

Maryland Spring 2014 - Get Your Pencil and Paper Ready NOW

Packet 12

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Tossups

1. In this figure's old age, Abishag the Shunammite was chosen to warm his bed, but this figure definitely didn't sleep with her. This man encountered an enemy who was relieving himself, but spared his life and only cut off a piece of that enemy's robe. In one story, a prophet was told to select this man instead of his stronger brothers because (\*) "God looks at the heart." This man was asked to bring a hundred Philistine foreskins, but instead brought back two hundred. This man sent Uriah the Hittite to the front lines in war so that he could sleep with Uriah's wife Bathsheba. This friend of Jonathan soothed Saul with his lyre and wrote many of the Psalms. For 10 points, name this father of Solomon and slayer of Goliath.

ANSWER: David

2. The Wick type of this process multiplies the temporal dimension by  $i$  in order to make Minkowski space look Euclidean. The Lorentz group includes these transformations and boosts, and one Lie group representation of them is the group  $SO(3)$ . An asymmetric rigid body has six degrees of freedom: three from translation and three from this transformation. Euler angles describe this transformation. The (\*) matrix for this transformation is  $\begin{bmatrix} \cos x & -\sin x \\ \sin x & \cos x \end{bmatrix}$  in 2D. This transformation preserves the length of a vector. For 10 points, name this transformation that turns an object around a point.

ANSWER: rotation

3. The rebellion of Gordian I and II against Maximinus Thrax in the Year of the Six Emperors ended after a battle in this city. Tiberius Gracchus gained fame after apocryphally being the first man over the wall in a siege of this city. This city faced the Mercenary War, was led by (\*) Hanno the Navigator, and lost the battles of Cape Ecnomus and the Metaurus River. Fabius Cunctator helped defend against an invasion by this city that led to clashes at the Trebia and Cannae after the brother of Mago crossed the Alps. For 10 points, name this city in modern Tunisia that Hannibal led against Rome in the Second Punic War.

ANSWER: Carthage

4. One of this author's characters owns a fake van der Meulen masterpiece and attempts to get her son Comus to court Emmeline Chetrof. In one of this author's short stories, Cornelius invents a device that allows his cat Tobermory to talk, only for it to be killed in a fight with a yellow tomcat. This author of *The Unbearable Bassington* wrote a story in which Georg Znaeum and Ulrich von Gradwitz are crushed by a (\*) tree before being confronted by wolves. In another story, Mrs. De Ropp is killed by a ferret that is worshipped as a god by the sickly Conradin. For 10 points, name this British short story writer of "The Interlopers" and "Sredni Vashtar."

ANSWER: Saki (or Hector Hugh Munro)

5. Piece type and composer required. The first of these pieces, marked *legato*, features a series of wide arpeggios in the right hand played over a pedal point. Another of these pieces, marked *vivace* in E minor, opens with a series of dissonant minor seconds in the right hand over arpeggiated chords, thus is nicknamed "Wrong Note." Most of these pieces were collected into their composer's Opus 10 and (\*) Opus 25. A challenging series of descending sixteenth note passages in the left hand follows the jarring opening fortissimo first-

inversion G7 chord in one of these pieces inspired by the November Uprising. For 10 points, name these highly technical works for piano by a Polish composer, which include one called the “Revolutionary.”

ANSWER: piano études by Frédéric François Chopin

6. **One character in this movie protests after his shirt is thrown away for being “rags and tatters.” Chris Chalk plays a character who advises the protagonist at the beginning of this film. This movie bizarrely features Taran Killam as Hamilton, a man who drugs some wine at a fancy dinner. Paul (\*) Dano plays the character Tibeats in this film, and the supposedly enlightened but ultimately hypocritical Ford is played by Benedict Cumberbatch. This movie was the film debut for an actress who played Patsey, Lupita Nyong’o. For 10 points, name this Steve McQueen-directed film starring Chiwetel Ejiofor as Solomon Northup, a best picture winner based on some memoirs.**

ANSWER: 12 Years a Slave

7. **A D. H. Lawrence poem describes how these animals are the “oldest... and the wisest of beasts” and are “slow to mate.” A novel by José Saramago tells of one of these animals named Solomon that is given as a gift to Archduke Maximilian. Rudyard Kipling’s *The Jungle Book* includes a story about a boy named Toomai who learns to work with these animals, which are referred to as Tantor in Edgar Rice Burroughs’ (\*) Tarzan novels. One of these animals destroys a hut, raids a fruit stall, and kills a man before being shot in a George Orwell essay inspired by time spent in Burma. For 10 points, name these animals, exemplified by Horton in Dr. Seuss’ *Horton Hears a Who*.**

