



NASAT 2016
Round 16

1. This hero raises a funeral pyre for a man who was drowned by Triton for challenging the gods to a conch shell music contest. He learns that one of his helmsmen never passed onto the underworld because he was not buried. This hero is barely able to recognize the face of a fallen countryman because he is so disfigured, and is rejected by the shade of a dead lover that flees to her deceased husband instead. This hero exits the underworld through an ivory gate of false dreams after being guided by the Cumaean Sibyl. This hero is told by his father Anchises that his descendants will begin a lineage that stretches to Romulus and Julius Caesar. For 10 points, name this title hero of an epic poem by Virgil.

ANSWER: Aeneas <Kim>

2. When the head of this company died, he was buried in a lead-lined coffin in a steel vault, with cement then poured over it to prevent his body from being vandalized. Richard Ely wrote an article claiming Otto von Bismarck's power was "utterly insignificant" compared to this company's. Robert Todd Lincoln once served as president of this company, which hired Solon Spencer Beman to design buildings near Lake Calumet, Illinois. An employee cracked that "we are born in [this company's] house and fed from [this company's] shops" because of the power it wielded over its company town. A 1894 strike against this company ended when Grover Cleveland sent in the U.S. Army to oppose union leader Eugene V. Debs. For 10 points, name this company whose founder invented a type of railroad sleeping car.

ANSWER: Pullman Palace Car Company [or Pullman-Standard Car & Manufacturing Company] <Cheyne>

3. In an opera by this composer, a fast, out-of-tune polka played by an onstage piano introduces a scene at a bar, and the opening is structured as a Baroque suite to portray an army captain's inability to understand how the poor live. Another of his operas depicts an arrest, trial, and imprisonment with a silent film. This composer wrote an opera whose protagonist sleeps with Alwa (alva) on the same couch where she had killed his father, Dr. Schön (shern), played by the same actor as her own murderer, Jack the Ripper. In another of his operas, the title character drowns himself in the lake next to which he murdered his wife Marie after she was raped by the Drum Major. For 10 points, name this composer of *Lulu* and *Wozzeck* (VOT-seck).

ANSWER: Alban Berg [or Alban Maria Johannes Berg] <Kim>

4. A poem titled for these things begins, "From a distant shore they cry, where are all [these things] gone?" and ends with the command to "draw your fuel of pain from earth's sated core". In a Clarice Lispector story, a French explorer in Africa names a seventeen-inch tall pygmy after one of these things. They aren't shadows, but Jeffia Okwe is the protagonist of a novel titled for these things, which are "for My Land" in a Wole Soyinka poem. They aren't fruits, but eating these things cause "mild-eyed melancholy" men in another poem to declare, "O rest ye, brother mariners, we will not wander more". For 10 points, a group of men sing "our island home is far beyond the wave" after consuming what things in Tennyson's Homeric poem "The Lotos-eaters"?

ANSWER: lotus **flowers** <Collins>

5. This phenomenon names a molecular beam method developed by I. I. Rabi, who adapted the technique from Otto Stern to measure the magnetic moments and quadrupole moments of many nuclei. The viability of the triple-alpha process was demonstrated by the discovery of a 7.65 mega-electron-volt phenomenon in carbon to which this term is applied; that was discovered by Fred Hoyle. Recoil-free emission and absorption of gamma rays in the Mössbauer effect is said to be this type of absorption. When the orbital period of two Solar System bodies are related by a ratio of two small integers, they are said to have the orbital type of this term. The Q factor for an RLC circuit is inversely proportional to the frequency named for this term. For 10 points, identify this phenomenon often erroneously claimed to have caused the Tacoma Narrows bridge collapse.

ANSWER: **resonance** [or word forms, such as **resonant**] <Voight>

6. A visitor to this place incessantly talks about his stay at Ecclesford with Lord Ravenshaw, which was ruined by the death of a grandmother. That visitor to this place, John Yates, kicks off an event in which residents adopt roles such as Amelia, Agatha, Anhalt, and the Baron. The owner of this place also owns a plantation in Antigua, whose implications of slave labor have been exaggerated by Edward Said. Many of the residents here disobey their father's wishes by acting out the scandalous play *Lovers Vows*. Henry and Mary Crawford flirt with this estate's residents. It is owned by Sir Thomas Bertram, whose son Edmund eventually marries the shy female protagonist. For 10 points, name this estate where Fanny Price goes to live, the title residence of an 1814 Jane Austen novel.

