

NEW TRIER SCOBOL SOLO 2012

ROUND 13

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1. One character created by this author is nicknamed Kinch and called a fearful Jesuit by his housemate, who invites Haines to stay with them in Sandycove Martello tower. A story by this writer is about a man whose wife Gretta had been in love with Michael Furey, a boy who died soon after visiting her. A novel by him begins with the word “riverrun”, which is in the middle of a sentence begun at the end of the work; that novel takes place at night. Another novel is about a character who attends Clongowes Wood College until his family cannot afford to send him. Another novel, which ends with the line “Yes and his heart was going like mad and yes I said yes I will Yes,” takes place on June 16, 1904, which is known as Bloomsday. Name this Irish author of *Finnegans Wake*, *Dubliners*, *Ulysses*, and *A Portrait of the Artist as a Young Man*.

ANSWER: James (Augustine Aloysius) Joyce

2. This is the central component in a clamper circuit, which shifts a potential difference average so that it is not zero. The first semiconductor type of this was known as a “cat’s whisker” and used in early radios. The type containing a metal–semiconductor junction can be combined with a transistor and is named for Walter Schottky. These are a type of rectifier, sometimes classified as the ones used with low power. The avalanche type is similar to the Zener type in that they both have a breakdown voltage beyond which backward current occurs, and some calculators use the light-emitting type. Name these devices that ideally are supposed to completely allow current in one direction but stop it in the opposite direction.

ANSWER: diodes [prompt on rectifier]

3. The goal of this battle was to capture three forts, two of which—Forts Powell and Gaines—fell quickly, while Fort Morgan resisted a siege for three weeks. This battle forced the Confederacy to divert troops for the defense of a nearby city, reducing resistance during Sherman’s March to the Sea. The Union lost the ironclad *USS Tecumseh* to a mine, but captured the ironclad *CSS Tennessee*. At one point, an admiral climbed a mast to gain a better view of this battle, and was lashed there to prevent him from falling. Identify this battle which severely hampered Confederate trade, perhaps most notable for the oft-misquoted order by Admiral Farragut: “Damn the torpedoes, four bells, Captain Drayton.”

ANSWER: Battle of Mobile Bay [do not prompt on “Mobile”]

4. Pathological examples of these include the Blancmange and the Weierstrass [VY-ur-shtrass] ones. When these can be expressed as an algorithm they are called computable, and when these can always be expressed locally as power series they are classified as analytic. Other ways to classify these mathematical objects are based on whether or not their image includes their entire codomain and whether any element in their image is used more than once; those classifications are surjective and injective, respectively, which are also called “onto” and “one-to-one”. Name these mappings more specific than relations, which have the restriction that each member of the domain can correspond to at most one member of the range.

ANSWER: functions [accept map(ping)s before “mappings”; prompt on relations before “relations”]

5. According to Giorgio Vasari, this artist's first commission was a stone carving of the *Annunciation* for the Church of Santa Croce [CROH-chay]. This artist's wealthiest patron commissioned him to create a bronze statue of *Judith and Holofernes*, and he also depicted a bald prophet in his *Zuccone* [zook-KOH-nay]. Three guilds commissioned this sculptor to design statues of various patron saints that sit in the Orsanmichele, in his home town. This sculptor created an equestrian statue of Erasmo da Narni in Padua, but is best known for sculpting a free-standing nude commissioned by the Medici family, in which the title figure holds Goliath's sword. Name this sculptor of *Gattamelata* and a bronze *David*.

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

6. In addition to being constant, McCarthy 91 is this type of function for all inputs less than or equal to 100. Kleene's theorem relates these functions to computable functions. As long as x does not equal zero, the Ackermann function is of this type, but it is not primitively so. In computer science, these functions are sometimes classified based on whether they use only tail calls or whether they build up values. The simplest types of these functions are defined inductively, and definition via this technique is useful for some functions that cannot be expressed explicitly. Name these functions calculated in terms of themselves.

ANSWER: recursive functions [accept word forms of recursion]

7. This person wrote "One fact and one alone explains the attitude of most recent writers toward Reconstruction; they cannot conceive of Negroes as men". That quote appears in his 1935 work *Black Reconstruction in America*. One of his works states that people who meet him make statements such as "I fought at Mechanicsville" rather than directly asking him, "How does it feel to be a problem?". His desire to develop an elite group of African Americans was embodied in his phrase "the Talented Tenth", and near the end of his life he worked on an *Encyclopedia Africana* in Ghana. Name this sociologist who wrote *The Souls of Black Folk* and whose ideas were often contrasted with the Atlanta Compromise pushed by Booker T. Washington.

