

Minnesota Undergraduate Tournament 2013

Questions by Rob Carson, Mike Cheyne, Andrew Hart, Gaurav Kandlikar, Matt Menard, and Bernadette Spencer

Round 1: Many Strong Men Await You

Tossups

1. **The central figure of one fresco in this city is standing on a rainbow arch, flanked by Victory and Liberty; that fresco was made by Constantino Brumidi. This city was the original site of a sculpture showing a giant emerging out of the earth titled *The Awakening*, which was made by Seward Johnson. It is not Vancouver, but one copy of the *Spirit of Haida Gwaii* is located at an (*) embassy this city. The first architect of a domed building in this city was William Thornton, and one statue in this city shows its subject with one hand in a fist and the other open and was carved by the Piccirilli Brothers. This city was designed by Charles L'Enfant. For 10 points, name this city, which is the site of both the world's tallest obelisk and a Daniel Chester French statue in the Lincoln Memorial.**

ANSWER: Washington, D.C. [or D.C.]

2. **One character in this novel sees himself being licked by a Saint Bernard in the movie *Cashiered*. In one scene in this novel, the protagonist visits Mr. Thoth to investigate the story behind a bronze memorial to 12 massacred Wells Fargo men at Fangoso Lagoons. One character in this novel claims to have made a face horrifying enough to drive a man insane while working at Buchenwald; that man is Dr. Hilarius. This novel's protagonist is directed to Zapf's Used Books by Randolph Driblette after the lawyer (*) Metzger takes her to a production of Richard Wharfinger's *The Courier's Tragedy*. Its plot is set into motion by the death of Pierce Inverarity, and its protagonist investigates a long-running conflict between the mail delivery companies Thurn und Taxis and Trystero. For 10 points, identify this 1966 novel which stars Oedipa Maas and was written by Thomas Pynchon.**

ANSWER: *The Crying of Lot 49*

3. **One government in this country killed ABC journalist Bill Stewart, which inspired outrage in the United States. In order to support the government of Adolfo Diaz in this country, Smedley Butler led the U.S. Marines in fighting insurgents. A newspaper here, *La Prensa*, was destroyed in a 1972 earthquake in its capital, although many relief funds were misappropriated by the right-wing government. In 1856, the "filibuster" and adventurer (*) William Walker became president of this country. One dissident in this country was Pedro Chamorro, whose wife, Violeta, would go on to be president. Another president was Daniel Ortega, an opponent of its long-time dictators, the Somoza family. For 10 points, name this Central American country, the site of fighting between the Sandinistas and the Contras.**

ANSWER: Nicaragua

4. **One form of this process is characterized by a non-linear dependence of particle MSD on time and is the subject of CTRW models. In plasmas, electrons move perpendicularly to magnetic field lines in a form of this property named for Bohm. The rate of this process in a gas is proportional to the square root of the density of the gas. The flux due to this process is related to the negative (*) chemical potential. When protein channels allow for this process to occur, its "facilitated" form results, which is type of passive transport. Fick's laws describe this process, and when water is subjected to this process, it is called osmosis. For 10 points, name this process by which molecules flow from areas of higher concentration to areas of lower concentration.**

ANSWER: diffusion [anti-prompt on "osmosis"]

5. This man refuted Walter Lippmann's view that journalists should transmit information from the elite to common people in a book that defines "the public" as a group of citizens indirectly bonded by the effects of events. This author of *The Public and its Problems* praised Keats' regard for imitation in a work that claims aesthetic creation and encounters are as important as works of (*) art themselves. In another book, this man argued that neither Plato's segmented system nor Rousseau's individualistic models of learning were sufficient since they did not promote cooperation or communication between citizens necessary for the free society of the title form of government. For 10 points, name this author of *Art as Experience*, an American pragmatist who wrote *Democracy and Education*.

ANSWER: John Dewey

6. This thinker claimed that his discipline should concern itself with the "interpretive understanding of social action" in a work in which he asserted that his thought was based on hypothetical "ideal types." This author, who was first translated into English by his disciple Takott Parsons, claimed that bureaucracy could trap humankind in an (*) "iron cage of rationality." This author defined the state as the entity that claims a monopoly on the legitimate use of force in his *Politics as a Vocation*. In another work, he argued that the work habits of Calvinists helped give rise to modern economics. For 10 points, name this author of *The Protestant Ethic and the Spirit of Capitalism*.

