QQBC Packet 7

1. **In eukaryotes [yoo-KAIR-ee-ohtz], this structure is the site of O-linked glycosylation [glye-KAH-suh-LAY-shun], which aids in creating molecules like proteoglycan [proh-tee-oh-GLYE-kan]. One model of this structure proposes “maturation” of cisternae [sis-TUR-nee] as they progress from its (\*)** cis [siss] face to its trans face. This structure modifies and dispatches proteins that arrive from the endoplasmic reticulum [en-doh-PLAZ-mi reh-TIK-yoo-lum]. For 10 points—what cellular “apparatus” is named for its Italian discoverer?  
  
 answer: Golgi [GOHL-jee] apparatus (or Golgi complex(es) or Golgi body/ies; accept dictyosome(s))  
  
 <SCI, BIO>

6. This man sent Russian troops to crush the 1831 November Uprising in Poland. For 10 points each—  
  
 A. Name this conservative Russian tsar who succeeded his brother Alexander I, and was himself succeeded by his son Alexander II.  
  
 answer: Nicholas I of Russia (or Nikolai I of Russia; prompt on “Nicholas” or “Nikolai”)  
  
 B. Shortly after taking power in 1825, Nicholas's rule was challenged by this uprising of soldiers who favored his older brother Constantine.  
  
 answer: Decembrist uprising (or Vosstanie dekabristov; accept similar terms in place of “uprising”)  
  
 C. During the Revolutions of 1848, Nicholas sent Russian troops to help suppress the liberal uprising of Lajos Kossuth [LOY-ohsh kuh-SOOTH] in this country, which would later enter a ”dual monarchy” with Austria to its west.  
  
 answer: Hungary (or Magyarország)  
  
 <HIST, EURO>

2. **Lessons from this battle included resupplying aircraft on the flight deck rather than in the hangar due to the success of Wade McCluskey's Dauntless dive bombers. A strike launched from the Hiryu in this battle hit the USS Yorktown, which was already damaged from the Battle of the (\*)** Coral Sea. Admiral Yamamoto's attack on an atoll led to the loss of four Japanese aircraft carriers in—for 10 points—what June 1942 battle?  
  
 answer: Battle of Midway  
  
 <HIST, AMER>

3. This mathematical operation's generalization is called the inner product. For 10 points each—  
  
 A. Name this vector product, the sum of the products of corresponding entries, resulting in a scalar.  
  
 answer: dot product or scalar product  
  
 B. Given two vectors of fixed magnitudes, the dot product is largest if the vectors' directions have this property.  
  
 answer: parallel (accept the same)  
  
 C. That fact is because the dot product of two vectors can be calculated as the magnitude of one vector, times the magnitude of the other, times this function of the angle between them, and this trig function is largest when for an angle measuring zero.  
  
 answer: cosine function (accept answers that additionally mention a variable)  
  
 <SCI, OTHER>

3. **This author wrote about an orphan named Bliss who becomes a U.S. senator in the posthumous novel Three Days Before the Shooting . . ., part of which was initially published under the title Juneteenth. Another novel by this author is narrated by a man who listens to recordings of Louis Armstrong while living in an (\*)** underground shelter. For 10 points—what author described a Harlem “Brotherhood” in the novel Invisible Man?  
  
 answer: Ralph (Waldo) Ellison  
  
 <LIT, AMER>

5. This unit equals one joule [jool] per coulomb [KOO-lohm]. For 10 points each—  
  
 A. Name this unit used to measure battery strength.  
  
 answer: volt(s)  
  
 B. This phrase typically abbreviated “emf” [“E-M-F”] denotes the potential difference or output voltage produced by a battery.  
  
 answer: electromotive force  
  
 C. This man's loop rule for circuit analysis states that the signed sum of voltages around a circuit loop equals zero.  
  
 answer: Gustav (Robert) Kirchhoff [KEER-koff]  
  