ANSWER: **Mansfield Park** <Cheyne>

7. This mathematician names honeycombs and tessellations that use regular and semi-regular shapes to fill a space. Shapes named after Catalan are the duals of the thirteen shapes named after this man, which includes the snub dodecahedron and the rhombicuboctahedron. This man names a property of the real numbers which states that for any real number x , there exists a natural number n greater than x . He tried to calculate how many grains of sand could fill the universe using a "myriad" counting system in his book *The Sand Reckoner*. He also devised a method for calculating the area under a parabola using the method of exhaustion. The formula " r equals a plus b theta" in polar coordinates generates his spiral. For 10 points, name this mathematician who also names a principle stating that the weight displaced by a body in a fluid is equal to the buoyant force on it.

ANSWER: **Archimedes** <Jose>

8. Samuel Huntington argued that this event was the starting point of what he considered to be "the third wave of democratization". This event led to the permanent closure of the Tarrafal prison camp. The radio broadcast of the songs "Grandola, Vila Morena" and "And after the farewell" were used to signal the start of this event. After this event, a mass exodus of refugees called *retornados* occurred due to the decolonization efforts of the National Salvation Junta. The only four deaths during this event were caused by the PIDE secret police, which was disbanded as a result of this event. This event grew out of a coup by the Armed Forces Movement and led to the overthrow of Marcelo Caetano. For 10 points, name this 1974 event that overthrew Portugal's Estado Novo government, named for a type of flower.

ANSWER: Carnation Revolution [or Revolution of the Carnations; or Revolucao dos Cravos; or 25th of April Revolution; or Revolucao do 25 de Abril] <Lou>

9. This man constructed a namesake monument after he announced he had no son to keep his name in remembrance, and in later years passersby would throw stones at it. An appeal for this man was made by a woman of Tekoa pretending to be a mourner. He was suckered by Hushai, who gave him intentionally bad advice. After this person died in the Battle of Ephraim's Wood, a ruler shouted "Would God I had died for thee" and cried so much that he was chastised by Joab. This man murdered Amnon to avenge the rape of his sister Tamar and he died when his hair was caught in an oak tree, leaving him vulnerable to be killed. This man obtained the treasonous adviser Ahithophel after taking Jerusalem from his father. For 10 points, name this rebellious son of David.

ANSWER: Absalom [or Avshalom] <Cheyne>

10. This organization's Gaia Project contracts with the NeXtScale System from Lenovo to perform a stereoscopic and kinematic census that maps up to a billion stars in three dimensions. In June 2016, it put two Galileo units into service as part of its long-term plan to operate a competitor to the GPS network. Matt Taylor attracted controversy for a sexual shirt worn during this organization's successful *Philae* mission. Canada is a "Cooperating State" to this group, which routinely uses the Ariane 5. Many of this agency's launches take place from CSG, a site near Kourou in French Guiana, though its science center is in Noordwijk (NORT-vike) and its mission control is in Darmstadt. For 10 points, name this pan-continental agency which sends Germans and Italians into orbit.

ANSWER: European Space Agency [or ESA] <Weiner>

11. The work of an economist from this present-day country ignited a controversy during the British election of 1945 because it claimed that England's socialist tendencies mirrored the policies of the Nazi Party. A man who served as the chief economic minister in this country claimed that praxeology, or purposeful deeds, formed the basis of behavior in his book *Human Action*. A theory of business cycles named after this country argues that booms and busts occur because of the over availability of credit. Ludwig von Mises was an economic minister here, and it was the birthplace of the author of *The Road to Serfdom*, Friedrich von Hayek. For 10 points, identify this European country that lends its name to a school of individualistic economics.