ANSWER: Max Weber [or Maximilian Karl Emil Weber]

7. This author criticized the pedantic vocabulary and ballad-like meter used in F.W. Newman's version of the *Iliad* in his *On Translating Homer*. The title character of one of his poems asserts that it's "better to be a serf" than to "be a crown'd king here, and rule the dead" during a visit from Hermod. Another poem by this author of "Balder Dead" tells of a "sweet city with her dreaming spires" which "needs not June for beauty's heightening" and laments "The bloom is gone, and with the bloom go I!" He urged "Ah, love, (*) let us be true to one another!" in a poem that describes the "eternal note of sadness" which Sophocles heard on the Aegean. This author of a monody for Arthur Hugh Clough described a "darkling plain" where "ignorant armies clash by night" in that poem, which opens "The sea is calm tonight". For 10 points, name this English poet of "Thyrsis" and "Dover Beach".

ANSWER: Matthew "marnold" Arnold

8. These molecules' turnover is facilitated at P-bodies, and the U2 enzyme recognizes "branch point" sites on these structures. The enzyme that synthesizes these compounds is more sensitive to alpha-amantin than related enzymes and has a C-terminal domain that recruits enzymes that process these molecules. The activity of these molecules is modulated by a pathway involving the (*) Dicer and Argonaute complexes. Lariat structures are formed during the processing of these molecules. A seven-methyl guanine residue is attached to one end of these structures, whereas a poly-A tail is added to their 3-prime ends. Ribosomes recognize triplet codons on these molecules, which are translated into peptides. For 10 points, name these molecules that carry genetic information from the DNA to the ribosomes.

ANSWER: messenger RNA [or mRNA; prompt on RNA; accept pre-mRNA]

9. In a Delaroche painting, this man calmly holds a book as soldiers blow pipe smoke into his face and insult him. The supposed writer of the spiritual autobiography *Eikon Basilike*, this ruler's advisers supported strict policies that were known as "Thorough." Such advisers included a man assassinated during this man's reign by John Felton. That adviser was the Duke of Buckingham. He appointed the unpopular Archbishop of Canterbury, (*) William Laud. This ruler was depicted "at the hunt" by his court painter, Anthony van Dyck. In the 1640's, his cavalry was led by Prince Rupert of the Rhine, a noted Cavalier. This ruler was put on trial by the Rump Parliament. For 10 points, name this king who was executed after losing the English Civil War to Oliver Cromwell's forces.

ANSWER: Charles I

10. One source claims that this deity was wounded while defending the Pylians. This deity's servant Ascalaphus was transformed into a screech-owl, while Heracles crushed the ribs of another of his servants, the herdsman Menoetes. One of his lovers, Leuce, was transformed into a white poplar, while another of his lovers was trampled by another goddess, who turned her into a mint plant. Eubuleus and Eumolpus witnessed an event involving this god at the (*) plains of Nysa. He gave his invisibility-granting helmet to Perseus, while his keys were guarded by Aeacus, who lived in this god's domain. His orchards produced the pomegranates that he used to secure several months' time with the wife he abducted, Persephone. For 10 points, name this oldest male child of Cronus and Rhea, the Greek god of the underworld.
ANSWER: Hades [or Pluto; or Plouton; or Aides; or Aidoneus; do not accept "Dis Pater" or "Orcus"]

11. In response to this event, Karl Goetz designed a medal showing a skeleton selling tickets with the caption "Business Above All." It killed the author of the essay *A Message to Garcia*, Elbert Hubbard. This event was partially blamed on William Thomas Turner's failure to maintain a zig-zag course near the Old Head of Kinsale in Ireland. Robert Lansing took over as Secretary of State after (*) William Jennings Bryan judged Woodrow Wilson's response to this event to be too provocative. Afterwards, an employee of the Cunard Line admitted that a certain vehicle was carrying 4,200 cases of cartridges but denied it was shipping munitions. For 10 points, name this May 7, 1915 event in which a German U-boat torpedoed a British ocean liner during World War I.
ANSWER: sinking of RMS Lusitania