 <SCI, PHYS>

4. **Viktor Klemperer's diaries describe his life in this city and its suburb of Dölzschen [DURLZ-shin] as a Jew under the Nazi regime. The Zwinger [TSVING-ur] Palace in this city is on the banks of the Elbe [EL-buh]. This capital of Saxony was the target of a 1945 event that killed 25,000 people, and which was described by a POW held here, (\*)** Kurt Vonnegut, in Slaughterhouse-Five. For 10 points—name this German city firebombed at the end of World War II.  
  
 answer: Dresden  
  
 <GEO, GEO>

7. For 10 points each—answer the following about the NBA three-point shootout:  
  
 A. This Chicago Bull set the record for the lowest score in a round when he only scored five points in 1990. He won the 1987 and 1988 dunk contests.  
  
 answer: Michael (Jeffrey) Jordan  
  
 B. This Boston Celtic won the first three competitions. He won three NBA titles with Boston as a player before going on to coach the Indiana Pacers.  
  
 answer: Larry (Joe) Bird  
  
 C. The 2013 champion was this player for the Cleveland Cavaliers, who in 2012 won Rookie of the Year.  
  
 answer: Kyrie (Andrew) Irving  
  
 <TRASH, SPORTS>

5. **This team defeated Miami in a 1982 game thanks to their snowplow operator, who cleared a spot for John Smith to kick a field goal. Three seasons later, this team was crushed by Mike Ditka's Chicago Bears in its first Super Bowl appearance; it has appeared in seven more Super Bowls since, including one in (\*)** 2015 against Seattle. For 10 points—name this NFL team coached by Bill Belichick and led by quarterback Tom Brady.  
  
 answer: New England Patriots (accept either underlined portion)  
  
 <TRASH, SPORTS>

2. For 10 points each—name these places in which comedians have gotten involved in politics:  
  
 A. In October 2015 comedian Jimmy Morales was elected the next president of this Central American country, following the arrest of Otto Pérez Molina [moh-LEE-nah] on corruption charges.  
  
 answer: (Republic of) Guatemala (or República de Guatemala)  
  
 B. This European country's Five Star Movement, led by comedian Beppe Grillo, has opposed several policies of current prime minister Matteo Renzi.  
  
 answer: Italy (or Italian Republic or Italia or Repubblica Italiana)  
  
 C. In 2013 Elizabeth Colbert [KOL-burt] Busch—the sister of Stephen Colbert [“coal-bear”]—lost a special election for a U.S. House seat from this state to its former governor, Mark Sanford.  
  
 answer: South Carolina  
  
 <CE, CE>

6. **This city contains art museums within both its Bargello [bar-JEL-loh] palace and Pitti Palace. Giorgio Vasari [JOR-joh vah-SAH-ree] built his namesake elevated “corridor” on top of this city's covered Ponte Vecchio [pahn-TAY VAY-kee-oh] bridge, which passes by an art museum called the (\*)** Uffizi [oo-FEET-see]. This city sits on the River Arno, which flows downstream towards Pisa [PEE-suh]. The capital of Tuscany is—for 10 points—what Italian city, dubbed the “birthplace of the Renaissance”?  
answer: Florence (or Firenze)  
<FA, OTHER>

2. In 2016 Chinese artist Ai Weiwei [“eye way-way”] withdrew all exhibitions of his works in this nation in protest of a new law allowing it to seize the valuables of asylum seekers. For 10 points each—  
  
 A. Name this European nation led by Lars Rasmussen. Its capital is Copenhagen.  
  
 answer: Denmark (or Kingdom of Denmark or Kongeriget Danmark)  
  
 B. In late January the refugee crisis led the E.U. to consider a two-year suspension of this “area” of mostly-free internal border crossings, named for a 1985 agreement.  
  
 answer: Schengen area (accept Schengen Agreement)  
  
 C. The Danish town of Randers passed a law to protect “Danish food culture” by requiring public institutions to serve this food even though it is forbidden under both Islamic and Jewish dietary laws.  
  
