

10. This composer’s only concerto, for piano, opens with a drum roll, a seven-note dotted-quarter-note chord, two three-note sixteenth-note chords, and another seven-note dotted-quarter-note chord. That piano concerto’s first movement is marked *allegro molto moderato*. This composer’s collection of 66 short pieces in ten volumes is called *Lyric Pieces* and includes “Wedding Day at Trold·haugen”. Two of his suites, which were derived from incidental music he wrote, begin with “The Abduction of the Bride” and “Morning Mood”. Those suites end with “Solveig’s Song” and “In the Hall of the Mountain King.” Name this Norwegian composer who wrote music for Henrik Ibsen’s play *Peer Gynt*.

Answer: Edvard (Hagerup) Grieg [accept Edward Grieg]

Check the score.

11. The eastern part of this country includes the city Choi·bal·san, in the Dor·nod region. The northern part of this country includes Darkhad Valley, which includes Dood Tsagaan Lake. That area is near Lake Khuvs·gul, and further east is the city of Er·de·net. Its provinces are called *ai·mags*. Some of the Sayan Mountains are in the northern part of this country, and its western section includes the Altai Mountains. Much of the southern part of this country includes the Gobi Desert. Its capital, at the junction of the Tuul and Selbe rivers, is Ulan Bator, the home of Genghis Khan Airport. Name this large landlocked country between Russia and China.

Answer: Mongolia [or Mongol Uls]

12. One novel by this author is about the Special Service for Garrisons, Frontier, and Related Installations, which runs efficiently until a member nicknamed the Brazilian is buried with military honors. In addition to that novel about Captain Pantoja [pahn-TOH-hah], this author wrote a novel in which the narrator works out of a wooden shack on a rooftop terrace with Pascual. That novel, which was originally planned as a story about Pedro Ca-ma-cho, describes the relationship between the narrator and an older woman who is his uncle's wife's sister. This author set that novel at a radio station in Lima [LEE-muh]. Name this author of *Aunt Julia and the Scriptwriter*.

Answer: Mario Vargas Llosa [YOH-sah] [prompt on partial last name]

13. Shikimic [shih-KIM-ik] acid is a base material for drugs that target this disease. The genome of this disease consists of eight negative-sense RNA segments. Zanamivir [zuh-NAH-muh-veer] and oseltamivir [oh-sel-TAM-ih-veer] target this virus by competitively cleaving sialic [sy-AAL-ik] acid. One enzyme on this virus's surface causes red blood cells to clump, or agglutinate [ag-GLOO-tuh-nate]. The lack of an M2 ion channel characterizes the B variant of this virus. Hema-gglutinin [HEEM-uh-GLOO-tuh-nin] and neur-aminidase [NUR-uh-MIN-ih-dayss] are spike proteins that classify types of this ortho-myxo-virus [OR-thoh-MIK-soh-"virus"] like the H1N1 [H one N one] variant. Name this disease that has bird and swine varieties.

Answer: influenza [accept more specific answers]

14. One painting by this artist shows a man and woman on the right looking at a brown horse standing in a field with a jockey wearing white. This painter of *At the Races* showed a woman with orange hair riding a horse at Cirque [sirk] Fernando. The bright face of May Milton appears on the right side of one work showing this artist himself in the center facing to the left. This painter helped popularize Marcelle Lender and Jane Avril through paintings and posters of those dancers. Due to a bone disorder, this painter's legs did not grow properly, and he was less than five feet tall. Name this painter of French nightlife who portrayed the Moulin Rouge [moo-lan roozh].

Answer: Henri de Toulouse-Lautrec

15. Before this battle, Demaratus [dee-MAHR-ah-tus] warned his king to take the enemy seriously. After waiting a few days, that king then sent the Medes [MAY-dus] and Cissians [kih-SEE-uns] into battle, but they were repelled. After this battle, the city of Thes-pi-ae was burned down; during this battle, the Thespians fighting for Demophilus were the only troops who surrendered. At the same time this battle took place, the naval Battle of Art-e-mi-si-um took place. Soon after this battle, the Persian advance was stopped at the Battle of Salamis [SAL-uh-miss]. Name this battle where Persians led by Xerxes [ZURK-seez] the Great defeated Leonidas [lee-uh-NIE-dus] and his 300 Spartans.

Answer: Battle of Thermopylae [thur-MAH-puh-lee]

Check the score.

16. This person advised “Be not afraid of life” at the end of his essay “Is Life Worth Living?”. He discussed knowing the tigers in India in a so-called sequel he wrote, *The Meaning of Truth*. He ended one lecture with a quote from Fitz James Stephen discussing being on a mountain pass in a snow storm. One of this person’s books contrasted the “healthy-minded” and “sick soul” approaches to religion. In addition to developing functional psychology, this person wrote “The Will to Believe” and *The Varieties of Religious Experience*. Name this American seen as a bridge between Charles Sanders Peirce [“purse”] and John Dewey in the development of pragmatism.

