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Tossups

1. One minus this quantity appears in the numerator of Stoney's formula, which governs the deflection of MEMS cantilevers. This quantity is equal to quantity E over 2G all minus one, and like E and G, it can be measured using the impulse excitation technique. Materials like Gore-Tex, paper, and graphene have negative values for this quantity and are called auxetic. This parameter governs an effect in which compression along one (*) axis causes stretching along the other two axes. For a stable, isotropic, linearly elastic material, this value varies between negative one and positive one-half, because the bulk, shear, and Young's modulus all have to be positive. For 10 points, name this material quantity equal to the negative transverse strain over the axial strain.

ANSWER: Poisson's ratio

2. A version of this property present in the trinitromethane anion and the guanidinium anion is called its "Y" type. Molecules with this property show peaks in the 900 to 700 inverse centimeter range in their IR spectrum corresponding to oop bending. Molecules with this property have a diatropic current, as well as often having quadrupole moments that allow stacking interactions. The restoration of this property after kicking out HCl is the driving force of the (*) Friedel-Crafts reaction. Larger systems exhibiting this property include coronene and pyrene. Molecules with this property are planar, cyclic, and have an extended pi system containing 4n+2 electrons according to Huckel's Rule. For 10 points, name this property of conjugated cycloalkenes which are extremely stable due to electron delocalization, exemplified by benzene.

ANSWER: aromaticity [or aromatic]

3. This government grew suspicious of Charles Pichegru after he dawdled at Mannheim, allowing the defeat of another of this government's armies at Höchst. Lazare Hoche led a failed expedition of this government that ended with a storm scattering an invasion fleet and a capitulation at the Battle of Ballinamuck. This government suppressed a policy discussion group centered at Clichy and was criticized in the song (*) "Dying of Hunger, Dying of Cold." The Conspiracy of Equals failed to overthrow this government, prompting Lazare Carnot to order the arrest and exile of Francois-Noel Babeuf. Paul Barras was the only constant member of this government. Roger Ducos and Abbe Sieyes resigned from it in the Coup of 18 Brumaire after Lucien Bonaparte lied to the Council of the Ancients that a Jacobin coup was developing in Paris. For 10 points, name this French revolutionary government overthrown by Napoleon's consulate.

ANSWER: The Directory

4. In a work by this author, the Dos Reis sisters have a Nativity Room filled with famous historical and modern figures to keep baby Jesus company. He created a character whose husband annuls their marriage after Eaglebeak reveals that she is sleeping with Tonico. Another novel by this author features a madam who reveals her profession to her family in order to save (*) Agreste's beaches. One of his characters is a bar owner who avoids picking sides between Colonel Bastos and Mundinho Falcão while managing his bar Vesuvius. Another one of his protagonists marries Teodoro, but is driven to unfaithfulness with the ghost of her husband, Vadinho, who died while dancing a samba. For 10 points, name this Brazilian author of *Dona Flor and Her Two Husbands* and *Gabriela, Clove and Cinnamon*.

ANSWER: Jorge Amado de Faria

5. In an unusual depiction, this man is shown lying down on top of a corpse in a painting by the Huguenot artist Briton Riviere. Wassily Kandinsky considered this man as an artistic "shaman" and depicted him in a glass tile that now is featured in the Lenbachhaus Gallery. A miniature that depicts this man is paired with *Saint Michael* in a diptych that is part of the Mazarin collection. In a bizarre Paolo Uccello painting, a woman clasps her hands as this man appears in front of a (*) cave. A woman holds the second title figure on a leash in an even more bizarre painting by Paolo Uccello which depicts this man going about his business. This man evokes the image of Guidobaldo da Montefeltro as a *condottiero* in a painting by Raphael in which he rides a horse and wears the Order of the Garter. For 10 points, name this English saint that can be seen stabbing a dragon in numerous paintings.

ANSWER: St. George

6. One part in this opera was sung by Maria Callas in only three performances due to its extreme difficulty; that character finds a document revealing her low birth, and swears to usurp her supposed father in the Act II aria *Salgo già [JAH] del trono aurato*. The title character declares himself God and loses his mind. The most famous number

from this work is one of the rare encores permitted at the Met Opera as well as an unofficial anthem of Italian unification. In the final act, Abigaille's plot is foiled when an (*) idol shatters of its own accord and the sacrifice of prisoners, including Fenena, is stopped. One chorus in this opera laments the loss of a homeland consisting of the banks of the Jordan and the towers of Zion; that chorus is *Va Pensiero* and is sung by Hebrew Slaves. For 10 points, name this opera about the Jews exiled in Babylon, by Giuseppe Verdi.

