

Scobol Solo 2017

Packet 8 (Round 8)



1. The redshift caused by this force was verified by Daniel Popper and Jesse Greenstein. Irwin Shapiro was the first person to demonstrate this force's time delay. String theory is one of several attempts to reconcile this force with quantum theory. The field strength associated with this force is used to calculate the metric tensor in the Einstein field equations for general relativity. The constant used in the inverse-square law for this force is 6.67×10^{-11} newton-meters squared per kilogram squared. Name this attractive force that depends on objects' mass.

Answer: gravity or gravitational force

2. Description allowed. A 2016 review determined that this photograph included Harold Schultz but not John Bradley. This photo was taken shortly after a similar but simpler photograph was taken by Louis Lowery. The action shown in this photograph appeared on a postage stamp a few months later and was the subject of a Felix de Weldon sculpture, finished in 1954, in Arlington County, Virginia. This photograph was taken by Associated Press photographer Joe Rosenthal and shows six men. It is set on Mount Suribachi [soo-ree-bah-chee], which is on a Pacific island, and was taken on February 23, 1945. Name this action shown in the Marine Corps War Memorial.

Answer: Raising the Flag on Iwo Jima [accept any reasonable answer that contains flag and Iwo Jima; prompt on less specific but relevant answers]

3. One of these animals chooses to be with Captain Arthur Hastings after it is blamed for the death of Emily Arundell in Agatha Christie's *Dumb Witness*. Dora Spenlow, who marries David Copperfield, is obsessed with one of these animals named Jip, and a different animal of this type, also named Jip, informs Doctor Doolittle that Polynesia the parrot has returned. Bill Sikes tries unsuccessfully to rid himself of one of these animals named Bull's-eye in *Oliver Twist*. Another of these animals belongs to Jack Stapleton and is shot by Sherlock Holmes after it kills Sir Charles Baskerville. Name this type of animal that Buck was in Jack London's *The Call of the Wild*.

Answer: dogs [or fox terriers or hounds; accept canines]

4. This person made a deal with her half-brother Henry IV in which she became the heiress presumptive instead of the possibly-illegitimately-born Joanna la Beltraneja [bel-trah-NAY-hah]. One of this person's successors was Joanna the Mad. This person and her husband gave Jews three months to convert to Christianity or leave their country when they signed the Alhambra Decree, strengthening their establishment of the Inquisition. This Queen of Castile [cast-EEL] enlarged her territory by marrying the King of Aragon. Name this Spanish queen who sponsored Christopher Columbus along with her husband Ferdinand.

Answer: Isabella I (of Castile) [or Isabella I (de Castilla)]

5. There have been a few recent swarms of these events, including ones in California and Yellowstone, in which no one of these events is significantly larger than the others. These events and volcanic eruptions are common at the edges of the Pacific Ocean, a region called the Ring of Fire. One way to determine how far away somebody is from one of these events is to measure the time between P waves and S waves. These events usually are triggered by movement at a fault, and the surface above that fault is the epi-center. Name these events detected by a seismometer ["sighs"-MAH-mih-tur] and measured on the Mercalli intensity or Richter scale.

Answer: earthquakes [prompt on tremors or temblors]

Check the score.

6. Jeff Bornstein announced that he will stop being this company's chief financial officer in 2017. Also in late 2017, this company announced that its dividend would be a top priority after analysts predicted its dividend would be cut for the first time since the Great Depression. John Flannery announced that he would cut costs when he took control of this company. This company was once led by Jack Welch and was more recently led by Jeffrey Immelt. This company was the original owner of RCA and NBC, and it was started by combining companies founded by Thomas Edison. Name this company that produces many household appliances and light bulbs.

Answer: General Electric

7. In one story by this writer, a group of people called Nothing-heads refuse to take drugs that dumb the patient from the waist down, called ethical birth control. In another story by this writer, George is forced to wear a handicap radio because of his above-average intelligence, and the Handicapper General kills George's son. This author of *Welcome to the Monkey House* and "Harrison Bergeron" wrote several novels featuring the unsuccessful science-fiction writer Kilgore Trout. In one of those novels by this author, Billy Pilgrim becomes "unstuck in time" after being a prisoner of war during the firebombing of Dresden. Name this author of *Slaughterhouse-Five*.

Answer: Kurt Vonnegut (Jr.)

8. This person spoke strongly against Western industrialization, saying "The railways, telegraphs, hospitals, lawyers, doctors, and such-like have all to go" and that the best of his country was in its 700,000 villages. This person often worked closely with Madan Mala-viya, who helped him negotiate the Poona Pact to improve the political representation of Depressed Classes. This person helped gather salt from the sea in Dandi at the end of a long protest march. In 1948, Nathuram God-se [NAH-too-rahm GAWD-say] assassinated this person during a conflict between Hindus and Muslims over partition. Name this nonviolent activist who worked so that Britain gave independence to India.