Answer: William James

17. In one novel by this author, Pink tells the protagonist his fingers are “cold as snakes”. That novel about Damon Cross is *The Outsider*. This author wrote about getting hit by a thrown broken milk bottle behind his ear in his autobiographic sketch “The Ethics of Jim Crow”, which was in the short story collection *Uncle Tom’s Children*. A novel by this author starts with the protagonist using a skillet to kill a rat that entered his family’s apartment. That protagonist in a work by this author gets into a fight with his friend Gus and then accidentally suffocates Mary Dalton, a wealthy white woman. Name this author who wrote about Bigger Thomas in the novel *Native Son*.

Answer: Richard Wright

18. The noun form of this adjective is used to describe the quality of a color based on wavelength and purity without regard to luminance. A type of problem described with this adjective can be decreased by using materials that have a high constringence [kon-STRIN-jinss], which is measured using a V-number or Abbe [ah-buh] number. This adjective can be placed in front of the term “dispersion” to clarify that light is separated based on its color. This adjective describes the distortion of lenses caused by the separation of colors, which is a type of aberration. Name this adjective that also describes a musical scale containing every half step instead of a diatonic scale.

Answer: chromatic [or chromaticity; accept more specific answers]

19. Giovanni Villani’s [joh-VAH-nee vil-LAH-nee’z] history of this city is the *Nuova Cronica*. Stilicho [STEE-lee-koh] took this city from Ra·da·gai·sus shortly before killing him. In 1865, Italy made an agreement with Napoleon III [3] to move its capital from Turin to this city. One leader of this city was offered a red hat but said he wanted a hat of blood. That leader, who burned condemned objects in his Bonfire of the Vanities, was Savonarola. Savonarola was allowed into this city by Lorenzo the Magnificent, who belonged to the Medici [meh-DEE-chee] family. In 1993, a mafia bombing damaged part of this city’s Uffizi [oo-FEET-see] art museum. Name this home of Niccolò Machiavelli, the capital of Tuscany in central Italy.

Answer: Florence, Italy [or Firenze or Florentia]

20. The Basilica of San Lorenzo has this person's portrayal of the Crucifixion and the Deposition. One work by this artist shows a person whose right hand is inside a strap and holding up a scroll. That work, which is believed to show the prophet Ha·ba·kkuk, is nicknamed *Zuccone* [zook-KOH-nay] because of the subject's bald head. It is in the Museo dell'Opera del Duomo [DWOH-moh] in Florence, which also contains this artist's *Penitent Magdalene*. Another sculpture by this person shows a character with his left hand on his hip who is wearing only a helmet and boots. That character's left foot is stepping on a head. Name this Florentine sculptor who made a bronze *David*.

Answer: Donatello [or Donato di Niccolò di Betto Bardi]

This is the end of regulation. Check the score. If it is tied, proceed to overtime tossups. If it is not tied, the game is over.

- ^{TB}21. In this novel, Henry Foster laughs about the amount of overtime he worked after a Japanese earthquake. Mr. Foster then gives a lot of quantitative information, pointing out that 15 racks move $33\frac{1}{3}$ centimeters an hour for 267 days. Students in this novel are taught about Bo·ka·nov·sky's Process, which allows a single human egg to produce up to 96 offspring. That process supports the World State's motto, "Community, Identity, Stability". In this novel, John grows up on the New Mexico Savage Reservation. Name this novel, set in the year 632 After Ford, by Aldous Huxley.

Answer: Brave New World

If the score is still tied, continue. If it is not tied, the game is over.

- ^{TB}22. This shape is generated by setting x equal to sine theta times cosine phi, y equal to sine theta times sine phi, and z equal to cosine phi. If two triangles drawn on the surface of this solid have the same angle sum, they must have the same area, and it is possible for triangles on this shape's surface to have three 90-degree angles. Of all the shapes with a given volume, this shape has the least surface area; that surface area equals 4π ["four pi"] times the radius squared, while its volume is $\frac{4}{3}\pi$ ["four-thirds pi"] times the radius cubed. Name this shape, the set of all points in 3D that are the same distance from a center point.

Answer: sphere

If the score is still tied, continue. If it is not tied, the game is over.

- ^{TB}23. This state's governor is Terry McAuliffe. This state's senators are Mark Warner and Tim Kaine. This state is south and west of the District of Columbia. Name this state whose cities include Norfolk, Alexandria, and Richmond.

Answer: Virginia

There are no more overtime questions available. If the score is still tied, contact the control room for further instructions. If it is not tied, the game is over.