

2015 NSC - Official Scoresheet

Round	17	Room	
Bracket			
Reader			

Team									Team								
Player Names																	
Q#					Bonus	Steals	Ques. Total	Run. Score						Bonus	Steals	Ques. Total	Run. score
1																	
2																	
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TB1																	
TB2																	
TB3																	
SD																	
Player 20s																	
Player 10s																	
Point totals																	
Final score																	
	Substitutions before Tossup 11								Substitutions before Tossup 11								
	Out:				In:				Out:				In:				
	Out:				In:				Out:				In:				

Circle winning team above. Clearly mark if game goes to OT/SD. Fill out "Point totals" row completely. If there are substitutions, please note tossups by each player in "20s" and "10s" rows. Below is for Tab Room use only:

RH	RS	BH	BS	Left	Right	BH	BS	RH	RS
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PACE NSC 2015 - Round 17 - Tossups

1. A novel by this author contains chapters describing "the Massacre of the Coconut Isles" and "the Skirmish in Normandy." This author's recurring character G.H. Bondy sells thousands of free-energy-producing Karburators in one novel, and in another finances a pearl-fishing business involving the title creatures that is organized by Captain van Toch. A play by this man opens with a man dictating to his secretary (*) Sulla and later suddenly proposing to a representative of the League of Humanity. That play by this man ends with Alquist trying to recreate a formula burned by Helena and dubbing Primus and Helena the new Adam and Eve. For 10 points, name this author of *The Absolute at Large* and *The War with the Newts*, a Czech writer who introduced the term "robot" in *R.U.R.*

ANSWER: Karel Capek ["cha-peck", but literal English readings are also acceptable] <Brownstein>

2. This man cooks a meal for forty people in a story that he narrates in which he is the only man to respond to a thrice-addressed plea for help. This man's letters and sermons are collected in the volume *The Peak of Eloquence*. This man tore down a door to use as a shield in a battle fought against the Jews of Khaybar Oasis, after which he was awarded the appellation "Lion of God." The Kharijites (*) rejected this man's leadership, and assassinated him while he was praying in Kufah, ending the first Fitna. Though some consider this man the last of the four rightly-guided Caliphs, others think he is the first post-Muhammad Imam. For 10 points, name this son-in-law of Muhammad, whose importance is disputed by the Sunnis and Shia.

ANSWER: Ali ibn Abi Talib [or al-Murtaza; or Amir Al-Mu'mineen; or Bab-e-Madinatul-ilm; or Murtadha; or Asadullah; or Haydar] <Gupta>

3. A group of protesters within this movement, infamous for covering paint spots on walls with graffiti of dwarves, is known as the Orange Alternative. This movement distributed the banned text *Theses on Hope and Hopelessness*, and grew out of a precursor called the KOR. This movement was reluctantly granted legal status by First Secretary of the PUWP, Edward Gierek. By engaging in the (*) Round Table Talks, this movement secured free elections in 1989 after the resignation of Wojciech Jaruzelski (VOI-check YA-ru-zelski). This movement was impelled by the first papal trip taken by John Paul II to his home country, and it was led by a former electrician at the Lenin Shipyard in Gdansk. For 10 points, name this anti-Communist trade union led by Lech Walesa in Poland.

ANSWER: Solidarity [or Solidarnosc; or Independent Self-governing Trade Union "Solidarity"; or Niezalezny Samorzadny Zwiazek Zawodowy "Solidarnosc"] <Gupta>

4. Three of these figures who can only say "da" or "ja", rather than "yes" and "no," feature in George Boolos's Hardest Logic Puzzle Ever. Xenophanes wrote a scathing critique of earlier Greek views about them. Cicero wrote a three-book dialogue *On the Nature of beings* of this sort. In an early Platonic dialogue, a man who claims to be close to them insists on suing his father. Louis-Auguste Blanqui coined an anarchist slogan demanding (*) none of these beings and "no masters." A dilemma in which the love of these beings seems to be arbitrary is presented in Plato's dialogue *Euthyphro*, which equates love for these beings with piety. For 10 points, name these beings whose existence is denied by as mere "delusion" by Richard Dawkins and other New Atheists.

ANSWER: gods [or deities] <Jackson>

5. Like pressure, this quantity is plotted on the y-axis of Fletcher-Munson contours after scaling via A-weighting. The net value for this quantity is zero in a diffuse field but is maximized in the active field. This quantity is proportional to both frequency squared and maximum displacement squared, or alternatively, it equals one-half the pressure squared over a non-electrical quantity called impedance. This quantity equals the product of particle velocity and pressure. It drops off with one over radius squared since it equals power over the (*) surface area of an imaginary sphere. The level of this quantity equals ten times the logarithm of it divided by one picowatt per square meter—a reference value also known as the threshold of hearing. For 10 points, name this quantity often measured in decibels.

