



1. A character in this story mistakenly believes he hears a mouse or cricket on his floor. That character is an old man who has an eye resembling that of a vulture's. In this story's climax, the narrator hears a sound like the noise "a watch makes when enveloped in cotton." At the end of this story, the narrator screams "I admit the (*) deed--tear up the planks!" after repeating the word "louder" several times. For 10 points, name this Edgar Allan Poe story in which a murderer is driven insane by what he believes is the sound of the title object beating under floorboards.

ANSWER: "The Tell-Tale Heart"

052-14-102-11101

BONUS: What Nazi Field Marshal was known as the Desert Fox for his tank warfare tactics in the North African theater of World War II?

ANSWER: Erwin Rommel

015-14-102-1110-11

2. A narrator in one of this composer's operas tells of "two lovers" who "sat on a park bench with their bodies touching, holding hands in the moonlight." He worked with Constance DeJong on an opera whose three acts reference Leo Tolstoy, (*) Rabindranath (rah-BIN-druh-nont) Tagore, and Martin Luther King, Jr. This man is best-known for an opera with interludes called "knee plays" that is named for a physicist. For 10 points, identify this American minimalist composer of *Einstein on the Beach*.

ANSWER: Philip Glass

189-14-102-11102

BONUS: What new 2013 drama starring Karl Urban concerns a futuristic society in which cops are paired with android counterparts?

ANSWER: Almost Human

015-14-102-1110-11

3. Ernst von Freyberg is the president of a financial services institute in this country, the IOR. In 2014, a former accountant for that organization here was charged with laundering money for his home in Salerno. Paolo Gabriele stole documents from his employer here which he leaked to journalist (*) Gianlugi Nuzzi. This country's leader decided to live in Saint Martha's House rather than the traditional apartments after replacing the first leader to resign in over seven hundred years. For 10 points, name this city-state led by Pope Francis.

ANSWER: Vatican City

121-14-102-11103

BONUS: What idea, that is opposed to phyletic gradualism and can explain stasis in the fossil record, is a theory developed by Niles Eldredge and Stephen Jay Gould which states that evolution occurs in bursts?

ANSWER: punctuated equilibrium [prompt on evolution]

048-14-102-1110-11

4. **This singer was criticized online for dating James Lowe, and Veronica Bayetti Flores wrote an October 2013 article claiming that a song by this artist is racist. A song by this artist includes the lyrics "I'm kind of over getting told to put my hands up in the air" and starts the chorus with "we live in cities you'll (*) never see on screen."** This singer of "Team" also has a song that begins "I've never seen a diamond in the flesh" and asks "let me be your ruler" and "let me live that fantasy." For 10 points, name this New Zealand singer whose album *Pure Heroine* included the song "Royals."

ANSWER: Lorde [or Ella Yelich-O'Connor]

023-14-102-11104

BONUS: This is a 30-second calculation question. A dartboard has radius 8 inches, and the inner bullseye has radius of one-half an inch. If a dart strikes the dartboard, what is the probability that it hits the bullseye?

ANSWER: 1/256

190-14-102-1110-11

5. **Several characters in this play appear in a 2010 sequel by Bruce Norris. A character in this play entertains going into business with Bobo, and the role of Mrs. Johnson is eliminated in some stagings of this play. Karl Linder attempts to talk several characters against moving into Clybourne Park in this play, in which the Nigerian student Joseph Asagai is one of (*) Beneatha's suitors. Walter dreams of owning a liquor store in this play. For 10 points, name this play about the travails of the Younger family, a work by Lorraine Hansberry.**

ANSWER: A *Raisin in the Sun*

030-14-102-11105

BONUS: What British economist wrote *On the Principles of Political Economy and Taxation*, in which he defined rent and laid out his theory of comparative advantage?

ANSWER: David Ricardo

014-14-102-1110-11

6. **Net electric flux equals this quantity divided by the permittivity according to Gauss's law. The elementary value for this quantity was determined by balancing the gravitational and electric forces on an (*) oil drop in an experiment conducted by Millikan. Current is the rate of change of this quantity with respect to time. The force on a particle is equal to this quantity times the electric field. For 10 points, identify this quantity measured in Coulombs, which is negative for an electron.**

ANSWER: electric charge

226-14-102-11106

BONUS: What "Generalísimo" led Spain from 1939 until his death in 1975 after winning the Spanish Civil War?

ANSWER: Francisco Franco y Bahamonde

015-14-102-1110-11

7. **The twenty-third chapter of this book jumps out of narrative to describe a gold rush at Odendaalsrust (oh-den-DAHLS-rust). At a trial in this book, Matthew gets off scot-free, partly because his father John can afford a good lawyer, unlike Mr. Carmichael, who takes the case *pro bono*. At this novel's conclusion, the protagonist prays atop a mountain near (*) Ndotsheni (en-DOT-shen-ee). For killing James Jarvis, Absalom is sentenced to death in this novel. For 10 points, name this novel about Stephen Kumalo by Alan Paton.**

ANSWER: *Cry, the Beloved Country*

190-14-102-11107

BONUS: What colony, whose governor for about thirty nonconsecutive years was William Bradford, was governed by the *Mayflower* compact?