ANSWER: Nabucco [or Nabucodonosor, or Nebuchadnezzar]

7. In this novel, a girl is criticized for staring at the ceiling while trying to walk like Sybil Thorndike. A character in this novel imagines that "some heedless member of the Unemployed" left the paint for the boat of the Lady of Shalott, whose poem she is called to recite because of her "vowel sounds." This novel begins by describing the differences in how five characters wear panama hats; these characters, including the clumsy (*) Mary Macgregor and the athletic Eunice Gardner, have heard of "Renaissance painters...but not the capital of Finland." The title character of this novel makes food for Mr. Lowther and tries to manipulate Rose Stanley into having an affair with Teddy Lloyd. Later, she is "betrayed" by Sandy Stranger, who reveals her fascist sympathies to her school's faculty. For 10 points, name this Muriel Spark novel about the titular eccentric teacher, who claims to be in the peak of her life.

ANSWER: The Prime of Miss Jean Brodie

8. This word nicknames an A major violin concerto whose third movement calls for low strings to play "coll'arco al roverscio" in its central A minor, 2/4 time episode. This is the first word in the title of the best-known movement of Ludwig van Beethoven's incidental music to *The Ruins of Athens*. A Rondo: Tempo di Menuetto is the third movement of Wolfgang Amadeus Mozart's (*) Violin Concerto No. 5, nicknamed for this style. An ensemble of triangle, cymbal, and bass drum evokes this style in the Allegretto second movement of Joseph Haydn's *Military* Symphony. This style characterizes the overture to *The Abduction of the Seraglio*, as well as the A minor rondo that ends Mozart's Piano Sonata No. 11. For 10 points, name this exotic 18th-century style based on the music of Ottoman Janissary bands.

ANSWER: Turkish style [or alla Turca; or Turkish march]

9. One participant in this event accused another of putting ice in a river because it was colder than usual, and another painted a pair of jeans orange. Participants in this experiment gathered beans and put them into a paper sack for counting in one activity; in another, they rated six characteristics of other subjects. Participants in this experiment were able to cooperate after pulling (*) a truck and obtaining drinking water together; however, after playing football and tug-of-war, each group verbally abused the other and burned their flags. This experiment demonstrated that superordinate goals could diffuse friction between groups dubbed the Rattlers and the Eagles. For 10 points, name this psychological experiment by Muzafer Sherif, which studied conflict among young boys at a namesake summer camp.

ANSWER: Robbers Cave experiment

10. A group named for their support of this policy started a newspaper called *The Signal* under Matilda Carse. Members of Congress violated this policy with the help of the "man in the green hat," George Cassiday. The chairman of a political party supporting this policy, David Leigh Colvin, called the president the "most conspicuous turncoat since Benedict Arnold" for opposing it. The Cullen-Harrison Act partly repealed one law enforcing this policy, which was drafted by (*) Wayne Wheeler and named for a Minnesota representative and chairman of the House Judiciary Committee. This policy was reversed by the 21st amendment. For 10 points, name this policy enshrined by the 18th amendment and enforced by the Volstead Act, the ban on the sale of alcohol.

ANSWER: Prohibition [accept Volstead Act or the 18th Amendment before mention]

11. One chapter of this book quotes a speech from *Measure for Measure* in which Isabella describes "man, proud man," and gives the example of a person who thinks he is talking about lithium, but is really thinking about kryptonite. Portions of the fourth chapter of this book originally appeared in *New Efte fur Philosophie*. This book claims that without a distinction between the "contingent" and the "necessary," it is impossible to know the true goal of epistemology. This work gives the example of creatures that number their mental states and that refer the (*) pain of a burn as the stimulation of "C-fibers." This book, which includes the thought experiment of the Antipodeans in its section "Persons Without Minds" rejects the correspondence theory of truth. For 10 points, name this book by Richard Rorty.