ANSWER: Austria <Droge>

12. A leader during this period refused to take advantage of a salt boycott on his rival's son, claiming to "not fight with salt, but with the sword". Another leader from this period put a phrase meaning "Wind, Forest, Fire Mountain" on his battle standard and was known as the "Tiger of Kai". During this era, Uesugi Kenshin and Takeda Shingen fought each other five times at Kawanaka-jima. This period began with the conflict of the Eastern and Western Armies in the Onin War. The man who brought this era to an end led the Siege of Osaka against the Toyotomis and won the battle of Sekigahara. For 10 points, what time period in Japanese history featured constant conflict between daimyōs and ended upon the establishment of the Tokugawa shogunate?

ANSWER: Sengoku period [or Warring States period; or Sengoku jidai; prompt on Ashikaga shogunate or Muromachi period] <Pari>

13. This place is depicted in the bottom left of four small circles surrounding a larger circle styled as the Eye of God in a "tabletop" at the Prado. A doorway leading to this place is lined with toads in another painting. In a depiction of this place, a figure carrying mortar scales a ladder to climb a tower under construction. In another painting, details found in this specific place include a musical fragment inscribed on bare buttocks, a giant knife protruding through ears, and a "tree-man" whose torso is formed from a broken eggshell. An enormous cart is hauled to this place in the triptych *The Haywain*. For 10 points, name this place depicted in the right panels of Bosch's *The Last Judgment* and *The Garden of Earthly Delights*, a nightmarish realm.

ANSWER: Hell <Gupta>

14. The FbaB protein from this genus was split into "SpyTag" and "SpyCatcher" subunits to produce a molecular superglue. This genus yields a negative pyrrolidonyl (pih-roh-lih-DON-uhl) arylamidase (air-uhl-AM-uh-dace) test and stimulates production of ASLO antibodies. Alexander Bolotin discovered Cas9 in the CRISPR locus of this genus' *thermophilus* species. The M protein is produced by this genus. Namesake exotoxins secreted by Lancefield Group A members of this genus cause beta-hemolysis. Along with *S. aureus*, this genus can cause toxic shock syndrome. Bacterial transformation with DNA was demonstrated by Avery, MacLeod (muh-CLOUD), and McCarty in the *pneumoniae* species of this genus. For 10 points, name this bacterial genus that can cause pharyngitis and scarlet fever with its *pyogenes* species.

ANSWER: Streptococcus [or word forms, such as streptococcal or streptococci] <Smart>

15. A character created by this author claims that there is only knowledge and no education after concluding that it is bread, and not religion nor any other ideology, that is the opium of the people. That character of his relays the results of a Notre Dame football game to Sister Cecilia. The ending of a story by this writer contrasts a person who repeats the phrase "I feel fine" with her lover, who orders another Anis del Toro and comments on people waiting reasonably for a train. He wrote about a man who tries to convince Jig to have an abortion in Spain. For 10 points, name this American author of "Hills Like White Elephants" who also used Spain as the setting for his novel about Robert Jordan, *For Whom the Bell Tolls*.

ANSWER: Ernest Hemingway <Droge>

16. Gilbert of Mons fudged the story of a death during this war to make the deceased live eight days longer and receive the sacraments. After a man died during this war, his son placed the body in vinegar, but ultimately boiled the flesh from the corpse's bones and buried the bones in Tyre, the heart in Tarsus, and the flesh in Antioch. Because Isaac II Angelos kept blocking the progress of a group in this war, the city of Philippopolis was occupied. During this war, the Battle of Iconium resulted in the fall of the Sultanate of Rum. While trying to cross the Saleph River during this event, Frederick Barbarossa died and thus was unable to meet up with two other monarchs. For 10 points, during what event did King Richard I attempt to recapture Jerusalem?

