



1. **The velocity of a bullet can be found with a ballistic one of these devices. The period of one of these equals two pi times the square root of L over g. For small angles, they approximate simple harmonic motion. One of these devices was used to demonstrate the earth's (*) rotation by Jean Foucault. For 10 points, name this device that consists of a weight suspended on a string.**

ANSWER: pendulum

185-14-101-04101

BONUS: What name is given to the people who attempted to cheat during the Land Run of 1889 by crossing the border of the Oklahoma Territory before it was opened?

ANSWER: Sooners

040-14-101-0410-11

2. **Penelope Barker instigated a boycott of this product by women in Edenton, North Carolina. This commodity was transported by the *Dartmouth, Eleanor, and Beaver*. The Townshend duty on this product was *not* lifted after the (*) Boston Massacre. Parliament permitted this product to be exported duty-free in a 1773 act that infuriated the Sons of Liberty. For 10 points, name this foodstuff which was therefore dumped into Boston Harbor.**

ANSWER: tea

190-14-101-04102

BONUS: What people, whose influx led to the settlement of San Francisco, were miners in the California Gold Rush who emigrated in a namesake year?

ANSWER: forty-niners

190-14-101-0410-11

3. **This author wrote that “life is too much like a pathless wood” in a poem whose speaker wishes to “get away from earth awhile.” He began one poem with the line, “Something there is that doesn’t love a wall,” skewering a neighbor who believes that “Good (*) fences make good neighbors.” This author of “Birches” wrote a poem whose speaker is “sorry he could not travel both” when confronted with a fork in the road. For 10 points, name this poet of “The Road Not Taken.”**

ANSWER: Robert Frost

190-14-101-04103

BONUS: What type of poem is composed of six stanzas each made up of six lines, followed by an *envoi*?

ANSWER: sestina

232-14-101-0410-11

4. **An officer of this state's military had his head thrown into the camp of his older brother after his defeat at Metaurus. This city was home to Hamilcar, a patriarch whose progeny included Mago and Hasdrubal Barca. Cato the Censor repeatedly advocated for the (*) destruction of this city. This civilization's downfall was ensured when Scipio Africanus won the Battle of Zama against its general Hannibal. For 10 points, identify this Phoenician city that fought the Punic Wars against Rome.**

ANSWER: Carthage [or Carthago; or Kart-hadasht]

195-14-101-04104

BONUS: What Frankish king had himself crowned Holy Roman Emperor by the Pope on Christmas Day, 800?

ANSWER: Charlemagne [or Charles the Great; or Charles I; or Carolus Magnus]

121-14-101-0410-11

5. **This composer's short piano piece *Albumblatt* was rediscovered and given its premiere in 2012. This man's fourth symphony includes variations of a theme from Bach's *Cantata No. 150*. His *Four Serious Songs* were written in memory of Clara (*) Schumann, with whom this composer was in love. This composer included student drinking songs in his *Academic Festival Overture*. For 10 points, name this German composer who composed a famous lullaby.**

ANSWER: Johannes **Brahms**

030-14-101-04105

BONUS: What Russian composer wrote *The Isle of the Dead* and *Rhapsody on a Theme of Paganini*?

ANSWER: Sergei **Rachmaninoff**

052-14-101-0410-11

6. **Non-nucleophilic examples of these substances are used to catalyze the E2 reaction. One of these compounds, which is a mix of n-butyl-lithium and potassium t-butoxide, is named for Schlosser. Lithium di-isopropyl-amide is an example of the "super" type of these. These substances, which turn phenolphthalein (*) pink, donate pairs of electrons in the Lewis definition, while they accept protons in the Bronstead-Lowry definition. For 10 points, name these substances like NaOH that have a pH above 7.**

ANSWER: **bases**

048-14-101-04106

BONUS: What gas law describes how the pressure of a gas decreases as the volume increases?

ANSWER: **Boyle's** law [or Boyle-**Mariotte** law]

052-14-101-0410-11

7. **This team's coach Hank Stram was miked up by NFL Films, which was the first time a coach wore a microphone in a Super Bowl. The founder of this team, Lamar Hunt, is the namesake of the AFC Championship trophy. This team was the loser of the first Super Bowl; more recently, this team won the division in 2003 with running back (*) Priest Holmes. It is currently coached by Andy Reid. For 10 points, name this team that is a rival of the Denver Broncos and plays its games in Arrowhead Stadium.**

ANSWER: **Kansas City** Chiefs [or Kansas City **Chiefs**]

030-14-101-04107

BONUS: What leader of the Huns may have killed his brother Bleda and was defeated by Flavius Aetius and Theodoric at the Battle of Chalons?

