Tossups

1. The plans for these buildings almost always consisted of a grid composed of a series of rectangle-shaped 2- by 4-foot units. Unrealized designs for one of them were used to construct the Sharp Family Tourism and Education Center on the campus of Florida Southern College in 2013. Aaron Resnick designed twelve of these buildings for a Westchester County, New York cooperative community named for them. The first of these structures includes a few curved bricks on a straight wall, because its architect raided the worksite of the Johnson Administration Building to stay under budget. That example in Madison, Wisconsin included the first ever carport. These one-story buildings are generally made up of modular concrete blocks, have flat roofs, and had an intended budget of under five thousand dollars. For 10 points, name this style of modest middle-income houses created by Frank Lloyd Wright to be a housing style for all of America.
ANSWER: **Usonia**n houses [prompt on Frank Lloyd <u>Wright buildings</u>; prompt on Frank Lloyd <u>Wright houses</u>]

2. In an essay for *Harper's Weekly*, this writer recalled a train ride on which she hid the fact that she had a Jewish grandmother from an anti-Semitic colonel who later ordered roast beef hash for lunch. The fact that many readers took that essay to be fiction led her to write an essay that begins by describing a student's intention to take a story and "put in the symbols." This author of "Artists in Uniform" offended Flannery O'Connor by raving about the symbolism of Holy Communion and describing her childhood loss of faith in *Memories of a Catholic Girlhood*. This longtime correspondent of Hannah Arendt wrote a novel in which a woman either falls or jumps from a 20th-story window after Harald Petersen cheats on her. That semi-autobiographical novel by this wife of Edmund Wilson begins with the wedding of Kay Strong and centers on a circle of eight friends from Vassar College. For 10 points, name this author of *The Group*.
ANSWER: Mary **McCarthy** [or Mary Therese **McCarthy**]

3. This country seized four vessels owned by Captain John Meares, which were registered in Macau and disguised with Portuguese flags, starting a dispute over fishing rights. To further negotiations with this country, Thomas Jefferson signed the so-called "Two Million Dollar Act." This country agreed not to police a disputed spot of land, which was subsequently settled by outlaws and "Redbones," and which was called the "Neutral Ground." This country was humiliated by England in the Nootka Crisis. Harman Blennerhassett's farm on an island in the Ohio River was intended as the launching point of an expedition against this European country's possessions in a plan exposed by James Wilkinson. This country settled navigation rights with the United States in Pinckney's Treaty, which dealt with the disputed "West" section of a colony it owned. For 10 points, name this European country which agreed to the Adams-Onis Treaty handing over Florida.
ANSWER: Kingdom of **Spain** [or **España**; or the **Spanish Empire**]

4. A procedure that uses a modification of this distribution has one of its key parameters given by the Welch-Satterthwaite equation. This distribution is a special case of the generalized hyperbolic distribution in which the psi parameter has been set to zero and the lambda parameter is less than zero. This distribution's associated density is proportional to the gamma function of "v plus one" divided by "two," where v is this distribution's degrees of freedom. This distribution relies on using a statistic often represented with the letter s, which is used because the related "zed" statistic is invalid. This distribution is used to estimate the mean of a normally-distributed population when the standard deviation is not known. For 10 points, name this distribution developed by Guinness Brewery employee William Gosset and published under the pseudonym "Student."
ANSWER: Student's **t**-distribution [accept Welch's **t**-distribution before the word "density" is read]

5. In the introduction to the story this character appears in, the narrator discusses confusions about this character's name and origins, as well as what to title his story, as the four difficulties he faced in writing it. When this character sees a nun from the Convent of Quiet Self-Improvement, he rubs her bald head and mocks her to win laughs from the crowd of men in a wine shop. This character becomes angry whenever villagers refer to a "long bench" as a "straight bench," and he focuses on drawing a perfect circle in lieu of signing his name to a confession, after which he is executed. This man is beaten over the head by a man who cut off his pigtail while studying in Japan, whom this character refers to as the "Imitation Foreign Devil." For 10 points, name this Chinese peasant who wins many "spiritual victories," and whose "true story" was told by Lu Xun (LOO "SHUN").
ANSWER: **Ah Q** [prompt on Ah; prompt on Q]