 answer: pork (accept specific pork products such as ham or bacon)  
  
 <CE, CE>

7. **A wing of this movement formed the pacifist “Freedom League” after finding the “Deeds Not Words” strategy insufficiently radical. A member of this movement, who died trying to tie a scarf to Anmer at the Epsom Derby [“darby”] in 1913, was Emily Davison. The Cat and Mouse Act targeted the hunger strikes led by (\*)** Emmeline Pankhurst, one of its activists. For 10 points—name this British movement to expand the franchise to women.  
  
 answer: (British) suffragist or suffragette or suffrage movement (accept descriptive answers such as “giving women the vote” before “women”) [Anmer was a racehorse owned by King George V.]  
  
 <HIST, EURO>

3. This city lies north of the San Ysidro [yuh-SID-roh] border crossing, which is often considered the busiest in the world. For 10 points each—  
  
 A. Name this major port city to the south of Los Angeles.  
  
 answer: San Diego, California  
  
 B. The San Ysidro border crossing separates San Diego from this city on Mexico's northern border, a popular weekend destination for American tourists.  
  
 answer: Tijuana [tee-HWAN-ah]  
  
 C. San Diego contains a large base for this branch of the armed forces, which is the largest single employer in the city.  
  
 answer: United States Navy  
  
 <GEO, GEO>

8. **This city's shikumen residences were inspired by Western townhouses. The world's busiest container port is in this city. Its Pudong District, which lies on the east bank of the Huangpu [wang-poo] River, is the site of the Oriental Pearl Tower and a Disneyland resort scheduled to open in June 2016. HSBC Bank is named after (\*)** Hong Kong and this city near the mouth of the Yangtze [yang-see]. For 10 points—name this most populous city in China.  
  
 answer: Shanghai  
  
 <GEO, GEO>

2. For 10 points each—answer the following about the fauna of Indonesia:  
  
 A. An extinct, namesake subspecies of tiger once lived on this most populous island of Indonesia, which contains its capital of Jakarta.  
  
 answer: Java  
  
 B. A faunal boundary line that divides Indonesia between Asian and Australian species is named after this British naturalist, who developed a theory of evolution independently from his contemporary Charles Darwin.  
  
 answer: Alfred Russel Wallace  
  
 C. This large Indonesian species of monitor lizard lives on the eastern side of the Wallace Line. These largest lizards in the world have a possibly venomous bite.  
  
 answer: Komodo dragons (or Komodo monitor or Varanus komodoensis)  
  
 <MISC., MISC.>

9. **In one episode of this TV show, the protagonist's childhood neighbor, Mrs. De Luca, blew herself up after admitting that she didn't have a premonition of the accident that killed the protagonist's family. The title character tries to help Hope (\*)** Shlottman, who is compelled to kill her parents by a man with mind-control powers named Kilgrave. Krysten Ritter plays the title superhero on—for 10 points—what Netflix series?  
  
 answer: (Marvel's) Jessica Jones  
  
 <TRASH, POP CULT>

9. For 10 points each—answer the following about Europe's attempts to rid itself of Napoleon:  
  
 A. After his defeat at the Battle of Leipzig, Europe tried to get rid of Napoleon by exiling him to this island off the coast of Tuscany. It didn't work.  
  
 answer: Elba  
  
 B. Napoleon ultimately escaped from Elba and led France for another 100 days, before being defeated by the Duke of Wellington in this 1815 battle.  
  
 answer: Battle of Waterloo  
  
 C. Napoleon died on the island of St. Helena in 1821. Historians have long speculated that he was killed by this poison, present in the wallpaper of his bedroom.  
  
 answer: arsenic (or As)  
  