ANSWER: sound intensity [or acoustic intensity; or I; prompt on loudness or volume] <Silverman>

6. The colonial governors of this modern-day country demanded the output from 1/5th of each village's land through the Culture System established in the 1830s. Wahabi converts in this nation rebelled against aristocratic chiefs in the Padri War. Forces from this nation carried out the Santa Cruz Massacre against supporters of FRETILIN during its occupation of a territory that seceded in 2002. A wave of violence followed a failed coup by its (*) 30 September Movement. Its first leader advocated internationalism as part of his *Pancasila* policy and practiced "Guided Democracy" after expelling the Japanese and throwing off the Dutch colonial yoke. For 10 points, name this island country whose first post-independence leader was Sukarno, the world's most populous Muslim nation.

ANSWER: Republic of Indonesia <Bentley>

7. In the Levins metapopulation model, the carrying capacity is one minus the rate of this process divided by the colonization rate. In island biogeography, species richness equilibrates where the rate of this process equals the colonization rate. Species formerly thought to have undergone this process are called Lazarus taxa. In the IUCN Red List, the opposite end of (*) "least concern" indicates that this process happened. Climate change may have contributed to this process in the golden toad. One of the largest "mass" examples happened at the Permian-Triassic boundary, and its main anthropogenic cause is habitat degradation. For 10 points, name this phenomenon in which the population of a species declines to zero, which happened to the passenger pigeon in 1914.

ANSWER: extinction <Kothari>

8. A character in this novel dies shortly after learning of the death of his favorite daughter Una. Another of its characters becomes rich selling beans in an effort motivated by his father's failure in a refrigerated lettuce-shipping venture. In this novel, the cook Lee tells a story about his Chinese relatives learning Hebrew to study the Bible, during which they discover that the word (*) *timshel* translates as "thou mayest". Samuel Hamilton attempts to help the protagonist of this novel, whose antagonist poisons the madame Faye and takes over a brothel after abandoning her family, including her sons Cal and Aron. Its protagonist marries the villainous Cathy Ames before moving to the Salinas Valley. For 10 points, name this novel about Adam Trask, by John Steinbeck.

ANSWER: East of Eden <Carson>

9. One of this artist's recurring symbols was inspired by a childhood incident in which he witnessed a dead bat being devoured. In one of his paintings, fingers protrude from the earth while holding a cracked egg from which a flower grows, although the crack also appears to be the flower's shadow. This painter of *The (*) Metamorphosis of Narcissus* often used ants to symbolize decay, and he included a small portrait of his wife Gala in *The Hallucinogenic Toreador*. He also painted "The Disintegration of" an earlier painting, which he claimed was inspired by Camembert cheese and not Einstein's theory of relativity. For 10 points, name this Catalan surrealist who painted melting clocks in *The Persistence of Memory*.

ANSWER: Salvador Dalí <Rosenberg>

10. A blue-covered book on this topic ends with a particularly-phrased account of the creation narrative and was written by George Demeter. Texts on this subject by Arthur Beauchesne (boo-shen) and John George Bourinot (bor-ih-noe) are used in Canada. The most authoritative text on this topic in the U.K. is by Thomas Erskine May. One version of this topic substitutes "moving the previous question" with (*) "cloture". Texts on this topic stress protecting the right of the minority to be heard while allowing the majority to make decisions and outline the ways people can bring motions. The most common American text on this subject is Robert's Rules of Order. For 10 points, give the term for the set of customs used in the operation of a deliberative assembly, such as a meeting or a legislature.

ANSWER: parliamentary procedure [or parliamentary law; or parliamentary practice; accept legislative procedure until "legislature" is read; accept rules of order until "rules" is read] <Carson>

11. Late in this poem, a man "'Brushing with hasty steps the dewes away / 'To meet the sun upon the upland lawn" is described by the "hoary-headed swain" who narrates five of its final stanzas. The speaker of this poem describes how "uncouth rhymes" and "shapeless sculpture" bedeck objects that also bear names and years "spelt by the unlettered muse". It also imagines how "Chill penury" repressed the "noble rage" of a "heart once pregnant with (*) celestial fire". This poem's speaker imagines a "Cromwell guiltless of his country's blood" or a "mute inglorious Milton" inhabiting this poem's title location, from which a ploughman "plods his weary way" as "the curfew tolls the knell of parting day". For 10 points, name this meditation on death, an elegy by Thomas Gray.

ANSWER: "Elegy Written in a Country Churchyard" <Carson>

12. A comment by society hostess Francis Anne Crewe that this man's ministry would be over soon after Christmas led it to be called the "mince-pie administration." This man appointed Thomas Townshend, the 1st Viscount Sydney president of his newly-created Board of Control for the East India Company. He returned to office after his successor Henry Addington signed the unpopular Peace of Amiens. This man (*) suspended habeas corpus for seven years and presided over the formal establishment of the United Kingdom. After this man's death, Lord Grenville set up the Ministry of All the Talents. This man was prime minister during both the French Revolution and the early Napoleonic Wars. For 10 points, name this British Prime Minister, the son of an earlier Prime Minister.