Answer: Mohandas (Karamchand) "Mahatma" Gandhi

9. MP3 files are encoded using a modified discrete transform based on this function. The Fourier series of an even function is a sum of coefficients times this function of nx . This function of the quantity $2x$ equals negative one plus two times the square of this function of x . The dot product of two vectors is equal to the product of their magnitudes times this function of the angle between them. If a point is written in polar coordinates as (r, θ) [*r comma theta*], its Cartesian x -coordinate equals r times this function of θ ; similarly, this function gives the x -coordinates of points on the unit circle. Name this trig function that, for an acute angle in a right triangle, equals the adjacent side length over the hypotenuse length.

Answer: cosine function [accept answers that additionally mention a variable]

10. In Psalm 32, the speaker states that when he did not take this action he cried all day long. In Judaism this action is called *vidui* [*veed-wee*] and is done through the *Al Chayt* prayer, which is said ten times over the course of two days. The Diet of Augsburg in 1530 produced a document named for this action. The *Omnis utriusque* [*oo-tree-OOS-kay*] *sexus* clause of the Fourth Council of the Lateran requires Catholics to take this action every year. Anglican and Catholic churches usually have a wooden structure designed for this action, in which a priest and a person doing this thing are in separate chambers. Name this action that often begins with the statement “Bless me Father, for I have sinned.”

Answer: confession or atonement or absolution or penance or reconciliation or repentance [accept answers that additionally mention sins; prompt on descriptive answers not listed previously, such as admitting sins]

Check the score.

11. Several paintings by this artist, including *The Woman in the Green Dress* and *Woman with a Parasol*, depict his wife Camille, and he also depicted her wearing a *kimono* [*kee-moh-noh*]. This artist painted tall thin trees along the Epte [*ept*] River, creating his *Poplars* series. This painter painted the same subject at different times of day and during the year to show the impact of light on his subjects in series depicting *Houses of Parliament*, *Rouen* [*roo-en*] *Cathedral*, and *Haystacks*. Name this painter who often portrayed water lilies near Giverny [*zhee-vair-nee*], and who painted the work that inspired the name of his art movement: *Impression, Sunrise*.

Answer: (Oscar-)Claude Monet

12. Several years after being injured in the President Kennedy assassination, John Connally held this U.S. Cabinet position and was responsible for overseeing the Nixon shock. The person who held this cabinet position for the longest was Albert Gallatin [*GAL-uh-tin*], who served under Presidents Jefferson and Madison. The Whiskey Rebellion was sparked by a proposal by the first holder of this position, who often disagreed with Secretary of State Thomas Jefferson but later supported Jefferson when the Election of 1800 went to the House of Representatives. Name this position first held by Alexander Hamilton, and responsible for overseeing the Internal Revenue Service and the U.S. Mint.

Answer: Secretary of the Treasury or Treasury Secretary

13. Like feathers, these objects sometimes grow outward from a center called a pinnatifid [pin-AT-uh-fid]. The middles of these objects contain spongy cells and elongated cells containing chlor-en-chyma [kluh-REN-ky-muh] called palisade cells. The surfaces of these objects have openings that widen when water is available, that are regulated by guard cells, and that are called stomata [stoh-MAH-tuh]. These parts of plants contain many chloroplasts, making them a principal location of photosynthesis. Name these organs that grow from the sides of plants and tops of trees.
- Answer: leaf [prompt on plant or mesophyll]

14. This geographic feature is atop the ancient Vishnu Schist [shist], which forms an un-conformity with the Tonto Group rocks above it. The region named for this feature includes peaks named Juno Temple and Venus Temple, and is home to a landmark for a 1956 airplane collision that was the first plane crash to cause over 100 deaths. This place is north of Kaibab National Forest, and its Desert View Tower, which offers eastward views of the Painted Desert, is on its South Rim. This feature follows a course from Lake Powell to Lake Mead. Name this enormous geological feature in Arizona formed by erosion of the Colorado River.
- Answer: Grand Canyon [accept longer answers that contain Grand Canyon]

15. In a poem by this writer, the speaker dreams of going back to where the flying fishes play, imagining that a woman thinks about him near the Moulmein [mool-“MAIN”] Pagoda. In another poem by this writer, the speaker calls the title person a “squidgy-nosed old idol”, imagines getting a swig in Hell from the title character, and claims the title character’s last words were, “I hope you liked your drink.” Another poem by this writer states “you’ll be a Man, my son” “[i]f you can keep your head when all about you are losing theirs and blaming it on you.” Name this writer of “Mandalay”, “Gunga Din”, and “If—”.
- Answer: (Joseph) Rudyard Kipling

Check the score.

