

Scobol Solo 2020

Packet 9 (Round 9)



1. The tax deduction named for this quantity is covered by the modified accelerated cost recovery system. The tax break for this quantity is almost identical to amortization, but this quantity is used for tangible assets. This quantity can be calculated using the straight-line, unit of production, or double-declining balance methods. Those methods use the initial cost, useful life period, and salvage value to calculate this quantity for an owned asset. Name this decrease in the value of an asset over time that can be caused by obsolescence or wear and tear.

Answer: depreciation [accept depreciate or depreciating]

2. This phenomenon explains why the recoil-less nuclear fluorescence of nuclear gamma emission used in Mössbauer spectroscopy has absorption that is very strong and has no recoil. In circuits, this phenomenon occurs when angular frequency equals the reciprocal of the square root of the product of inductance times capacitance. The damping ratio changes the frequency of this phenomenon, and the presence of damping makes this phenomenon finite rather than infinite. Name this phenomenon that occurs when a driving frequency equals a natural frequency, causing a wave with a very large amplitude.

Answer: resonance [or resonating or resonant frequencies]

3. When this sculptor was about 20 years old, he made a pair of busts, one showing a woman with flowers in her hair and eyes looking upward [pause] and another showing a man with wavy hair and his mouth and eyes wide open. Those two works by this artist are now called *Blessed Soul* and *Damned Soul*. Another sculpture by this person, which is in the Cornaro Chapel in Rome, depicts a woman with an open mouth and closed eyes, and an angel with a golden spear. Name this 17th-century Italian sculptor who depicted a nun in the *Ecstasy of St. Teresa*.

Answer: Gian Lorenzo Bernini [“John” loh-REN-zoh bair-NEE-nee] [or Giovanni Lorenzi Bernini]

4. One poem by this writer states “Joy is the sweet voice, Joy the luminous cloud— / We in ourselves rejoice!”. This poet opened that work with lines from “The Ballad of Sir Patrick Spens”, and he wrote that poem to Sara Hutchinson when he was separated from his wife. Another poem by this writer ends by saying of its subject, “For he on honey-dew hath fed, and drunk the milk of Paradise.” This writer started the last stanza of that poem with the lines “A damsel with a dulcimer in a vision once I saw.” Name this writer of “Dejection: An Ode” and “Kubla Khan” who worked with William Wordsworth on the collection *Lyrical Ballads*.

Answer: Samuel Taylor Coleridge

5. This person advised two U.S. presidents that troop withdrawals are like “salted peanuts” that the public becomes addicted to. Some members of Congress blamed this person for initiating illegal wiretaps, which at one point he in turn blamed on his assistant, Alexander Haig [hayg]. This person was awarded the Nobel Peace Prize, but his co-winner didn’t accept the prize because peace had not been achieved. This person pushed détente [day-tahnt] with the Soviet Union and negotiated the Paris Peace Accords to end the Vietnam War. Name this National Security Advisor and Secretary of State under Presidents Nixon and Ford.

Answer: Henry (Alfred) Kissinger [or Heinz (Alfred) Kissinger]

Check the score.

6. Though several of these orbitals each look like four spheres, the lowest energy z^2 [“z squared”] orbital of this type looks like two spheres on opposite sides of a disk. The use of two of these orbitals as opposed to one differentiates the hybridization of octa-hedral molecules compared to trig-o-nal bi-pyramidal ones. These orbitals correspond to an angular momentum quantum number of 2, and their magnetic quantum numbers go from -2 to positive 2. These orbitals are partially filled in transition metals. Name these orbitals that hold 10 electrons at each energy level, and which are filled between p orbitals and f orbitals.

Answer: d orbitals

7. Though it is not a perfect overlap, this country contains most of what used to be the Kanem-Bornu Empire. Almost all of the Tibesti Mountains are in the north part of this country. This country is the primary location of the Logone [loh-gohn] and Chari Rivers. The Logone River flows by this country’s second-most populous city, Moundou [moon-doo]. This country shares its name with a large shallow lake near its town of Bol, on its border with Cameroon and Nigeria. This country is between Niger and Sudan, south of Libya. Name this African country whose capital is N’Djamena [un-jah-MAY-nah].

Answer: (Republic of) Chad [or (République du) Tchad or Tichad]

8. One character in this novel uses the nickname “old Gruff-and-grim” to refer to his father-in-law, Mr. Barley. That son-in-law, who refers to the title character of this novel as “Handel”, is Herbert Pocket. Throughout much of this novel, the title character receives mysterious payments from a lawyer named Jagers. This novel’s title character eventually learns that Jagers had helped Estella years ago by convincing Miss Havisham to adopt her. This novel begins with the title character explaining why he is often called Pip. Name this novel by Charles Dickens.