 <HIST, EURO>

10. **James Strachey [“STRAY-key”] translated this author's term Besetzung [buh-SET-zoong], which loosely means “mental investment,” as ”cathexis” [kuh-THEK-siss] in a book by this author which includes five studies of hysteria. This man's teacher Josef Breuer [YO-sef BROY-er] developed the ”talking cure,” which inspired this thinker's technique of (\*)** free association. Psychoanalysis was developed by—for 10 points—what Austrian psychologist who wrote The Interpretation of Dreams?  
answer: Sigmund Freud [froyd] (or Sigismund Schlomo Freud)  
<RMPSS, SOC SCI>

3. For 10 points each—answer the following about electric and magnetic fields:  
  
 A. The magnitude of the electric field divided by the magnetic field is equal to this physical constant. It equals approximately 3 times 10 to the 8 meters per second.  
  
 answer: speed of light (in the relevant medium, or in a vacuum) (prompt on “c” or “c0” [“c naught”])  
  
 B. A particle's charge times the quantity electric field plus the cross product of velocity and magnetic field gives this quantity for a point charge, according a law named after Lorentz [luh-RENTZ].  
  
 answer: force (or Lorentz force)  
  
 C. One over the permeability times the cross product of the electric and magnetic fields gives this vector indicating the electromagnetic energy flux.  
  
 answer: Poynting vector  
  
 <SCI, PHYS>

11. **Sergei Rachmaninoff's [sair-gay rahk-MAH-nih-nawff] piano concerto of this number ends with an Alla breve [AHL-lah BRAY-vay] finale in the home key of D minor. This many instruments play in a Ludwig van Beethoven piece titled Archduke. Camille Saint-Saëns's [kuh-MEEL san-SAHNSS'Z] symphony of this number features an (\*)** organ. Beethoven's symphony of this number has a second-movement funeral march and was originally dedicated to Napoleon. For 10 points—give the number of the Eroica Symphony.  
answer: 3 (accept third)  
<FA, AUDIO>

8. These birds are only found in the New World. For 10 points each—  
  
 A. Name this family of birds, the only one whose members can hover and fly backwards. They have the highest metabolic rate of any homeothermic [HOH-mee-oh-THUR-mik] animal.  
  
 answer: hummingbirds (or Trochilidae)  
  
 B. Hummingbirds specialize in feeding on this sugar-rich fluid produced by flowers.  
  
 answer: nectar  
  
 C. Scientists have discovered that flowers pollinated by hummingbirds have an especially high concentration of this disaccharide [“die-SACK-uh-ride”], the most common one with a beta 1,2 [“one two”] linkage between its two subunits.  
  
 answer: sucrose [SOO-krohss]  
  
 <MISC., MISC.>

12. **This religion has been criticized for baptizing dead Holocaust victims without their families' consent. This religion allowed black people to enter priesthood for the first time after its leaders received a 1978 revelation. It has been governed by the (\*)** Quorum of the Twelve Apostles since the 1840s, when it aimed to create the state of Deseret [dehz-uh-RET] in the American West. For 10 points—name this faith founded by Joseph Smith.  
answer: Mormonism (or The Church of Jesus Christ of Latter-Day Saints; accept LDS Church)  
<RMPSS, REL>

9. For 10 points each—answer the following about crime in Los Angeles during the 1990s:  
  
 A. Throughout the 1990s, this gang founded in L.A. continued its long and violent war against rival gang the Bloods.  
  
 answer: Crips  
  
 B. In 1992 riots broke out in L.A. following the acquittal of local police officers who had been videotape beating this African-American man.  
  
 answer: Rodney (Glen) King (III)  
  
 C. This former NFL player was acquitted after a high-profile 1995 trial for the murder of his ex-wife Nicole Brown and Ron Goldman.  
  
 answer: O(renthal) J(ames) Simpson  
  
 <TRASH, POP CULT>

13. **During this president's administration a private group created the American Protective League, whose members volunteered to help the government find spies. This president established the Committee on Public Information, which was led by George Creel and used propaganda to advocate for a (\*)** war that this man had won re-election by having “kept us out of.” For 10 points—name this Democrat who led the U.S. in World War I.  
  
