

Scobol Solo 2015

Packet 12 (Round 12)



1. In one play by this writer, Olga and Louis send Hugo to assassinate Hoe-der·er. That play, set during World War II in Ilyria [il-EER-ee-uh], is *Dirty Hands*. Though this writer was European, he addressed American racism in a play in which Lizzie Mackay is pressured to sign a false account about an incident on a train, *The Respectful Prostitute*. In another play by this writer, one of the characters describes tying a stone to her daughter and dropping her in a lake. In that play, set in a room with Second Empire furniture, Joseph Garcin [gar-san] concludes that “hell—is other people!”. Name this French existentialist who wrote *No Exit*.

Answer: Jean-Paul (Charles Aymard) Sartre

2. Wet-type cerumen [suh-ROO-men] in this organ has been linked to armpit odor. Bumps on the outside of this organ include the tragus [TRAY-gus] and anti-tragus, and the outside of this structure is called the auricle or pinna. The semi-circular canals in this structure assist in maintaining balance, and its organ of Corti [KOR-tee] contains hair cells that respond to incoming vibrations. The stapes [STAY-pees], the smallest bone in the body, is in this organ, whose inner portion contains a spiral cavity called the cochlea [KOHK-lee-uh]. These organs’ lobes may be attached or un-attached. Identify this organ used for hearing.

Answer: ear(s)

3. This European city’s Museum of Contemporary Art was designed by Richard Meier. That museum and this city’s Center of Contemporary Culture are in its Raval neighborhood. This city’s Hospital of the Holy Cross and Saint Paul was designed by Lluís Domènech i Montaner [yoo-EEZ thoo-MEN-uk ee moon-tah-NAY]. This city is home to Frank Gehry’s *Fish Sculpture* and a multicolored mosaic salamander at its Park Güell. *Dona i Ocell* [oh-SELL], which means *Woman and Bird*, is one of its many Joan Miró [zhoo-AHN mee-ROH] sculptures, and this city has a museum dedicated to him. A church in this city began its construction in 1882 and is expected to be completed in 2026. Name this city that his home to Antoni Gaudí’s Sagrada Familia in Catalonia, Spain.

Answer: Barcelona, Catalonia, Spain

4. In this country, Adolfo Díaz was able to finish his presidential term according to the 1927 Pact of Espino Negro [es-PEE-noh NAY-groh] following its civil war. During the 19th and 20th centuries, several leaders of this country came from either the Chamorro or Somoza families. After A-nas-tas-i-o Somoza was exiled in 1979 and then killed in Paraguay, the Junta [HOON-tuh] of National Reconstruction took control of this country with the support of the San-din-is-tas. U.S. President Reagan supported the Contra rebels against them, selling weapons to Iran in order to fund the rebels. Name this Central American country, now being run for the second time by Daniel Ortega, whose capital is Managua.

Answer: Nicaragua

5. This country's Alternate Minister of Finance was Nadia Valavani until she resigned from the leading party in 2015 to join this country's new left-wing Popular Unity Party. This country's third largest party, which denies being neo-Nazi despite using Nazi salutes and colors and having several high-ranking Holocaust deniers, is the Golden Dawn. This country held its second national election of 2015 in September following the August resignation of its prime minister. That prime minister, who belongs to the Syriza [seh-REE-zah] Party and has returned to power, is Alexis Tsipras [TSEE-pruss]. Name this country in southeastern Europe that received several billion dollars in additional loans in 2015 when it was unable to pay off its old loans.

Answer: Greece [or Hellenic Republic or Ellas or Ellada or Elliniki Dhimokratia]

Check the score.

6. One character in this play says, "Shake off this downy sleep, death's counterfeit, And look on death itself!". That quote is spoken by a character in this play who finds the king murdered and who later has his own wife and son killed before beheading this play's title character. The title character of this play saw an imaginary dagger before killing the king. At the end of this play, Malcolm becomes king, following in the footsteps of his father, Duncan. In this play's first scene, the words "Fair is foul, and foul is fair" are spoken by three witches. Name this Shakespeare play featuring Macduff, sometimes called "the Scottish Play".

Answer: (*The Tragedy of*) Macbeth

7. The efficiency of a heat engine is calculated by dividing two values of this quantity. This quantity is raised to the fourth power in the Stefan-Boltzmann law, which can be used to find this quantity for stars based on their luminosity and radius. The peak wavelength of radiation is found by dividing Wien's [veen's] displacement constant by this quantity. Multiplying this quantity times 3/2 times Boltzmann's constant gives the average kinetic energy of molecules. This quantity is multiplied by the number of moles and a constant in the ideal gas law. Name this quantity whose lowest value is absolute zero and which is measured in kelvins.