ANSWER: Philosophy and the Mirror of Nature

12. The Sharp Lab used this technology to screen a mouse model for metastatic mediators. The PX330 plasmid is provided by the Zhang Lab for this technique. Artificial versions of this system combine the tracrRNA and crRNA into one plasmid. One protein in this pathway can be modified into a useful D10A nickase mutant and a double D10A/H840A mutant. This pathway requires the sequence NGG on its (*) target molecule, which is called a

protospacer adjacent motif or PAM. In this pathway, a short guide RNA binds to a target sequence, allowing the Cas9 nuclease to create a double-strand break. For 10 points, name this genome editing technology adapted from a prokaryotic defense mechanism.

ANSWER: **CRISPR** [or **clustered regularly interspaced short palindromic repeats**]

13. In this country, large fossils of *Basilosaurus* proto-whale skeletons protrude from the ground at Wadi al-Hitan, and Gebel Elba in its far southeast is the northern limit for many species of the Afrotropical Ecozone. Prehistoric paintings of horizontal humans with outstretched arms are found at the Cave of the Swimmers in this country's Gilf Kebir plateau on whose northern limits are scattered deposits of green desert silica. Chalk rock formations form this country's (*) White Desert outside Farfara, while the cave where St. Anthony the Great allegedly endured temptation is part of its Eastern Desert. The Bitter Lakes are found along a waterway that extends South from Port Said in this country, while the oasis of Siwa is found in its Qattara Depression. For 10 points, identify this country with capital at Cairo.

ANSWER: **Egypt**

14. One poet from this modern-day country was nicknamed the "Sarmatian Horace" and was crowned poet laureate by Pope Urban VIII. Another poet from this country wrote the "Monachomachia" and the novel "The Adventures of Mr. Nicholas Wisdom." The Romantic author of a poetic drama whose name translates as *Forefathers' Eve*, as well as this country's national epic, is one of this country's "Three (*) Bards." A Nobel Laureate from this country wrote the popular poems "Nothing Twice" and "Love at First Sight" and gained fame for mocking Stalin in the title poem of her *Calling Out to Yeti*. This modern country is the birthplace of the man who wrote *With Fire and Sword*, *The Deluge*, and *The Fire in the Steppe*, as well as *Quo Vadis*. For 10 points, name this Eastern European country, home to Wislawa Szymborska and Henry Sienkiewicz.

ANSWER: Republic of **Poland** [or Rzeczpospolita **Polska**]

15. This religion practices a Sabbath that occurs every 8 days, called the Day of Settlement and Attendance. Members of this religion believe that all humans will become immortal in the spirit world after death and hold funerals called "ascension and harmony" ceremonies. This religion's scripture contains a section called "Introduction to Restoration" which outlines a procedure for cancelling out sins with good deeds called indemnity; that scripture is called the (*) *Divine Principle*. In one ceremony from this religion, whose leaders are called the "True Family," participants strike each other three times in order to reverse the fall of Adam and Eve and to become part of God's sinless lineage; that ceremony involves large numbers of couples marrying. For 10 points, name this church formerly headed by Sun Myung Moon.

ANSWER: **Unification** Church [or the Family Federation for World Peace and **Unification**; accept the **Moonies** before the end]

16. Instruments used to measure these things include a sonar-like device called an ADCP. Deep examples of these entities are the subject of the Argo project. These entities are mapped by the OSCAR dataset. Gradients of the Coriolis force cause the "westward intensification" of these entities. Wind forcing results in these entities moving 90 degrees to the wind in Ekman transport, and these entities have geostrophic (*) balance when pressure gradient forces balance the Coriolis force. Differences in temperature and salt concentration drive these entities in the thermohaline circulation. Their total flux is measured in Sverdrups, and examples of them include the Kuroshio and Antarctic circumpolar. For 10 points, name these flows of water through earth's largest bodies of water.

ANSWER: oceanic **currents** [accept **gyres**]

17. When told that the one true statement in the world is "God is love," one character in this work replies, "What is God? What is love?" Another character in this work lists his avocation as "being alive" and his principal occupation as "being dead." A doctor in this novel who used to work for the Nazis will, working night and day, have saved and let die equal numbers of people by the year 3010; that doctor works for a hospital founded by (*) Julian Castle. A holy book beginning "All of the true things that I am about to tell you are shameless lies" and sacred texts in the form of calypsos are used by a religion in this novel called Bokomonism, which is sweeping San Lorenzo. In this novel, the dictator Papa Monzano is killed, and the world's oceans are frozen, by an invention of Felix Hoenikker. For 10 points, name this Kurt Vonnegut novel that introduced ice-nine.

