



1. A scene in this book depicts an Ethiopian eunuch reading the book of Isaiah in his chariot. This book describes a council held in Jerusalem where James the Just decrees that some groups may be excluded from circumcision. It recounts the descent of the Holy Spirit on (*) Pentecost. This book is thought to have been written by the author of the Gospel of Luke. Matthias replaces Judas near the beginning of this book. For 10 points, name this fifth book of the New Testament, which describes what the apostles did after the Resurrection.

ANSWER: Acts of the Apostles [prompt on the New Testament until "Luke" is read; prompt on the Bible until "Luke" is read]

014-14-102-04101

BONUS: What Canadian province borders Washington, Idaho, and Montana?

ANSWER: British Columbia

015-14-102-0410-11

2. The double dabble algorithm converts values from this system into another system. In this system, signed numbers can be represented using two's complement notation. Every grouping of four digits in this system corresponds to one digit in (*) hexadecimal, which uses symbols from 0 to F. This system can represent two to the n distinct numbers, where n is the number of bits used. For 10 points, name this number system used by computers that only has zeroes and ones.

ANSWER: binary number system [or base-two number system]

132-14-102-04102

BONUS: This is a calculation question. How many unique, real roots satisfy the equation $x^2 - 7x + 13 = 0$?

ANSWER: zero

003-14-102-0410-11

3. An opera by this composer combines poetry by Muriel Rukeyser, traditional Tewa songs sung by the housemaid Pasqualita, and an aria based on the poem "Batter my heart, three person'd god." A character nicknamed "Rambo" is one of the antagonists in another of his operas, in which Marilyn's husband sings the "Aria of the falling body" after being killed by (*) hijackers. This composer of *Doctor Atomic* included the number "I am the wife of Mao tse-tung" in another opera. For 10 points, name this American composer of *The Death of Klinghoffer* and *Nixon in China*.

ANSWER: John Coolidge Adams

025-14-102-04103

BONUS: Identify the Presidential election year in which Samuel Tilden received more popular votes but still lost to Rutherford B. Hayes.

ANSWER: United States Presidential election of 1876

052-14-102-0410-11

4. **The portion of these things where the rate of deposition is greater than ablation is the accumulation zone. Erosion due to these things is divided into abrasion and plucking. The action of these things turns stream-formed V-shaped valleys into U-shaped valleys. A characteristic deposit of these things is a mixture of (*) boulders and clay, also called till, which is deposited in moraines. When these things calve (KAHV), they form icebergs. For 10 points, name these dense accumulations of ice that flow like very, very slow rivers.**

ANSWER: glaciers [or ice sheets]

066-14-102-04104

BONUS: What treatise defends the absolute rule of kings and calls the life of man "nasty, brutish, and short?"

ANSWER: Leviathan

014-14-102-0410-11

5. **The poems of the Pearl Poet commonly use a repeating unit of this many lines called the bob-and-wheel. Sapphic stanza includes this many syllables in the final line of the poem. The first and third lines of a tanka poem contain this many syllables. This is the number of ancient Confucian classics. Blank verse contains this many (*) metrical feet per line. Most of Shakespeare's plays have this many acts. The first and last line of a haiku have this many syllables. For 10 points, name this number of lines in a limerick.**

ANSWER: five

190-14-102-04105

BONUS: What Cavalier poet instructed, "Gather ye rosebuds, while ye may," in his "To the Virgins, to Make Much of Time"?

ANSWER: Robert Herrick

014-14-102-0410-11

6. **Materials with this property exhibit a phenomenon in which heat is transferred by waves called second sound, resulting in a material with this property having the highest known thermal conductivity. In 2004, a team at Penn State first witnessed this property in a solid, which at first was thought to be a Bose-Einstein condensate. Materials with it can form a thin (*) Rollin film and creep out of a container. This property is observed below a sharp discontinuity at 2.17 Kelvin, the lambda point. For 10 points, name this property observed when viscosity goes to zero at low temperatures.**

ANSWER: superfluidity

064-14-102-04106

BONUS: What author of *The Sorrows of Young Werther* wrote a two-part tragedy about a German scholar who makes a deal with the demon Mephistopheles?

ANSWER: Johann Wolfgang von Goethe

080-14-102-0410-11

7. **Eustace of Boulogne tried to convince a commander during this battle to retreat right before Eustace was severely wounded. The victors of this battle pursued the other side into the Malfosse. During this battle, a defensive position was taken by the eventual losing side on (*) Senlac Hill. The winning commander of this battle used fake retreats to draw soldiers out, and the losing commander may be depicted dying from an arrow to the eye on the Bayeux Tapestry. For 10 points, name this battle lost by Harold Godwinson to the Normans under William the Conqueror in 1066.**

ANSWER: Battle of Hastings

023-14-102-04107

BONUS: What father of Umberto I became the first king of a united Italy in 1861?