ANSWER: elephants

8. **Public outcry resulted after protesters in this city were taken to Occoquan Workhouse and beaten by guards. Lucy Burns was arrested in this city holding a sign that read “Kaiser Wilson.” The Silent Sentinels protest in this city led to (\*) Alice Paul being placed in its St. Elizabeth’s insane asylum, after suffragettes stood outside the gates of a building here. Walter Washington helped this city weather massive rioting after the death of Martin Luther King. In 1990, the mayor of this city was videotaped exclaiming, “[she] set me up!” while being arrested for crack cocaine. Marion Barry somehow still holds political office in, for 10 points, what city home to the White House?**

ANSWER: Washington, D. C. (accept either)

9. **This polity’s flag is a setting sun below a union jack with a crown in the center. This polity contains the most prominent peak in the Rocky Mountains, Mount Robson. Suburbs of its largest city include Burnaby and Coquitlam and other cities in this province include Kamloops and Kelowna. This province’s capital is home to the Abkhazi Gardens and (\*) Butchart Gardens, and its largest city is home to Stanley Park. This province is home to the largest and most visited ski resort in the world, Whistler-Blackcomb. For 10 points, name this province in western Canada, with cities Victoria and Vancouver.**

ANSWER: British Columbia

10. **These cells namesake activating factor was the first phospholipid found to have messenger functions. The integrin complex IIb/IIIa (“two-b, three-a”) is found on the surface of these cells, which malfunction in Hermansky–Pudlak and Bernard–Soulier syndromes. Adhesion of these cells requires (\*) von Willebrand factor and is followed by deposition of fibrin. The protein thrombin activates these cells, which are produced in the megakaryocytes of bone marrow. Also known as thrombocytes, for 10 points, name these cells that form a plug at the wound site and facilitate blood clotting, named for their small, circular shape.**

ANSWER: platelets (or thrombocytes before mentioned)

11. Several people on balconies overlook a crowded harbor in this man's depiction of the *Opening of Waterloo Bridge*. A seated woman in a white dress looks to the left in this man's portrait of his wife Maria Bicknell. This man painted cows grazing in front a structure seen through some trees "from the Bishop's Grounds." A lone man in a yellow vest operates a canal lock in the foreground of a painting by this man set next to Flatford (\*) Mill. Willy Lott's cottage appears on the left of a painting this by this man, which shows a dog running along a shoreline and three horses pulling the title conveyance across a river. For 10 points, name this English landscape painter of *The Hay Wain*.

ANSWER: John Constable

12. A character in this novel hires the investigator Mr. Britten to find the whereabouts of his daughter. At the beginning of this novel, the protagonist uses an iron skillet to smash a rat and shows the body to his sister Vera to scare her. The protagonist of this novel murders his girlfriend Bessie by hitting her with a brick while she sleeps. The protagonist of this novel abandons a robbery and assaults his fellow gang member (\*) Gus in a pool room, making him lick the blade of his knife. The lawyer Boris Max defends the protagonist of this novel, who smothers and decapitates Mary Dalton. For 10 points, name this novel about Bigger Thomas by Richard Wright.

ANSWER: Native Son

13. One leader of this country set up the Nyayo House torture center, withstood a 1982 Air Force coup, and oversaw the disastrous Goldenberg gold scandal. Rawson Macharia claimed that another of its leaders led nude, vampiric rituals during the Kapenguria Six trial. The Shifta War was fought by ethnic (\*) Somalis in this country, the site of the Swynnerton plan and Operation Anvil during a 1950s uprising. Daniel Arap Moi led this country, where a more recent election was contested between Mwai Kibaki and Raila Odinga. The site of the Mau Mau revolt, for 10 points, name this African country led by Uhuru Kenyatta from Nairobi.

ANSWER: Kenya

14. C18 HPLC columns use octadecyl alkyl chains attached to this element as a stationary phase. Zeolites are comprised of the oxides of aluminum and this element. In column chromatographies, the stationary phase often consists of a "gel" of this compound. This element makes up (\*) twenty-eight percent of the Earth's crust by weight, only behind oxygen. It's not germanium, but this metalloid is "doped" in order to increase its properties as a semiconductor. For 10 points, name this member of the carbon family often used in computers..

