

Terrapin Invitational Tournament 2013: “Make your own judgments, but we wrote this set in good faith”
Packet by Dartmouth and the University of Washington

Tossups

1. This protein’s proteasomal degradation is inhibited by ATM-dependent phosphorylation of COP1 and other E3 ubiquitin ligases, while PPM1D can reverse its effect by inactivating Chk1 and other kinases or by directly dephosphorylating this protein. Mutations in the gene encoding this protein are associated with a syndrome that is diagnosed using the Chompret criteria. That condition, Li–Fraumeni syndrome, is sometimes implicated in patients whose disease does not originate from BRCA1 or BRCA2 mutations. Sirt1 can deacetylate this protein, leading to an inhibition of apoptosis, and more than 50% of human tumors contain a mutation or deletion of the gene that encodes, for 10 points, what protein involved in the regulation of the cell cycle and tumor suppression?

ANSWER: tumor **protein 53** [accept **p53**]

2. Along with the single-engine Faery Bomber, this was the name of a whole class of light aircraft bombers developed by the Bristol Aeroplane Company for use in World War II. Three months after the battle of this name, the Bavarians left the war via the Treaty of Ilbersheim. A month prior to this engagement, its victorious commander defeated the Graf von Arco’s troops in the siege of Schellenberg. This battle saw an early crossing of the Nebel Stream and a repulse of the winning side’s forces at Oberglau by troops under the comte de Marsin. This battle saw the capture of the duc de Tallard, which prevented the French from taking Vienna. It was followed by the battles of Ramillies and Oudenarde. For 10 points, name this victory for the Duke of Marlborough in the War of the Spanish Succession, which lends its name to a lavish palace built by John Churchill.

ANSWER: Battle of **Blenheim** [or Battle of **Blindheim** or Second Battle of **Hochstadt**]

3. This man attempted to unify the mental sciences with the physical sciences by proposing a mental chemistry. One text by this thinker argues that the title figures may have a “nervous temperament” and states that the only basis for the title “universal custom” is the perpetuation of the “law of the strongest.” Another text by this thinker considers the example of Marcus Aurelius, who made the mistake of persecuting Christians. That text discusses whether truth may be justifiably persecuted and argues that actions should only be limited if they restrict the freedom of other individuals. This author of *The Subjection of Women* argued for the harm principle in one work and updated the ideas of Bentham to argue for the greatest happiness principle. For 10 points, name this author of *On Liberty* and “Utilitarianism.”

ANSWER: John Stuart **Mill**

4. One of these objects is in between the title figures of Gerrit van Honthorst’s *The Matchmakers*. Between 1982 and 1983, Gerhard Richter made a series of paintings that depicted pairs of these objects. A work titled *Meditation* depicts three of these objects that squirm along a beach in a painting by René Magritte. These elongated objects illustrate the contemplative pose of numerous paintings by Georges de la Tour about the Penitent Magdalena. Skulls and these objects are key motifs of *memento mori* paintings. A typical technique of the Caravaggisti is to position one of these between the central figures of their paintings. Although there is space for six of them, only one can be seen at the top of *The Arnolfini Wedding*. For 10 points, identify these objects that illuminate a room in old days, and are often placed into chandeliers.

ANSWER: **candles**

5. The speaker of one poem by this author describes attending a meeting when he was seven where “everybody must have been a spy.” That poem asks “When will you send your eggs to India?” The speaker of another of his poems parenthetically states “I touch your book and dream of our odyssey ... and feel absurd.” That poem describes a series of questions, such as “Who killed the pork chops? What price bananas?” and “Are you my angel?” In one

poem, this author told the title country “Go fuck yourself with your atom bomb.” A different poem by this author asks “What were you doing down by the watermelons?” to Garcia Lorca. This author’s most notable poem describes the filth of the demon Moloch and repeatedly states “I’m with you in Rockland.” For 10 points, name this author of “A Supermarket in California” and the poem “Howl.”