12. The functional of which a system's evolution is a stationary point is equal to this operation applied to the difference between kinetic and potential energies. The voltage across a capacitor is given the inverse of its capacitance times this operation applied to the current across it, since charge can be calculated by applying this operation to current. Applying this operation to the Lagrangian gives the (*) action, while applying it to power gives energy and applying it to force gives impulse. For 10 points, name this operation which can be applied to acceleration to get velocity and to velocity to get displacement, an operation which corresponds to finding the area under a curve of functions of a certain quantity.
ANSWER: time integral [prompt on partial answers]

13. One character in this story notes that for the modern man, "actual travel is superfluous", because technology has "inverted the story of Mohammed and the mountain". It opens on a "burning February morning" in the Constitution Plaza, where its narrator is pained by the sight of ads for American cigarettes. Its epilogue laments the poor reception given to its narrator's book *The Sharper's Cards* and compares the title entity to a list of items, including the sevenfold cup of Kai Khosrau and a (*) speaking pillar in the Amr mosque in Cairo. At the beginning of this story, the narrator is mourning the death of Beatriz Viterbo, after which he meets her cousin, the mediocre poet Carlos Argentino Daneri, whose basement contains the title object. For 10 points, name this Jorge Luis Borges story titled for a fictional point in space that contains the entire universe.
ANSWER: "The Aleph" [or "El Aleph"]

14. This type of piece was the subject of a 1753 treatise on playing techniques by Friedrich Christian Marpurg. Fourteen of these pieces, all but the final of which use the same 13-note D-minor subject, are found in an eighteenth-century work that also includes four canons. The final piece of this type in that work tails off after introducing a four-note theme representing the composer's own name. Examples of this type of piece by a certain Baroque composer are usually preceded by a prelude or a (*) toccata, including a spooky one in D minor. For 10 points, J.S. Bach wrote a composition titled for the "art" of what type of contrapuntal compositions for multiple voices?
ANSWER: fugues

15. This ruler entertained explorer Richard Chancellor, setting up relations with England. A film about him switches from black and white to color in the last ten minutes, during which this man dresses his cousin up as a ruler to avoid assassination. He ordered the death of the Metropolitan Philip II, who had refused to bless him. According to legend, this ruler blinded the architect who designed a (*) cathedral to commemorate the seizing of Kazan. Thousands were killed when he ordered the massacre of Novgorod to be carried out by his police force, the oprichniki. This man was succeeded by his mentally unstable son Feodor I after having himself killed his heir Ivan Ivanovich. For 10 points, name this first ruler crowned as tsar of Russia, whose nickname may refer to his acts of cruelty.

ANSWER: Ivan the Terrible [or Ivan IV Vasilyevich]

16. In one of this band's songs, the singer repeatedly claims to be "a rough and tough" and instructs the listener to "get in line and" perform the title action. The chorus of another of their songs begins with the lines "Sorry I'm not home right now, I'm walking into" the title objects. This band's most recent album, *Push and Shove*, contains "Settle Down", while an earlier diamond-certified album contains (*) "Spiderwebs". Another of their songs from that album begins "Take this pink ribbon off my eyes" and repeats the line "oh...I've had it up to here!" with the title dismissive phrase. In their most successful song, the title phrase is followed by lines like "don't tell me 'cause it hurts". For 10 points, name this band whose 1995 album *Tragic Kingdom* contains "Just a Girl" and "Don't Speak", a group fronted by Gwen Stefani.

ANSWER: No Doubt

17. This province's capital was the site of a 1912 "cyclone," the deadliest tornado in Canadian history. The western red lily adorns the flag of this province, whose city of Preeceville is near the source of a river that flows east to another province's capital. This province, the source of the Assiniboine River, contains the eastern portion and majority of Lake (*) Athabasca. Sitting Bull settled his people in this province's Wood Mountain area following the Battle of Little Bighorn. This province, which is a quadrilateral, contains the cities of Prince Albert and Moose Jaw. For 10 points, name this Canadian prairie province whose capital is Regina and whose largest city is Saskatoon.