ANSWER: **Third Crusade** [or **Kings Crusade**] <Cheyne>

17. This man's papers were published by Richard Waller, who inelegantly wrote this thinker was "in person, but despicable". He accused Henry Oldenburg of spying on him and helping another man steal one of his inventions. Another thinker wrote a letter that compared building on this man's work to "standing on the shoulders of giants", possibly a jab at this thinker's short build. There is no authenticated portrait of this man and a persistent myth states that his official portrait was destroyed by the author of *Opticks*, his rival Isaac Newton. He bitterly fought Christiaan Huygens (HOY-guns) over who really invented a balance-spring watch. This author of *Micrographia* coined the term "cell". For 10 points, what British scientist names a law regarding the force needed to extend a spring?

ANSWER: Robert **Hooke** <Cheyne>

18. The fourth movement of the Reformation Symphony begins with this instrument quoting "A Mighty Fortress Is Our God". It introduces the main theme of the saltarello in the Italian Symphony, and two of them play the opening notes of the overture to *A Midsummer Night's Dream*. In a standard orchestra, these instruments sit directly to the right of the oboes. Two of them represent the title river at the start of "Die Moldau" from *Má vlast*, and one of them introduces the opening theme of *Boléro*. This instrument chromatically descends from C-sharp down to G at the start of a tone poem setting of Stéphane Mallarmé's *Prelude to the Afternoon of a Faun*. For 10 points, name this instrument whose half-size relative is the piccolo.

ANSWER: **flute** <Kim>

19. In February 2016, *Dialectica* controversially published a completely blank article by Tyron Goldschmidt which purportedly demonstrates that absences have this "power". This phenomenon, which can be visually represented using "neuron diagrams", cannot occur backwards according to the bilking argument. The problems of "fizzling" and "preemption" arise in probabilistic accounts of this phenomenon. David Lewis introduced the notion of "comparative similarity" in a paper which proposed a counterfactual account of this concept. David Hume argued that this concept can only be understood inductively via the "copy principle" as it arises from "constant conjunction". For 10 points, identify this phenomenon, the necessity of one event resulting in another.

ANSWER: **causation** [or **cause and effect**; or word forms, such as **causality**] <Kendrick>

20. In a play that begins in this city, a character's complicated proof that a servant is a sheep makes the latter note "such another proof will make me cry 'baa.'" In another scene in this city, a character uses a shoe with a hole in it to represent his mother in a long monologue where he berates his dog for not crying. That play features a resident of this city, Julia, swearing a vow of love to the employer of Launce, the idiot servant who owns a dog named Crab. That play begins in this city but features the young men Valentine and Proteus leaving it to expand their horizons. In another play set here, Prince Escalus tries to stop the Montagues and Capulets from feuding. For 10 points, what Italian city is the setting of Shakespeare's *Romeo and Juliet*, as well as a comedy about "two gentlemen" from here?

ANSWER: **Verona** <Cheyne>

21. Kit Fine holds that this field can be explained by non-causal dependencies known as "grounds". "Revisionary" and "descriptive" approaches to this field are contrasted in P. F. Strawson's book *Individuals*. This field titles a book which posits that a statue is different from a lump of bronze by virtue of its cause, illustrating its author's theory of hylomorphism. The thesis that this field "affords us knowledge of a transcendent reality" is rejected as unverifiable in the first chapter of *Language, Truth, and Logic*. The logical positivists sought to "eliminate" this field which was called "first philosophy" in a namesake book describing the "unmoved mover" written by Aristotle. For 10 points, name this branch of philosophy concerned with the fundamental nature of the world.

ANSWER: **metaphysics** <Kendrick>

1. Answer some questions about solving systems of linear equations, for 10 points each.

[10] It is often helpful to rewrite the system of equations as $Ax = b$, where x and b are vectors, and A is one of these array-like objects.

ANSWER: **matrix** [or **matrices**]

[10] This English mathematician's algorithm for solving a system of equations involves repeatedly computing determinants of matrices. Inhomogeneous differential equations are solved using variation of parameters and this "rule".

ANSWER: **Cramer's** rule

[10] Cramer's rule does not have this property, desired of numerical approximation methods, so round-off errors may become large enough that converging upon the solution is impossible or takes an inordinate amount of time. Solutions to stiff equations often lack this property.