ANSWER: W(illiam) E(dward) B(urghardt) Du Bois [doo BOYSS]

8. The ability of this amendment to override state anti-discrimination laws was weakened by *Roberts v. United States Jaycees*, but it was enforced in *Boy Scouts of America v. Dale*. In 1991, the Supreme Court ruled that Son of Sam laws violate this amendment. In *Wisconsin v. Yoder*, the court ruled that education could not be mandatory past eighth grade according to this amendment's Free Exercise Clause, while in *Engel v. Vitale*, the Supreme Court ruled that prayer could not be required in public schools because of its Establishment Clause. Name this amendment that guarantees the right to petition, assembly, and practice religion in addition to establishing freedom of the press and freedom of speech.

ANSWER: 1st Amendment

9. This character states "My parts, my title and my perfect soul shall manifest me rightly." He is accused of using spells and medicines bought of mountebanks to attract his wife in front of the senate, which wants him to stop a Turkish invasion of Cyprus. Those accusations come from his wife's father Brabantio. This man becomes suspicious of his wife when her handkerchief is picked up by Emilia and then planted in Cassio's room. Name this Shakespeare title character antagonized by Iago and married to Desdemona, nicknamed the Moor of Venice.

ANSWER: Othello

10. This leader recently met with Google's Eric Schmidt to discuss a bill forcing search engines to pay media sites. One month after this man's partner lost the 2007 presidential election, he separated from her and began dating a journalist. In October 2012, the prime minister this man appointed announced a housing bill was being tossed out before it had been discussed, leading his opponents in the Union for a Popular Movement to call the prime minister an amateur. This man won his current position by defeating Martin Aubry for the party nomination, a nomination that just two months earlier appeared to be secured by Dominique Strauss-Khan. Identify this socialist, the first member of that party since François Mitterrand to be president of France.

ANSWER: François (Gérard Georges Nicolas) Hollande [aw-lawnd]

11. One method for identifying these involves dividing gap by range and is known as Dixon's Q test. Chauvenet's [shao-veh-nay'z] criterion identifies these when a probability times the sample size is less than one-half, while the critical value of a t -distribution is used to look for these using Grubbs' test. Other methods work by adding or subtracting a multiple of the interquartile range to one of the quartiles. Statistical measures that can be used effectively without eliminating these are called robust, and these are sometimes defined as any measurement more than 3 standard deviations away from the mean. Name these data points that do not fit in with the rest of the data because they are abnormally high or low.

ANSWER: outliers [accept outlying points or similar answers]

12. The second and third stanzas of this poem end with four-syllable lines, but the other lines are all six or ten syllables. Those two short lines are "Turns again home" and "When I embark". Its last stanza capitalizes the words "Time", "Place", and "Pilot" even though they do not open lines, stating "I hope to see my Pilot face to face". The beginning of its first and third stanzas set the time as the end of the day, which is a metaphor for the stage of life of the poet, who was eighty when he wrote it in 1889. The poet says that he hopes there is no moaning when he puts out to sea. Name this sixteen-line work by Alfred, Lord Tennyson.

ANSWER: "Crossing the Bar"

13. This process is stopped by alpha-Amanitin, a toxin found in some mushrooms. In eukaryotes [yoo-KAIR-ee-ohts], this process can be blocked by chromatin compaction or histones, usually takes place near a TATA box, and occurs simultaneously as the creation of a five prime cap. In prokaryotes, it ends with the breaking of hydrogen bonds after the creation of a sugar-phosphate backbone. The reverse of this process can be carried out by some viruses, including HIV. Name this process carried out by RNA polymerase, which uses a DNA nucleotide sequence to create RNA.

ANSWER: transcription

14. In 1532 in this city, before peace agreements were reached at Frankfurt and Augsburg, Charles V negotiated an informal peace with the Schmalkaldic League. Albrecht von Wallenstein [VAL-un-shteen] defeated Gustavus Adolphus just outside this city during the Thirty Years' War at the Battle of Alte Veste, and the Golden Bull of 1356 required each Holy Roman Emperor to hold his first diet in this city. A 1934 Nazi Party Congress and rally in this city made it the setting of *Triumph of the Will*, and a 1935 convention here deprived Jews of German citizenship and the right to marry German citizens. Name this Bavarian city that in 1945 and 1946 hosted trials of several Nazis.

ANSWER: Nuremberg [or Nürnberg]

15. This artist created a two-panel work showing red with blue stems on a trash can that is first closed and then opened by a woman's foot stepping on its pedal. Another work shows a man's face as he looks through a peephole and is called *I Can See the Whole Room!*. Inspired by Dick Giordano's *Strange Suspense Stories*, he created a *Brushstrokes* series that includes *Big Painting Number 6*. A diptych by this artist shows a North American P-51 Mustang successfully firing a missile at another plane. Some of his works are his own version of classic paintings, and many of his works use Ben-Day dots and have captions inspired by comics. Name this late-20th-century American artist who created *Whaam!*.