ANSWER: silicon (accept Si)

15. One short story named after this man has a scene where this man calls his homosexual assistant to his deathbed. That assistant, David Boyd, is a creation of David Foster Wallace. A recording of this man ordering pants has achieved Internet fame, and this man owned an Amphicar that he used to terrorize guests. A famous photograph by Cecil Stoughton of this man and Sarah (\*) Hughes was taken in an airplane. This man rejected a portrait of him by Peter Hurd as ugly. This man earned the nickname "Landslide" after winning a narrow election, and this man was married to Lady Bird. For 10 points, name this American president who followed John F. Kennedy.

ANSWER: Lyndon Baines Johnson (or LBJ)

16. This architect designed the Arthur Heurtley House for his sister Jane Porter, and his only skyscraper is the Price Tower in Oklahoma. H. Allen Brooks coined the term for the movement primarily associated with this architect, who included a series of treelike concrete columns in the "Great Workroom" of his Johnson Wax (\*) Headquarters. A museum designed by this man features a spiraling ramp around a large atrium and is located on Fifth Avenue in New York. He designed a house for Edgar Kaufmann cantilevered over Bear Run in Pennsylvania. For 10 points, name this proponent of the Prairie School, the architect of the New York Guggenheim and *Fallingwater*.

ANSWER: Frank Lloyd Wright

17. According to Raabe's formula, the integral, from  $a$  to  $a$  plus one, of the log of a function that reduces to this function, equals one-half log two pi plus  $a \log a$  minus  $a$ . Wilson's theorem states that if  $n$  is prime, then this function of  $n$  minus one is congruent to negative one, modulo  $n$ . Stirling's formula approximates this function as  $x$  times  $\ln x$  minus  $x$ , and is used for extremely large values of it. A function that (\*) generalizes this function to the real numbers equals the integral of  $x$  to the  $t$  minus one times  $e$  to the negative  $x$ . The denominator of every term in a Taylor series has this function of the order of the term. The gamma function generalizes, for 10 points, what function that recursively multiplies numbers and is denoted by an exclamation point?

ANSWER: factorial (accept gamma function before mention)

18. This man defeated Anne de Joyeuse at Coutras, after which he promptly abandoned his army and rode all night either to plot with Montaigne or visit his mistress Gabrielle d'Estrees, the most consistent of his many liaisons. He helped end the Julich Succession in Germany, and was fatally stabbed while waiting in traffic by Francois Ravalliac. This victor at Arques and (\*) Ivry rose to power after his predecessor ordered the 45 to kill their mutual rival in the wake of the Day of the Barricades. The Catholic League of Henry of Guise opposed this man, who succeeded his cousin, Henry of Valois, and noted "Paris is well worth a mass." For 10 points, name this successor to Henry III who ended the Wars of Religion with the Edict of Nantes.

ANSWER: Henry IV (or Henry of Navarre; accept Henry III of Navarre, but obviously not just "Henry III")

19. In a Russian fairy tale, Ivan Tsarevitch tried to catch the Firebird because it was stealing these objects. After Thiazzi stole some of these objects, Loki took the form of a falcon to retrieve them. In addition to the ones possessed by Idunn, three of these objects were used by Hippomenes to beat (\*) Atalanta in a footrace. According to some stories, Heracles slew the hundred-headed dragon Ladon to retrieve some of these objects. Another one of these items bore the inscription "To the Fairest," and Aphrodite was deemed most worthy of that one by Paris. For 10 points, name these fruits that grow in the Garden of the Hesperides, often a source of immortality or eternal youth.

ANSWER: golden apples

20. The appropriately-named fool Moron serves the title character of a play this author set in Greece, *The Princess of Elis*. This author wrote a play in which Gorgibus attempts to marry off his daughters Magdalen and Cathos. Richard Wilbur translated many of this man's works into English, and he died on stage while playing Sganarelle in his play about Argan, a (\*) hypochondriac. In one of his plays, Du Bois and the Basque serve Celimene, who is courted by the hypocritical Alceste. One of this man's characters swindles Orgon out of the deed for his house and is arrested after trying to seduce Elmire. For 10 points, name this French playwright of *The Misanthrope* and *Tartuffe*.

ANSWER: Molière (or Jean-Baptiste Poquelin)

## Bonuses

1. One character in this play yells “I say... God is Dead!” after being accused of asking Mary Warren to sign the Devil’s Book. For 10 points each:

[10] Identify this play set during the Salem witch trials that ends with drums beating as the protagonist John Proctor is hung.