ANSWER: Allen **Ginsberg**

6. David Bloor and Barry Barnes considered this structure’s relation to scientific knowledge in relation to their strong programme. A paradigm that explains the relationship between human knowledge and action that is named after this discipline is given in the book *Ideology and Utopia*, which was written by Karl Mannheim. One approach to this discipline suggests that it can be analyzed through milieus and was championed in a book that criticized abstracted empiricism. Distinguishing between the “I” and the “Me” is the basis for the symbolic interactionism approach to this discipline. The thinker who started this discipline advocated a Religion of Humanity and posited that humankind moves through theological, metaphysical and positive stages. For 10 points, C. Wright Mills and Auguste Comte were practitioners of what social science that is often concerned with the institutions of a human community?

ANSWER: **sociology** [accept **strong sociology**, **sociology of science**, **sociology of scientific knowledge**, etc. if they say the word sociology]

7. This language has recently been updated to allow for move semantics, although the syntax for it is so complex that no compiler has successfully implemented it. Software engineers probably have read Scott Meyer’s book on this language, in which you can specify abstract classes by setting their virtual functions equal to 0. Like Perl and Python, you can use multiple inheritance in this language. The rule of 3 applies to this language, stating that if any one of a destructor, copy constructor, or assignment operator must be explicitly defined, then they all must be. To print and input something in this language, you may use “c out” and “c in.” This language was developed by Bjarne Stroustrup and incorporates a unary operator into its name that indicates it improves upon a certain procedural language. For 10 points, name this object-oriented extension to C.

ANSWER: **C++** or **“C plus plus”** [do not accept or prompt on “C”]

8. Major motorways passing through this city include Diagonal Avenue and Meridiana Avenue, and it is served by Sabadell Airport. The plain on which this city rests is bounded to the north by the Besos River, to the south by the Llobregat River, and elsewhere by a ring of mountains peaking at Tibidà. On April 23, the feast day of St. George, this city hosts a large book fair. In 2008, the AVE high-speed rail was extended to this largest metropolis on the Mediterranean Sea, which contains the Palace of the Generalitat. A mosaic salamander can be found in Park Guell in this city, built by the architect of its Casa Milà. For 10 points, name this home of the still incomplete Sagrada Família, second largest city of Spain and capital of Catalonia.

ANSWER: **Barcelona**

9. Archbishop Mario Casariego was kidnapped by insurgents in this country, which was ruled by Mario Mendez Montenegro, a man whose tenure saw the atrocities committed by the so-called Butcher of Zacapa. In the wake of Jorge Serrano’s disastrous auto-coup, Ramiro de Leon Carpio became leader of this country. One leader of this country redistributed chunks of land bigger than 226 acres to the landless as part of the Agrarian Reform Law of 1952. In the wake of Jorge Ubico’s overthrow, a 1944 presidential election saw the rise of scholar Juan Jose Arévalo in this country. Carlos Castillo Armas wrestled power from this country’s ruler Jacobo Arbenz, who was overthrown during a CIA coup led by Allen Dulles. For 10 points, identify this country whose plight was the subject of a biography by K’iche Rigoberta Menchu, and whose capital is a city named after the country.

ANSWER: **Guatemala**

10. This work's last act begins with a train of dark Forms and Shadows mourning the death of the King of Hours. Act III, Scene II is set in a river in Atlantis, where Ocean and Apollo discuss how a shapeless extra-human evil has overthrown a monarch. The fourth act includes much dialogue between the Earth and the Moon and exults the liberation of man. This play's title character is in love with the character of Asia, who has conversations with the revolutionary Demogorgon. Beginning with the title character surrounded by Ione and Panthea, he later cries out against the tyrannical "Monarch of Gods and Daemons" Jupiter and mourns the fact that a hawk eats his liver out daily. For 10 points, identify this update of Aeschylus's *Prometheia*, a work of Percy Shelley.

ANSWER: Prometheus Unbound

11. This location's entrance features its name and a statue of a deer on top. A man who comes to this location blasts The Animals' song "Boom, Boom" while approaching it. This location is compared to a great lady who still has her secret ways when a woman is shown its priest-hole from Reformation times. Some sticks of dynamite from a quarry and a few guns are the only weapons from this location that were not sold to a collector from Idaho, according to its gamekeeper Finney. A woman who dies here was nearly murdered while at a public inquiry about why she lost a disk drive containing the names of NATO undercover agents. This location is the last stand of a trio who faces off against Raoul Silva. For 10 points, identify this title location of a 2012 movie, which is James Bond's childhood home.