6. Heterogeneity across firms is behind a productivity shift in a model of this phenomenon created by Marc Melitz. James Anderson and Eric van Wincoop criticized a common empirical model of it that they argued produced biased results by ignoring "multilateral resistance." Predictions from a common model of this phenomenon can be visualized using Lerner diagrams. Autor, Dorn, and Hanson have suggested employment decreased and welfare rolls increased in areas most affected by this phenomenon in the early 2000s. Gravity models relate its magnitude to variables like distance. According to a theory of this phenomenon, if production occurs in the "cone of diversification," factor prices will equalize across space. Paul Krugman's models of it use increasing returns to scale to explain it in the absence of differences in factor endowments or technologies. For 10 points, name this exchange of goods and services across borders.
ANSWER: international **trade**

7. In computational fluid dynamics, an error term known as the "false" type of this process appears when using upwind schemes. Nekhoroshev's theorem restricts the extent of this process in nearly integrable systems, where it leads to unstable growth of action variables. The "marker" velocity of a system undergoing this process is given by Darken's first equation. The expression "one-third" times "the integral from t equals zero to infinity" of the "velocity autocorrelation function" gives the proportionality constant in a partial differential equation governing this process that may be solved via the Boltzmann-Matano method. The current density in a semiconductor equals the sum of a drift component and a component named for this process. The product of k, T, and mobility gives this process's namesake coefficient. For 10 points, name this process described by Fick's laws, in which particles move down concentration gradients.
ANSWER: **diffusion** [or false **diffusion**; or Arnold **diffusion**; or inter**diffusion**; or **diffusion** current; or **diffusion** coefficient; prompt on mass **transport**; prompt on **mass transfer**]

8. A thinker described how complex "molecular" versions of these entities arise from four "incidents," which he listed in tables of opposites and correlatives. Proponents of the "will theory" of these entities argue that they reduce to a single, fundamental one, in contrast to the "interest theory." Wesley Hohfeld developed an influential analysis of these entities. Jeremy Bentham described the idea of an imprescriptible natural version of these entities as "nonsense upon stilts." Ronald Dworkin described these entities as "trumps" in explaining their ability to override other objectives in a book about taking them "seriously." Robert Nozick described these entities as side-constraints on action, emphasizing their negative kind over the positive kind. Utilitarians argue that they are conferred upon people only by the law, in contrast to John Locke. For 10 points, name these principles that describe what people are free or entitled to do, including free speech and freedom of religion.
ANSWER: human **right**s [or natural **rights**; or civil **rights**]

9. One of these objects on the sole of the foot is the second of the 32 lakshanas, or auspicious marks, which has led to one of them generally being included in Buddhapada, sculptures of Buddha's footprint. The ancient Hindu, Jain, and Buddhist concept of an ideal universal ruler is named for one of these objects and generally depicted with one of them. Four ritual exercises that mimic holding these objects are practiced by the Falun Gong, who take their name from one. The mantra "Om mani padme hum" is frequently embossed onto metallic objects of this type, which are used for prayer in Tibetan Buddhism. One of these objects, often used to represent the elements of the Eightfold Path, was traditionally held to be set in motion when the Buddha gave his first sermon. For 10 points, name these objects that include the Dharmachakra, which is depicted on the flag of India.
ANSWER: __wheel__s [or prayer __wheel__s; accept (dharma)__chakra__s until "Dharmachakra"]