ANSWER: **Victor Emmanuel II** [prompt on partial answer]

014-14-102-0410-11

8. **A film attacking this practice depicted a man igniting a fireball by holding a match up to his kitchen faucet. Debate over this practice often focuses on the future of the Marcellus region. Matt Damon starred in a 2012 Gus Van Sant film about the controversy over this practice, (*) *Promised Land*.** In this technique, gallons of high-pressure fluid are injected underground to crack the rock around a gas well. For 10 points, name this controversial method of extracting natural gas.

ANSWER: induced hydraulic **fracturing** [or **fracking**]

080-14-102-04108

BONUS: What genetic disease is caused by a mutation in hexosaminidase A, resulting in a buildup of gangliosides in the brain?

ANSWER: **Tay-Sachs** disease

048-14-102-0410-11



SET A:

1. BONUS: The Portuguese "President-King" Sidónio Pais (pai-EES) promoted an ideology named for what month, also the month of 1825 in which liberal Russian nobles protested for "Constantine and constitution" against the ascent of Nicholas I?

ANSWER: **December**

019-14-102-0410-12

2. BONUS: This is a 30-second calculation question. If test scores are normally distributed with mean 50 and standard deviation 10, then, to the nearest percent, what percentage of students scored 40 or better?

ANSWER: **84** percent

003-14-102-0410-12

3. BONUS: In what German board game do players try to get ten Victory Points by acquiring sheep, wheat, wood, brick, and ore?

ANSWER: *The **Settlers of Catan***

015-14-102-0410-12

4. BONUS: What Latin poet coined the phrase "Carpe diem" in his *Odes*?

ANSWER: **Horace** [or Quintus **Horatius** Flaccus]

014-14-102-0410-12

SET B:

1. BONUS: Congress passed the Force Acts to combat the Ku Klux Klan during the Presidency of what man, which also saw high-ranking officials implicated in the Credit Mobilier (MOH-beel-yay) scandal?

ANSWER: Ulysses Simpson **Grant** [or Hiram Ulysses **Grant**]

186-14-102-0410-12

2. BONUS: This is a 20-second calculation question. If the cosine of A is $\frac{2}{7}$, what is the cosine of $2A$?

ANSWER: **$-\frac{41}{49}$**

003-14-102-0410-12

3. BONUS: Emily relives her twelfth birthday after addressing her fellow ghosts in a cemetery at the end of what play set in Grover's Corners?

ANSWER: **Our Town**

080-14-102-0410-12

4. BONUS: What 1996 Adam Sandler movie stars Christopher McDonald as the arrogant Shooter McGavin and Carl Weathers as a one-handed retired golfer?

ANSWER: **Happy Gilmore**

015-14-102-0410-12



9. In Game 6 of the 2004 ALCS, this player swatted the ball out of Bronson Arroyo's glove when Arroyo tried to tag him. After Aaron Boone injured his knee in a game of pickup basketball, this player was traded to his current team for Alfonso Soriano and Joaquin Arias. Raul Ibanez hit a game-winning home run after pinch-hitting for this player in the 2012 postseason. Arbitrator (*) Fred Horowitz reduced this man's suspension from 211 games to the entire 2014 season for his role in the Biogenesis scandal. For 10 points, name this New York Yankees third baseman.

ANSWER: Alexander Emmanuel **Rodriguez** [or **A-Rod**]

186-14-102-04109

BONUS: What kind of simple diagram uses arrows to represent all the forces acting on a central object?

ANSWER: **free-body** diagram

014-14-102-0410-11

10. This short story features a secret which is found out by "gold, and the power of a woman's will." Its main character is accused of romancing the daughter of his "semi-barbaric" king. In this short story, the princess tells the main character to choose the right-most option in a ceremony which will end in either (*) death or marriage to another woman for the protagonist. For 10 points, name this short story by Frank R. Stockton in which two identical doors conceal the title options.

ANSWER: "The **Lady, or the Tiger?**"

088-14-102-04110

BONUS: What student of Franz Boas wrote *Patterns of Culture* and *The Chrysanthemum and the Sword*?

ANSWER: Ruth **Benedict**

014-14-102-0410-11

11. The McLaren Vale and Barossa Valley of this country are known for their shiraz wines. This country was the site of mines in the Golden Mile of its western city of Kalgoorlie. Polish explorer Pawel Strzelecki (struh-LECK-ee) was the first man to climb this country's highest peak, Mount (*) Kosciuszko. This country's city Alice Springs is the nearest to the rock formation known as either Uluru or Ayers Rock. For 10 points, name this country that is the only one to also be a continent and whose western half is mostly made up of the Outback, which is the home of many kangaroos.