16. During this war, Arthur Brooke had to take command at the Battle of North Point after Major-General Robert Ross was killed. Ross had earlier won this war’s Battle of Bladensburg, one of the worst military losses in U.S. history. During this war, Oliver Hazard Perry wrote “We have met the enemy and they are ours.” Bladensburg was part of this war’s Chesapeake campaign, which included a defense of Baltimore from Fort McHenry that inspired Francis Scott Key to write the lyrics to “The Star-Spangled Banner”. Name this conflict that was nicknamed “Mr. Madison’s War” and was named after the year in which it started.
- Answer: War of 1812

17. This is the most abundant metal in the Earth's crust. Henri Étienne Sainte-Claire Deville [awn-ree "ate"-yen "sa found a way to use sodium instead of potassium to isolate this metal. This element is named after a mineral used to help dyes adhere to fabric. The Bayer process is used to separate this element's oxide from bauxite [BAWK-"site"]; then this element's oxide is broken down by adding carbon in the Hall-Héroult [air-awl] process. Name this element that is commonly used in baseball bats, foil, and cans.

Answer: aluminum [or aluminium; accept Al]

18. Baz Dreisinger ["dry-singer"] wrote a book after visiting these institutions in different countries. Michel Foucault [mee-shel foo-koh] described one of these institutions called Mettray in a book subtitled for *The Birth of* this type of institution that ties the increase in the number of these institutions to an increase in the belief in discipline. That book by Foucault also refers to a theoretical institution of this type that is circular and allows the entire building to be viewed from the center, Jeremy Bentham's Panopticon ["pan-OPT"-ih-kahn]. Name this type of institution whose psychological effects were studied by Philip Zimbardo in a 1971 experiment at Stanford, which found a tendency towards abusive behavior by guards.

Answer: prisons [accept jails or penitentiary/ies or penal institutes]

19. The Russian type of this musical passage, used often by Rachmaninov [rahk-MAH-nih-nawff], ends in the opposite way from other types. This type of musical passage is found at the end of overtures and first acts in pieces by Gioachino Rossini [joh-ah-KEE-noh rohss-SEE-nee], making it the main feature of a "Rossini rocket". Though this type of passage typically lasts for just a few measures, Maurice Ravel's *Bolero* has this feature over its entire 17 minutes, starting with the strings and eventually including the entire orchestra. A *sforzando* [s'fort-SAHN-doh] is a very sudden version of this type of dynamic change. This musical instruction can take a musical piece from pianissimo [pee-ah-NEESS-see-moh] to fortissimo [for-TEESS-see-moh]. Give this term for a gradual increase in loudness.

Answer: crescendo [kres-CHEN-doh or kruh-SHEN-doh] [or crescendi]

20. A writer from this country wrote a play about Diana's obsession with her secretary Teodoro [tay-oh-DOR-oh] that is known as either *The Gardener's Dog* or *The Dog in the Manger*. That play is one of over 2,000 plays by that writer. In a play by another writer from this country, three woodcutters discuss the search for Leonardo and the Bride, who ran away together after the Bride's wedding. That play, *Blood Wedding*, is by Federico García Lorca. Name this European country in which Félix Lope de Vega [FEH-leess LOH-pay day VAY-gah] was a major figure of its Golden Age.

Answer: (Kingdom of) Spain [or (Reino de) España]

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 founder of this religion proclaimed 95 times per day that “God is the Most Glorious.” Followers of this religion pray while facing in the direction of that person’s shrine, which is in Acre [AH-kur], Israel. When the leader of this religion died, his son Mírzá Muhammad Alí attempted to take control, but he was labeled a covenant-breaker and excommunicated, and control passed to Shoghi Effendi. Many prophets from other religions are called “Manifestations of God” in this religion. This religion was started in the 19th century in Iran by a follower of the Báb. Name this religion with eight large dedicated temples, the oldest of which is in Wilmette, Illinois.

Answer: Bahá’í(ism)

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

TB22. This city’s workers and shoppers were portrayed in works such as *Allen Street*, *Houston Street*, and *Hester Street*, which are early 20th-century works by George Luks, who replaced Richard Outcault to draw the *Hogan’s Alley* comic strip for one of this city’s newspapers. Clotheslines between buildings in this city appear in *Cliff Dwellers* by George Bellows, a member of an art movement that portrayed daily life in this city: the Ashcan School. The Factory was Andy Warhol’s studio in this city. Name this home of the Metropolitan Museum of Art, the setting of Paul Cadmus’ *Coney Island* and Joseph Stella’s *The Brooklyn Bridge*.

Answer: New York City [accept NYC]

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

TB23. This superhero was created by Joe Shuster and Jerry Siegel. This character is raised in Smallville, Kansas by Martha and Jonathan Kent. This character was portrayed by Kirk Alyn, Henry Cavill, and Christopher Reeve. He has fought against Brainiac, General Zod, and Lex Luthor. His actual father, Jor-El, lived on Krypton. Name this flying superhero who wears a red cape.

Answer: Superman

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.