

Scobol Solo 2021

Packet 6 (Round 6)

1. Hopkinson's law describes how this force relates to its flux and reluctance. In different situations, the strength of this force depends on the circumference of a toroid or the length of a solenoid [SOHL-eh-noyd]. An inductor stores energy in the field of this force, and Faraday's law of induction relates the rate of change of this force's field to the curl of electric field. This force is often noticed when materials have unpaired electrons. Name this force that, conventionally, runs from a north pole to a south pole.

Answer: magnetic force [or magnetomotive force; accept magnetism; accept magnetic field; prompt on electromagnetism]

2. At the beginning of this play, a commoner states that he is "a surgeon to old shoes" after referring to himself with the pun "mender of bad soles". In this play's second scene, a leader makes sure that his wife gets touched during a ceremonial run and then says of a man in the crowd, "He is a dreamer; let us leave him: pass." Two politicians in this play then express fear that the leader will be declared a king. Casca and Cinna [SIN-uh] then join a plot led by Cassius to oppose the leader. Name this William Shakespeare play in which a sooth-sayer says "Beware the ides of March" during a parade in ancient Rome.

Answer: *The Tragedy of Julius Caesar*

3. To show support for this country in 1955, U.S. Secretary of State John Foster Dulles [DUL-les] publicly threatened to use nuclear weapons. This country's first direct election was held in 1996 and resulted in the continuation of the presidency of Lee Teng-hui. As president, Lee had ended 38 years of martial law, which was a period called this country's White Terror. From 1928 to 2000, this country was headed by the Kuomintang Party. Name this country that has been part of a large neighboring country but has had a complex rivalry with that country since 1949 when Chiang Kai-shek moved to this country.

Answer: Taiwan or the Republic of China [accept Zhonghuá Mínguó or Chinese Taipei; prompt on Formosa; do not accept or prompt on "China" or "People's Republic of China"]

4. This Supreme Court justice complained that future plaintiffs have an incentive to add a request for a dollar in a solo dissent to *Uzuegbunam* [oo-zah-BUN-um] v. *Preczewski* [preh-CHEV-skee], which was brought by former students at Georgia Gwinnett College. Stephen Breyer [BRY-ur] and Elena Kagan [KAY-gun] joined this justice's dissent and another one by Sonia Sotomayor in an initial decision on the Texas 2021 abortion law, joining this justice with the three court liberals. In 2012, this justice wrote the decision that preserved most of the Affordable Care Act. Name this justice who in 2005 replaced William Rehnquist as the Chief Justice of the United States.

Answer: John (Glover) Roberts (Jr.)

5. Though Leonard Bernstein had earlier written sonatas for piano and for violin, his first *published* piece was his sonata for this instrument and piano, dedicated to David Oppenheim, who performed it. Aaron Copland [“COPE”-lund] wrote one piano concerto and another concerto for this instrument. Unlike other woodwinds, this instrument over-blows a twelfth instead of an eighth. This instrument plays a glissando at the beginning of George Gershwin’s *Rhapsody in Blue*. Name this only typical orchestra woodwind that uses a single reed.

Answer: clarinets

Check the score.

6. Phosphate often plays this role in saline, commonly through a combination of di-sodium phosphate and mono-potassium phosphate. These solutions are measured using an equation in which a logarithm is added to a measure of the acid dissociation constant, the Henderson–Hasselbalch [HASS-ul-bawlk] equation. The combination of carbonic acid and bicarbonate plays this role in the blood. Many of these substances are the combination of a weak acid and its conjugate base. Name these substances that are used to maintain a constant hydrogen ion concentration so that a solution’s acidity does not change.

Answer: buffers or buffer solutions

7. In a novel, this author describes a religious text that states “Man created the checkerboard; God created the karass.” According to this author, adherents of that religion rub the bare soles of their feet together. This author invented the religion Bokononism [BOH-kuh-nahn-izm]. One of this author’s characters is himself an author; in *Jailbird*, that character is a prisoner, and that character’s son narrates this author’s novel *Galápagos*. That fictional author created by this real author is Kilgore Trout, and his biggest fan is Eliot Rosewater. Name this author who wrote about ice-nine in *Cat’s Cradle* and wrote about Billy Pilgrim, who survived the firebombing of Dresden, in *Slaughterhouse-Five*.

Answer: Kurt Vonnegut Jr.

8. This person’s predecessor and half-brother was nicknamed “Enrique el Impotente” [en-REE-kay el eem-poh-TEN] but is now commonly called Henry IV. This person’s rise to power was supported by both the Treaty of the Bulls of Guisando [ghee-SAHN-doh] and the military defeat of supporters of Joanna la Beltraneja [bell-trah-NAY-hah]. Because this person was the Queen of Castile [kas-TEEL] and married to the King of Aragon, she is often considered the first queen of Spain. She and her husband established the Spanish Inquisition. Name this wife of Ferdinand II who supported the voyages of Christopher Columbus.