ANSWER: numerical **stability** [or word forms] <Collins>

2. This religion uses a calendar with nineteen nineteen-day months plus four intercalary days. For 10 points each:

[10] This Abrahamic religion, founded by Bahá'u'lláh, teaches the foundational unity of human religions.

ANSWER: The **Bahá'í** Faith

[10] The Faith teaches that these prophetic figures reflect the divine image like a mirror, without being incarnations. Some examples include Moses, Jesus, Mohammad, and Bahá'u'lláh himself.

ANSWER: **Manifestations of God**

[10] The inclusion of "Dharmic" Manifestations of God, such as Krishna and Buddha, began under this last individual Bahá'í leader. He was succeeded by the Universal House of Justice.

ANSWER: Shoghi **Effendí** Rabbání <Marvin>

3. This author wrote a story after the death of a high school classmate named Neal that begins with the line "My whole life I've been a fraud". For 10 points each:

[10] Name this author whose story "Good Old Neon" appears in the collection *Oblivion*. His story about the *Jeopardy*-winning Julie appears in his first collection, *Girl with Curious Hair*.

ANSWER: David Foster **Wallace**

[10] This Wallace collection includes a second-person story about a boy's thirteenth birthday at a swimming pool, "Forever Overhead", as well as "The Depressed Person". Many of its stories consist of questions and answers.

ANSWER: ***Brief Interviews with Hideous Men***

[10] Wallace's most famous work is this novel about the Incandenza family, whose member James founds the Enfield Tennis Academy.

ANSWER: ***Infinite Jest*** <Mehr>

4. An essay with the prominent line "We return fighting" was published in this year. For 10 points each:
[10] What year was when "Red Summer" took place in the United States, which featured numerous race riots? The First Red Scare, as led by Attorney General A. Mitchell Palmer, began near the end of this year as well.

ANSWER: **1919**

[10] A major riot in Red Summer took place in this Midwestern city after a black youth was killed when a white man threw rocks at black swimmers. Future Mayor Richard Daley was probably a member of a group that helped instigate the riot.

ANSWER: **Chicago**

[10] The bloodiest riot during Red Summer took place in this state, in which at least 100, possibly as many as over 200, blacks were killed by white mobs near the town of Elaine. That riot is sometimes cited as the bloodiest racial conflict in U.S. history.

ANSWER: **Arkansas** <Cheyne>

5. This composer's *Violin Concerto No. 2* begins with the harp playing a soft chord eight times, and includes a second movement in theme-and-variations form. For 10 points each:

[10] Name this composer whose *Piano Concerto No. 3* includes a chorale-like "Adagio religioso" as its central movement. The third movement of his *Piano Concerto No. 2* begins with a loud bass drum THWACK.

ANSWER: Bela **Bartok** [or Bela Viktor Janos **Bartok**]

[10] Bartok's *String Quartet No. 4* calls for his namesake "snap" variety of this technique, in which the strings are plucked rather than bowed.

ANSWER: **pizzicato** [or **snap pizzicato**; or **Bartok pizzicato**]

[10] Bassoons open the "Game of Pairs" movement of this Bartok piece, whose paradoxical title originates from his desire to showcase each instrument of the title ensemble.

ANSWER: ***Concerto for Orchestra*** <Kim>

6. This man's familiar name is actually the stage name he took for his magician performances which he kept when going into academia. For 10 points each:

[10] What pioneer in the sociology of science noted that the rise of Protestantism has links to the rise of experimental science? He wrote a 1948 article that was titled for the concept it introduced to modern audiences, that of the self-fulfilling prophecy.

ANSWER: Robert King **Merton** [or Meyer Robert **Schkolnick**; do not accept "Robert Cox Merton"]

[10] Merton developed this theory that has been further developed by such sociologists as Robert Agnew. This theory argues that society puts pressure on people to achieve certain goals, which may cause them to turn to crime to advance such goals.

ANSWER: **strain** theory

[10] A major school of criminology emerged from the sociology department at an university in this city. Jane Addams tried to prevent deviant behavior in this city through her settlement house project at Hull House.