Answer: absolute temperature

8. A collection that started out as 15 sonatas by this composer and grew eventually to 19, including four recorder sonatas, was compiled by Friedrich Chrysander. Another work by this composer has a fourth movement labelled *La Réjouissance* [*ray-zhwah-sawnss*] and two minuets in its fifth movement, which is its last. That piece premiered at a celebration of the end of the War of the Austrian Succession. Another piece by this composer, containing a total of 21 movements in three suites, was premiered for King George I [1] on the Thames [*temz*]. Name this composer of *Music for the Royal Fireworks* and *Water Music*, whose *Messiah* oratorio includes the “Hallelujah” Chorus.

Answer: George Frideric Handel [*“handle”*] [or Georg Friedrich Händel]

9. Ajax used one of these objects made of seven cow-hides. Hesiod wrote a poem about the one belonging to Heracles, and W. H. Auden wrote a poem about the one owned by Achilles [*uh-KIL-eez*]. Over one hundred lines of the *Iliad* are used to describe the one belonging to Achilles, which depicts the Earth, constellations, cities, and a dance floor. Athena may have added the head of a Gorgon to hers after it was made by Hephaestus [*huh-FEST-uss*]. Perseus used a polished one to look at Medusa when he killed her. Fallen soldiers were carried on these objects after ancient battles. Name these protective objects held by people who go to war.

Answer: shields [prompt on armor]

10. In the 16th century in this country, Johan Rantzau [*YOH-hahn RAHNT-soh*] ended a peasant rebellion led by Skipper Clement known as the Count’s Feud. The first king of what is now this country was Gorm the Old, who raised one of the Jelling stones. This country was the southernmost part of the Kalmar Union. Its King Christian X [10] was able to keep his title during the Nazi Occupation. In recent years, this country has given more autonomy to Greenland. This country, headed by Queen Margrethe II [*mahr-GREE-duh “the second”*], is considered Scandinavian even though it is on mainland Europe. Name this country whose capital is Copenhagen.

Answer: Denmark

Check the score.

11. Typical Friedel-Crafts reactions use aluminum tri-chloride or this element’s tri-chloride as a catalyst. The most common thermite reaction combines aluminum with this element’s oxide. Nickel-62 and this element’s 56 isotope have the highest nuclear binding energies, which is why stellar fusion ends at this element. This element is found in the center of the porphyrin [*por-FEER-in*] rings of heme [*heem*]. Nickel and cobalt exhibit the type of magnetism named for this element. A layer of zinc is used to galvanize this element, because otherwise it combines with oxygen to form rust. Name this metal that forms steel with carbon, and whose symbol is Fe.

Answer: iron [accept Fe before the end]

12. In one work by this writer, two doves guide the protagonist to the golden branch, allowing the hero to enter Dis. In that same work, this person wrote about a phantom version of his hero that was chased onto a ship by Turnus. This poet's agricultural work is *Georgics*, while he developed a form started by Theocritus in his *Eclogues*. The George Bernard Shaw title *Arms and the Man* takes its title from the first line of an epic by this writer. That epic describes how the son of Anchises [aan-KY-seez] and legendary forefather of Romulus and Remus set up the founding of Rome. Name this ancient poet who wrote the *Aeneid* [uh-NEE-id].

Answer: Virgil [or Publius Vergilius Maro]

13. One painting by this artist shows an irregular frame with six sections showing scenes such as clouds, fire, and windows. Another painting by this artist shows a boat with the same texture as the water it is floating on. Those paintings are *The Empty Mask* and *The Seducer*. Another one of his paintings, which shows men that look like they are falling from the sky like rain, is *Golconda*. This person also painted a train coming out of a fireplace in *Time Transfixed*, and a man whose face is behind an apple in *The Son of Man*. Name this Belgian surrealist whose *The Treachery of Images* includes French words meaning "This is not a pipe" under a picture of a pipe.

Answer: René(-François-Ghislain) Magritte

14. John "Whispering Willie" Williams cast a deciding vote for this legislation. Bourke Hickenlooper led a group of six Republicans opposed to it, though most of the opposition came from Democrats, and the bill passed thanks to Republican Minority Leader Everett Dirksen. This act created the Community Relations Service, and its Title V [5] expanded a commission created by a similar act in 1957. The inadequacy of its Title I [1] led to the passage of the Voting Rights Act the next year. It was filibustered for 54 days by Robert Byrd and Strom Thurmond. Name this law, signed by Lyndon Johnson, that outlawed certain types of racial discrimination.

Answer: Civil Rights Act of 1964

15. These constructs "make infinite use of finite means" according to Wilhelm [VIL-helm] von Humboldt. In *Philosophical Investigations*, Ludwig Wittgenstein [LOOT-veek VIT-gun-shtyne] argued that the rules of these constructs are similar to the rules of games. Without this construct, "thought is a vague, uncharted nebula" according to Ferdinand de Saussure [soh-sur]. The idea that these constructs influence the way people think is called the Sapir-Whorf hypothesis. The sounds used in one of these systems form a phonology, and their structural rules form a grammar. Name these constructs used to communicate, examples of which include Mandarin and Spanish.