ANSWER: Skyfall

12. This man came to power in his highest office after Rudolf Hilferding suggested that he end social unrest by replacing Wilhelm Cuno. This man's 102-day tenure in that highest post ended after continuous harassment from Hans von Seeckt, but he was able to replace the *Papiermark* and issue the *Rentenmark* while in that office. In a different role, this man and Nikolai Krestinsky chaired a *rapprochement* between his own country and the USSR that culminated in 1926's Treaty of Berlin. One of his last acts was to accept the Young Plan at a conference at The Hague, though four years earlier he met with Austen Chamberlain and Aristide Briand in a Swiss town to plan for international peace. For 10 points, name this German signatory of the Locarno treaties, a foreign minister of the Weimar Republic.

ANSWER: Gustav Stresemann

13. The Fock states of a single mode describe this system, and the operators used to describe second quantization were originally motivated by this system. Some systems modelled after this one are more accurately described by a model named for Morse. Inverse square forces and forces that cause these systems are the only ones that can result in closed orbits according to Bertrand's theorem. The solution to the Schrodinger equation with this type of potential may be found by power series expansion and given in terms of Hermite polynomials, but a more elegant method makes use of ladder operators. A small angle approximation allows one to model a pendulum as one of these. It is defined as having restoring force proportional to displacement. For 10 points, name this system involving sinusoidal oscillations.

ANSWER: quantum harmonic oscillator [accept simple harmonic oscillator; prompt on "oscillator"; prompt on "Hooke's Law" or "linear force"]

edited

14. Alban Berg used this time signature in the second section of his *Violin Concerto*'s first movement to quote a Carinthian folk dance similar in style to his use in *Wozzeck* of an Austrian dance. In Mozart's *Requiem*, the "Hostias," "Recordare," and "Agnus Dei" movements all have this meter, which he also used for most of his *Missa Longa* and for the *Coronation Masses*' "Agnus Dei." This meter is sometimes marked by the Italian "di quarta in quarta." Genres of music that rely on this meter include the "tiny wisp" in Brahms' *Piano Concerto No. 2* and the *Moonlight Sonata*'s "Allegretto" second movement. Besides scherzi, the most notable uses of this meter are in

works like von Weber's *Invitation to the Dance* and Strauss' *Blue Danube*. For 10 points, name this time signature most common in dance as the meter for minuets and waltzes.

ANSWER: **triple** time or meter [accept **3/4** time, accept the old "**three-beats-in-a-measure**" time; prompt on **waltz** time or meter]

15. While doing this, a Prince of Homburg seizes a glove while trying to grab a laurel wreath from the Grand Elector's daughter Natalia in a play by Kleist. A novel titled for this action ends with the marriage of Elizabeth Baddensen to the neurotic Joachim von Pasenow and consists of *The Romantic*, *The Realist* and *The Anarchist*. Practitioners of this action name a *History of Man's Changing Vision of the Universe* by Arthur Koestler. A poem named for a practitioner of this action describes "big hoarfrost stars" and repeats the refrain "green, how I want you green." While performing this action in front of a doctor and gentlewoman, a character exclaims, "All the perfumes of Arabia will not sweeten this little hand!" For 10 points, name this action performed while crying, "Out, damned spot!" by Lady Macbeth, whose "eyes are open" but "their sense is shut."

ANSWER: **sleepwalking** [or **somnambulism**; accept word forms; prompt on "sleeping" or "walking"]

16. One figure in this culture's myths is lured to his death by a crab made out of prairie grass, bamboo and stone. Earlier, that figure killed four hundred gods of alcohol by toppling a house. This culture's myths describe how an arrogant figure had his teeth and eyes replaced with white corn after he was blasted with a blowgun. A key location in this culture's myths contains rivers of pus and blood and a house where knives fly. The Dominican Francisco Ximénez is responsible for compiling a "Council Book" of this culture. This culture's villains include Zipacna and his father Seven Macaw, and many demons from Xibalba, its underworld. For 10 points, Hunahpu and Xbalanque are the Hero twins of what Pre-Columbian culture?