Answer: Isabella I of Castile [accept Isabel la Católica]

9. One city in this modern country contains the House of the Golden Scales in the reconstructed old town near the Imperial Cathedral of St. Bartholomew, which was used for coronations by the Holy Roman Empire. The New Town Hall in another city in this country celebrates the coopers' dance with a clock that goes off twice each day, the Rathaus-Glockenspiel [RAHT-“house” GLAHK-en-shpeel]. Those cities are in this country's states Hesse [HESS-uh] and Bavaria. Name this country that has land borders with Denmark and Poland, and that contains the cities Frankfurt and Munich.

Answer: (Federal Republic of) Germany [or Bundesrepublik Deutschland]

10. Applying this function to 1 less than a prime number gives a result congruent to -1 , mod the prime number, according to Wilson's theorem. This function is used to calculate the denominator of Taylor series coefficients. If this function is applied to all positive integers, the sum of the reciprocals equals e . This function is used in both the numerator and denominator in the most common formulas for permutations and combinations. This function gives the number of ways to put a number of objects in order. Name this function that gives the product of all positive integers from 1 through the input, and which is commonly represented by an exclamation point.

Answer: factorial function

Check the score.

11. A painting named for one of these objects shows a man looking at Gare Saint-Lazare [gar san luh-zar]. That painting is on one of these objects named for Europe and is by Gustave Caillebotte [ky-bawt]. Another one of these objects is in a Japanese style and plays a central role in some of Claude Monet's paintings of water lilies at Giverny [zhee-vair-nee]. Edvard Munch's [moonk's] *The Scream* appears to be set on one of these objects, though the painting was actually made on a scenic path. Name this object that supports the train in J. M. W. Turner's *Rain, Steam and Speed* as the train goes over the River Thames [temz].

Answer: bridges [accept railroad bridges before “Monet's”]

12. This character kidnaps a 10-year-old girl, telling her “I have told you that you must think of me as your father.” A few years later, after this character's wife dies in childbirth, he marries the girl whom he had kidnapped. Earlier, when this character is three years old, he is given an elaborate bestowing-of-trousers ceremony even though he was not the emperor's oldest son. As a man, this person has many affairs, and he marries both Lady Aoi [ow-ee] and Lady Murasaki. Name this protagonist of an 11th-century novel written by Murasaki Shikibu.

Answer: Genji [accept *The Tale of Genji*]

13. The Biblical basis for this ritual is in the Book of Acts when Peter and John go to Samaria. The Catholic catechism [KAT-uh-kizm] describes this ritual as “the special outpouring of the Holy Spirit as once granted to the apostles on the day of Pentecost”. This ritual is equivalent to the Eastern Orthodox chrismation [kriz-MAY-shun]. In several Christian faiths, this ritual centers around renewing the vows made on one’s behalf during infant baptism. Name this Christian ritual that is a Catholic sacrament usually performed by people between the ages of seven and 18.

Answer: confirmation [accept chrismation before it is mentioned]

14. On this U.S. president’s last full day in office, he gave full recognition to the Republic of Texas. This president got Congress to pass a law allowing the use of armed forces to protect customs officers. That law, called the Force Bill, was passed during the Nullification Crisis over the objections of John Calhoun, who had resigned as this person’s vice president to enter the Senate. Before becoming president, this person used the phrase “corrupt bargain” to describe his loss to John Quincy Adams in the election of 1824. Name this person who signed the Indian Removal Act and who led troops against Native Americans before becoming president.

Answer: Andrew Jackson

15. If the nerves around this organ do not develop properly, babies are born with Hirschsprung’s [HIRSH-sproong’z] disease. Pouches in this organ are called “haustra”, though sometimes additional pouches form and get inflamed, causing diverticulitis [“DIVER-tick-you-LIGHT”-iss]. This is the last place in the body where digestion takes place, though most digestion takes place before chyme [kime] reaches this organ. Name this organ that goes from the ascending colon to the rectum and is where digestive waste goes after leaving this organ’s smaller counterpart.

Answer: large intestine [accept large bowel; accept colon before it is mentioned; prompt on intestines; do not accept “bowel”]

Check the score.

16. One work by this poet ends “Time held me green and dying, though I sang in my chains like the sea.” That poem describes the same place this person wrote about in the story “The Peaches”. That poem, which was the last work in this writer’s collection *Deaths and Entrances*, is “Fern Hill”. In another poem by this writer, the speaker tells his father “Curse, bless, me now with your fierce tears, I pray.” That poem also states “Old age should burn and rave at close of day; / rage, rage against the dying of the light.” Name this Welsh poet who wrote “Do not go gentle into that good night”.