ANSWER: **Cat's Cradle**

18. A structure built by Walter Allward to honour this battle's dead was Hitler's favourite war memorial and guarded by Waffen-SS in the Second World War. The unveiling of this battle's memorial was the only non-abdication, official ceremony in Edward VIII's reign. The infantry advanced in this battle with a namesake "glide" that kept apace with the creeping barrage. This battle began on Easter Monday 1917 as part of the Second Battle of

(*) Arras. This was the first time that the four divisions of Sir Julian Byng's corps fought together; one of those divisions was led by Sir Arthur Currie. A saying about this battle is "We went up...as Albertans and Nova Scotians. We came down as Canadians." For 10 points, name this First World War battle seen as a formative moment in the Canadian national identity, in which the Canadian Corps captured a namesake ridge.

ANSWER: Battle of Vimy Ridge

19. In the *Argonautica*, this man's body is said to emit smoke and a terrible stench that the birds couldn't avoid. A lover of this man wept for him until his gray hair turned into gray feathers. This man was taunted by Epaphus after a foot-race. This man sees a set of silver doors with a representation of the cosmos and zodiac on it. In their grief, this man's sisters turned into poplar trees that cried amber tears. This figure fell into the river (*) Eridanus after Zeus struck him with a thunderbolt; before that, this son of Clymene claimed one promise from his father, which led to Africa being turned into a desert. For 10 points, name this son of Helios who asked to drive his father's sun chariot.

ANSWER: Phaethon

20. A statue of this man by Marion Walgate was vandalized as part of a campaign with the hashtag "[this man] must go." Princess Catherine Raziwill once forged this man's signature on a promissory note after he refused to marry her. One version of this man's will left his estate to Neville Pickering, who may have been his lover. This man's agent Francis Thompson gave assurance that fewer than 10 of his men would be present in Lobenguela's land as part of the Rudd Concession, which allowed him to acquire (*) Matabeleland. In one cartoon, this man was depicted as a colossus with his arms extended after he put in motion a plan to connect his colony with Cairo via rail. This man stepped down as governor of the Cape Colony after the Jameson Raid. For 10 points, name this founder of the De Beers Diamond Company and namesake of a scholarship to study at Oxford.

ANSWER: Cecil Rhodes

Bonuses

1. The five extant theories of this type were combined into a single theory predicting eleven dimensions called M-theory. For 10 points each:

[10] Name these theories that suggests that fundamental particles are actually different vibrations of small loops. It competes with loop quantum gravity as the most likely correct theory of everything.

ANSWER: superstring theory

[10] Theories of everything necessarily must include a theory of this type, which unifies the strong and electroweak forces, without unifying gravity.

ANSWER: GUT [or Grand Unified Theory]

[10] M theory was first posited by this Princeton physicist, who won a Fields medal for his work. He also names a theorem with Weinberg that implies that the graviton cannot be a composite particle.

ANSWER: Edward Witten

2. Answer the following about a foundational comic book character that first appeared in 1962, for 10 points each.

[10] In issue #50 of this character's first series, he briefly gives up his superhero identity, in a story entitled "this character No More!" He gains his powers from a radioactive arachnid and fights villains like Doctor Octopus.

ANSWER: Spider-Man [accept Peter Parker]

[10] Spider-Man was created by writer Stan Lee and this reclusive artist, for the 15th issue of Marvel's *Amazing Fantasy*. His other characters include Mr. A and Doctor Strange, soon to be played by Benedict Cumberbatch.

ANSWER: Steve Ditko

[10] Ditko also created this character from DC Comics, who first appeared in Showcase #73. With civilian identity talk show host Jack Ryder, this character has yellow skin and green hair, along with a crazed personality.

ANSWER: The Creeper

3. In West Bengal, gigantic clay idols of the goddess worshiped on this holiday are made and immersed in the river on the fifth day. For 10 points each:

[10] Name this festival dedicated to the worship of Durga, with a name meaning "nine nights" in Sanskrit.