ANSWER: **The Crucible**

[10] This American playwright wrote *The Crucible* and depicted his turbulent marriage with Marilyn Monroe in *After the Fall*.

ANSWER: Arthur **Miller**

[10] In the last scene of *The Crucible*, Elizabeth relates how Giles Corey refused to answer to the accusation of witchcraft against him, instead uttering these two words as he was pressed to death with rocks.

ANSWER: “**More weight!**”

2. The company D-Wave claims to build these devices at scales far larger than anything people can make in the lab. For 10 points each:

[10] Name these devices in which bits are in superpositions of ones and zeroes, rather than in classical states.

ANSWER: **quantum computers**

[10] One of the most lauded quantum algorithms is Shor’s algorithm, which performs this task. It is faster than classical algorithms, which could lead to problems with it breaking RSA encryption.

ANSWER: **factoring** numbers (accept word forms)

[10] Current quantum computers cannot be more than several bits because of this issue in which interaction with the environment ruins the order created by quantum entanglement.

ANSWER: **decoherence** (accept equivalents like **losing coherence**)

3. Answer some questions about conditioning in psychology. For 10 points each:

[10] Conditioning is often broken down into classical conditioning, and this other, contrasting kind of conditioning, which relies more on punishment and reinforcement than classical conditioning.

ANSWER: **operant** conditioning

[10] Operant conditioning was popularized by this psychologist who wrote *Walden II* and invented the operant conditioning chamber, or his namesake “box.” He also invented the air crib, which led to false allegations of child abuse.

ANSWER: Burrhus Frederic **Skinner**

[10] Skinner often worked with these animals, including an attempt to develop a missile system guided by them. He also used them in the operant conditioning chamber, forcing them to hit a disk to receive grains.

ANSWER: **pigeons** (prompt on “birds”)

4. The dissolution of this state led to bloody conflicts in Bosnia and Kosovo. For 10 points each:

[10] Identify this large Balkan country that splintered into numerous modern states in the 1990s after being established under Alexander the Unifier following World War I.

ANSWER: **Yugoslavia**

[10] Modern Yugoslavia was held together by this communist, who split with Stalin after World War II. The Nazis tried to kill this leader of the Partisans in Operation Knight’s Move.

ANSWER: Josip Broz **Tito** (or Josip **Broz**)

[10] This founder of the Serb Volunteer Guards, known as his “Tigers,” stands out even among the Yugoslav Wars as a particularly evil guy. This two-decade occupant of Interpol’s most wanted list was assassinated in Belgrade in 2000.

Commented [1]: is this supposed to be a middle part??

Commented [2]: just fix it

ANSWER: Arkan (or Željko Ražnatović)

5. One section of this work shows a large brown ape to the left of a pregnant woman wearing a vibrant blue skirt. For 10 points each:

[10] Name this large painting housed in the Secessionist Building in Vienna that is named for a certain composer.

ANSWER: Beethoven Frieze

[10] The *Beethoven Frieze* was painted by this artist, who painted several works depicting Adele Bloch-Bauer.

ANSWER: Gustav Klimt

[10] Another of Klimt's paintings shows a man and woman engaged in this action. A fresco by Giotto shows Judas performing this action to identify Jesus to some soldiers.

ANSWER: kissing

6. This figure was conceived when Zeus visited Danaë in the form of a shower of gold. For 10 points each:

[10] Name this figure who beheaded Medusa and later accidentally killed his grandfather Acrisius during a discus-throwing contest.

ANSWER: Perseus

[10] While trying to find the Hesperides, Perseus encountered the Graeae and stole this object that they shared, returning it when they gave him the information he sought. In Irish myth, Balor had a destructive one of these that burned a hole in the ground when he died.

ANSWER: eye

[10] Perseus later rescued this Ethiopian princess from the sea monster Cetus. This figure was chained to a rock as a sacrifice after her mother Cassiopeia bragged that this figure was more beautiful than the Nereids.

ANSWER: Andromeda

7. Pope Alexander IV universalized the charter given to this institution by Alfonso X. For 10 points each:

[10] Identify this university that became the center of Spanish renaissance thought under Francisco de Vitoria and Francisco Suarez.

ANSWER: University of Salamanca

[10] This man from Salamanca opposed Juan Gines de Sepulveda in the Valladolid debates, expressing his famous support for indigenous populations of the New World.