Answer: Great Expectations

9. Shortly after a battle in this location, the victor led the successful Siege of Sambhal [SAHM-bahl]. At that battle in this location, the use of cannon fire scared war elephants, who trampled their own soldiers as they fled. During that battle, both Vikra-maditya and Ibrahim Lodi died. At another battle in this location, one side seemed to be winning until its leader was hit in the eye with an arrow. That leader, Hemu, was captured and later beheaded. Name this location where Babur and Akbar won different battles for the Mughal Empire in what is now India.

Answer: Panipat [pah-NEE-puht]

10. Geometric mean regression gets its name because it uses the geometric mean of this property for y versus x , and the reciprocal of this property for x versus y , to find the correlation coefficient. This property is plotted at many points in a coordinate plane in so-called “fields” used to visualize solutions to differential equations. This property equals the tangent of the angle between a line and the x -axis. The derivative of a function at a point is this property of a tangent line drawn at that point. This property appears with a point or a y -intercept in common forms of the equations for lines, in which context it is symbolized m . Name this property often summarized as “rise over run”.

Answer: slope

Check the score.

11. One piece by this composer begins with three quarter notes, two eighth notes, a quarter note, two eighth notes, and five quarter notes before doing a similar rhythm with chords. That “Promenade” by this composer is in B-flat major, and it comes before sections called “The Gnome” and “The Old Castle”. This composer ended that composition with “The Great Gate of Kiev”. A composition by this composer that tells a story about St. John was re-arranged after his death by Nikolay Rimsky-Korsakov. Name this Russian composer of *Pictures at an Exhibition* and *Night on Bald Mountain*.

Answer: Modest (Petrovich) Mussorgsky

12. This national leader was scheduled to step down in 2023, but instead in 2018 his congress voted overwhelmingly to abolish term limits. At the same time, it was decided that this leader’s *Thought for the New Era* would be taught to all schoolchildren. In November 2020, this leader blocked the initial public offering of Ant Group, which is owned by Jack Ma. In January 2020, this leader sent his vice-premier to sign the first phase of a trade deal that included increased imports from the United States. Name this president of the world’s most populous country, China.

Answer: Xi Jinping [shee jeen-peeng] [prompt on Jinping]

13. Priests from a fire cult used to walk from the center of this city towards a mountain once every 52 years as part of the New Fire Ceremony. This city was first settled around 1375, and within about 50 years it was the most populous part of the Triple Alliance. A failed 16th-century effort to leave this city has been nicknamed “La Noche Triste” [lah NOH-chay TREES-tay]. That occurred shortly after the Massacre in the Great Temple killed several leaders in this city. Hernán Cortés destroyed this city shortly after the death of its leader Montezuma. Name this historical city on the site of what is now Mexico City.

Answer: (Mexico-) Tenochtitlan [tay-NOHCH-teet-LAHN] [prompt on Mexico City]

14. Crude attempts to measure the amount of these molecules in food, such as the Kjeldahl [KYEL-dahl] method and Dumas [doo-mah] method, actually measure the amount of nitrogen. Like nucleic acids, these molecules have their structures removed through a process called de-naturing. These molecules contain bonds that link carboxyl [“car-BOX-ill”] groups to nitrogen-containing groups. Enzymes are catalysts that are also this type of molecule. These molecules are important nutrients that have high levels in tofu and meat. Name these molecules that consist of peptide bonds linking amino acids, and that are nutrients comparable to carbohydrates and fats.

Answer: proteins

15. This painting is based on a drawing that Irv Novick originally made for the book *All-American Men of War*. The lower left of this painting has bright red and yellow horizontal lines in front of smoke. There is a person in the lower half, but only the back of his helmet and seat are visible. The upper left part of this painting says “I pressed the fire control. . . and ahead of me rockets blazed through the sky.” The right half of this painting shows an explosion and the painting’s title, which is an onomatopoeia. Name this painting of a fighter aircraft being shot, created by Roy Lichtenstein [LIK-tun-styn].

Answer: Whaam!

Check the score.

16. After being shot, a character in this novel states “Blast that infernal Quaker!”. Very soon after that interjection in this novel, Phineas exclaims that he does not care if that man is doctored up among the Quakers. That character in this novel, who is healed at a Quaker settlement by Aunt Dorcas, is Tom Loker. Before being shot by George Harris, Loker works for Mr. Haley, who claims that he does not separate families. This novel depicted the cruelty of several characters, most notably Simon Legree, who badly mistreats his slaves. Name this novel by Harriet Beecher Stowe.