Answer: Dylan (Marlais) Thomas

17. This concept was traditionally considered to be one of the four cardinal virtues along with prudence, fortitude, and temperance. A book developing *A Theory of* this concept focuses on both extensive liberty and organizing inequality so that it benefits the least advantaged. That book is by John Rawls. In recent times there has been an effort to look at alternatives to the retributive [reh-TRIB-yoo-tiv] form of this concept, such as the restorative type. Name this concept that is similar to the concept of fairness, is often addressed in courts of law, and is often represented symbolically by a blindfolded woman holding balanced scales.

Answer: justice [accept *A Theory of Justice*]

18. When this war became unpopular, the Earl of Aberdeen resigned as British prime minister and was replaced by Viscount [“vie-count”] Palmerston. This war began after Paul Nakhimov’s overwhelming victory at Sinop [SEE-nop], and it included Nikolay Muravyov-Karsky’s victory at Kars. During another battle in this war, Colin Campbell’s troops—who were told not to retreat—became lionized as the Thin Red Line, and a misunderstanding of Lord Raglan’s orders led to a frontal assault during the Battle of Balaclava that was lionized as the Charge of the Light Brigade. Name this war fought during the 1850s in which much of Europe opposed Russia’s attacks against the Ottoman Empire.

Answer: Crimean War

19. In an opera by this composer, the title character questions her fate with the aria “Vissi d’arte [DAR-tay]”. Soon after that, this composer has the title character kill Scarpia [skar-PEE-uh] and take papers that allow safe passage for her and the artist Cavaradossi [kah-vuh-rah-DOHSS-see] to leave Rome. In another opera by this composer, Rodolfo says that he is a poet in the aria “Che gelida manina” [kay JAY-lee-dah mah-NEE-nah]. Later in that opera, this composer has Musetta sing “Quando me’n vo” [KWAN-doh men voh] to Marcello [mar-CHELL-loh]. That opera, which inspired the musical *Rent*, depicts Mimì suffering from consumption in Paris. Name this composer of *Tosca* and *La bohème* [boh-em].

Answer: Giacomo (Antonio Domenico Michele Secondo Maria) Puccini [JAH-koh-moh poot-CHEE-nee]

20. When this material forms ridged patterns that resemble the ones in sand dunes, the formation is called sastrugi [sah-STRUG-ee]. Ukichiro Nakaya made a diagram that relates the shape of this substance to humidity and temperature. Crystals of this substance come in shapes like columns, capped columns, and stellar dendrites. A fake version of this material can be made by combining sodium polyacrylate [pah-lee-AK-rih-“late”] with water. Though there is great variety in the shape of crystals of this substance, they are often based on the shape of a hexagon and are called flakes. Name this type of precipitation that falls when it is cold.

Answer: snow [accept snowflake; prompt on ice]

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. This statue is just north of the Gefion Fountain, just south of a standing sculpture called *The Swimmer* and just east of the Maritime Monument at Langelinie [lahn-guh-LEEN-yuh]. This statue has been vandalized several times, including some decapitations and a 2003 explosion that knocked it off its base, which is a rock that this statue's lower portion curves to conform to. This statue by Edvard Eriksen is on the coast of the Strait of Øresund [er-eh-sun] by the Island of Zealand. Name this statue in Copenhagen depicting a Hans Christian Andersen character who tries to get a human soul after saving a prince from drowning.

Answer: *The Little Mermaid* [or *Den lille Havfrue*]

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

^{TB}22. A novel about a failed attempt to leave this continent begins with a servant finding an old general floating naked in medicinal water. That general and president learns that his preferred successor has been assassinated and then dies himself after stops in Honda [ohn-dah] and Mompo on this continent. A novel set at a military academy on this continent depicts one student killing another after they cheat on a chemistry test. That novel is *The Time of the Hero* by Mario Vargas Llosa [YOH-sah]. Name this continent that is the setting of *The General in His Labyrinth* by Gabriel García Márquez, which depicts Simón Bolívar.

Answer: South America [accept Sudamerica; prompt on America]

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

^{TB}23. Two different subscripts are written after this letter to represent the types of specific heat capacity. This letter is commonly used for a concept added at the end of indefinite integrals. This letter is the Roman numeral for 100. This letter with a subscript zero represents the speed of light in a vacuum. A famous spelling rule claims that 'I' comes before 'E', except after this letter. Name this letter between 'B' and 'D'.

Answer: c

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.