ANSWER: William Pitt the Younger [prompt on William Pitt] <Bentley>

13. Yehudi Menuhin performed a duet with one performer of this instrument at the 1966 Bath Musical Festival and recorded the album *West Meets East* with him. Da, ra, and dir are among the strokes one can make on this instrument using a *mizraab*, and a technique called *meend* is used to bend pitches on it. This instrument has three or four melody strings, three drone strings called (*) *chikari*, and eleven to thirteen sympathetic strings called *taraf* tuned in accordance with the *raga* being played. George Harrison's lessons from a virtuoso of this instrument led him to use it in songs like "Norwegian Wood." For 10 points, name this plucked Hindustani instrument played by Vilayat Khan and Ravi Shankar.

ANSWER: sitar <Kothari>

14. In a novel set in this country, a blue-painted thief escapes from prison and later helps Patrick Lewis blow up a filtration plant. An author from this country wrote a novel whose protagonist moves to Slocan with the title character and her uncle Isamu after her mother is disfigured in the bombing of Nagasaki. This country is the setting of *In the Skin of a Lion*, whose characters Caravaggio and Hana reappear in a novel whose title character reminisces about (*) Katherine Clifton. A Sri Lankan author who lives in this country wrote a novel about the burned Count Laszlo de Almasy that won its Governor General's Award. For 10 points, name this country home to the author of *Obasan*, Joy Kogawa, and *The English Patient* author Michael Ondaatje, both of whom live in Toronto.

ANSWER: Canada <Carson>

15. John Anthony "Shorty" Powers was a spokesperson on behalf of several members of this profession. A politician who retired from this profession was unable to campaign for senator against Stephen M. Young because he suffered a concussion from hitting his head on a bathtub. The Rogers Commission investigated the death of seven people in this profession, who were eulogized in a speech stating that they "touched the (*) face of God." Wally Schirra was one of the seven men in this profession profiled in Tom Wolfe's *The Right Stuff*. Several O-rings around boosters failed and killed seven people in this occupation, including the former schoolteacher Christa McAuliffe, in the 1986 *Challenger* disaster. For 10 points, name this profession of John Glenn and Neil Armstrong.

ANSWER: astronauts [accept payload specialists; prompt on test pilot; prompt on NASA personnel or related answers; prompt on engineers] <Bentley>

16. Researchers from the Royal Institute of Technology from Stockholm developed a type of this technique detecting the release of the anion pyrophosphate. The SOLiD and ion torrent types of this technique are grouped together as the "next-generation" methods, which supplanted an older version of this technique using phosphorus-32-labelled ATP, developed by Maxam and Gilbert. Multiple overlapping reads are combined into contigs in a (*) piecemeal type of this process. Chain-terminating dideoxynucleotides, or ddNTPs, are selectively incorporated in a type of this process named for a British biochemist. For 10 points, name these techniques, such as the "shotgun" and "Sanger" types, that determine the order of nucleotides in a molecule of DNA.

ANSWER: DNA sequencing [or word forms; accept pyrosequencing; accept Maxam-Gilbert sequencing; accept Sanger sequencing; accept dideoxy method; accept shotgun sequencing] <Gupta>

17. Around this river, Henry Walter Bates's decade-long study of butterflies led to a pioneering biology paper on mimicry. This river's basin contains large amounts of charcoal-rich *terra preta* soil. This river is home to an aquatic mammal which turns pink when excited, a dolphin called the *boto*. This largest habitat of the bony-tongued arapaima fish joins a darker-colored tributary at the (*) Meeting of Waters after a sandy-colored upper section often called the Solimoes. It empties into the ocean near Marajo Island and rises near Iquitos, the largest city in the world inaccessible by road. The Rio Negro, which rises in Colombia, joins this river at the rainforest city of Manaus. For 10 points, name this longest river in South America.

ANSWER: Amazon River <Wang>

18. This island is home to a giant who has a single nail that keeps shut a blood vein running from his ankle to his head. Two men from this island quarrel for the affection of Miletus. A plague is brought to this island by a king who sacrifices the first living thing he sees after returning from Troy. This island is the home of the bronze giant Talos and the king Idomeneus. After this island's champion Androgeus wins a (*) sporting event, it demands annual sacrifices from Athens. A hero that travels to this island is given a ball of yarn by Ariadne in order to navigate an impossible structure designed by Daedalus. For 10 points, name this Greek island home to the Labyrinth, which Theseus navigates to slay the Minotaur.