 answer: (Thomas) Woodrow Wilson  
  
 <HIST, AMER>

3. The so-called House of Atreus [AY-tree-uss] was actually founded by this man, Atreus's grandfather. For 10 points each—  
  
 A. Name this man who served up his son Pelops [PEE-lops] at a feast for the gods. He was punished by the temptation of eternally-unattainable fruit and water.  
  
 answer: Tantalus  
  
 B. After his death, Tantalus became a resident of Tartarus, one of the regions ruled by this Greek god of the underworld.  
  
 answer: Hades [HAY-deez] (or Plouton; do not accept or prompt on “Pluto”)  
  
 C. Another resident of Tartarus was this ancestor of the Centaurs, a Lapith king who tried to seduce Hera and was punished by being strapped to burning wheel.  
  
 answer: Ixion  
  
 <RMPSS, MYTH>

14. **This character is curious to know whether the baby of the Duchess turned into a fig, or a pig. An executioner is unable to determine how to sever this character's head, to the displeasure of a king and queen who are hosting a chaotic game of croquet [kroh-KAY]. A (\*)** grin is left hanging in the air during the gradual disappearance of this animal. Lewis Carroll created—for 10 points—what feline who lives in Wonderland?  
  
 answer: Cheshire Cat [CHEH-shur] (or Cheshire Puss; prompt on “cat”)  
  
 <LIT, BRIT>

2. Pencil and paper ready. For 10 points each—answer these trigonometry questions:  
  
 A. If x is an angle between zero and 360 degrees, inclusive, then for how many values of x does the sine [“sign”] of x equal one-half?  
  
 answer: 2 values [Within the range of angle values, arcsin(1/2) = 30 degrees or 150 degrees.]  
  
 B. What is the smallest positive value of x for which the cosecant [koh-SEE-kant] of x is undefined?  
  
 answer: x = 180 degrees (or x = 1 pi radians; do not accept or prompt on “1”) [csc(x) = 1/sin(x), and is thus undefined whenever sin(x) = 0, a situation that occurs at integer multiples of pi.]  
  
 C. Using a positive radial value and an angle between zero and 360 degrees, inclusive, what are the polar coordinates of the point whose Cartesian [kar-TEE-zhun] coordinates are (-1, negative square root of 3) [“negative one comma negative square root of 3”]? You have 10 seconds.  
  
 answer: (2, 240 degrees) or (2, 4 pi/3 radians) or (2, 4/3 pi radians) or (2, 1 1/3 pi radians) [r = sqrt(x2 + y2) = sqrt((-1)2 + (-sqrt(3))2) = sqrt(1 + 3) = sqrt(4) = 2; theta = arctan(y/x) = arctan(-sqrt(3)/-1) = arctan(sqrt(3)) = 240 degrees since it must be a 3rd-quadrant angle.]  
  
 <SCI, OTHER>

15. **A song titled for one of these people by 3 Doors Down claims that “you're getting closer, you're holding the rope and I'm taking the fall.” A song by Tom Petty suggests that even these people “get lucky sometimes.” The singer claims to be one of these people in Spanish by stating “Soy un (\*)** perdedor” [SOY oon PAIR-day-dor] before asking “so why don't you kill me?” in a hit by Beck. For 10 points—name these people who don't win.  
  
 answer: losers (accept I'm a Loser or Even the Losers)  
  
 <TRASH, POP CULT>

1. For 10 points each—answer the following about Catholic law concerning priests:  
  
 A. This requirement mandates that all priests refrain from marriage and sexual activity.  
  
 answer: clerical celibacy (do not accept or prompt on “abstinence”)  
  
 B. There are seven of these major rituals, such as baptism and the Eucharist, in Catholicism; the performance of many is restricted to priests alone, though others can be administered by deacons.  
  
 answer: sacraments  
  
 C. This is the name for the process of dismissing a priest from the clergy.  
  
 answer: laicization (accept defrocking or unfrocking)  
  