ANSWER: **Mayans**

17. This novel's penultimate chapter, which contains a digression about the anti-Semitic story "Little Harry Hughes," describes two men urinating in a yard and is written as a series of 309 questions and answers. In another chapter, the protagonist imagines his father Rudolph chastising him for going to Nighttown. This novel's protagonist had a son named Rudy that died shortly after birth and is friends with one of the author's recurring characters who lives in a Martello Tower. A chapter set at the National Library details many of this novel's characters' theories of Shakespearean scholarship. This novel begins "Stately, plump Buck Mulligan came from the stairhead" and ends with a woman contemplating her relationship with Blazes Boylan before stating "yes I said yes I will yes." For 10 points, identify this novel that chronicles one day in the life of Leopold Bloom, a work of James Joyce.

ANSWER: **Ulysses**

18. Fragments of a molecule with this geometry are isolobal to a tricarbonyl cobalt three fragment. PES supports the molecular orbital prediction that bonds in this geometry are formed by a_1 and t_2 orbitals. Complexes with this geometry experience a crystal field splitting of four-ninths Δ_O . Snubification of molecules with this geometry yields a molecule in a point group with 120 symmetry operations, while this geometry itself names a point group with 24 symmetry operations. Although the molecules themselves are pyramidal, amines are often approximated to have this geometry, with a lone pair replacing one substituent. Compounds with this geometry have sp^3 hybridization and VSEPR idealized bond angles of 109.5 degrees. For 10 points, name this molecular geometry consisting of a central atom bonded to four substituents.

ANSWER: **tetrahedral** geometry [accept word forms]

19. Concerns over a forerunner of this law were investigated by attorney Samuel Untermyer as part of an inquiry by the Pujo Committee. This law's bill was introduced in the House by Robert Owen and Carter Glass, while a draft version of this law known as the "Aldrich Plan" is believed to have been conceived during a meeting at the Jekyll Island Club. This law, created in response to concerns about a "money trust," was modified in 1933 to create the

FOMC, while another amendment in 1977 gave the result of this law a “dual mandate.” The passage of this law came five years after the establishment of the National Monetary Commission, created to survey international banking systems after the Panic of 1907. For 10 points, name this bill signed by Woodrow Wilson, a 1913 Act that created the United States’ current central bank.

ANSWER: Federal Reserve Act [accept Glass-Owen bill before mentioned]

20. Ernest Renan famously remarked that if Christianity had been halted by some mortal illness, then this would have been the dominant religion in the world. Initiation into this religion involved tying one’s hands with chicken intestines then hopping over pools of water. In this religion, a “courier of the sun” called a heliodrome and a lion symbolized by the planet Jupiter are two of its seven grades. This henotheistic religion venerated a deity that was born from a rock with dagger in hand, possibly sometime around Christmas. This religion’s main act of sacrifice was a *tauroctony* or slaying of a bull, which took place in a namesake cave. For 10 points, identify this mystery religion of the Roman Empire, named for a Persian deity.

ANSWER: mithrasism [or even Mithraism or worshipping Mithras]

Extras

21. One notable document written by this ruler was placed in a foundation deposit underneath the Esagila. This man’s son and successor had an incestuous relationship with this man’s daughter, Atossa, and probably murdered this man’s other son, Bardiya. His namesake Cylinder is sometimes considered the first declaration of human rights in history. This son of Persis seized the city of Sardis after defeating the Lydian king, Croesus. Herodotus reports that this man met his end fighting against Tomyris, the queen of the nomadic Massagetae people, while he was idealized in a namesake text by Xenophon. When this man conquered Babylon in 539 BCE, he permitted more than 40,000 Jews to leave and return to Palestine. For 10 points, name this founder of the Achaemenid Empire.

ANSWER: Cyrus the Great [or Cyrus II]

Bonuses

1. Part two of this work attempts to elucidate the nature of humans and claims that the mind and body do not causally interact. For 10 points each:

[10] Identify this philosophical work, whose first section lays out 14 propositions, concluding with, “Except God, no substance can be or be conceived.”