10. An outbreak of violence in this war began after British soldiers atop the Grande Hotel Bretagne (breh-TAHN-yuh) fired on unarmed protesters marching past the Tomb of the Unknown Soldier. During this conflict, orphans were moved into "child-cities" administered by a former member of the Hitler Youth women's branch, who attacked the opposing side for evacuating 28,000 children into "indoctrination camps" abroad. The second phase of this conflict began when a military force refused the "Scobie order" to disarm, sparking urban warfare against "Organization X" in the "December events." This war was fought between the government and mountain-based guerrilla fighters loyal to the DSE and KKE, who lost logistical support when they backed Stalin in the Tito-Stalin split. Marshall Plan aid was delivered to royalist forces in this conflict in an early application of the Truman Doctrine to contain communism. For 10 points, name this 1946-1949 conflict that ended in victory for the strongly anti-communist Hellenic Army.
ANSWER: __Greek Civil War__

11. The words "Go and set everything aflame" inspired a painting of this type, a fresco in which Jesus shoots a beam of light at the title saint, which then splits into four rays directed at four continents. That fresco of this type honoring Saint Ignatius was created by Jesuit painter Andrea Pozzo (ahn-DRAY-ah POH-tzo). A scythe-wielding personification of Time gobbles up the arm of a *putto* in another of these paintings, in which Immortality carries a crown made of stars to a group of flying women amidst a swarm of bees. Urban VIII commissioned that *quadratura*-filled *Triumph of Divine Providence* from Pietro da Cortona, who specialized in this type of work. A smoky spiral of angels takes Mary up to Heaven in a work of this type by Correggio located at Parma Cathedral. *The Union of the Crowns* and *The Apotheosis of James I* partly form one of these works created by Peter Paul Rubens for the Banqueting House at Whitehall. For 10 points, name this form of interior decoration painted by Michelangelo for the Sistine Chapel.
ANSWER: __ceiling__ paintings

12. These compounds can be evaluated by measuring two parameters, *h* and *c*, named after Woodward and Cohen. The synthesis of one class of these molecules includes the cyclization of ACV by IPNS. Nitro·cefin can be used to test for the presence of enzymes that hydrolyze these molecules. pUC ("puck") plasmids encode an enzyme that hydrolyzes these molecules in their *bla* ("blah") gene. Another enzyme that hydrolyzes these molecules was first identified in a strain of *K. pneumoniae* ("k" new-MOHN-ee-ay) from New Delhi. The efficacy of these compounds can be increased by co-administration with cla·vu·lan·ic acid. A member of this class of molecules inhibits the enzyme DD-trans·pep·tid·ase, and they include carba·penems and cephalo·sporins. For 10 points, name this family of antibiotics distinguished by the presence of a four-member cyclic amide group, such as penicillin.
ANSWER: __beta-lactam__s [or __beta-lactam__ antibiotics; prompt on __lactam__s]

13. One character in this story twirls around in a shirt and trousers whose back is cut in two by a bayonet, showing his bare ass to an amused onlooker. Another character mutters "Always harbor construction!" in irritation, and confirms that an unseen character in this story was "soldier, judge, engineer, chemist, and draftsman." At a pivotal moment in this story, a character's face shows "no sign of the promised transfiguration" in death. At the conclusion of this story, the protagonist swings a knotted rope to deter two people from jumping onto his steamer; that occurs after a visit to a tea house, where a gravestone hidden underneath a table promises that a previous ruler will rise again. In this story, a character pulls out a nude corpse impaled through the forehead with an iron needle after being alarmed by popping-off gears. That traveler in this story is shown instructions for the "harrow" to write the phrase "Be just!" For 10 points, name this story in which the Officer demonstrates a torture machine, which was written by Franz Kafka.
ANSWER: "**In the Penal Colony**" [or "**In der Strafkolonie**"]

14. This party formed a government after Miles Lampson rolled tanks up to a ruler's palace and shouted, "Where's the boy?" in the Abdin Palace Incident. A former leading politician in this party tried to discredit it by publishing the Black Book, accusing them of corruption in power. The motto "Obedience and Struggle" was used by this non-Chinese party's youth wing, the "Blue Shirts," which it created to defend its agreement to a 1936 treaty with England. It originally formed under governor Reginald Wingate for the purpose of sending a national delegation to the Paris Peace Conference, and it was created by a former participant in the Orabi Rebellion, Sa'ad Zaghloul (sah-ahd zahg-lool). Under Mustafa al-Nahhas, this liberal constitutionalist party frequently clashed for power with King Farouk. For 10 points, name this political party that negotiated independence for Egypt.
ANSWER: **Wafd** Party [or **Delegation** Party]