ANSWER: Crete [or Knossos] <Kim>

19. A unique type of these objects that has absorption lines greater than a thousand kilometers per second in width is the BAL, or broad-absorption line, type. Intense gravitational lensing creates four images of one of these objects in the Einstein cross. These objects are useful for studying density fluctuations in the early universe because their radiation is absorbed by intergalactic clouds and galaxies, creating a (*) forest of lines blueward of their Lyman-alpha line. It's conjectured that these objects having their relativistic jets pointed at Earth explains blazars. These active galactic nuclei are powered by accretion onto supermassive black holes. For 10 points, what most energetic objects in the universe are also called quasi-stellar radio sources?

ANSWER: quasars [or quasi-stellar radio sources or QSOs until "quasi-stellar" is read] <Jose>

20. Erik Satie's *Dessicated Embryos* parodies a piano sonata of this number, although it falsely claims to be an homage to Schubert. Brahms's string sextet of this number contains a recurring musical cryptogram that spells out the name "Agathe" (A-ga-ta), and is the last such sextet he wrote. A chord based on the scale degree of this number is called "supertonic". Chopin's nocturne of this number *from his opus 9* is in E-flat and is his most popular, while his (*) piano sonata of this number is in B-flat minor and is best-known for its third-movement funeral march. Mahler's symphony of this number is called "Resurrection." For 10 points, give this minimum number of notes required to make a musical interval and the number of violins in a standard string quartet.
ANSWER: two [or obvious equivalents, such as second] <Rosenberg>

21. The protagonist of a novel by this author has a sister who goes into a near-catatonic state named for the "13th Zodiac sign" of the Starfish. A mother discovers an African-American washerwoman's baby buried alive in her garden in a novel by this author in which an Eastern-European immigrant who makes paper silhouettes becomes a "baron" in the animation industry. This man based Paul and Rochelle Isaacson's (*) execution on that of Ethel and Julius Rosenberg for his novel *The Book of Daniel*. After his Model T Ford is destroyed by firemen, Coalhouse Walker becomes a terrorist in a novel by this author that includes historical characters such as J.P. Morgan and Harry Houdini. For 10 points, name this American author of *Ragtime*.

ANSWER: E. L. Doctorow [or Edgar Lawrence Doctorow] <Gupta>

22. Sinapinic acid is most commonly used for this procedure. It often requires helium to be pumped into a collision cell in an intermediate step. This technique is done twice in a row, or in tandem, to sequence proteins. In a common method of prepping this procedure, a laser is fired at a matrix to desorb a sample. The output of this procedure is commonly shown as a bar graph with an M+1 signal right next to the (*) base peak, which is the radical cation formed in this procedure's first step. This technique measures the abundance of each m-over-z ratio in a sample by subjecting fragments to a magnetic field. For 10 points, name this form of spectrometry which distinguishes between isotopes because of the difference in ions' molecular weights.

ANSWER: mass spectrometry <Silverman>

23. This party worked with the COD, an organization whose members included Helen Joseph and the lawyer Bram Fischer. This organization's Programme of Action was replaced by a document which states "we the people shall govern!", its Freedom Charter. 156 members of this party were acquitted at the Treason Trial, which inspired Oliver Tambo to leave the country and lead this party from exile. A member of this party declared "I am prepared to die" at the Rivonia Trial. The (*) Church Street bombing was carried out by this party's armed wing known as Umkhonto we Sizwe, which was originally formed in response to the Sharpeville Massacre. A leader of this party was imprisoned for 27 years on Robben Island. For 10 points, name this South African political party once led by Nelson Mandela.

ANSWER: ANC [or African National Congress] <Wang>

24. Integrity checking can be used to identify a type of these things that operate at Ring 0. Some of these things use a polymorphic engine to obscure their signature. A recent example of these things called Cryptolocker encrypted file contents. They're often used to create large numbers of zombies and particularly hard to detect examples of these entities are called (*) rootkits. Melissa was one of many of these things that took advantage of macros, but more modern examples of them often use zero-day exploits reported to the Common Vulnerabilities and Exposures index. These programs are studied by Kaspersky Lab and one of them called Stuxnet was used against the Iranian nuclear program. For 10 points, name these types of malware.

ANSWER: computer virus [or worm; or trojan horse; or backdoor; or adware; or scareware; or ransomware; or spyware; or keylogger; or malware or rootkit until they are read; prompt on exploits] <Bentley>



PACE NSC 2015 - Round 17 - Bonuses

1. Name some things related to the most recent edition of the American Psychological Association's Diagnostic and Statistical Manual of Mental Disorders, the DSM-5, for 10 points each.

[10] The DSM-5 controversially eliminated the bereavement clause from the diagnostic criteria for this disorder, which is often characterized by melancholy, a lack of motivation, and anhedonia.

ANSWER: **depression** [or major **depressive disorder**; or **MDD**; or **dysthymia**; or chronic **depression**; do not accept "manic depression"]

[10] The DSM-5 introduced dubious Disruptive Mood Dysregulation Disorder, which can only be diagnosed in this specific group of people. It also incorporated the DSM-IV's chapter devoted to disorders often found in this group of people.