ANSWER: **Attila** the Hun

186-14-101-0410-11

8. **This novel asserts that "a king is history's slave" in a chapter outlining the author's theory of history. This novel's protagonist leaves his wife Helene and wins a duel against Dolokhov. In this book, Prince Andrei survives the Battle of (*) Austerlitz. At this novel's conclusion, Pierre decides against assassinating Napoleon and winds up marrying Natasha Rostov. For 10 points, name this giant novel written by Leo Tolstoy.**

ANSWER: **War and Peace** [or **Voyna i Mir**]

190-14-101-04108

BONUS: What two competitors for the 2016 Republican nomination have been involved in a recent feud, as one of them responded to accusations of pork barrel spending by calling the other the "king of bacon?"

ANSWER: Rand **Paul** and Chris **Christie** [prompt on partial answer]

080-14-101-0410-11



SET A:

1. BONUS: What type of lakes are formed when the neck of a river's meander is cut off?

ANSWER: oxbow lakes

233-14-101-0410-12

2. BONUS: What terrorist event lasted for 444 days and ended when Ronald Reagan was inaugurated on January 20, 1981?

ANSWER: Iran Hostage Crisis

225-14-101-0410-12

3. BONUS: Name the play by Johann Wolfgang von Goethe (GURR-tuh) in which the title scholar bargains with the devil.

ANSWER: Faust [do not accept "Doctor Faustus," etc.]

030-14-101-0410-12

4. BONUS: This is a 30-second calculation question. If two distinct letters are selected from the alphabet, what is the probability that *neither* is found in the word bankruptcy? Express your answer as a fraction in simplest form.

ANSWER: 24/65

003-14-101-0410-12

SET B:

1. BONUS: Which last-in, first-out data structures, which can sometimes overflow, are push and pop applied to?

ANSWER: stack

233-14-101-0410-12

2. BONUS: What English poet asked "If Winter comes, can Spring be far behind?" in his poem "Ode to the West Wind"?

ANSWER: Percy Shelley

227-14-101-0410-12

3. BONUS: This is a 30-second calculation question. Line AB intersects perpendicular lines CD and EF at points G and H, respectively. If angle AGC measures 130 degrees, what is the measure of angle BHF?

ANSWER: 40 degrees [or 140 degrees; accept either answer as both ways of drawing EF are acceptable]

003-14-101-0410-12

4. BONUS: What river is the longest entirely within Massachusetts, had a marshy area known as the Back Bay, and flows through Boston?

ANSWER: Charles River

030-14-101-0410-12



9. **Branches of this religious group are called "mansions," and one important text of this faith consists of four books of Athlyi and is called the *Holy Piby*. Members of this faith reject "-isms," and they believe that shellfish and pork turn the body into a (*) cemetery. This religion believes that corruption can be burned out of oneself through smoking cannabis. For 10 points, name this religion whose followers believe that Halie Selassie was a form of God, or Jah, and is popular in Jamaica.**

ANSWER: **Rastafarianism**

141-14-101-04109

BONUS: Tritium and deuterium are both what forms of hydrogen that have the same number of protons but a different number of neutrons?

ANSWER: **isotopes**

023-14-101-0410-11

10. **An unusually large type of this structure is found within the cells of the salivary glands of *Drosophila* and is called polytene. Scaffolding proteins and histones help comprise these structures. They can be viewed on a karyogram, which can detect (*) aneuploidies. These structures are formed from condensed genetic material before a cell divides. For 10 points, name this DNA-containing structure, of which 23 pairs are found in humans.**

ANSWER: **chromosomes** [prompt on **chromatin**]

140-14-101-04110

BONUS: Name the colleague of William James who examined the interaction between man and works of art in *Art as Experience* and argued that schools should play a part in social reform in *Democracy and Education*.

ANSWER: John **Dewey**

005-14-101-0410-11

11. **The least common naturally occurring isotope of potassium decays to argon or this element. Feldspars rich in sodium or this element, instead of potassium, are classified as plagioclase. One crystal form of this element's carbonate is aragonite, which is found in a sedimentary rock whose solubility at weak acidities leads to the formation of (*) karst topography. That sedimentary rock is limestone. For 10 points, identify this element found in hydroxyapatite, an important mineral constituent of bones, and that has symbol Ca.**

ANSWER: **calcium** [or **Ca** until it is read]

066-14-101-04111

BONUS: Name the center for the 2013-14 Cleveland Cavaliers, who became the youngest person to play in an NBA game in 2005, the first of his seven seasons with the Lakers.