ANSWER: Ethics

[10] This man penned *Ethics* as well as the *Theological-Political Treatise*. This philosopher was excommunicated, likely for denying the immortality of the soul and proclaiming that law did not originate from God.

ANSWER: Bento Spinoza [or Baruch Spinoza or Benedictus Spinoza]

[10] This contemporary philosopher argued that Spinoza gives us an alternative conception of power, or organization of society in *The Savage Anomaly*. He wrote a series of three works with Michael Hardt that updated the claims of Marxism.

ANSWER: Antonio Negri

2. This one act play concerns a grieving woman whose drowned son Michael receives “a clean burial in the far north” after his clothes wash up on a shore. For 10 points each:

[10] Name this work, in which Michael’s brother is thrown from a grey pony and drowns following his mother’s vision of Michael’s ghost at a well. It was written by the author of *The Playboy of the Western World*.

ANSWER: Riders to the Sea

[10] *Riders to the Sea* was written by this Irish playwright who wrote about Christy Mahon winning a donkey race and bragging about killing his father in *The Playboy of the Western World*.

ANSWER: John Millington **Synge**

[10] *Riders to the Sea* is set at the Aran Islands, which is also where this author set a trilogy of his plays. His black comedy *The Lieutenant of Inishmore* concerns Mad Padraic's loss of his beloved cat Wee Thomas.

ANSWER: Martin **McDonagh**

3. The form of this molecule was determined to be present in the microorganisms that form stromatolites, and this molecule is converted into a group of cyclic tetrapyrroles upon plant senescence. For 10 points each:

[10] Name these substances that exist in the thylakoid membrane of certain organelles and contain a central magnesium atom. They are the principal pigment involved in photosynthesis.

ANSWER: **chlorophyll**

[10] While chlorophyll is responsible for the green color of plants, this hydrocarbon produces a red-orange color and is composed of two retinyl groups, which can be broken down to yield a form of vitamin A.

ANSWER: **carotene** [or **beta-carotene**]

[10] This xanthophyll is the primary cause of the yellow color of egg yolks. Along with zeaxanthin, it is found in human eyes, possibly to protect them from high energy blue light.

ANSWER: **lutein**

edited

4. This kingdom succeeded D'mt as the main power of its coast. For 10 points each:

[10] Name this legendary birthplace of the Queen of Sheba, which was famous for its *stelae* and conversion to Christianity under King Ezana.

ANSWER: Manti **Aksum** [or **Axumite Empire**]

[10] The Axum Empire was based out of the land that is now part of this modern day country. Its modern capital was founded by Menelik II.

ANSWER: Federal Democratic Republic of **Ethiopia**

[10] Avalites and Adulis are given as Aksum's primary ports in this kind of document that names a number of prominent ports on the Arabian Sea. This kind of document basically lists a series of ports encountered when sailing.

ANSWER: **periplus**

5. Two young girls in white dresses sit in the sand in this artist's *Children on the Beach*, while two women lean over an opera balcony in another painting. For 10 points each:

[10] Name this Impressionist painter of *Under the Horse Chestnut Tree* and *Lydia Leaning on Her Arms, Seated in Loge*.

ANSWER: Mary **Cassatt**

[10] Cassatt may be best known for this painting, which depicts a mother holding onto her child, as she puts her feet into a bowl with a rose-colored rim.

ANSWER: *The **Bath***

[10] Cassatt became a successful Impressionist after meeting this other Impressionist, with whom she maintained a long lasting friendship. He is best known for his paintings of dancers and *L'Absinthe*.

ANSWER: Edgar **Degas**

6. Homogeneous forms of these compounds typically use MAO as a cocatalyst, and their heterogeneous form is generally titanium based. For 10 points each:

[10] Name this class of organometallic catalysts that makes 1-alkene polymers.

ANSWER: **Ziegler-Natta** catalysts

[10] Ziegler-Natta catalysts proceed via this mechanism of forming carbon-carbon single bonds. It grows the polymer by attaching it and a monomer to the catalyst, and then are attaching them through a migratory insertion.