ANSWER: **children** [or **infants**; or **toddlers**; or **adolescents**; or **teenagers**; or **kids**; or equivalents]

[10] Some psychologists posit that DMDD was introduced in response to a huge spike in diagnoses of this disorder in children, which is often treated with a combination of antipsychotics and mood stabilizers like Zyprexa, Depakote (**DEH-puh-kote**) and Lamictal.

ANSWER: **bipolar** disorder [or **bipolar** I disorder; or **bipolar** II disorder; or **bipolar** not otherwise specified; or **bipolar** not elsewhere defined; or **bipolar** disorder rapid cycling] <Spencer>

2. During the 1st century AD, the legendary warrior Nomi no Sukune invented this activity, which takes place in a sand-covered ring called the *dohyo*. For 10 points each:

[10] Name this form of wrestling that in actuality probably traces back to ancient Shinto harvest rituals. The objective is to push the opponent out of the ring or to make them touch the ground with something other than the soles of their feet.

ANSWER: **sumo** wrestling

[10] Salt is thrown on the floor prior to sumo matches for this general purpose, which in Japanese is known as *harae*. Another method of accomplishing this goal is *misogi*, in which the participant stands under a waterfall and performs calisthenics.

ANSWER: ritual **purification** [accept word forms; or **ablution**; prompt on **cleansing** or **cleaning** or **washing** or similar answers]

[10] Professional sumo tournaments began in 1684 at the Tomoika shrine to this Japanese tutelary god of warriors, whose name literally means "god of eight banners."

ANSWER: **Hachiman** <Gupta>

3. A number of missing persons notices for this character were published by his creator as part of a successful hoax intended to drum up sales for a satirical *History of New York*, which was then published as a work of this man.

[10] Name this fictional Dutch historian whose papers supposedly contained the sources for the stories "Rip Van Winkle" and "The Legend of Sleepy Hollow". His surname later became a common nickname for Manhattanites.

ANSWER: Diedrich **Knickerbocker**

[10] Diedrich Knickerbocker was a creation of this early American author, who published the aforementioned stories in a "Sketchbook" attributed to the fictional persona of Geoffrey Crayon.

ANSWER: Washington **Irving**

[10] Irving made his print debut by trolling New York theater critics and commenting on contemporary fashion in nine letters to the *New York Morning Chronicle* written in the guise of this character, whose name was a reference to his ostensible traditionalism.

ANSWER: Jonathan **Oldstyle** <Carson>

4. The top of the title building is almost completely drowned out by white light in this artist's painting *The Shelton with Sunspots*. For 10 points each:

[10] Identify this American artist who included a red, white and blue motif in the background of a 1931 painting of a cow's skull.

ANSWER: Georgia **O'Keeffe** [or Georgia Totto **O'Keeffe**]

[10] Georgia O'Keeffe's sexually suggestive paintings of these objects include include *Petunia No. 2*, which was included in the Seven Americans exhibit.

ANSWER: **flowers**

[10] In O'Keeffe's painting of this skyscraper, the building is shown at night haphazardly lit by lights in its rectangular windows. Designed by John Howells and Raymond Hood, this building was commissioned for its namesake company on West 40th Street in Manhattan.

ANSWER: American **Radiator** Building [or **American Standard** Building or the **Bryant Park** Hotel] <Bentley>

5. Because this quantity is a vector, it is often symbolized using Xs to represent it going into the plane of the page, or dots to indicate it coming out of the page. For 10 points each:

[10] Name this vector quantity that is mutually perpendicular to the velocity of a charged particle and the resulting acceleration of that particle, according to a common right-hand rule.

ANSWER: **magnetic field** [or **B**-field; or **H**-field]

[10] When talking about the strength of the magnetic field, one would either use the unit gauss or this unit, named for the Serbian-American inventor who supported alternating current.

ANSWER: **tesla** [Nikola **Tesla**]

[10] The unit gauss is used to measure the magnetic field when using this system of measurement that is much less widely used than SI units. It's also called the Gaussian system.

ANSWER: **CGS** units [or **centimeter-gram-seconds** units] <Silverman>

6. This case, which concerned the same issue as the earlier *DeFunis v. Odendaard*, hinged on the applicability of Title VI of the Civil Rights Act of 1964, and resulted in a plurality decision. For 10 points each:

[10] Name this landmark 1978 case in which the Supreme Court struck down a medical's school practice of setting specific racial quotas for applicants.

ANSWER: *Regents of the University of California v. **Bakke*** [or *Regents v. **Bakke***; or the **Bakke** decision]

[10] At the same time, the *Bakke* decision upheld the constitutionality of this practice of granting special consideration to minorities or members of historically disadvantaged groups.