15. This man's collaborator Harvey Sacks applied his analytical framework to study recordings of phone calls to the Los Angeles Suicide Prevention Center. Sociologists of science have been influenced by this man's study of differences between workplace manuals and workplace environments, which he called the "shop floor problem." This man noted that he was forced to abandon "game" metaphors to understand gender performance by one of his subjects, the trans woman Agnes. In experiments devised by this man, students erased another player's moves made in tic-tac-toe and behaved like lodgers while having dinner with their parents. To test the consequences of violating tacit behavioral understandings, which he argued social agents built as they interpreted, this man designed several "breaching experiments." For 10 points, name this founder of ethno·method·ology.
ANSWER: Harold **Garfinkel**

16. When this character is asked, "Should dying men flatter with those that live?" he replies, "No, no, men living flatter those that die." This character remarks, "Light vanity, insatiate cormorant, consuming means, soon preys upon itself," in a speech he begins by declaring, "Methinks I am a prophet new inspired." This character warns, "Thy death-bed is no lesser than thy land wherein thou liest in reputation sick," as he addresses a ruler from his own deathbed. He describes a "fortress built by Nature for herself against infection and the hand of war," a "royal throne of kings" and "sceptered isle," in a speech eulogizing "this blessed plot, this earth, this realm, this England." This character dies in grief after his son is exiled by the corrupt king for feuding with Thomas Mowbray. For 10 points, name this historical figure who appears as an elderly man in *Richard II*, the father of the usurper Henry Bolingbroke.
ANSWER: John of **Gaunt** [prompt on John]

17. Prokofiev's piano sonata of this number alludes to Schumann's lied (LEET) "Wehmut" in its second movement, marked *Andante caloroso*. A symphony of this number ends on a series of soft C-sharp major arpeggios in the tuned percussion, which were added in an unsuccessful attempt to win a first-class Stalin Prize. Sofia Gubaidulina (goo-"BYE"-doo-LEE-nuh) was among this many composers denounced by Tikhon Khrennikov in 1979 for their participation in Western music festivals. Prokofiev's piano sonata of this number was the second of his "War Sonatas," and his symphony of this number was his last. Another symphony of this number pastiches the tune "Da geh' ich zu Maxim" (dah GAY ish tsoo MAHK-seem) as its "invasion theme," and was broadcast to German lines as propaganda during its premiere in a city under siege. For 10 points, give this number of Dmitri Shostakovich's "Leningrad" Symphony.
ANSWER: **seven**

18. Alan Olmstead and Paul Rhode argued that new varieties of this commodity were responsible for its rise in production, against a controversial book with chapters like "Feet," "Breath," and "Tongues." Seaman A. Knapp gave demonstrations on the Terrell Farm and elsewhere of methods for producing this good more efficiently on behalf of the General Education Board. The transition from "war capitalism" to modern capitalism frames a global history of this commodity by Sven Beckert. The Stalybridge riots occurred after a depression in Lancashire began during this good's "famine," which also led to increased production of it in Egypt. In a 2014 book, Ed Baptist argued that its productivity increased thanks to the development of more effective forms of torture. James Hammond delivered a speech claiming the South was invincible because this crop "is king." For 10 points, name this dominant export of the Confederate States of America.
ANSWER: **cotton**

19. This peninsula will eventually be connected to the mainland by the planned Parallel Thimble Shoal Tunnel. An island off its coast is the setting of a festival that was the subject of a Newberry Medal winning book by Marguerite Henry. Sailboats called skipjacks are used for fishing near this peninsula, due to a law restricting powerboats in the body of water to its east. One of the largest poultry companies in the US, Perdue Farms, began in this peninsula's largest town of Salisbury. Its barrier island Assateague is the site of an annual tradition in which wild ponies are driven across a narrow channel to Chincoteague Island. The longest bridge-tunnel complex in the world connects this peninsula's southern tip of Cape Charles to the city of Virginia Beach. This landmass contains the Eastern Shore and lies between the Atlantic Ocean and Chesapeake Bay. For 10 points, name this peninsula containing most of Delaware, whose name combines Delaware with two other states.
ANSWER: **Delmarva** Peninsula