ANSWER: Bartolomé de las Casas

[10] This Spanish king died before he could fulfill a promised audience to Las Casas. This leader of Aragon led Spain during the Reconquista with his wife Isabella.

ANSWER: Ferdinand II of Aragon

8. The two leaving groups in the one-step type of this reaction need to be antiperiplanar. For 10 points each:

[10] Name this type of reaction in which substituents are removed from a molecule. They can be one-step or two-step and compete with substitutions.

ANSWER: elimination

[10] This rule states that elimination reactions favor the more-substituted double bond.

ANSWER: Zaitsev's rule

[10] The Hofmann and Cope eliminations occur in the presence of this lustrous metal. Its ores include pyrargyrite and argentite and it precipitates onto glassware in the presence of an aldehyde in Tollen's test.

ANSWER: silver

9. The Lascaux Caves are near Montignac in this region of France. For 10 points each:

[10] Name this southwestern region of France, with capital at Bordeaux.

ANSWER: Aquitaine

[10] The western coastline of Aquitaine runs along this body of water, a large bay shared with the northern coast of Spain.

ANSWER: Bay of **Biscay**

[10] The Garonne River flows south through Bordeaux before crossing France's southern border terminating in this autonomous community in the northeastern area of Spain.

ANSWER: **Catalonia**

10. This man wrote about the cocaine addicted Nicky Lancaster in his play *The Vortex*. For 10 points each:

[10] Name this British playwright of *Private Lives*, who told of Charles Condomine's seance with Madame Arcati in *Blithe Spirit*.

ANSWER: Noel **Coward**

[10] The title of Coward's *Blithe Spirit* comes from "To a Skylark," a poem by this man who described how "Two vast and trunkless legs of stone stand in the desert" in "Ozymandias."

ANSWER: Percy **Shelley**

[10] Coward's play *Present Laughter* takes its title from this comedic play, whose secondary characters include Feste, Sir Toby Belch, and Sir Andrew Aguecheek.

ANSWER: **Twelfth Night**

11. This choreographer collaborated with George Balanchine on the ballet *Episodes*, which features music by Anton von Webern. For 10 points each:

[10] Name this legendary American choreographer who commissioned of Aaron Copland's *Appalachian Spring*, which won the Pulitzer Prize in 1945.

ANSWER: Martha **Graham**

[10] Graham danced in the American premiere of this Igor Stravinsky work, which features the "Sacrificial Dance" and the "Dance of the Earth."

ANSWER: *The* **Rite of Spring**

[10] This contemporary choreographer is known for the Bob Dylan-inspired *The Times They Are a-Changin'* and her collaboration with director Miloš Forman on *Hair* and *Amadeus*.

ANSWER: Twyla **Tharp**

12. Answer some questions about everyone's favorite egghead. For 10 points each:

[10] This man managed to lose to Dwight Eisenhower in both the 1952 and 1956 Presidential elections. He had served as Governor of Illinois prior to that.

ANSWER: Adlai **Stevenson II**

[10] Later in life, Stevenson served as the ambassador to this organization, which replaced the League of Nations as the leading international cooperative group after being formed in 1945.

ANSWER: **United Nations** (or **UN**)

[10] This prominent "court historian" to the Kennedy administration also served as a speechwriter for Stevenson, and his eyewitness accounts of the Kennedy administration include details about Stevenson's zealous hatred of Kennedy, including his seeming glee at his assassination.

ANSWER: Arthur M. **Schlesinger Jr.**

13. At the end of this novel, a cake resembling St. Anthony's Abbey is brought in for Heinrich's 80th birthday. For 10 points each:

[10] Name this novel centering on the Faehmels, a family of architects.

ANSWER: **Billiards at Half-Past Nine** (or **Billard um halb zehn**)

[10] *Billiards at Half-Past Nine* is a novel by this German author, who told of a woman's murder of Werner Totges in *The Lost Honor of Katharina Blum*.

ANSWER: Heinrich **Böll**

[10] Hans Schneier is the protagonist of a novel by Böll titled for a person of this profession. Pierrot is an example of one of these people from the commedia dell'arte.

ANSWER: **clowns**

14. Name some famous computers. For 10 points each:

[10] This chess-playing AI may be best known for besting Gary Kasparov in May 1997.

ANSWER: **Deep Blue**

[10] This early computer was the successor of the ENIAC, and famously predicted Eisenhower's landslide win in the 1952 presidential election.