Answer: Uncle Tom’s Cabin(; or, Life Among the Lowly)

17. Some people believe that this concept is a “dirt” that affects *lesya*, which is the color of the soul. The term for this concept is based on the word for “action”. This concept allows for people to influence their own cycle of *samsara*, and it is used to explain the existence of evil and provide a positive incentive. One of the earliest statements of this concept was by Yajnavalkya [YAHN-yuh-VOLK-yuh], who said “A man turns into something good by good action and into something bad by bad action.” Name this concept explaining why good actions lead to better reincarnations.

Answer: karma [or karman or kamma]

18. What is now this country was ruled for a few months in 1600 by Michael the Brave. A smaller version of this country was formed in 1859 when Alexandru Cuza [ah-lek-SAHN-droo KOO-zah] was elected the head of two of its principalities. In 1947, King Michael abdicated his throne, and this country was declared a communist republic under the leadership of Gheorghe Gheorghiu-Dej [GYORG-eh GYORG-ee-yoo dez]. This country had a violent break from communism in 1989, and the poor condition of its orphanages became an international concern. This country’s last communist ruler was Nicolae Ceausescu [chow-CHESS-koo]. Name this country comprising the regions Moldavia, Wallachia [wah-LAY-kee-uh], and Transylvania.

Answer: Romania

19. The two halves of this structure, which is not considered an organ, are separated by the vermis. This structure contains the flocculonodular [“FLOCK”-yoo-loh-“NOD”-yoo-lur] lobe, which is a connection between this structure and the vestibular [ves-TIB-yoo-lur] system. This structure contains granule cells, which are small, and Purkinje [pur-KIN-jee] cells, which have large dendritic trees. This structure’s peduncles connect it to the medulla, pons, and midbrain. This structure is used by the body to maintain attention and for motor control. Name this structure located behind the brain-stem and under the cerebrum [suh-REE-brum] in the brain.

Answer: cerebellum [prompt on hindbrain; do not prompt on “brain”]

20. In a novel by this writer, a faceless man offers the narrator a little penguin charm in an attempt to get the narrator to draw his portrait. This writer titled that novel after a painting that the narrator finds in a famous painter’s attic that depicts a scene from *Don Giovanni* [dohn joh-VAHN-nee]. In another novel by this author, the narrator is reminded of a woman whose sister and boyfriend committed suicide. This author set the beginning of that novel on a plane landing in Hamburg, and he titled that novel after a Beatles song. Name this Japanese author of *Killing Commendatore* [koh-men-dah-TOR-ay] and *Norwegian Wood*.

Answer: Haruki Murakami [accept names in either order]

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. Gottlob Frege [FREH-guh] ridiculed this writer by saying that he relied on “pebble and gingerbread arithmetic”. This person used the “method of concomitant variation” and the “method of residues” as two of his five methods to determine causation. In another book, this person wrote “He who knows only his own side of the case, knows little of that.” In that book, this person argued that power should only be used to prevent harm. In another book, this person argued “Only happiness is a good to each individual, and in the aggregate to all persons.” Name this person who wrote *A System of Logic, On Liberty*, and *Utilitarianism*.

Answer: John Stuart Mill

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

^{TB}22. A major proponent of traditional and sustainable architecture in this country was Hassan Fathy, who designed this country’s village of New Gournah. One structure in this country is famous for the inscriptions left by ancient leaders and is named for the massive pillars that held up its roof, which no longer exists. That building is this country’s Great Hypostyle [“hippo-style”] Hall. There is historical debate over whether the first use of stone columns was made by this country’s ancient architect Imhotep, who is credited with designing a step pyramid for Djoser [JOH-sur]. Name this country that has famous ancient buildings in Giza, including the Great Pyramid.

Answer: Egypt [or Misr; accept (Arab Republic) of Egypt or (Gumhuriyat) Misr (al-Arabiyyah)]

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

^{TB}23. During this month in 1959, Buddy Holly, Ritchie Valens, and “The Big Bopper” J. P. Richardson died in a plane crash. During this month in 1945, U.S. Marines raised the flag on Iwo Jima. This month is Black History Month, and in it, George Washington’s birthday and Groundhog Day occur. The Super Bowl is played during this month. Name this month that is the shortest month, even when it has a Leap Day.

Answer: February

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.