ANSWER: Saskatchewan

18. This man's only painting on display in Germany features the Virgin Mary holding the title shadowy red flower. Another of his paintings depicts the infant Christ staring at a niddy-noddy. This artist of the *Madonna of the Carnation* and the *Madonna of the Yarnwinder* depicted a feminine Uriel sitting next to an infant John the Baptist in front of some craggy cliffs in one painting and showed Cecilia Gallerani caressing a white-furred (*) stoat in another. In yet another of his paintings, a certain apostle knocks over a saltshaker with his elbow while clutching a possibly-silver-filled bag and looking shocked at Jesus's revelation of his betrayal. This painter of *Lady with an Ermine* and *Virgin of the Rocks* was known for his use of *sfumato*. For 10 points, name this Italian polymath who painted the *Last Supper* and the *Mona Lisa*.

ANSWER: Leonardo di ser Piero da Vinci [accept either underlined portion]

19. The existence of one of these entities corresponding to a function from R^n to R^n is guaranteed in some neighborhood if the Jacobian is nonsingular, according to a theorem often contrasted with the implicit function theorem. A generalization of one of them named for Moore and Penrose is an example of a "pseudo" one. The existence of these entities is only guaranteed for one of the operations in a ring, but for both operations in a field. If a function is injective, it has a corresponding one of these functions. A square matrix has one of these if and only if it has a nonzero (*) determinant, and matrices without one of these objects are called singular. Multiplying a matrix by one of these gives the identity matrix. For 10 points, give this term whose multiplicative kind is the reciprocal and whose additive kind for a number x is negative x .

ANSWER: inverse [accept inverse function or pseudoinverse or inverse element or inverse matrix]

20. Jean-Paul Sartre claimed that this man was unloved as a child in his biography of this man, *The Family Idiot*, while Walter Pater dubbed him the “martyr of style”. He used Polybius’s *Histories* as the basis for a historical novel set during the Mercenary Wars that stars the daughter of Hamilcar Barca. The journalist Dussardier is killed by Senecal near the end of another of his novels, whose protagonist fights a duel with Cisy over his lover Rosanette and carries on a long platonic affair with the wife of Madame (*) Arnoux. The manipulative merchant Lhereux appears in his most famous novel, which sees Leon Dupuis and Rodolphe Boulanger carry on affairs with the title doctor’s wife. For 10 points, identify this author of *Salamambo* and *Sentimental Education*, a French realist who wrote *Madame Bovary*.

ANSWER: Gustave Flaubert

21. One character in this work gets a letter from her son relating the finding of ten white piglets. Another character in this novel improvises a story about a spirit who appears only during moonlit midnights on August 28th. It opens with a parrot repeating a phrase meaning “go away, go away, for God’s sake!” After an argument sparked by a tray full of visiting cards, this novel’s protagonist smashes a glass vase and stomps ineffectually on her (*) wedding ring. Its protagonist visits Dr. Mandelet and strikes up a friendship with Mademoiselle Reisz. Léonce’s trip to New York allows its protagonist to strike up a brief affair with Alcee Arobin and continue obsessing over Robert Lebrun. It ends with the protagonist drowning herself in the Gulf of Mexico. For 10 points, identify this 1899 novel about Edna Pontellier, the most famous work of Kate Chopin.

ANSWER: *The Awakening*

Bonuses

1. This uprising resulted in the deaths of about 2,500 soldiers during the Massacre of the Ninth Legion. For 10 points each:

[10] Name this revolt which ended at the bloody battle of Watling Street. It has no formal name, simply being named after its prime instigator, a leader of the Iceni tribe.

ANSWER: **Boudicca's Revolt** [accept obvious synonyms for revolt, accept **Boadicea** or **Buddug**]

[10] Boudica's initial success alarmed this Roman emperor, who contemplated pulling out of Britain. This man would also have to deal with the Great Fire of Rome, which he blamed on Christians, even though legend claims he fiddled during it.

ANSWER: **Nero** Claudius Caesar Augustus Germanicus

[10] The general who defeated Boudica shared his name with this Roman historian, who wrote *The Twelve Caesars*, a group biography of the first leaders of the Roman Empire.

ANSWER: Gaius **Suetonius** Tranquillus

2. Name the following things about the "November Revolution" in physics, which followed the discovery of a subatomic particle now given a two letter name. For 10 points each:

[10] The name "November Revolution" began when two separate teams, led by Richter and Ting, simultaneously announced their discoveries of this meson, the first excited state of charmonium.