ANSWER: **UNIVAC I**

[10] This series of supercomputers made by IBM includes the L, P, and Q generations.

ANSWER: **Blue Gene**

15. Answer some questions about America's most popular television network, CBS. For 10 points each:

[10] Undoubtedly one of CBS's flagship series is this one, whose original Las Vegas show has been running since 2000. There was a popular "Miami" spin-off, starring David Caruso.

ANSWER: **CSI: Crime Scene Investigation**

[10] This CBS sitcom stars Kat Dennings, Beth Behrs, and a crew of racist ethnic stereotypes, including Han Lee, who can't drive a car.

ANSWER: **Two Broke Girls**

[10] This critically acclaimed drama manages to stay on the air despite poor ratings mostly because it's one of the few CBS shows critics actually like. It stars Julianna Margulies as a lawyer married to a disgraced attorney.

ANSWER: **The Good Wife**

16. This man's downfall in Operation Ajax was presaged by the Abadan oil crisis. For 10 points each:

[10] Name this leader whose 1953 ouster allowed Mohammad Reza Pahlavi to assume total national control.

ANSWER: Mohammad **Mosaddegh** (or **Mosaddeq**)

[10] Mosaddegh was deposed in a CIA-orchestrated coup that made Pahlavi the Shah of this Middle Eastern country, whose capital is Tehran.

ANSWER: Islamic Republic of **Iran**

[10] Norman Schwarzkopf's father helped the CIA train this fantastically evil Iranian secret police force. It had to be retrained to be slightly less effective at killing after the Siahkal massacre.

ANSWER: **SAVAK** (or **Organization of Intelligence and National Security**; or **Sāzemān-e Ettelā'āt va Amniyat-e Keshvar**)

17. One of this man's poems promises his lover "a thousand kisses, then a hundred, then a thousand and a second hundred." For 10 points each:

[10] Name this Latin poet who wrote several poems to the pseudonymous Lesbia.

ANSWER: **Catullus**

[10] Catullus wrote two poems about one of these creatures owned by Lesbia. Ovid's *Metamorphoses* describes how Tereus, Procne, and Philomela were turned into these creatures.

ANSWER: **birds** (or specifically **sparrows**, **swallows**, **hoopoes**, **nightingales**)

[10] This other Latin elegist addressed his pseudonymous lover Cynthia in his four books of *Elegies*.

ANSWER: Sextus **Propertius**



18. The figure discussed in this text inspired the poems “On Portents” and “To Juan at the Winter Solstice.” For 10 points each:

[10] Name this book that claims that Dionysus Sabazius was actually the Old Testament God, and argues for a common mythological tradition in moon-worship of the titular feminine deity.

ANSWER: *The White Goddess*

[10] *The White Goddess* is a work of highly dubious mythography by this author, better known for *Good-bye to All That* and *I, Claudius*.

ANSWER: Robert Graves

[10] Graves argues that the ancient Ogham alphabet used in this modern-day country was actually a secret cipher protecting the goddess from a vast conspiracy or something similarly bizarre. This country’s real-life religious icons include Saint Patrick.

ANSWER: Ireland

19. This philosopher once supposedly prevented Mike Tyson from assaulting someone at a party. For 10 points each:

[10] Name this philosopher, a logical positivist who wrote *Language, Truth, and Logic*.

ANSWER: Alfred Jules Ayer

[10] A. J. Ayer is a philosopher from this country. Other philosophers from here include scientific method enthusiast Francis Bacon, and William of Ockham, who was from the town of Surrey in this country.

ANSWER: England or Great Britain

[10] This English philosopher was a utilitarian who proposed the Panopticon and wrote *Introduction to the Principle of Morals and Legislation*.

ANSWER: Jeremy Bentham

20. Pencil and paper may be useful for this bonus. Answer these questions about disease testing. For 10 points each:

[10] Disease testing, like all binary testing, can be evaluated in terms of specificity, the “true negative” rate, or this other measure, which gives “true positives.”

ANSWER: sensitivity

[10] The Mantoux skin test has largely replaced the Tine test for this disease, which is combated with the BCG vaccine and was once called consumption.

ANSWER: tuberculosis (or TB; or phthisis)

[10] Calculate the following percentage by rounding up to the nearest whole number: A test is 90% accurate for a disease present in 1 out of every 100,000 people. What is the percentage likelihood someone with a positive test result actually has the disease? You have 15 seconds.

ANSWER: 1%