ANSWER: **Plymouth** Bay Colony [do not accept "Massachusetts Bay"]

023-14-102-1110-11

8. **Murray Gell-Mann originally theorized the existence of this many quarks. The active ingredient of Eskalith contains the carbonate of the element with this atomic number, which is used to treat manic disorders. Phosphorus pentachloride has this many equatorial atoms. It is the bond order of the carbon carbon bond (*) acetylene, since it is the number of carbon-carbon bonds in alkynes (al-KINEZ). The law of thermodynamics with this number says it is impossible to cool a system to absolute zero. For 10 points, give the number of hydrogen atoms in ammonia.**

ANSWER: **three**

239-14-102-11108

BONUS: What man who worked with Gandhi became the first prime minister of India upon independence?

ANSWER: Jawaharlal **Nehru**

023-14-102-1110-11



SET A:

1. BONUS: What experiment confirmed the de Broglie hypothesis by firing a beam of electrons at a sheet of nickel and measuring the scattering angles?

ANSWER: **Davisson-Germer** experiment

233-14-102-1110-12

2. BONUS: This is a 20-second calculation question. What is y in the solution to the system of equations: " $y = x + 3$ ", and " $x + 2y = 9$ "?

ANSWER: **4**

190-14-102-1110-12

3. BONUS: Name the poet who wrote of a "darkling plain swept with confused alarms" where "ignorant armies clash by night" in a poem that begins by describing a seascape.

ANSWER: Matthew **Arnold**

014-14-102-1110-12

4. BONUS: What Umberto Eco novel follows William of Baskerville's investigation of a murder at a medieval abbey?

ANSWER: *The **Name of the Rose***

014-14-102-1110-12

SET B:

1. BONUS: What experiment disproved the plum pudding model of the atom and showed the existence of a positively charged nucleus?

ANSWER: Rutherford **gold foil** experiment [or **Geiger**-Marsden experiment; or **Rutherford** gold foil experiment]

239-14-102-1110-12

2. BONUS: What instrument was played by Dizzy Gillespie, Miles Davis, and Louis Armstrong?

ANSWER: **trumpet**

015-14-102-1110-12

3. BONUS: What mathematician names a set of fluid dynamics equations describing inviscid flow?

ANSWER: Leonhard **Euler**

014-14-102-1110-12

4. BONUS: This is a 20-second calculation question. An angle in standard position has a terminal side that passes through $(-12, 9)$. What is the cotangent of this angle?

ANSWER: **-4/3**

037-14-102-1110-12



9. In response to Mayor Levi Boone's restrictions on taverns in this city, the 1855 Lager Beer Riot broke out. Another of its mayors, Carter Harrison, was assassinated by a failed office seeker. Dr. Henry Howard Holmes killed numerous people in this city during a festival. As documented in the book *The Devil in the White City*, it hosted the 1893 World's (*) Columbian Exposition. This city suffered a disaster legendarily caused by Mrs. O'Leary's cow kicking over a lantern. For 10 points, name this Illinois city severely damaged in an 1871 "great fire."

ANSWER: Chicago

052-14-102-11109

BONUS: What man painted a scene of a demonic creature consuming his offspring as a part of his *Black Paintings* series, entitled *Saturn Devouring His Children*?

ANSWER: Francisco Goya

227-14-102-1110-11

10. On this exact date, a president gave a speech containing a last minute line about "inevitable triumph" added by Harry Hopkins. A vote taken on this day featured a sole dissent from Jeannette Rankin and passed 388 to 1 in the House of Representatives. On this day, a speaker noted that American forces had been attacked on (*) Wake Island. That speech begins by noting the previous day "will live in infamy." For 10 points, give the exact date of the United States declaration of war on Japan in World War II, which occurred the day after the Pearl Harbor attacks.

ANSWER: December 8, 1941 [prompt on partial answer]

052-14-102-11110

BONUS: What complex of protein and sugars makes up the bacterial cell wall and is taken up by the Gram stain?

ANSWER: peptidoglycan [or murein]

048-14-102-1110-11

11. The symbols I and K are used for a type of these things when it is present in the inner and outer core. The two most common surface types of these things are named for Rayleigh and Love. A shadow zone results from one type of these things not penetrating the outer (*) core and another type of them being refracted by the core-mantle boundary. Those two types are P and S. For 10 points, identify these things whose travel time is used to determine an earthquake's hypocenter.