ANSWER: Navaratri

[10] This other more-well-known Hindu festival celebrates the return of Rama to his throne by lighting candles, lanterns, and the like.

ANSWER: Diwali

[10] An important element of Diwali is giving prayers to this goddess of wealth. Gifts are typically exchanged and shopping happens afterwards.

ANSWER: Lakshmi

4. This man's poems include "At the call of the race of Sheba." For 10 points each:

[10] Name this author of *Nocturnes* and *Ce que je crois*. Jean-Paul Sartre wrote an introduction for his compilation of Francophone poetry entitled *Anthology of New Negro and Malagasy Poetry*.

ANSWER: Léopold Senghor

[10] Senghor helped develop this literary ideology, which affirms international African solidarity and identity, and which takes its name from a French antiblack slur. Its name first appeared in the third issue of *L'Étudiant Noir*.

ANSWER: Négritude

[10] Another founder of Négritude includes this Martinican poet of "Notes from a Return to the Native Land", "Discourse on Colonialism," who portrayed Caliban as a hero in *Une Témpeste*.

ANSWER: Aimé Césaire

5. For 10 points each, answer the following about children in photographs:

[10] This photographer's works include *Jewish Giant, taken at Home with His Parents in the Bronx*. She also took the photo *Child with Toy Hand Grenade in Central Park*.

ANSWER: Diane Arbus

[10] Two children appear in this photograph by Dorothea Lange, which is named for and depicts Florence Thompson.

ANSWER: Migrant Mother

[10] This 1992 book by Sally Mann was controversial for including several nude shots of her own children. Her son Emmett refused to let one picture appear in the book because it showed him with his socks on his hands.

ANSWER: Immediate Family

6. This character dreams of "livin' off the fatta' the lan'". For 10 points each:

[10] Name this character who is targeted by a lynch mob led by Curley in revenge for his having killed Curley's wife, but is mercifully shot in the back of the head before they can get to him.

ANSWER: Lennie Small [accept either underlined portion]

[10] Lennie is killed by his friend George at the end of this 1937 novella by John Steinbeck.

ANSWER: Of Mice and Men

[10] Lennie's death is foreshadowed by the execution of the ancient dog belonging to this other ranch worker. This aging one-handed man offers to contribute his life savings to George and Lennie's rabbit-farm plan.

ANSWER: Candy

7. Answer the following about revolutionary South America, for 10 points each.

[10] Manuel Belgrano and Jose de San Martín were both generals from this modern-day nation, which was later ruled by Juan Perón and his wife Isabel.

ANSWER: Argentina

[10] San Martín met with fellow revolutionary Simón Bolívar to decide the fate of Peru at this conference, where the two negotiated in private at the city hall with no records being kept.

ANSWER: Guayaquil Conference

[10] Guayaquil is in this present-day Andean country, which emerged after Sucre's victory at Pichincha. Juan José Flores collaborated with Maria Christina of the Two Sicilies to reinstall the Spanish throne here.

ANSWER: Ecuador

8. It claims that philosophy is the only thing that can conduct a man. For 10 points each:

[10] Name this philosophical text which advises: "always run to the short way, and the short way is the natural." Its second book ends by suggesting its author wrote part of it in Carnuntum.

ANSWER: Meditations [or Ta eis heauton]

[10] The second book ends "This in Carnuntum" because the *Meditations* were written by this Roman emperor while he was campaigning in modern-day Slovakia.

ANSWER: Caesar Marcus Aurelius Antoninus Augustus

[10] In the tenth book of the *Meditations*, Marcus Aurelius compares "every man who is grieved at anything or discontented" to be like this animal, which "kicks and screams" when killed because it is not "reasonable."

ANSWER: pig [or equivalents of any sex, such as warthogs or spinks]

9. One member of these people set up a settlement in L'Anse aux Meadows, and these people raided Lindisfarne in 793 AD. For 10 points:

[10] Name these Norse seafaring people whose members include Leif Erikson. They often used longships in their conquests.

ANSWER: **Vikings**

[10] Byzantine emperors employed Vikings as members of this personal guard. They were first created under Basil the Bulgar-Slayer and eventually included Anglo-Saxons.