 <RMPSS, REL>

16. **This character is puzzled by the apparent disappearance of Thomas Pérez, who cuts through fields to keep pace with a hearse that is carrying the body of this man's mother. The question of God's existence fails to interest this character when he is visited by a prison chaplain shortly before his execution. A knife-wielding (\*)** Arab man is shot on a beach by—for 10 points—what narrator of Albert Camus's [al-“bare” kam-oo'z] novel The Stranger?  
  
 answer: (Monsieur) Meursault [mur-SOH] (prompt on ”(The) Stranger” ”(L')Étranger” or ”(The) Outsider”)  
  
 <LIT, EURO>

0. In his 2016 State of the Union President Obama reiterated his call to make these institutions tuition-free. For 10 points each—  
  
   
  
 Name these institutions that offer associate's degrees.  
  
 community colleges or junior colleges (accept two-year colleges; prompt on “college(s)”)  
  
 In summer 2015 Governor Kate Brown signed free community college legislation into law in this state; in October 2015 its Umpqua Community College was the site of a mass shooting.  
  
 Oregon  
  
 This governor of Maine, who made headlines with racist statements about ”drug dealers,” was accused of forcing out the head of Maine's community college system during a failed impeachment attempt.  
  
 Paul (Richard) LePage  
  
 <CE, CE>

17. **In the lower center of this painting, a woman eats a giant blackberry next a bird feeding a man a cherry. A pair of ears holds a carving knife in the rightmost portion of this work, whose leftmost portion shows a swarm of birds emerging from a hut, below which (\*)** Eve is presented to Adam by God. Scenes of Eden and Hell flank the nude revelers of the central panel in—for 10 points—what triptych by Hieronymus Bosch [“hi”-uh-RAHN-uh-muss “bosh”]?  
  
 answer: The Garden of Earthly Delights  
  
 <FA, VISUAL>

0. For 10 points each—answer these questions about the adrenal [uh-DREE-nul] glands:  
  
 A. The adrenal glands sit atop what urine-producing organs?  
  
 answer: kidney(s)  
  
 B. What outer part of the adrenal glands secretes cortisol and surrounds the inner medulla?  
  
 answer: adrenal cortex (or adrenal cortices or cortical layer)  
  
 C. The adrenal medulla secretes epinephrine [ep-in-EF-rin] and norepinephrine [NOR-ep-in-EF-rin], which are derived from what amino acid that differs by an OH group from phenylalanine?  
  
 answer: tyrosine [TYE-roh-seen] (or Tyr or Y)  
  
 <SCI, BIO>

18. **The first welfare theorem states that a condition named for this man is satisfied by competitive equilibria. A type of power-law distribution is named for this man because of his observation that about 20 percent of the population owns 80 percent of the total wealth. An allocation displays his namesake (\*)** ”efficiency” if no one can be made better off without making another worse. For 10 points—name this Italian economist.  
  
 answer: Vilfredo Pareto (or Vilfredo Federico Damaso Pareto or Wilfried Fritz Pareto; accept Pareto efficiency or Pareto optimality)  
  
 <RMPSS, SOC SCI>

0. This character's nickname comes from his abnormally small number of fears. For 10 points each—  
  
   
  
 Name this character who trains prospective members of the Dauntless faction.  
  
 Four (or Tobias Eaton; accept any underlined portion)  
  
 Tris [triss] Prior falls in love with Four in this author's Divergent series.  
  
 Veronica Roth  
  
 Roth's short story “Free Four” retells a scene from Divergent in which Tris and others are taught to throw these weapons.  
  
 knives (or knife)  
  
 <LIT, AMER>

19. **This artist offered, “Bring your cups baby, I could bring the drink” in his debut single, which appeared on his mixtape House of Balloons. This singer of “Wicked Games” had back-to-back number one hits in 2015, including one about cocaine-induced (\*)** numbness and one in which he claims to “only call you when it's half past five.” Abel Tesfaye [TESS-fay] is better known as—for 10 points—what singer of “Can't Feel My Face” and “The Hills?”  
  