ANSWER: Roy Lichtenstein

16. In the late 19th and early 20th century, this country's politics was dominated by the National Autonomist Party led for a time by Julio [HOO-lee-oh] Roca, who moved several functions from the church to the government. That party was weakened by the granting of universal adult male suffrage in the Sáenz Peña Law. Annihilation decrees issued against leftists in 1975 opened a Dirty War that led to the disappearance of many people. After World War II, a leader associated with Justicialismo [hoo-stee-see-ah-LEES-moh] was put in power; he ruled until fleeing the country during a 1955 coup, later returning to power after eighteen years in exile. Name this country currently headed by Cristina Kirchner that was ruled by Juan Perón and fought the United Kingdom in the Falklands War.

ANSWER: República Argentina [or Argentine Republic]

17. The protagonist in this book sometimes pretends that her name is Elly Higginbottom. Early in this work, Doreen meets Lenny Shepherd, who has a radio show and decorates his apartment to look like a ranch, and the news is dominated by the electrocution of the Rosenbergs. The protagonist's relationship with Buddy Willard is put on hold because of his tuberculosis. She works for Jay Cee as a magazine guest editor. After that job ends, she returns to Massachusetts and is brought to the attention of Dr. Gordon, a psychiatrist. Name this novel about Esther Greenwood, who becomes suicidal after undergoing electric shock therapy, written by Sylvia Plath.

ANSWER: *The* Bell Jar

18. One of this composer's pieces for piano, which begins with a long section in the key of A in Lydian mode and which changes keys following a circle of fifths, is *Phrygian Gates*. Another piece, which started out as *Wavemaker* and was then written for a string septet and then string orchestra, is *Shaker Loops*. This composer has labeled his *Foxtrot for Orchestra* as an outtake from one of his operas, and it is sometimes referred to as *The Chairman Dances*. His piece subtitled *Fanfare for Orchestra*, which features a woodblock repeatedly hitting quarter notes and is about four minutes long, is *Short Ride in a Fast Machine*. Name this composer whose operas include *A Flowering Tree*, *Doctor Atomic*, and *Nixon in China*.

ANSWER: John (Coolidge) Adams

19. The velocity of this process is related to the gradients of chemical potential and of the log of activity in the Maxwell-Stefan model. The constant associated with this quantity equals the Boltzmann constant times temperature times drift velocity divided by applied force. That constant is also proportional to mean thermal speed and mean free path in a law that multiplies that constant by the derivative of concentration with respect to position, which is Fick's Law. Name this process involving a larger opening than the quantity usually addressed by Graham's Law in which the random motion of particles leads them to spread out.

ANSWER: diffusion [accept word forms; do not accept "effusion"]

20. This god traveled with Thor to Hymir's hall in order to find a cauldron large enough for the sea giant Aegir. Though he is sometimes portrayed as the son of Hymir, he was at other times considered the son of Odin. He gets in a fight with the hound that guards the realm of the dead, Garm, causing both of them to die during Ragnarok. One of his honorifics is "leavings for the wolf" because he allowed his right hand to be eaten so that Fenrir could be tied down. Name this Germanic god whose name came to mean "god" and was used for a day of the week, the predecessor of Odin as the god of war.

ANSWER: Tyr [or Tiwaz or Tiw or Ziu]

TB1. A late work by this artist shows a woman in a fluffy blue dress seated at a keyboard instrument on top of a marble table, with a cello in the lower left corner and a painting and curtains in the upper corners. He used glazing for the laurel which has turned blue over time on top of a girl's head in another work. That girl, who stands in front of a map holding a book and a trumpet, is posing for a painter shown in the work. One of the girls he painted has a white collar showing under a yellow garment and an unusual blue and yellow turban. Name this painter of *Lady Seated at a Virginal*, *The Art of Painting*, and *Girl with a Pearl Earring* whose best known cityscape is *View of Delft*.

ANSWER: Jan Vermeer [or Johan(nes) Vermeer]

TB2. One work by this poet has 42 brief chapters, most of which contain an introduction to a poem and the poem itself, including some works about his obsession with a lady he saw in a window and many works about an obsession with a different woman he calls, "My mind's glorious lady." His best known work begins when he has journeyed through half his life and is in a shadowed forest. In that work, he travels to the city of Dis, which is where the worst sins are punished. He is guided in that work by his ideal woman Beatrice, who takes over for Virgil because Virgil cannot enter Paradise. Name this Italian writer of *La Vita Nuova* and *The Divine Comedy*.

ANSWER: Dante Alighieri [accept either; accept either underlined part of Durante degli [DEL-ye] Alighieri]

TB3. In the week before Easter, this day is sometimes given the name Spy because it is the day when Judas conspired with the Sanhedrin. This day is often associated with the planet Mercury and the Norse god Odin. This is the first day of Lent, which some Christians literally mark by putting ash on their foreheads. Name this day of the week referred to as Hump Day; it follows Tuesday.

ANSWER: Wednesday