ANSWER: **Chicago** <Cheyne>

7. Answer some questions about the Seebeck effect. For 10 points each:

[10] Thermocouples utilize the Seebeck effect to measure this quantity. The resistance of thermistors drops as this quantity increases.

ANSWER: **temperature** [prompt on T]

[10] For a material to have be an effective Seebeck generator, it should have a high value for this quantity, usually denoted sigma. This quantity's SI unit is the siemens.

ANSWER: electrical **conductivity** [do not accept "thermal conductivity"]

[10] The Thomson effect, the Seebeck effect, and this other effect are all manifestations of the thermoelectric effect. This effect is the generation of a temperature gradient by running a current through the junction between two conductors, and can be used to create coolers with no moving parts.

ANSWER: **Peltier** (pelt-YAY) effect <MacAulay>

8. A storekeeper of this ethnicity shot and killed a black ninth grader in Los Angeles in 1991. For 10 points each:

[10] Name this Asian ethnic groups, members of which armed themselves to protect their businesses during the 1992 Los Angeles riots.

ANSWER: **Korean**-Americans

[10] Korean-American stores were boycotted in Brooklyn in 1990 and 1991 after Robert "Sonny" Carson alleged a shopkeeper assaulted a black woman. Racial tensions in Brooklyn exploded again in August 1991 during these riots, in which Jews were attacked after a rabbi's motorcade struck a black child.

ANSWER: **Crown Heights** riots

[10] Some Korean Americans were anxious about racial backlash after Seung-Hui Cho, a senior at this university, killed 32 people in a 2007 massacre.

ANSWER: **Virginia Tech** [or **Virginia Polytechnic Institute** and State University] <Cheyne>

9. In a play, Raina scornfully gives Bluntschli some of these objects when he enters her bedroom. For 10 points each:

[10] Name these objects which Captain Bluntschli keeps in his ammunition pouches rather than bullets, as he claims most experienced soldiers do. These objects inspire Bluntschli's nickname.

ANSWER: **chocolate** creams

[10] Bluntschli and Raina appear in the satirical play *Arms and the Man*, which was written by this Irish author of such plays as *Pygmalion*.

ANSWER: George Bernard **Shaw** [or Bernard **Shaw**]

[10] In another Shaw comedy, *Barbara Undershaft*, the daughter of a munitions maker, has a high rank in this institution in Britain. Barbara becomes enraged that this institution will take her father's money.

ANSWER: the **Salvation Army** <Cheyne>

10. The storm god of this culture marries his son to the daughter of a wicked dragon in order to take back his stolen eyes and heart as a dowry. For 10 points each:

[10] Name this culture whose lengthiest epic describes a scheme to overthrow the gods by impregnating the face of an enormous mountain and birthing a monstrous stone giant.

ANSWER: **Hittites** [or **Hurrians**; prompt on **Anatolians**]

[10] In its role as the axis mundi of Hinduism, this enormous mountain encompasses every heaven and hell, and is circumnavigated by the sun god Surya each day.

ANSWER: Mount **Meru**

[10] Legends from this modern-day country describe Xi Wangmu's heavenly domain of Mount Kunlun, from which Sun Wukong steals and eats an immortality-granting peach.

ANSWER: **China** [or **Zhongguo**; or **People's Republic of China**; or **Zhonghua Renmin Gongheguo**]
<Kim>

11. Answer the following about doubles and doppelgangers in cinema, for 10 points each.

[10] The waitress Diane Selwyn turns out to resemble aspiring actress Betty Elms in this director's non-linear mystery *Mulholland Drive*. Other surrealistic, disturbing films by this man include *Inland Empire* and *Blue Velvet*.

ANSWER: David **Lynch**

[10] A split screen shot of the nurse Alma and the mute actress Elisabet, suggesting the merging of their identities, concludes this Ingmar Bergman film, which opens with shots of projectors lighting up images like a crucifixion and a tarantula.

ANSWER: **Persona**

[10] A 1991 film by this director examines the parallel lives of a Polish soprano and a French music teacher, both named Veronique. This Polish director produced the *Three Colors* trilogy, comprising films titled *Red*, *White*, and *Blue*.