 answer: The Weeknd [“weekend”] (accept Abel Makkonen Tesfaye before “Tesfaye”)  
  
 <TRASH, POP CULT>

1. Calculations suggest that unlike all other elements in its group, this element should be a solid at standard temperature and pressure. For 10 points each—  
  
 A. Give the systematic name or atomic number of this element, the heaviest one for which experimental evidence has been verified.  
  
 answer: element 118 or ununoctium [un-un-OCK-tee-um] (or Uuo)  
  
 B. Element 118 was synthesized by bombarding another noble gas, krypton, with this heavy metal. It is used as shielding by X-ray technicians.  
  
 answer: lead (or Pb)  
  
 C. The known isotopes of element 118 are near, but not within, this theoretical region on a graph of atomic number versus mass number that is predicted to contain relatively long-lived heavy isotopes.  
  
 answer: island of stability  
  
 <SCI, CHEM>

20. **This desert contains the Puritama hot springs and provides an alternative name for the Vallenar toad. The Very Large Telescope is in this desert whose coastal cliffs are home to Humboldt penguins. Marine fog from the Pacific provides rare moisture to this desert, whose vast salt pans provide sustenance for (\*)** Andean flamingos. The Andes run east of—for 10 points—what driest desert in the world that lies mostly in Chile [CHEE-lay]?  
  
 answer: Atacama Desert (or Desierto de Atacama; accept Atacama toad after “toad”)  
  
 <GEO, GEO>

7. This country surrounds the Sulu Sea, where the Muslim Moro people conducted piracy against the Spanish during the colonial era. For 10 points each—  
  
 A. Name this Asian country, whose capital was the site of the 1898 Battle of Manila Bay.  
  
 answer: (Republic of the) Philippines (or Republika ng Pilipinas)  
  
 B. This other sea west of the Sulu has been the site of many territorial disputes involving China, which claims a majority of this sea via the so-called ”nine-dotted line.”  
  
 answer: South China Sea  
  
 C. This gulf in the eastern Philippines was the site of World War II's largest naval battle, in which Admiral “Bull” Halsey crippled Japan's naval capabilities for the remainder of the war.  
  
 answer: Leyte Gulf (accept Battle of Leyte Gulf)  
  
 <GEO, GEO>

21. **One of these objects sitting outside the U.S. Senate chamber is named, for unknown reasons, for Ohio. After being jilted, Miss Havisham disables several of these objects in Great Expectations. The Bulletin of the Atomic Scientists manages a symbolic one of them that is moved forward or back based on global stability, the (\*)** ”doomsday” one. For 10 points—name these devices that also come in ”grandfather” and ”cuckoo” varieties.  
  
 answer: clocks (accept Ohio clock or Doomsday Clock or grandfather clock or cuckoo clock)  
  
 <MISC., MISC.>

0. This archaeological site, which is comprised of four geologic beds, features chipped pebbles that are the earliest known stone tools. For 10 points each—  
  
 A. Name this steep-sided African ravine in the Great Rift Valley where Mary and Louis Leakey discovered Homo habilis [HOH-moh HAB-ih-liss] fossils.  
  
 answer: Olduvai [OHL-doo-vye] Gorge (or Oldupai Gorge)  
  
 B. Homo habilis may have co-existed with this other hominid species, whose name is Latin for “upright man.”  
  
 answer: Homo erectus  
  
 C. In addition to Homo habilis, the Leakey family also discovered this species at Olduvai Gorge. It was originally classified as Australopithecus [aw-STRAY-loh-PITH-eh-kuss] but is now considered to be a member of the Paranthropus genus.  
  
 answer: Paranthropus boisei [boy-SAY]  
  
 <SCI, BIO>

22. **In a test of this effect, John Darley and Bibb Latané measured how long it took for people filling out a questionnaire to notice smoke being pumped into a room. An oft-cited article about how 38 people witnessed the murder of Kitty (\*)** Genovese is often used as an example of this effect, in which there is a diffusion of responsibility. For 10 points—name this effect in which onlookers fail to respond to an emergency.  
  
 answer: bystander effect (accept Genovese Syndrome before “Genovese”)  
  
 <RMPSS, SOC SCI>

0. In this country, the Wabar [waw-bar] meteorite impact craters were discovered by the British officer John Philby, who was searching for the so-called “Atlantis of the Sands.” For 10 points each—  
  
   
  
 Name this oil-rich Middle Eastern kingdom whose capital is Riyadh [ree-YAHD].  
  