ANSWER: **Varangian** Guard

[10] This Viking commander sieged Paris in 885 AD and founded the Duchy of Normandy after the land was ceded to him by Charles the Simple. He passed the duchy on to his son William I Longsword.

ANSWER: **Rollo** [or **Robert** or **Ganger-Hrolf**]

10. The pre-electronic field of modern astronomy was remarkably full of discoveries, all by done by hand. For 10 points each:

[10] This astronomer employed a "harem" to compute astronomical data and together with one of his employees, Williamina Fleming, created a classification system for stars that formed the Henry Draper Catalogue.

ANSWER: **Edward Charles Pickering** [prompt on "Pickering"; do not accept "William Pickering"]

[10] This astronomer's Ph.D. thesis first concluded that hydrogen was the primary component in stars, which notably dismayed Henry Norris Russell. She also related spectral class to temperature.

ANSWER: Cecilia **Payne**-Gaposchkin

[10] Both Pickering and Payne spent their astronomical careers at this university; Payne graduated from the nearby Radcliffe college. Pound and Rebka confirmed gravitational redshift at its Jefferson Laboratory.

ANSWER: **Harvard**

11. These brothers were conceived when their father's skull spat on their mother's hand. For 10 points,

[10] Name these two brothers who defeated Seven Macaw and his sons and later became the sun and the moon.

ANSWER: **Hunahpu** and **Xbalanque** [or the **Hero Twins**]

[10] The story of the hero twins is told in the Popul Vuh, the primary mythological text of this civilization. The ballgame played by the Hero Twins, in which the losers are sacrificed, was played by this Mesoamerican civilization

ANSWER: **Mayans**

[10] The Popul Vuh was preserved and transcribed by this Dominican priest.

ANSWER: Francisco **Ximenez**

12. This man proposed a war plan against Great Britain that concentrated the US Navy around New York and launched an expedition to seize Halifax. For 10 points each:

[10] Identify this American Naval captain whose lectures at the Naval War College on the *Influence of Sea Power Upon History* inspired Theodore Roosevelt's build-up of the American Navy.

ANSWER: Alfred Thayer **Mahan**

[10] Mahan's ideas may have influenced the robust American response to this 1891 attack on US sailors in Valparaiso returning to the attack's namesake ship; Benjamin Harrison threatened war and Chile paid compensation to end this dispute.

ANSWER: USS **Baltimore** Affair [accept **Baltimore** Crisis or anything synonymous]

[10] American naval primacy was showcased during the Spanish-American War at this 1898 battle when Commodore Dewey sunk most of the Spanish Fleet in the namesake bay outside the capital of the Philippines.

ANSWER: Battle of **Manila** Bay

13. In musical parlance, the fifth scale degree is called the dominant. For 10 points each:

[10] In the key of G major, the dominant is this note, whose major key Johann Pachelbel used to write a canon.

ANSWER: **D** [or **D major**]

[10] A chord progression from the dominant to the tonic characterizes the authentic type of this musical figure. Musical phrases end with these constructions, which also have plagal, half, and deceptive varieties.

ANSWER: **cadence**

[10] If a dominant seventh chord is rooted on F, it contains these other three notes.

ANSWER: **A**, **C**, and **E-flat** [accept in any order; do not accept "E"]

14. This artist used a number of "lozenge shapes" to illustrate his color palette in *Four Darks in Reds*, a painting which now hangs in the Whitney Museum of Art. For 10 points each:

[10] Name this color field painter, who painted the Seagram Murals, as well as the fourteen paintings that can be found at his namesake "Chapel" in Texas.

ANSWER: Mark **Rothko**

[10] Rothko was part of the loosely defined color field movement, which is a style of this kind of painting. This type of "expressionism" names a style practiced by Jackson Pollock.

ANSWER: **abstract** expressionism [or **abstract** painting]

[10] The sculpture *Broken Obelisk*, which can be found at Rothko Chapel, was made by this other artist. As a color field painter he created the series *Who's Afraid of Red, Yellow, and Blue?* and the *Stations of the Cross* series.

ANSWER: Barnett **Newman**

15. This was the last major conflict between Scotland and England before the Union of the Crowns. For 10 points each:

[10] Name this 1543-1551 war which was concluded by the Treaty of Norham and involved the betrothal of Edward VI.