ANSWER: **Cossee-Arlman** mechanism

[10] Ziegler–Natta catalysts may be metallocenes, which are two five-membered rings sandwiched on a metal center. The first metallocene discovered had a center of this metal, which can be refined to make steel.

ANSWER: iron
edited

7. This man singled out the New Deal policies of the Agricultural Adjustment Administration and the minimum wage as being particularly harmful to African Americans. For 10 points each:

[10] Identify this Swedish social scientist, who may be best known for writing *An American Dilemma*, which played a key role in the *Brown v. Board* ruling.

ANSWER: Gunnar Myrdal

[10] Gunnar and his wife Alva wrote this other book, which discusses the Swedish government policies of housing and the title problem. It uses neo-Malthusian principles to argue that government policies should promote conditions to make it easier to have children.

ANSWER: *The Crisis in the Population Question*

[10] Myrdal received his Nobel Prize along with this Austrian, who wrote *The Road to Serfdom*.

ANSWER: Friedrich August Hayek [or Friedrich August von Hayek]

8. Name some guys who have served as governor of New York in the 19th century. For 10 points each:

[10] This man served as the first Governor of New York before serving as Vice President under two consecutive Presidents. He should not be confused with a fellow Governor who was widely criticized for the construction of the Erie Canal.

ANSWER: George Clinton

[10] This man defeated Democrat William Marcy to become Governor of New York. He's probably more famous for serving as Secretary of State for almost the entire 1860s.

ANSWER: William Seward

[10] This Governor of New York also served as Secretary of State and helped resolve the dispute over the Alabama Claims, along with helping his President attempt to annex the Dominican Republic.

ANSWER: Hamilton Fish

9. At the beginning, the protagonist hears about a diurnal, raincoat-clad ghost, and he later learns that his arsonist brother-in-law jumped in front a train while wearing a raincoat. For 10 points each:

[10] Name this story about a depressed author who imagines being stalked by the Furies while hallucinating the title objects. He takes sleeping pills, wanders through a red-lit city and is horrified to find *The Brothers Karamazov* in the binding of *Crime and Punishment*.

ANSWER: “Spinning Gears” [or “Cogwheels” or “Haguruma”]

[10] “Spinning Gears” was written by this author, who described a rape and murder told from different perspectives in “In a Grove,” which Akira Kurosawa combined with another of his stories for the film *Rashōmon*.

ANSWER: Ryūnosuke Akutagawa

[10] In this Akutagawa story, Yoshihide demands to immolate a girl as a model for his commissioned painting of the title infernal scene. His cruelty backfires when his daughter is the one burned.

ANSWER: “Hell Screen” [or *Jigoku-hen*]

10. Manuel de Falla, the composer of the *Ritual Fire Dance* hails from this country. For 10 points each:

[10] Name this country of origin of the *flamenco* dance, the influence of which can be felt in many of de Falla's works.

ANSWER: Kingdom of Spain [or Reino de España]

[10] De Falla was notably influenced by this fellow Spanish composer of *12 Spanish Dances* who composed a set of pieces influenced by the paintings of Francisco Goya and for drowning in 1916 after his boat was torpedoed by Germans.

ANSWER: Enrique **Granados** Campiña

[10] *Goyescas* by Granados is a set of pieces for this instrument. Philip Glass's *Metamorphosis* consists of five slightly modified themes for this instrument, and a concerto for this instrument by Tchaikovsky was blasted by Rubinstein for being clumsily written.

ANSWER: **piano**

11. *Double Fine Adventure* was funded through this website, but an unsuccessful attempt at funding through it was a card game called Tentacle Bento, which satirizes a certain genre of something unsavory. For 10 points each:

[10] Identify this website that provides a way of crowd-funding your artistic projects and scientific endeavors.

ANSWER: **Kickstarter**.com

[10] One of the coolest kickstarter projects is this one by Palmer Luckey, an attempt at making a low-overhead head mounted display. John Carmack and Gabe Newell have sung the praises of the potential of this device.

ANSWER: **Oculus Rift**

[10] In August 2012, this online presence launched a kickstarter project called *it* "sells out," which was an attempt to raise money to remove ads from its website. It also puts on PAX, an annual series of conventions for gamers everywhere.