ANSWER: **J/psi** particle (both required)

[10] The J/Psi particle is a meson because it consists of a bound state of the charm flavor of this type of particle and the anticharm. Other examples of these particles include the up and down ones.

ANSWER: **quarks**

[10] While the team led by Richter discovered the J/Psi particle at the Stanford Linear Accelerator Center, Samuel Ting's team was working at this laboratory on Long Island which is home to the RHIC.

ANSWER: **Brookhaven** National Laboratory [or **BNL**]

3. In the introduction to this work, its author describes selling his cottage and hanging in it a poem reading "Even a thatched hut may change with a new owner into a doll's house". For 10 points each:

[10] Identify this work in the *haibun* genre, which through a combination of prose and poetry chronicles its author's travels to all of the sites mentioned in the poetry of Saigyō Hoshi.

ANSWER: ***Narrow Road to the Deep North*** [or ***Narrow Road to the Interior***; or ***Oku no Hosomichi***]

[10] *Narrow Road to the Deep North* was written by this Edo-period poet who is now widely recognized as the greatest master of the haiku form.

ANSWER: **Matsuo Bashō** [accept either underlined portion; accept **Matsuo** Chuemon Munefusa; accept **Matsuo** Kinsaku; accept any of these names with the constituent parts reversed]

[10] Stylistically, *Narrow Road to the Deep North's* influences include the works of this Chinese poet, who Bashō greatly admired. This man wrote a number of poems to his fellow Tang Dynasty literary light, Li Po.

ANSWER: **Du** Fu [or **Du** Zimei; or **Du** Shaoling; or **Du** Gongbu; accept **Tu** instead of "Du" in all names]

4. This pope attempted to mend the relations with Jews in *Nostra Aetate* and officially declared Mary the Mother of the Catholic Church. For 10 points each:

[10] Name this pope who oversaw the completion of Vatican II after his predecessor, John XXIII, died.

ANSWER: Pope **Paul VI** [or **Paulus VI**; or **Paulos VI**; or Giovanni Battista Enrico Antonio Maria **Montini**; prompt on **Paul**]

[10] Paul VI rejected the findings of a commission that reviewed the prohibition of this practice among Catholics. Catholics are currently forbidden from using such methods as condoms or birth control pills to engage in this practice.

ANSWER: **contraception** [accept word forms like **contraceptives**; prompt on things like "family planning"]

[10] Paul's thoughts on contraception were published in this encyclical that argued that married love must be modeled on God's love for humanity. It has been further supported with *Evangelium Vitae* by John Paul II and a letter by Benedict XVI.

ANSWER: ***Humanae Vitae*** [or *Of Human Life*; or *On Human Life*]

5. As Wikipedia reminds us, “soups have been made since ancient times”. Show that you’ve been paying attention by naming these examples, for 10 points each.

[10] Less prevalent variations on this American seafood soup include the “Delaware” version, which uses fried salt pork, and the “Minorcan” version, which uses datil peppers. You’re probably more familiar with its broth-based “Manhattan” or its creamy “New England” versions.

ANSWER: **clam chowder** [prompt on partial answer; accept any of the versions given in the prompt]

[10] Both Anthony Bourdain and Rob Carson are prone to wax rhapsodic about this Vietnamese noodle soup, which usually features various cuts of beef and is garnished with lime, bean sprouts, and Thai basil.

ANSWER: **pho** [accept **pho** bac or **pho** saigon or **pho** dac biet]

[10] This versatile Greek dish can be prepared both as a soup and as a sauce, in which role it is used to thicken magiritsa. As its name suggests, its two primary ingredients are beaten eggs and lemon juice.

ANSWER: **avgolemono** [or **tarbiya**]

6. This treaty made a man named Jerome the king of Westphalia. For 10 points each:

[10] Name this 1807 treaty signed after Levin Bennigsen’s Russian forces were decisively defeated by the French in Prussia. It was signed by two rulers on a raft in the middle of the Neman River.

ANSWER: (First) Treaty of **Tilsit**

[10] Another decisive battle involving Napoleon was this 1813 battle in which Napoleon’s men lost to a coalition of Russians, Prussians, Austrians, and Swedes. It was called the “battle of the Nations” and was the largest in Europe prior to World War I.