ANSWER: **affirmative action**

[10] In 1971, the Third Circuit Court of Appeals ruled that the namesake "plan" to institute racial quotas for hiring minority government contractors in this city was not inconsistent with Titles VI and VII of the Civil Rights Act.

ANSWER: **Philadelphia** <Gupta>

7. Before this man's execution, he supposedly uttered a curse against the King of France stating that "you will not live to see the end of this year, and Heaven's retribution will strike down your accomplices and destroy your posterity". For 10 points each:

[10] Identify this final head of a knightly order accused by Philip the Fair of committing crimes like "infecting the purity of the air" and "torturing Christ a second time".

ANSWER: Jacques de **Molay** [prompt on **Jacques**]

[10] Jacques de Molay was the final leader of this order of crusading knights, which has become the subject of many legends since its destruction. This group was founded by Hugues de Payens in the Holy Land in the 1120s.

ANSWER: Knights **Templar** [or Poor Fellow-Soldiers of Christ and of the **Temple of Solomon** or Poor Knights of Christ and of the **Temple of Solomon**]

[10] The Templars received papal approval by *Omne Datum Optimum*, which was issued by a pope of this name. The third pope of this name organized the Albigensian Crusade and the Fourth Crusade.

ANSWER: **Innocent** [or **Innocent II**; or **Innocent III**; or **Innocentius**] <Bentley>

8. The protagonist of this novel takes a part in an amateur production of Augustin Daly's *Under the Gaslight* after moving out of the apartment she'd shared with her boring sister Minnie and her boring husband Sven. For 10 points each:

[10] Name this novel about an aspiring actress who meets Charles Drouet on a train to Chicago, then later flees to Canada with George Hurstwood.

ANSWER: **Sister Carrie**

[10] *Sister Carrie* was written by this American naturalist, who fictionalized Chester Gillette's 1906 murder of Grace Brown in his novel *An American Tragedy*.

ANSWER: Theodore **Dreiser** [or Theodore Herman Albert **Dreiser**]

[10] Dreiser's "Trilogy of Desire", which consists of the novels *The Financier*, *The Titan*, and *The Stoic*, centers on this character, who like his historical basis Charles Yerkes (**YER-keez**) becomes a streetcar tycoon in Chicago.

ANSWER: **Frank Cowperwood** [accept either underlined portion] <Carson>

9. This composer specified that his Piano Sonata No. 15 in C was "for beginners". For 10 points each:

[10] Name this composer who wrote a "Rondo Alla Turca" as the final movement of his Piano Sonata No. 11, which later inspired Dave Brubeck to compose "Blue Rondo à La Turk." This man also composed the *Jupiter Symphony*.

ANSWER: Wolfgang Amadeus **Mozart**

[10] The Turkish craze that inspired Mozart's "Rondo Alla Turca" also inspired Joseph Haydn's "Military" Symphony, which is the eighth of this group of 12 symphonies named for the city where he was living.

ANSWER: **London** symphonies

[10] Mozart's pieces are often specified by their "K" number, after this Austrian musicologist who made the first complete catalog of them.

ANSWER: Ludwig von **Köchel** <Rosenberg>

10. The Rydberg formula gives energy as proportional to negative one over this quantity squared. For 10 points each:

[10] Name this value, an integer that appears in the radial solution of the hydrogen atom's wavefunction. In the Bohr model, this number multiplying h -bar quantizes angular momentum.

ANSWER: **principal** quantum number [or **n**]

[10] The principal quantum number equals one, plus the azimuthal quantum number, plus the total number of these things. The number of angular ones is equal to the azimuthal number.

ANSWER: **nodes** [or **angular nodes**]

[10] In the s-block, the principal quantum number for valence electrons is simply defined by which of these things the element belongs to. This term refers to the rows on the Periodic Table, as opposed to groups or families.

ANSWER: **periods** <Silverman>

11. This battle, and the follow-up offensive on the Aisne River, paved the way for a period known as the "Race to the Sea." For 10 points each:

[10] Name this battle, a defeat for Helmuth von Moltke in which the Sixth Army commanded by General Maunoury was reinforced by 6,000 infantrymen who traveled to the front in taxis.

ANSWER: First Battle of the **Marne**

[10] This rising star in the French army commanded the Ninth Army at the First Marne and was promoted from Commander in Chief of the Allied Forces to Marshal of France for his chief role in halting the Spring Offensive in 1918.

ANSWER: Ferdinand **Foch**

[10] The hostilities between Germany and the Allied Powers were ended by this 1919 treaty, which Foch presciently called an "armistice for twenty years."

ANSWER: Treaty of **Versailles** <Gupta>

12. This author's most famous novel is discussed in Mario Vargas Llosa's *The Perpetual Orgy*. For 10 points each:
[10] Name this author, whose stuffed parrot is sought by Geoffrey Braithwaite in a novel by Julian Barnes. His own novels include *The Temptation of St. Anthony* and *Salamambo*.