20. One technique in this paradigm used to track the propagation of quasiparticles SA is known as transient grating spectroscopy. Another technique used in this field is the diffraction image referencing method, also known as the diffraction-difference method. One of the earliest studies in this field examined the dissociation kinetics of cyanogen iodide. An experiment in this field showed that the bond in sodium iodide alternates between ionic and covalent forms. An important technique in this field relies on firing two laser pulses, the first to initiate a reaction and another to study its progress. For 10 points, identify this field of chemistry developed by Ahmed Zewail, which uses ultrashort laser pulses to study chemical reactions over a very short timescale.
ANSWER: **femto-chemistry** [or **pump-probe** spectroscopy]

TB. One section of this book lists the restrictions imposed by the Hindu caste system on the *chandala* and finds that "undying *chandala* hatred" has been disguised as love. This book praises Thucydides for writing with "severe, hard factuality" as opposed to Plato, whose theory of forms made him a "coward before reality;" it also argues that the Greeks demonstrate its comparison of great men to "explosives in which...force is stored up." The last section of this book features a discussion between a coal and a diamond and asserts that "all creators are hard." This book includes a collection of aphorisms called "Maxims and Arrows" and attacks the dialectical method in "The Problem of Socrates." For 10 points, name this polemical book against representatives of decadence in 19th-century Europe, a Friedrich Nietzsche book subtitled "How to Philosophize With a Hammer."
ANSWER: **Twilight of the Idols**: *Or, How to Philosophize with a Hammer* [or **Götzen-Dämmerung** (guut-zen-day-mer-ung)]

1. The convolutional type of these systems are often used for image recognition and other computer vision tasks. For 10 points each:
[10] Name these systems that are the basis of deep learning and are often divided into input layers, hidden layers, and output layers. Examples of them include the perceptron and Boltzmann machines.
ANSWER: artificial **neural net**works [or A**NN**s; or convolutional **neural network**s; or recurrent **neural network**s; or feedforward **neural network**s; or stochastic **neural network**s]
[10] The weights in a neural network can be updated using this technique, in which gradients are calculated starting from the last layer in the network. This technique works because the gradients of one layer are dependent on all the layers that appear after it.
ANSWER: **backprop** [or **backpropagation**]
[10] This computer scientist built SNARC ("snark"), one of the first neural network machines, and co-authored the influential book *Perceptrons* with Seymour Papert, demonstrating the inability of single-layer networks to compute functions that lack linear separability, such as XOR.
ANSWER: Marvin **Minsky**

2. During his inauguration as Vice President, Andrew Johnson drunkenly forgot this man's name while attempting to praise him. For 10 points each:
[10] Name this Democrat in the Lincoln administration whom Lincoln referred to as his "Neptune."
ANSWER: Gideon **Welles**
[10] Slightly more than a year after becoming Secretary of the Navy, Welles played a substantial role in the creation of the USS *Monitor*, which took part in this naval battle, the first meeting of ironclad warships in combat.
ANSWER: Battle of **Hampton Roads**
[10] Lincoln's real liaison in the Navy Department was this Assistant Secretary of the Navy, the son-in-law of Levi Woodbury. He commanded the rescue mission for the Fort Sumter garrison and pushed for the use of ironclads.
ANSWER: Gustavus Vasa **Fox**