ANSWER: Battle of **Leipzig**

[10] Napoleon was never quite able to get his smile back, with his brilliant Hundred Days of 1815 culminating in this June 18 defeat at present-day Belgium at the hands of the Duke of Wellington. This was Napoleon’s final defeat and he was exiled to St. Helena afterwards.

ANSWER: Battle of **Waterloo**

7. An early step in this process requires describing fluxes to and from the environment, and when these analyses are conducted on transport vehicles, they are called “wheel to wheel” analyses. For 10 points each:

[10] Name this type of analysis, alternatively called cradle to grave analysis, which describes the actual and potential impact of its subject’s creation and use.

ANSWER: **life cycle** analysis [prompt on **LCA**]

[10] Wheel to Wheel analyses are central to the GREET model developed by the Argonne National Labs, which are housed near this Midwestern city. Fermilab is located near this city, which also houses a notable Field Museum.

ANSWER: **Chicago**, Illinois

[10] One fuel that has been the subject of many wheel to wheel analyses is this product generated from corn stover. This biofuel’s generation from cellulose is the goal of a lot second generation biofuel research.

ANSWER: **ethanol** fuel

8. André Kostelanetz commissioned this work, which was initially to profile Walt Whitman. For 10 points each:

[10] Name this composition that includes quotes of Stephen Foster’s “Camptown Races” and a narrator reading excerpts from the Gettysburg Address.

ANSWER: A **Lincoln Portrait**

[10] This American composer of the ballets *Rodéo*, *Billy the Kid*, and *Appalachian Spring* wrote *A Lincoln Portrait*.

ANSWER: Aaron **Copland**

[10] Cincinnati Symphony Orchestra conductor Eugene Goossens commissioned this 1942 Copland work for brass and percussion. Partly inspired by a Henry Wallace speech, it was later reused in Copland’s *Third Symphony*.

ANSWER: **Fanfare for the Common Man**

9. This deity's affair with the wife of a sage caused the sage to curse him, covering his body with vaginas. He then apologized, and the sage relented, turning the vaginas into eyes. For 10 points each:

[10] Identify this deity, the leader of the Devas. His most famous accomplishment resulted in the freeing of the rivers and saw him destroy ninety-nine fortresses while riding his mount, the white elephant Airavata.

ANSWER: **Indra** [or **Sakra**; or **Phra In**; or **Intiran**; or **Dishitian**; or **Taishakuten**]

[10] Indra defeated noted jerk Vritra by using the Vajra, one of these weapons. Perhaps the most famous mythological example of these weapons was made by the Cyclopes and used by Zeus to smite people.

ANSWER: **thunderbolt** [accept **lightning**, I suppose]

[10] Indra's other accomplishments include smashing open the cave Vala to free the dawn deity Ushas and these animals. Other examples of these animals include Nandini, an avatar of a deity named Kamadhenu or Surabhi.

ANSWER: **cows** [or **bovines**]

10. This novel's author coined the term "erotolepsy" to refer to process in which a passionate longing is induced in its title character that forces him to marry Arabella Donn. For 10 points each:

[10] Identify this 1895 novel, whose protagonist eventually moves to Christminster and shacks up with his cousin, Sue Bridehead. In its most memorable scene, their son Little Father Time kills their other children and hangs himself.

ANSWER: **Jude the Obscure**

[10] *Jude the Obscure* was written by this British author, who set much of it in his fictional county of Wessex. His other novels include *The Mayor of Casterbridge* and *Tess of the d'Urbervilles*.

ANSWER: Thomas **Hardy**

[10] Hardy's first Wessex novel was this one, in which Vicar Maybold attempts to modernize the parish of Mellstock, while a love triangle forms between Frederic Shiner, Dick Dewy, and Fancy Day.

ANSWER: **Under the Greenwood Tree**

11. Let's go to a minstrel show. For 10 points each:

[10] A popular minstrel song about a character with this name "jumping" inspired the name of certain laws passed to enforce racial segregation. Laws with this name included some establishing separate drinking fountains for blacks.

ANSWER: **Jim Crow**

[10] This man was a frequent composer for minstrel shows, writing such now-standards as "My Old Kentucky Home" and "Camptown Races," as well as songs less performed today, such as "Old Black Joe."