ANSWER: Gustave **Flaubert**

[10] This Flaubert title character is unhappily married to a doctor named Charles. She commits suicide with arsenic after having affairs with Rodolphe and Leon.

ANSWER: **Emma** Bovary [or *Madame Bovary*]

[10] Another contributing factor to Emma Bovary's suicide is the constantly-mounting debt she owes to this fiendish merchant, who repeatedly convinces her to take out additional loans to buy more fancy things.

ANSWER: Monsieur **Lheureux** <Weiser>

13. It began after Raj Narain successfully sued the Prime Minister for illegal electioneering. For 10 points each:

[10] Name this period from 1975-77, in which the Congress-Party-led government ruled by decree, jailed dissidents, and embarked on Sanjay Gandhi's forced sterilization campaign.

ANSWER: the **Emergency** [or State of **Emergency**; or **Apatakala**]

[10] This rival of Morarji Desai invoked Article 352 of India's Constitution during the Emergency. This female Prime Minister was later assassinated by her Sikh bodyguards after ordering a raid on the Golden Temple.

ANSWER: **Indira Gandhi**

[10] Early in her first premiership, Indira Gandhi promoted this type of national economy in which a country is entirely self-sufficient without need for trade. It is thus more extreme than protectionism.

ANSWER: **autarky** <Wasserman>

14. Moderator note: do not read the alternate answers to the first part.

During its "regeneration" phase, an enzyme unique to this pathway cleaves a phosphate ion from sedoheptulose-1,7-bisphosphate. For 10 points each:

[10] Name this set of photosynthetic reactions that fixes carbon, reduces NADPH, and regenerates RuBP. It is named for a Berkeley chemist, and is mistakenly called the light-independent reactions.

ANSWER: **Calvin** cycle [or **Calvin**-Benson-Bassham cycle; or **CBB** cycle; or **reductive pentose phosphate** cycle; prompt on **dark reactions**; do not accept or prompt on "pentose phosphate" alone]

[10] The Calvin cycle takes place in the stroma, a fluid-filled part of the chloroplast surrounding these membrane-bound compartments that stack up to form grana.

ANSWER: **thylakoids**

[10] The Calvin cycle shares enzymes like transketolase and intermediates, such as xylulose 5-phosphate, with this other pathway, which parallels glycolysis, reduces NADP⁺, and produces five-carbon sugars.

ANSWER: **pentose phosphate** pathway [or **phosphogluconate** pathway; or **hexose monophosphate** shunt; or **HMP** shunt] <Gupta>

15. Along with yellow ribbons, many protesters carried yellow examples of these objects during pro-democracy protests in the Admiralty and Mong Kok districts. For 10 points each:

[10] Name these objects that became the symbol of a 2014 pro-democracy movement led by students such as Joshua Wong.

ANSWER: **umbrellas**

[10] The protests broke out in this largely Cantonese-speaking Special Administrative Region, due to electoral changes that looked like they would increase Communist Party control from the mainland.

ANSWER: **Hong Kong** Special Administrative Region

[10] Another symbol of the Hong Kong protesters is a stuffed toy wolf manufactured by this company, since Hong Kong leader C.Y. Leung is sometimes nicknamed "the Wolf". In March 2015, this company banned people from playing hide-and-seek in its Dutch stores.

ANSWER: **IKEA** <Bentley>

16. After being mistaken for a governess by the arrogant Mrs. Quabarl, Lady Carlotta plays along and claims to use the title technique to teach children history by acting it out in this man's story "The Schartz-Metterklume Method". For 10 points each:

[10] Identify this witty British short story master who penned the line "Romance at short notice was her specialty", which ends his story "The Open Window".

ANSWER: **Saki** [or Hector Hugh **Munro**]

[10] In another Saki story, Cornelius Appin invents a procedure for teaching animals to speak, which he then demonstrates on Tobermory, one of these creatures. Tobermory then reveals some of the many household secrets he had innocuously overheard.

ANSWER: a **cat** [or a house**cat**; or synonyms like **kitty**, **kitten**, **moggie**, etc.]

[10] One possible source for Saki's pen name is the cupbearer who appears in Edward FitzGerald's translation of this collection of quatrains by Omar Khayyam.

ANSWER: the **Rubaiyat** of Omar Khayyam <Carson>

17. Chapters in this book are titled "The Gee-Whiz Graph" and "The Semiattached Figure." For 10 points each:

[10] Name this 1954 book by Darrell Huff, which teaches readers about how people misuse the results of a field of mathematical inquiry.

ANSWER: ***How to Lie With Statistics***

[10] In *How to Lie With Statistics*, misleading studies with low values for this number are discussed. It is usually represented by a lower-case *n*, and is the number of data points being considered in a statistical observation.