3. Eric Charnov applied the marginal value theorem to the theory of the "optimal" type of this behavior, which was first developed by MacArthur and Pianka. For 10 points each:
[10] Name this general behavior which is often modeled by comparing energetic gains to search times and handling times for different resource types. The "optimal" theory of it often yields decision rules with prey-size thresholds.
ANSWER: **foraging** [or word forms; anti-prompt on predation]
[10] Optimal foraging has been widely tested in terms of flower selection among this group of hymenopterans, whose waggle dance was elucidated by Karl von Frisch.
ANSWER: **bee**s [or **anthophila**]
[10] Fretwell and Lucas proposed that animals foraging for resources should arrange themselves according to this kind of distribution, in which the number of animals in a patch is proportional to resource availability.
ANSWER: **ideal free** distribution [or **IDF**]

4. For 10 points each, answer questions about the "king in the mountain" motif in European mythology and folklore.
[10] This empire's last ruler has the epithet *Marmaromenos* (mar-mar-oh-may-nohs), or "the Marble King," due to the legend that an angel turned him into a marble statue that will one day return to avenge Mehmed II's 1453 sack of this empire's capital.
ANSWER: **Byzantine** Empire [or **Eastern Roman** Empire; do not accept or prompt on "Roman Empire"]
[10] Goll mac Morna and Finn MacCool were leaders of this mythical group of warriors, who fell at the Battle of Gabhra. They sleep in a cave beneath Ireland and will arise again when they hear three blasts on Finn's hunting horn.
ANSWER: the **Fiann**a [do not accept "Fianna Fáil" or "Fianna Éireann"]
[10] Frederick Barbarossa is variously said to lie sleeping under two German mountains to this day. Name either.
ANSWER: **Kyffhäuser** (KIFF-hoy-zer) or **Untersberg** [accept either]

5. Some linguists categorize languages as [this word]-initial, or [this word]-final. For 10 points each:
[10] Name this word in a phrase that determines the syntactic function of the whole phrase. For example, the word "man" plays this role in the phrase "the man with the brown hat."
ANSWER: **head**
[10] The head, specifier, complement, and adjunct are the basic syntactic categories in this theory developed by Noam Chomsky. This theory proposes that all languages have similar syntactical structures.
ANSWER: **X-bar** theory
[10] Chomsky argued that children learn their first languages organically, rather than by being explicitly taught, in a review of this man's *Verbal Behavior.* This behaviorist is often dubbed the father of operant conditioning.
ANSWER: B. F. **Skinner** [or Burrhus Frederic **Skinner**]

6. This novel is narrated by a popular author of superficial romantic fiction named Mr. Twelvemough ("TWELVE"-mow). For 10 points each:
[10] Name this satirical novel in which Mr. Homos exposes the hypocrisy of a bunch of wealthy Americans staying at the same summer resort.
ANSWER: A ***Traveler from Altruria***
[10] *A Traveler from Altruria* is a utopian novel written by this American novelist, a champion of realism who also wrote *The Rise of Silas Lapham.*
ANSWER: William Dean **Howells**
[10] In a letter to its author, Howells objected to the depressing ending of this Henry James novel, which ends with the protagonist reflexively making a motion to withdraw an incriminating letter he had thrown into the fire.
ANSWER: *The **American***

7. Tanya Levin's expose *People In Glass Houses* discusses her life as a member of this church and her eventual expulsion. For 10 points each:
[10] Name this Australia-based global megachurch founded by Frank Houston. It is known for its music-centered worship services and its profitable record label.
ANSWER: **Hillsong** Church
[10] Hillsong is part of this broad Christian movement, which began with the Azusa Street Revival and takes its name from the holiday celebrated fifty days after Easter.
ANSWER: **Pentecostal**ism
[10] Australia's branch of this Pentecostal denomination recently changed its name to the Australian Christian Churches. The 500,000-strong Yoido Full Gospel Church in South Korea is a branch of this denomination, the largest Pentecostal group in the US.
ANSWER: **Assemblies of God**