ANSWER: seismic waves

066-14-102-11111

BONUS: What Canadian province borders North Dakota and Minnesota to the south and has its capital at Winnipeg?

ANSWER: Manitoba

015-14-102-1110-11

12. This king's general Sagmandia captured Gao, the capital of a neighboring empire. He employed an architect from Granada named as-Sahili and had the Sankore (sahn-CORE-eh) and Djinguereber (JING-uh-ray-bare) mosques built. Writing twelve years after this man traveled through, al-Umari claimed that his visit was still being talked about in (*) Cairo. He allegedly flooded Cairo's gold market during his extremely lavish hajj. For 10 points, name this fourteenth century ruler who served as the mansa of Mali.

ANSWER: Kankan Musa I [or Mansa Musa]

023-14-102-11112

BONUS: Pegasus came out of the neck of what mythological character after Perseus beheaded her?

ANSWER: Medusa

019-14-102-1110-11

13. BH3-only proteins such as Bim and Bid promote this process once they are activated by Fas ligand binding its receptor. Trophic factors prevent this process from occurring. Mutant CED protein in *C. elegans* causes defects in this pathway. In eukaryotes, it is caused when Bcl-2 no longer prevents the release of (*) cytochrome C from the mitochondria. This process results in a cascade of caspases. Damage to p53 causes this process to occur in healthy cells, though defects in it are indicative of cancer. For 10 points, name this process of programmed cell death.

ANSWER: apoptosis [prompt on cell death until it is read]

190-14-102-11113

BONUS: What 2013 comedy subtitled "The Legend Continues" features Paul Rudd as Brian Fantana and John C. Reilly as the ghost of Stonewall Jackson?

ANSWER: Anchorman 2: The Legend Continues

015-14-102-1110-11

14. One example of this genre addressed to "Vera" was written by Vladimir Nabokov and originally referred to the mother of the Muses. Another book in this genre describes how the main character was sexually abused by her mother's boyfriend Mr. Freeman and then helped out of a period of silence by Bertha Flowers after moving back to (*) Stamps, Arkansas. For 10 points, name this genre that includes *Speak*, *Memory* and Maya Angelou's *I Know Why the Caged Bird Sings*, which both describe the authors's lives.

ANSWER: autobiography [or autobiographies; or memoirs]

023-14-102-11114

BONUS: Former Princeton boxing champion Robert Cohn and the wounded war veteran Jake Barnes are characters in a novel set in what country, where Robert Jordan goes to blow up a bridge in *For Whom the Bell Tolls*?

ANSWER: Spain

052-14-102-1110-11

15. In rituals involving these items, the phrase "I'had'lik neir" (luh-HOD lick-NAIR) is used. A ritual involving two of these items uses one of them to fulfill the commandment "remember" and the other to fulfill the commandment "observe." A hand is waved over these items and then used to cover the eyes by a woman who uses them at the start of (*) Shabbat. In another Jewish holiday, these items include the "shamash," and an additional one is used on each of eight days. For 10 points, identify these items which are placed in a menorah on Hannukah and lit.

ANSWER: candles

019-14-102-11115

BONUS: Silla and Goguryeo (go-GUR-yo) were some of the early kingdoms on what Asian peninsula?

ANSWER: **Korea** [or the **Korean** Peninsula]

014-14-102-1110-11

16. **This city's Old Deaf School Park contains a topiary rendering of the painting *Sunday Afternoon on the Island of La Grand Jatte*. The Batelle Memorial Institute is headquartered in this city, whose historic monuments include the Camp Chase Confederate Cemetery and James Thurber's house. Found at the confluence of the Olentangy and (*) Scioto (sai-OH-tuh) Rivers, it is the seat of Franklin County. It is the capital of a state whose other large cities include Dayton and Toledo. For 10 points, name this capital of Ohio.**

ANSWER: **Columbus**, Ohio

080-14-102-11116

BONUS: Beth dies after becoming ill with scarlet fever in what novel, which begins with the March family donating their breakfast to a poor neighbor?

ANSWER: **Little Women**

227-14-102-1110-11



17. This leader described Vietnam as "the rotten country" and started a boycott of the European Economic Community that led to the Empty Chair Crisis. He pulled his country out of NATO in 1966, four years after he escaped an assassination attempt engineered by the (*) Secret Army Organization. His presidency was weakened by a series of protests in May of 1968. This leader's government signed the Evian Accords to grant Algeria independence. For 10 points, name this first president of France's Fifth Republic, who led the Free French forces during World War II.

ANSWER: Charles Andre Joseph Marie de Gaulle

186-14-102-11117

BONUS: What Czech novelist wrote about Tomas and Tereza in *The Unbearable Lightness of Being*?

ANSWER: Milan Kundera

014-14-102-1110-11