ANSWER: The **War of the Rough Wooing** [or the **Eight Years' War** or the **Nine Years' War**]

[10] The War of the Rough Wooing attempted to arrange a marriage between the six-year old Edward and this infant queen of Scotland. She would later marry both Francis II and Henry Stuart, Lord Darnley.

ANSWER: **Mary**, Queen of Scots [do not accept "Bloody Mary" or "Mary Tudor"]

[10] This father of Mary was killed at the Battle of Solway Moss, leading Mary to succeed him when she was six days old.

ANSWER: **James V** of Scotland

16. Maurice Allington encounters the ghost of Thomas Underhill, who uses a silver figurine to summon the title spirit of the forest, in his novel *The Green Man*. For 10 points each:

[10] Name this author who won a Booker for his novel *The Old Devils*. The protagonist of his most famous novel gets fired from his university job after a lecture on "Merrie England" turns into a drunken tirade mocking his boss Professor Welch.

ANSWER: Kingsley **Amis**

[10] Amis attacked the aesthetics and ideology of this literary movement, which was exemplified by poets like Wordsworth, Byron, and Keats, in a poem titled "Against" it.

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

[10] "Against Romanticism" can be seen as a manifesto for this literary group, which included Amis as well as other English writers like Philip Larkin, Tom Gunn, and Elizabeth Jennings. Its name was coined by Jay. D. Scott.

ANSWER: The **Movement**

17. Receptors of this kind include those in the JAK-STAT pathway. For 10 points each.

[10] Name this type of receptor that use ATP to phosphorylate a namesake amino acid after dimerizing. Growth factor receptors are often this type

ANSWER: **tyrosine kinase** [prompt on kinase]

[10] The 1989 Nobel Prize was awarded for the discovery of this proto-oncogene in the Rous sarcoma virus, which infects chickens. SH2 and SH3 domains are homologous to this protein.

ANSWER: c-**Src** (pronounced "sarc") [or proto-oncogene tyrosine-protein kinase **Src**]

[10] The JAK-STAT pathway is aberrantly activated in a disease that causes this tissue to become fibrotic. This tissue, which comes in red and yellow types and is aspirated from the pelvis, is where blood cells are synthesized.

ANSWER: bone **marrow**

18. 3-chloropropionic acid has a chloride substituent one carbon further away from the acidic hydrogen than 2-chloropropionic acid does. For 10 points each:

[10] Name the more acidic species between 2-chloropropionic acid and 3-chloropropionic acid.

ANSWER: **2-chloropropionic acid** [also accept **alpha-chloropropionic acid**]

[10] 2-chloropropionic acid is more acidic because the negative charge on the oxygen is stabilized by this effect, in which electronegative groups pull electron density through bonds.

ANSWER: **inductive** effect

[10] The inductive effect is well-established for elements in this group, which includes bromine, chlorine, and fluorine. They are group 17 on the periodic table.

ANSWER: **halogens**

19. These entities must be equal to the sum of liabilities and equity. For 10 points each:

[10] Name these accounts which refer to resources or the right to future benefits for a firm. Examples include cash and inventory.

ANSWER: **assets**

[10] Equity includes additional paid-in capital and this account, which refers to the nominal price of a stock. This value often differs highly from the actual price at which the stock was issued.

ANSWER: **par value**

[10] Increases in assets are listed under this term. Conversely, it indicates decreases in liabilities and in equity.

ANSWER: **debit** [or **dr**]

20. In this novel, the protagonist's brother Charles Nicholas becomes involved in a marine insurance scam, while the protagonist falls in love with Bida Petterson, who turns out to be Rehnholm's former lover Agnes. For 10 points each:

[10] Name this novel in which Arvid Falk becomes a journalist and poet while hanging out with his bohemian friends in the title cafe.

ANSWER: *The **Red Room*** [or ***Röda Rummet***]

[10] This Swedish author of *The Red Room* is now more famous for his plays, including *The Ghost Sonata*, *A Dream Play*, and *Miss Julie*.

ANSWER: August **Strindberg** [or Johan August **Strindberg**]

[10] In this Strindberg play, Captain Adolph and his wife Laura argue about whether Bertha should become an artist or a teacher. Laura tricks her husband into acting insane, thus gaining power over the family's property.

ANSWER: *The **Father*** [or ***Fadren***]