ANSWER: Andrew **Bynum**

020-14-101-0410-11

12. **The largest national forest in the contiguous United States is this state's Humboldt National Forest. The Truckee River on this state's western border flows out of its Lake Tahoe. Three-quarters of this state's population lives in its southernmost Clark County, home to the city of (*) Paradise.** One city in this state contains a long, well-lit "Strip" home to the Luxor, Caesars Palace, and the Bellagio. For 10 points, identify this western state home to Carson City and Las Vegas.

ANSWER: Nevada

233-14-101-04112

BONUS: What elementary particle is sought by the Large Hadron Collider and was tentatively confirmed to exist in March 2013?

ANSWER: Higgs boson

052-14-101-0410-11

13. **A perpetrator of this event may have murdered Brendan Mess and two others in Waltham on September 11, 2011. The missing Brown University student Sunil Tripathi was wrongly implicated in early reports on it. A perpetrator of this event was arrested after he hid in a boat in (*) Watertown.** *Rolling Stone* was criticized for printing a glamorous photo of that man, Dzhokhar (JOH-kar) Tsarnaev (ZAR-nev). For 10 points, name this terrorist attack on an April 15, 2013 sporting event.

ANSWER: Boston Marathon bombing

052-14-101-04113

BONUS: What character from the Star Trek universe was portrayed by George Takei in the original series and has been played by John Cho in the two most recent Star Trek movies?

ANSWER: Hikaru Sulu [or Hikaru Sulu]

030-14-101-0410-11

14. **The first stages of this conflict ended with the Battle of Lade (LA-day), which quelled the Ionian Revolt. This war ended when Pausanias won at Plataea. This conflict was chronicled by Herodotus, whose *Histories* are sometimes named for it. Another battle in this war saw three hundred (*) Spartans hold off an army for three days.** For 10 points, name this early fifth century BCE conflict, in which the armies of Darius and Xerxes (ZERK-zeez) attempted to conquer cities such as Athens.

ANSWER: Greco-Persian Wars [or equivalent answers such as Persian invasions of Greece; or the Ionian Revolt before it is read]

019-14-101-04114

BONUS: What opera by Ruggero Leoncavallo about a troupe of clowns includes the aria "Vesti la giubba?"

ANSWER: Pagliacci

030-14-101-0410-11

15. **This author of "The Laughing Man" created Mr. Antolini, an English teacher who ambiguously brushes the hair of a former student. This man wrote about the Glass family in *Nine Stories*, a collection that contains "A (*) Perfect Day for Bananafish."** This author also created a sullen youth who has an epiphany watching his sister Phoebe ride a carousel. For 10 points, name this reclusive writer who created Holden Caulfield in *The Catcher in the Rye*.

ANSWER: J. D. Salinger [or Jerome David Salinger]

080-14-101-04115

BONUS: This is a 20-second calculation question. If four to the nth power is 256, what is two to the nth power?

ANSWER: 16

003-14-101-0410-11

16. **One novel from this country ends with Maureen running towards a helicopter; that novel features the Smales family fleeing to the village of their servant July during a violent civil war. After receiving a letter from Theophilus Msimangu, Stephen (*) Kumalo searches for his son Absalom in another novel set in this country. For 10 points, name this country home to Nadine Gordimer and Alan Paton, whose literature often focused on apartheid.**

ANSWER: Republic of **South Africa**

226-14-101-04116

BONUS: What author of *Under the Moons of Mars* created characters like John Carter and Tarzan?

ANSWER: Edgar Rice **Burroughs**

233-14-101-0410-11



17. **This ruler lost the duchy of Normandy after losing the Battle of Bouvines to Philip Augustus. Robert fitz Walter led one military action against this ruler. Innocent III excommunicated this ruler for opposing Stephen Langton's appointment as Archbishop of (*) Canterbury.** This brother of Richard the Lionhearted was forced to sign one document by rebelling barons at Runnymede. For 10 points, name this King of England who signed the Magna Carta.

ANSWER: King **John** [or **John** Lackland]

186-14-101-04117

BONUS: Name the author who wrote about Tana, the Japanese servant to Gloria and Anthony Patch, in his novel *The Beautiful and Damned*, and about Amory Blaine in *This Side of Paradise*.

ANSWER: F. Scott **Fitzgerald** [or Francis Scott Key **Fitzgerald**]

020-14-101-0410-11