ANSWER: Krzysztof **Kieślowski** (k-SHISH-toff kyeh-SHLOFF-ski) <Gupta>

12. This man was challenged as party leader by John Redwood, prompting the newspaper headline "Redwood versus Deadwood". For 10 points each:

[10] Name this prime minister who faced a rebellion within his own party regarding the Treaty of Maastricht. He almost abruptly resigned after Black Wednesday, when the pound sterling was withdrawn from the European Exchange Rate Mechanism, costing his country billions.

ANSWER: Sir John **Major**

[10] Major was influential in setting up the Good Friday Agreement, which negotiated peace in this turbulent part of the United Kingdom that is not located on the island of Great Britain.

ANSWER: **Northern Ireland** [do not accept "Ireland"]

[10] In 1993, Major announced this political campaign with a three-word name that was meant to promote traditional values. Unfortunately for Major, numerous Conservative ministers over the next few years were busted in sex and corruption scandals.

ANSWER: **Back to Basics** <Cheyne>

13. Mechanisms underpinning this issue include the formation of low affinity PBPs and increased expression of efflux pumps. For 10 points each:

[10] Name this broad public health issue, exemplified by the emergence of MDR organisms such as VREs, as well as the evolution of beta-lactamase enzymes.

ANSWER: **antibiotic resistance** [or **antimicrobial resistance**; or obvious equivalents, such as organisms becoming **resistant to antibiotics**]

[10] Rifampicin and isoniazid are ineffective for the multi-drug-resistant forms of this disease, while its XDR strains also don't respond to at least one of the second-line treatments such as kanamycin. It is caused by a namesake species of *Mycobacterium* and mainly attacks the lungs.

ANSWER: **tuberculosis** [or **TB**; or **consumption**]

[10] Eleven out of eighteen affected patients died in a frightening 2011 outbreak at the NIH of a carbapenem-resistant strain of the *pneumoniae* species of this genus in the Enterobacteriaceae family. This genus is the most common cause of opportunistic pneumonia in hospital settings.

ANSWER: ***Klebsiella*** <Gupta>

14. "Screaming" Lord Sutch was one of many people who set up unauthorized radio stations at these places, which include Screaming Sands. For 10 points each:

[10] Name these defensive towers built in the North Sea during World War II. Paddy Roy Bates established the Principality of Sealand on one of them.

ANSWER: **Maunsell** forts

[10] The Principality of Sealand is located in the estuary of this British river that runs through London.

ANSWER: River **Thames**

[10] Guy Maunsell's sea forts were also built in this other river's estuary. This river, the southern limit of the Northumbrian kingdom, flows into the Irish Sea at Liverpool.

ANSWER: River **Mersey** <Golimlim>

15. A book written by a member of this family inspired a Pulitzer-winning play by Frances Goodrich and Albert Hackett. For 10 points each:

[10] Name this family, whose best known member wrote about her potential romance with Peter van Pels, her desire to be a journalist, and her relationship with her sister, Margot.

ANSWER: **Frank**

[10] Anne Frank wrote her diary while living in a concealed room in this city, where the Franks had moved after leaving Germany. The Anne Frank House, a museum, is located in this city.

ANSWER: **Amsterdam**

[10] *The Diary of Anne Frank* consists of entries almost all addressed to a person with this female name. It is unclear if it was meant to be an actual person with this name or if it was just Anne's pet name for the diary.

ANSWER: **Kitty** <Cheyne>

16. These two rulers followed the motto "Tanto monta, monta tanto". For 10 points each:

[10] Name these two rulers who united the crowns of Castile and Aragon and sponsored Christopher Columbus's 1492 expedition.

ANSWER: **Isabella** I of Castile and **Ferdinand** II of Aragon [accept in either order]

[10] Fearing the reversion of *conversos* to their previous faith, Ferdinand and Isabella passed this 1492 edict, which authorized the expulsion of Jews from Spain.

ANSWER: **Alhambra** Decree

[10] This Portuguese king's shared interest in exploration with his Spanish counterparts led him to sign the Treaty of Tordesillas.