ANSWER: **sample size**

[10] *How to Lie With Statistics* also examines the post hoc fallacy, which is similar to this short phrase often given as a warning to intro social sciences students. This phrase reminds people that two variables might have linked rates of incidence without either being *responsible* for the other.

ANSWER: **Correlation does not imply causation** [or **Correlation is not causation**; or **Correlation doesn't imply causation**; accept any answer negating the idea that **correlation** could be equated to or used as valid evidence of **causation**] <Rosenberg>

18. Answer the following about the geometry of conic sections, for 10 points each:

[10] This conic section is formed by cutting the cone with a plane parallel to one of the surface lines. It is also the shape formed by the graph of a quadratic equation.

ANSWER: **parabola**

[10] This line is perpendicular to the axis of symmetry of a parabola. The distance from the vertex to this line is equal to the distance from the vertex to the focus.

ANSWER: **directrix**

[10] This general term is given to the set of all points which satisfy a given relation, like the focus-directrix ratio of conic sections.

ANSWER: **locus** <Karas>

19. One title for this sculpture comes from a legend that it depicts a moment just after the title youth delivered a message to the Roman Senate. For 10 points each:

[10] Identify this Greco-Roman sculpture of a youth removing the title object from his foot.

ANSWER: The ***Thorn-Puller*** [or ***Boy with Thorn*** or ***Fedele*** or ***Fedelino*** or ***Spinario***]

[10] The servant on the left of this sculptor's unsuccessful entry for the Gates of Paradise commission borrows from the *Thorn-Puller*. This man's masterpiece is the dome for the Florence Cathedral.

ANSWER: Filippo **Brunelleschi**

[10] Lorenzo Ghiberti, who beat Brunelleschi in that contest, was an expert in using a minimal number of casts when working in this material, such as in the Gates of Paradise. *The Thorn Puller* was also sculpted in this medium.

ANSWER: **bronze** <Bentley>

20. Answer the following about the lovers of Apollo, for 10 points each.

[10] Apollo's union with Coronis produces this master healer who is struck down by Zeus's thunderbolt for bringing Hippolytus back to life.

ANSWER: **Asclepius**

[10] Apollo creates the hyacinth flower to memorialize the death of Hyacinth, who is jealously killed by Zephyrus in this manner. Perseus accidentally kills his own grandfather Acrisius in this fashion.

ANSWER: he is hit in the head by a **discus**

[10] Either Helios or Apollo elopes with Leucothoe, who transforms into one of these objects after she is condemned to be buried alive by her angry father Orchamus. Aphrodite creates one of these objects from the blood of Adonis.

ANSWER: **flowers** [or **frankincense**; or **anemone**; or obvious equivalents; prompt on **plants**] <Kim>

21. This man probably landed in modern-day Maine and Nova Scotia while sailing with his son Sebastian under a patent granted by Henry VII. For 10 points each:

[10] Identify this explorer who vanished after attempting to return to North America on a 1498 expedition.

ANSWER: John **Cabot** [or Giovanni **Cabot** or John **Cabatto**]

[10] Cabot was Italian, like this other explorer. This man entertained ideas that he had reached Cipango, aka Japan, while sailing west on the *Santa Maria* in 1492.

ANSWER: Christopher **Columbus** [or Crisotbal **Colon** or Cristoforo **Colombo**]

[10] Another pair of Italian explorers, the Vivaldi brothers, were rumored to have gone to the court of this king after their disappearance. This mythical king was believed to rule a Christian domain in Ethiopia.

ANSWER: **Prester John** [or **Presbyter Johannes**] <Bentley>

22. Positive LOD scores indicate the occurrence of this phenomenon, which was first diagrammed by Alfred Sturtevant. For 10 points each:

[10] Name this tendency of genes whose loci are close by to be inherited together.

ANSWER: genetic **linkage**

[10] Linkage is a product of chromosomal recombination during this form of cell division, which produces four haploid cells and is undergone by gametes.

ANSWER: **meiosis**

[10] This base unit of measurement represents the distance between two genes for which the recombination frequency between them is 1%.

ANSWER: **centimorgan** [or genetic **map** unit] <Gupta>

23. In her most famous speech, this character claims that "the quality of mercy is not strain'd" and that "it droppeth like a gentle rain from heaven." For 10 points each:

[10] "Name this woman who poses as a "doctor of the law" named "Balthasar."

ANSWER: **Portia**

[10] Portia is the female lead of this Shakespeare play, in which Shylock seeks a "pound of flesh" as recompense for a loan made to the title character, Antonio.

ANSWER: *The* **Merchant of Venice**

[10] Shylock asks "If you prick us, do we not bleed? If you tickle us, do we not laugh? If you poison us, do we not die?" in his most famous speech, which is usually referred to by this five-word question.

ANSWER: "**Hath not a Jew eyes?**" <Cheng>