ANSWER: **Penny Arcade**

12. Answer some questions about the quantum Hall effect. For 10 points each:

[10] In the quantum Hall effect, von Klitzing's constant is equal to this constant divided by electron charge squared. This constant is symbolized h , and it gives energy when multiplied by the frequency of light.

ANSWER: **Planck**'s Constant

[10] The quantum Hall effect causes conductivity to be equal to this coefficient over von Klitzing's constant. It can take integer and fractional values, and is experimentally extremely close to those allowed values.

ANSWER: **filling** factor

[10] Experiments with the quantum Hall effect were observed on the inversion layer of these devices. These devices are four terminal transistors, although two of the terminals are often connected, making them more like other three-terminal devices.

ANSWER: **MOSFETs** [or **metal-oxide-semiconductor field effect transistor**; prompt on partial answer]

13. Pompey had a lot of enemies. For 10 points each:

[10] Pompey was the primary prosecutor of the third war against this man. This ruler of Pontus earlier had eighty thousand Romans and Italians murdered in the Asiatic Vespers and supposedly developed immunity to poison.

ANSWER: **Mithridates VI** [or **Mithridates the Great**; or **Mithridates Megas**; or Mithridates **Eupator Dionysios**; prompt on partial answer]

[10] Pompey led a campaign against the pirates of this region of Asia Minor north of Cyprus, whose most important city was Tarsus. Alexander the Great had earlier used its namesake "Gates" through the Taurus Mountains as a route into Syria.

ANSWER: **Cilicia**

[10] Pompey also had to fight the army of this fellow *triumvir* at the Battle of Pharsalus. After Pompey lost, he fled to Egypt and was promptly assassinated by Ptolemy XIII, who then gave this man Pompey's head.

ANSWER: **Julius Caesar** [prompt on "Caesar"]

14. It asks "Why isn't anything happening in the senate? / Why do the senators sit there without legislating?" For 10 points each:

[10] Identify this poem that asks a series of questions about “distinguished orators” and “the crown” before concluding the title figures “were ... a kind of solution.”

ANSWER: “**Waiting for the Barbarians**”

[10] “Waiting for the Barbarians” was written by this Greek author of “The God Abandons Antony.”

ANSWER: Constantine **Cavafy**

[10] In addition to being the birthplace of Constantine Cavafy, Alexandria was home to a giant one of these repositories. Borges wrote a story about one that seemed infinite, which was comprised of a finite set of hexagonal rooms.

ANSWER: **library** or **libraries**

15. Apparently, he was so tall that when he stood up his head reached into the stars, and his many children included the Hydra and Ladon. For 10 points each:

[10] Identify this monstrous son of Gaia who was a consort of Echidna.

ANSWER: **Typhon**

[10] According to Apollonius Rhodius, when Typhon had his arms stretched out wide, 100 of these objects were visible, which allowed him to burn things.

ANSWER: **heads of dragons** [accept equivalents; accept **heads of snakes** or **heads of serpents**]

[10] According to Pindar and other poets, Typhon currently resides underneath this real-life location. Typhon’s belches explains this mountain’s behavior.

ANSWER: Mount **Etna**

16. Answer some questions about everyone’s favorite Vietnamese syncretic religion, Cao Đài. For 10 points each:

[10] The Holy See of Cao Đài is located in this Vietnamese city, its founding place.

ANSWER: **Tây Ninh**

[10] An image inside the temple at Tây Ninh shows Sun Yat-sen, Nguyễn Bình Khiêm, and this man signing a covenant with God. This French author wrote *Les Misérables*.

ANSWER: Victor **Hugo**

[10] Priests of Cao Đài are required to partake in this practice, while followers partake in it for at least ten days a month. In Rastafarianism, this practice is often followed in adherence to I-tal, and Pythagoreans also practiced it.

ANSWER: **vegetarianism** [accept **not eating meat** or equivalents]

17. Hilbert’s tenth problem was to give an algorithm which would determine the solubility of one of these equations, though that was proven impossible in 1970. For 10 points each:

[10] Polynomials whose variables take integer values are given this name. Famous examples may be found in Fermat’s last theorem and Pell’s equation.