ANSWER: **John II** [or **João II**; prompt on **John** or **João**] <Golimlim>

17. During this event, three men profess their hope that they will die on the same day, in the same month, and in the same year. For 10 points each:

[10] Name this fictional event from a novel in which Liu Bei, Guan Yu, and Zhang Fei promise to band together and protect the Han Empire from Yellow Turban rebels? It is named for the tranquil location where the vow takes place.

ANSWER: **Oath of the Peach Garden**

[10] The Oath of the Peach Garden is an event from a classical Chinese novel titled for the "romance" of how many Chinese kingdoms?

ANSWER: **three**

[10] This real-life battle is heavily fictionalized in the novel, which features such incidents as Zhuge Liang pretending to use magic to control the eastern wind in order to protect the fire ships and a later sequence in which Guan Yu spares this battle's loser, Cao Cao.

ANSWER: Battle of **Red Cliffs** [or Battle of **Chibi**] <Cheyne>

18. A man with a nosebleed holds a handkerchief at the left of this painting, whose center includes a tense stare-off between a cat under a table and a dog. For 10 points each:

[10] Name this painting, effectively trisected by two giant columns separating three archways. It controversially depicted Moors and Germans frolicking amidst a Biblical scene.

ANSWER: *The **Feast in the House of Levi***

[10] This Venetian artist of *The Wedding at Cana* faced an interrogation by the Inquisition over the non-religious details he included in his painting eventually titled *The Feast in the House of Levi*.

ANSWER: Paolo **Veronese** [or Paolo **Cagliari**; or Paolo **Caliari**]

[10] Despite its title, *The Feast in the House of Levi* actually depicts this other scene in the center, as Veronese had originally intended. Veronese's contemporary Tintoretto painted this dinner scene oriented around a diagonal table.

ANSWER: the **Last Supper** <Golimlim>

19. The phrase "teaching without verbosity" is an example of this principle. For 10 points each:

[10] Usually translated as "non-action", what phrase, as explained in texts written by Lao Tzu, is the idea of engaging in effortless, completely natural actions or movements?

ANSWER: **wu wei** [or **wei wu wei**]

[10] Wu wei is an important concept within this Chinese religion, whose important authors include Lao Tzu and Zhuangzi.

ANSWER: **Taoism** [or **Daoism**]

[10] Various Asian religions frequently burn sheets of bamboo paper known by this name to ensure good blessings for the deceased in the afterlife. The most famous type resembles bank notes.

ANSWER: **joss** paper [or **ghost money**; or **hell money**] <Cheyne>

20. This effect involves a change in reaction rate when one atom of a reactant, typically a hydrogen, is replaced with a heavier isotope, typically deuterium or tritium. For 10 points each:

[10] Name this effect that can be quantified as the ratio between the rate of a reaction using the light isotope to that of the reaction using the heavy isotope.

ANSWER: **kinetic isotope effect** [or **KIE**; prompt on isotope effect]

[10] Primary kinetic isotope effects occur because the value of this quantity for carbon-deuterium bonds is larger than for carbon-hydrogen bonds. It is the energy released when a bond is homolyzed.

ANSWER: **bond-dissociation energy** or **bond-dissociation enthalpy**

[10] Homolytic cleavage produces these highly reactive intermediates, which have unpaired electrons.

ANSWER: free **radicals** <Nagari>

21. A drug in this novel makes people unable to distinguish words from things, so simply saying "speeding bullet" would cause a character using the drug to duck for cover. For 10 points each:

[10] Name in this novel in which Babette takes the aforementioned drug, Dylar, to try to overcome her fear of death. The fear is intensified by the "airborne toxic event" that occurs in the second part of this novel.

ANSWER: ***White Noise***

[10] *White Noise* is a novel by this postmodern American author, who also wrote about Lee Harvey Oswald in *Libra* and waste management executive Nick Shay in *Underworld*.

ANSWER: Don **DeLillo**

[10] In the final chapter of *White Noise*, Wilder Gladney improbably crosses a highway using this method of transportation.

ANSWER: a **tricycle** [or **trike**; do not accept "bicycle"] <Cheyne>