 (Kingdom of) Saudi Arabia (or al-Mamlakah al-Arabiyah as-Suudiyah)  
  
 The Wabar craters lie in this largest sand desert in the world; this part of the Arabian Desert covers most of southern Saudi Arabia.  
  
 Rub' al-Khali [roob al-KAH-lee] (or Empty Quarter)  
  
 The Rub' al-Khali contains much of Saudi Arabia's southwestern border with this nation, which is currently experiencing a civil war between its president Abd Rabbuh Mansur Hadi [ahb-drah-BOO mahn-SOOR HAH-dee] and Houthi [HOO-thee] rebels in the northwest.  
  
 (Republic of) Yemen [YEH-men] (or Al-Jumhuriyya al-Yamaniyya)  
  
 <GEO, GEO>

23. **This building, whose lobby ceiling is decorated with Edward Trumbull murals, is the tallest brick structure in the world. It was, for about eleven months, the tallest building in the world after its secretly constructed metal spire was raised. William Van Alen designed this Art (\*)** Deco skyscraper to have gargoyles resembling 1920s hood ornaments. For 10 points—what New York building is named for an American automaker?  
answer: Chrysler Building  
<FA, OTHER>

5. Pencil and paper ready. For 10 points each—give either the name or the number of sides of the regular polygon with these properties:  
  
 A. Its interior angles each measure 120 degrees.  
  
 answer: (regular) hexagon or 6 sides (or 6-gon; accept hexagonal shape) [I = (180/n) × (n - 2) = 120, so 180n - 360 = 120n, so -360 = -60n, and n = 6]  
  
 B. Its area equals one-fourth times the square root of 3 times the square of the side length.  
  
 answer: (equilateral) triangle or 3 sides (or 3-gon; accept triangular shape)  
  
 C. It has a total of 14 diagonals; you have 10 seconds.  
  
 answer: (regular) heptagon [HEP-tuh-gon] or (regular) septagon or 7 sides (or 7-gon; accept heptagonal shape or septagonal shape) [An n-sided polygon has n(n - 3)/2 diagonals, so n(n - 3)/2 = 14, so n(n - 3) = 28, which, via inspection, can be solved as n = 7.]  
  
 <SCI, OTHER>

24. **The Kiwa genus of deep-sea crabs is nicknamed for this creature due to their hairy legs. The Pangboche Hand and Khumjung Scalp were relics falsely attributed to this creature. John Ratzenberger voiced it in Monsters Inc. and Monsters University. In 1963 Edmund Hillary reported seeing this (\*)** creature's tracks during his trip to Nepal. For 10 points—name this cryptid that supposedly haunts the peaks of the Himalayas.  
  
 answer: Yeti (accept Abominable Snowman or Meh-teh)  
  
 <MISC., MISC.>

8. This biological domain can be split in two based on how organisms in it respond to the Gram stain. For 10 points each—  
  
 A. Name this domain that contains single-cell organisms such as Escherichia [esh-uh-REE-kee-uh] coli.  
  
 answer: bacteria  
  
 B. Gram-positive bacteria have an especially thick layer of this polymer in the cell wall.  
  
 answer: peptidoglycan (or murein)  
  
 C. Upon the completion of the Gram stain, Gram-positive bacteria are this color, because they retain the “crystal” dye of this color.  
  
 answer: violet (accept crystal violet; accept purple)  
  
 <SCI, BIO>