Answer: languages

Check the score.

16. For a Koch [kawch] snowflake, this quantity equals eight-fifths times its value for the original triangle, while this quantity is zero for a Sierpinski [seer-PIN-skee] triangle. For a polygon, this quantity equals half times the apothem [AP-uh-thum] times the perimeter. For a rhombus, this quantity equals half the product of the diagonal lengths. For a positive function, an integral finds this value between a function and the x -axis. An equilateral triangle's value for this quantity is the side length squared times $\sqrt{3}/4$ ["root 3 over 4"]. Name this value measured in square units.

Answer: area [accept Lebesgue [luh-bayg] measure before "polygon"]

17. This author described voting for women's suffrage during one of the many days he spent drinking in his book *John Barleycorn*. In one of this author's novels, Humphrey van Weyden is rescued after he is on a boat that sinks in San Francisco Bay. One of this author's books starts by saying that its protagonist does not read newspapers and lives in Judge Miller's place. That protagonist, who is saved from drowning by John Thornton and then returns the favor, is a cross between a Saint Bernard and a Scotch Collie who is sent to Alaska to be used as a sled dog. Name this author of *The Sea-Wolf* who wrote about Buck in *The Call of the Wild*.

Answer: Jack London [or John Griffith Chaney]

18. During this war, Lord Audley died while trying to stop an advance at Blore Heath. That advance was later stopped at Ludford Bridge, and its leaders were killed at Wakefield. Those leaders were Richard Neville and Richard, Duke of York. Soon after a Great Council called by Margaret of Anjou, this war started with the First Battle of St. Albans. One of this war's causes was the poor leadership of Henry VI [6]. In its last major battle, Richard III [3] was killed at Bosworth Field. Identify this war that established the Tudor dynasty when the House of Lancaster defeated the House of York, and which was named for the fancy badges used by both sides.

Answer: War(s) of the Roses [do not accept "English Civil War"]

19. This state used to be the home of Mertens Apple Orchards, which was in the current location of Green Ridge State Forest. Though this state does not include Chincoteague [CHEEN-koh-teeg], it is the home of the wild horses on the northern part of Assateague [ASS-uh-teeg] Island. A lot of military testing takes place at this state's Aberdeen Proving Ground near the north end of Chesapeake Bay. This state's capital is the home of the United States Naval Academy, while its most populous city was protected by Fort McHenry and is home to Johns Hopkins University. Name this state that forms the northern boundary of Washington, DC and is the home of Annapolis and Baltimore.

Answer: Maryland

20. In July 2015, it was announced that a combination of four of these particles with one of their antiparticles was observed during the decay of the Lambda b baryon. During the past decade, there have also been announcements of a combination of two of these particles with two of their antiparticles. These particles and leptons are the elementary fermions. These particles were first observed using deep inelastic scattering after they had been proposed in 1964 by George Zweig and Murray Gell-Mann. These particles combine with their antiparticles to form mesons, and groups of three of these particles form hadrons such as protons. Name these particles whose “flavors” include up and down.

Answer: quarks

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.

- TB21. The mechanical advantage of this type of simple machine equals circumference divided by lead [lead]. In the single-start type of these devices, the lead equals the pitch. P. L. Robertson designed one type of this device, and another type is manipulated by an Allen key, which is in the shape of a hexagon. These simple machines convert torque [tork] into linear motion. They can be used as fasteners, and they can be thought of as an inclined plane wrapped around a cylinder. When the top of one of these objects looks like a cross, it is called a Phillips-head. Name these objects that may be secured by a nut and are driven into a material by twisting.

Answer: screws [accept bolt, prompt on fastener before it is mentioned]

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

- TB22. The rarity of this planet was described in a book by Peter Ward and Donald Brownlee, in part because it is not near a “hot Jupiter.” This is the densest planet in our solar system, probably due to the amount of iron it contains. This is the only planet in our solar system clearly within the Goldilocks Zone. The Drake equation is used to approximate the number of planets in the universe similar to this planet. Within our solar system, this planet has by far the highest concentration of nitrogen and oxygen in its atmosphere. By definition, its average distance from the Sun is one astronomical unit. Name this planet with liquid oceans and exactly one moon.

Answer: Earth

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

- TB23. This state’s governor is Andrew Cuomo. This state’s senators are Kirsten Gillibrand and Chuck Schumer. This state is west of Vermont. Name this state whose cities include Utica, Albany, and Buffalo.

Answer: New York

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.