ANSWER: **Diophantine** equation [accept word forms]

[10] Gauss proved this theorem that states that for two primes p and q , x squared equals $p \bmod q$, and x squared mod $q \bmod p$ will have the same solvability unless p and q both equal 3 mod 4. It had resisted the powers of Euler and Legendre, but Gauss found at least 8 proofs of it in his lifetime.

ANSWER: law of **quadratic reciprocity** [accept **golden theorem**]

[10] The impossibility of finding a general method of determining the solubility of Diophantine equations is elegantly stated in Matiyasevich’s theorem which says that every set of this type is Diophantine. Sets of this type can be listed by an algorithm that may halt or run infinitely.

ANSWER: **recursively enumerable** [accept **computably enumerable**, **semidecidable**, **provable**, or **computably enumerable**; prompt on “Turing-computable,” “recursive,” “Turing-decidable,” or “Turing-recognizable”; do not prompt on “decidable” or just plain old “recognizable”]

18. Its last scene is a shot of the title figure’s castle in ruins, symbolizing his end. For 10 points each:

[10] Identify this symphony of horror, a German Expressionist film. Its title “bird of death” meets his end when Ellen sacrifices herself so that he can succumb to the power of the rising sun.

ANSWER: Nosferatu

[10] *Nosferatu* was an adaptation of this Bram Stoker novel. Bela Lugosi has played the title figure of this novel for some more mainstream films.

ANSWER: Dracula

[10] One of *Nosferatu*’s more memorable scenes sees a sailor open a coffin with a hatchet that has been filled with these things. Shortly afterwards, everyone but Orlok dies.

ANSWER: rats

19. In one novella by this author, Mr. and Mrs. Richards receive a letter that they believe will allow them to claim some gold, although it becomes apparent that every other model couple has received the same letter. For 10 points each:

[10] Identify this author of “The Man That Corrupted Hadleyburg.” He also wrote *The Adventures of Tom Sawyer*.

ANSWER: Mark Twain [or Samuel Clemens]

[10] Twain wrote several works of travel literature, including this one in which he and his friend Harris journey through Germany, the Alps, and Italy. It contains the essay “The Awful German Language.”

ANSWER: A Tramp Abroad

[10] One of Twain’s posthumously published novels is this one, which concerns how Young Satan visits Eseldorf and performs many magical acts, such as summoning the Missing Link in a procession.

ANSWER: *The Mysterious Stranger* [or No. 44 The Mysterious Stranger]

20. This ruler married Mary I of England in 1554. For 10 points each:

[10] Identify this son of Charles V who bankrupted Spain four times during his rule. The Duke of Medina Sidonia led the Spanish Armada during his reign.

ANSWER: Philip II of Spain [or Philip I of Portugal; do not prompt on just “Philip I”]

[10] This building, designed by Philip II and Juan Bautista de Toledo serves a dual purpose as both a palace and a monastery. It serves as a burial ground for many of Spain’s rulers.

ANSWER: San Lorenzo de El Escorial

[10] Philip II’s natural ally was Pope Paul III, who was from this family along with the mistress of Pope Alexander IV, Giulia. This family had its court in Parma and ruled as dukes of the city for over 200 years.

ANSWER: Farnese Family [or House of Farnese]

Extras

21. Tired of boring geography bonuses on rivers? Here’s one on oryxes instead! For 10 points each:

[10] Arabian oryxes are protected by a namesake wildlife sanctuary between the Hajar and Dhofar Mountains, a UNESCO World Heritage Site in this country. This country is dominated by the Ibādī sect of Islam.

ANSWER: Sultanate of Oman

[10] Before becoming extinct in the wild after hunting for their horns, scimitar oryxes were found in this region, a transition zone between the Sahara Desert and savanna. This semi-arid, acacia-dominated region is currently undergoing rapid desertification.

ANSWER: Sahel

[10] Kgalagadi Transfrontier Park, on the border between South Africa and Botswana, was formed from two national parks named for this species of oryx. This species is an invasive in the White Sands National Monument of New Mexico.

ANSWER: gemsboks [or *Oryx gazella*]