ANSWER: Stephen Collins **Foster**

[10] This Foster song is controversially the state song of Florida and its lyrics reference the Suwannee River, which the song incorrectly calls the "Swanee." Charlie Crist abandoned its use at state inauguration ceremonies in 2007.

ANSWER: **"Old Folks at Home"**

12. Name some things about the human vertebral column, for 10 points each:

[10] Normal vertebral columns contain 33 total vertebrae, which are divided into four regions. The upper and lower portions are the cervical and sacral zones; name either two of the other groups.

ANSWER: **thoracic** or **lumbar**

[10] In anatomy, this term refers to holes through which other structures pass, such as the one in the body of all vertebrae. The medulla oblongata passes through the "magnum" one of these of the occipital bone.

ANSWER: **foramen** [or **foramina**]

[10] This condition arises when an individual's spine is curved into an "S" shape. It is contrasted with kyphosis and lordosis.

ANSWER: **scoliosis**

13. Works by this man in his characteristic style include a riot of angles in red, white, blue, and green called *Abstract Speed + Sound* and the twisting, angular bronze sculpture *Boccioni's Fist*. For 10 points each:

[10] Identify this artist who depicted a jangling chain, six rapidly-moving feet, and a wagging tail in his 1912 painting *Dynamism of a Dog on a Leash*.

ANSWER: Giacomo **Balla**

[10] Balla, like his student Umberto Boccioni, was a prominent member of this technology-obsessed artistic movement. Its manifesto, written by F.T. Marinetti, declared that a racing car was more beautiful than the Nike of Samothrace.

ANSWER: **Futurism** [accept word forms]

[10] This Italian Futurist painted the red-and-black-dominated *Funeral of the Anarchist Galli* and, later in his career, co-founded metaphysical painting with Giorgio di Chirico.

ANSWER: Carlo **Carra**

14. This character and her accomplice Mercy Lewis flee on a ship after stealing 31 pounds from Reverend Parris. For 10 points each:

[10] Identify this character, a 17-year-old girl who leads heretical rituals with the slave Tituba. Her brief affair with John Proctor leads her to later accuse Elizabeth Proctor of witchcraft.

ANSWER: **Abigail Williams** [accept either underlined portion]

[10] Abigail Williams is one of the major antagonists of this Arthur Miller play, which depicts the Salem Witch Trials as an allegory for McCarthyism.

ANSWER: *The* **Crucible**

[10] Before being crushed to death for refusing to enter a plea, Giles Corey accuses this fellow Salemite of engineering the witchcraft accusations as part of a scheme to acquire more land.

ANSWER: **Thomas Putnam** [accept either underlined portion]

15. Name some things related to the state of nature, for 10 points each.

[10] This English philosopher claimed that life in the state of nature was "solitary... nasty, brutish, and short" in his book *Leviathan*.

ANSWER: Thomas **Hobbes**

[10] Hobbes argued that the civil societies were necessary since the state of nature resulted in this negative state of total conflict.

ANSWER: **war of all against all** [or **bellum omnium contra omnes**; accept anything that indicated everyone is fighting against everyone]

[10] Hobbes outlines the twelve rights of the sovereign in *Leviathan's* second book, which is named for this type of government. Hobbes argues that this government arises when men covenant with each other to give power to a sovereign and can be a democracy, a monarchy, or an aristocracy.

ANSWER: a **commonwealth**

16. Name these people who have written about human ability to understand probability, for 10 points each.

[10] This man, who accurately predicted 2012 election outcomes on his *FiveThirtyEight* blog, wrote about "why so many predictions fail, but some don't" in his 2012 book *The Signal and the Noise*.

ANSWER: Nate **Silver** [or Nathaniel Read **Silver**]

[10] This economist penned a 1921 *Treatise on Probability* that claimed that numerical probability was just one kind, which exists alongside "irreducible uncertainty." He also wrote *The Economic Consequences of the Peace*.

ANSWER: John Maynard **Keynes**

[10] This Lebanese-American epistemologist discussed the problem of predicting outlier events and the ways in which humans rationalize them in his 2007 book *The Black Swan*.