ANSWER: Commonwealth of **Australia**

023-14-102-04111

BONUS: The aria "quando me'n v'o" is sung while Musetta dances a waltz to Marcello in what opera, which ends with Rodolfo weeping as Mimi dies of consumption?

ANSWER: *La boheme*

140-14-102-0410-11

12. This man posited a theory of behavior that acknowledges the influence of both social factors and the environment, reciprocal determinism. His best-known experiment focused on a similar area as his work *Adolescent Aggression*. The experiment he designed involved adult collaborators who (*) punched the objects which name the experiment, causing the study's subjects to imitate them while yelling "sockaroo!" For 10 points, name this Canadian psychologist who performed the "bobo doll" experiment.

ANSWER: Albert **Bandura**

081-14-102-04112

BONUS: The sun is part of what populous branch of the Hertzsprung-Russell diagram that stretches from the bottom-right to the top-left?

ANSWER: main sequence

014-14-102-0410-11

13. **This poem was inspired by the poet's reflections on crossing a natural feature on his way to Mexico City in 1920. It alludes to Abraham Lincoln's trip to New Orleans, as well as the raising of the pyramids upon the Nile. It speaks of bathing "in the (*) Euphrates when dawns were young" and knowing things "ancient as the world and older than the flow of human blood in human veins."** For 10 points, name this Langston Hughes poem in which the speaker's "soul has grown deep" like the title bodies of water.

ANSWER: "The Negro Speaks of Rivers"

147-14-102-04113

BONUS: What instrument was played by Mstislav (MIS-tee-slav) Rostropovich and is still played by Yo-Yo Ma?

ANSWER: cello

015-14-102-0410-11

14. **This structure is located within the sella turcica. Cysts can be found in the pars intermedia, which separates this structure's anterior and posterior sections. Cancer of this structure often leads to excess levels of ACTH and Cushing's disease. It is connected to the (*) hypothalamus through the infundibulum (IN-fun-DIB-yoo-lum). It secretes hormones like oxytocin (OCK-see-TOH-sin) and vasopressin, or ADH, to regulate different systems in the body. For 10 points, name this gland in the brain, an important part of the endocrine system.**

ANSWER: pituitary gland

140-14-102-04114

BONUS: What is the name given to the glass tube with a stopcock at the bottom that is used to dispense one solution into another during titration?

ANSWER: burette

014-14-102-0410-11

15. **After this battle, Gregorio Esparza was the only member of the losing side to receive a burial. William Barrett Travis wrote several letters requesting additional reinforcements before this battle. This battle became part of a slogan along with the similar (*) Goliad massacre. Pneumonia caused Jim Bowie to be confined to bed during this battle, but Davy Crockett and the other defenders fought to the last man against Santa Anna. For 10 points, name this battle of the Texas Revolution in which a Mexican army massacre defenders of the namesake mission in San Antonio.**

ANSWER: Battle of the Alamo

239-14-102-04115

BONUS: What Charles Dickens novel features such characters as Fagin and the Artful Dodger?

ANSWER: Oliver Twist

014-14-102-0410-11

16. **This man's government executed leaders of the "milk strike," and he attempted to advance a new philosophy he called "universism." As Minister of Defense under Peder Kolstad, this man became notorious for putting down a strike of hydroelectric workers. After forming the National Union Party in 1933, he never won a seat in the (*) Storting. He served as Prime Minister under Josef Terboven, who led the occupation of his country. For 10 points, name this Norwegian officer who collaborated with the Nazis, and whose name has become a noun meaning "traitor."**

ANSWER: Vidkun **Quisling**

014-14-102-04116

BONUS: What Mesoamerican civilization led by Montezuma was crushed by the conquistador Hernan Cortes?

ANSWER: **Aztecs**

015-14-102-0410-11



17. Early in this poem, the speaker expresses his longing for "a draught of vintage" and "a beaker full of the warm South," since with a drink he can then "fade far away." This poem begins with the speaker feeling that his "head aches, and a drowsy (*) numbness pains my sense," and he concludes by asking, "Do I wake or sleep?" The speaker of this poem climatically exclaims, "Thou wast not born for death," addressing the title bird. For 10 points, name this ode by John Keats.

ANSWER: "Ode to a Nightingale"

140-14-102-04117

BONUS: What letter is used to represent the equilibrium constant in chemistry and thermal conductivity in physics?

ANSWER: k

014-14-102-0410-11