ANSWER: Nassim Nicholas **Taleb** [accept "Nessim" or "Nissim" for Nassim]

17. The rate of reactions can be greatly impacted if different versions of these types of atoms are in key to the rate-limiting step. For 10 points each:

[10] Give this term which describes atoms of the same element that have different number of neutrons, such as deuterium and tritium.

ANSWER: **isotopes**

[10] While the term “isotope” was coined by Frederick Soddy, it was determined that non-radioactive elements could also have isotopes by this British physicist, who invented the mass spectrometer and discovered the electron.

ANSWER: J.J. **Thomson** [or Joseph John **Thomson**]

[10] Because the 79 and 81 isotopes of this element are found at approximately equal levels in nature, mass spec readouts of compounds with this element have equally tall M and M+2 peaks.

ANSWER: **bromine** [or **Br**]

18. Claudia Chauchat briefly departs this novel’s central location, eventually returning with the plantation owner Mynheer Peeperkorn, who later commits suicide with a poisoned snake-like contraption. For 10 points each:

[10] Identify this novel in which Lodovico Settembrini and Leo Naphta also serve as mentors to Hans Castorp, whose visit to his cousin Ziemssen turns into a seven-year stay in a sanatorium in Davos.

ANSWER: *The **Magic Mountain*** [or *Der **Zauberberg***]

[10] *The Magic Mountain* was written by this German proponent of “exile-literature”, who explored the origins of Judaism in his epic tetralogy *Joseph and His Brothers* and also wrote *Death in Venice*.

ANSWER: Thomas **Mann** [or Paul Thomas **Mann**]

[10] A conversation with Adele Schopenhauer takes up the fifth chapter of this 1939 Mann novel, in which the title character confronts Goethe about her fictionalized appearance in *The Sorrows of Young Werther*.

ANSWER: ***Lotte in Weimar: The Beloved Returns*** [accept either underlined portion]

19. The second act of this opera is set in the Farnese Palace, where the title character betrays Angelotti’s hiding place. For 10 points each:

[10] Name this opera in whose first act the title character nags her lover Mario about the woman in his painting of Mary Magdalene. It ends with what is supposed to be a fake execution but turns out to be a real one.

ANSWER: **Tosca**

[10] *Tosca* was composed by this Italian, who also composed *La Bohème* and *Madame Butterfly*.

ANSWER: Giacomo **Puccini**

[10] In this Puccini opera, Minnie runs the Polka saloon, where she is visited by Dick Johnson from San Francisco, who is actually the bandit Ramirez in disguise. At its end, Minnie wins a game of cards against Jack Rance.

ANSWER: ***Girl of the Golden West*** [or *La **fanciulla del West***]

20. Using the name “Nguyen the Patriot,” this man petitioned for the rights of his people at the Versailles peace talks without success. For 10 points each:

[10] Give the more familiar name of this man, born Nguyen Sinh Cung, who established the Communist-led Democratic Republic of Vietnam in 1945. The capital of united Vietnam, the former Saigon, is named after him.

ANSWER: **Ho** Chi Minh

[10] Ho Chi Minh’s Viet Minh forces achieved independence for Vietnam after defeating the French at this disastrous 1954 battle. After their defeat here, the French pulled out of Indochina in the Geneva Accords.

ANSWER: Battle of **Dien Bien Phu**

[10] This final emperor of the Nguyen dynasty ruled Vietnam during Japanese occupation and later returned to become the “head of state” of what would become South Vietnam. He was removed from power in a presumably fraudulent 1955 election won by his prime minister, Ngo Dinh Diem.

ANSWER: **Bao Dai** [accept Nguyen Phuc Vinh **Thuy**]

21. This man's death is the focus of the presumably classic Sharon Stone movie *Year of the Gun*. For 10 points each:

[10] Name this Christian Democrat politician who was abducted by the Marxist group the Red Brigades in 1978 and killed 55 days later.

ANSWER: Aldo **Moro**

[10] Moro was previously the Prime Minister of this country. Another man to lead this country was popular jerkass Silvio Berlusconi.

ANSWER: **Italy** [or the **Italian Republic**]

[10] This Italian Marxist philosopher was arrested in 1979 for involvement with the Red Brigades and the death of Moro. While exonerated in the Moro case, he fled to France to avoid prosecution on other charges. His best known collaboration, *Empire*, dealt with the decline of the nation-state.

ANSWER: Antonio **Negri**