8. In a major treatise, this author condemned the theory of the sun and moon that gave the Pope prerogative over man's earthly happiness as well as his eternal happiness. For 10 points each:
[10] Name this writer who argued that the Holy Roman Emperor was the custodian of God's authority on earth in his early 14th-century treatise *De Monarchia.*
ANSWER: **Dante** Alighieri [or Dante **Alighieri**]
[10] Dante advocated the power of the emperor as part of this political faction, which fractured into "White" and "Black" subgroups and opposed the Ghibellines.
ANSWER: **Guelph**s
[10] Dante's *De Monarchia* is discussed in the last chapter of this study of political theology by Ernst Kantorowicz (kan-TOR-oh-vitz), which interprets the continuity of dynasties in light of Henri de Lubac's "corpus mysticum."
ANSWER: *The **King's Two Bodies***

9. In a portrait by this artist, a female journalist with bobbed hair, a red-and-black checkered dress, and a monocle smokes while crossing her legs at a cafe table. For 10 points each:
[10] Name this artist of that unflattering *Portrait of Sylvia von Harden*, whose other portrait subjects include the nude dancer Anita Berber, the dermatologist Hans Koch, and the painter Adolf Uzarski.
ANSWER: Otto **Dix**
[10] Otto Dix's paintings were labeled as this type of art by the Nazis. Modernist painters like Ernst Kirchner and Emil Nolde were displayed at a Nazi exhibition of this type of "inferior" art in 1937.
ANSWER: **degenerate** art [or *Entartete* Kunst]
[10] Otto Dix is also known for this macabre series of woodcuts showing subjects like stormtroopers advancing under a gas attack and a skull infested with maggots.
ANSWER: The ***War*** [or Der ***Krieg***]

10. One of the two protagonists of this novel lives with the dog Mutt, a cook, and her grandfather Jemubhai (JEH-moob-"high") in Kalimpong, while the other is the cook's son living illegally in the U.S. For 10 points each:
[10] Name this book in which judge Patel hates all Indian customs, and Sai falls in love with her math teacher Gyan.
ANSWER: The ***Inheritance of Loss***
[10] *The Inheritance of Loss* was written by an Indian novelist with this surname, Kiran. Her mother Anita, who also has this surname, is the author of *Clear Light of Day*.
ANSWER: **Desai**
[10] *The Inheritance of Loss* won the Man Booker Prize the year after this Irish novel narrated by Max Morden, who reflects on his childhood experiences with the rich Grace family while coping with the death of his wife Anna.
ANSWER: The ***Sea*** [by John Banville]

11. The Kasha-Vavilov rule states that the quantum yield of this process is independent of the wavelength of the excitation light. For 10 points each:
[10] Identify this spin-allowed process in which a sample emits light as an electron drops from an excited singlet state to its ground state.
ANSWER: **fluorescence**
[10] This is the term given to the uncommon transition where a molecule absorbs a photon and re-emits a photon of *higher* energy. Photon up·conversion is an example of this process.
ANSWER: **anti-Stokes** shift [prompt on "Raman scattering"; do not accept "Stokes shift"]
[10] This super-resolution fluorescence microscopy technique won the Chemistry Nobel in 2014. It beats the diffraction limit by using a donut-shaped beam to selectively deactivate fluorophores surrounding the focal point, minimizing the illumination area.
ANSWER: **STED** microscopy [or **stimulated emission-depletion** microscopy]

12. John Haldane has sought to rehabilitate this philosophical tradition in modern discourse by devising an "analytical" form of it. For 10 points each:
[10] Name this philosophical tradition which was combined with Kant's transcendental idealism by Bernard Lonergan, and with existentialism by Jacques Maritain (mah-ree-tahn).
ANSWER: **Thomism** [or neo-**Thomism**; prompt on Scholasticism or Catholicism or equivalents]
[10] This philosopher turned to Thomism after deciding that his virtue ethics could not stand without faith in God. This writer criticized the destruction of moral traditions in the Enlightenment in *After Virtue*.
ANSWER: Alasdair (Chalmers) **MacIntyre**
[10] In *After Virtue*, MacIntyre criticizes the "veil of ignorance" propounded by this Harvard philosopher who wrote *A Theory of Justice*.
ANSWER: John (Bordley) **Rawls**

13. This writer chronicled the ways that Joe McGinniss allegedly betrayed the trust of the murderer Jeffrey MacDonald by portraying him as a sociopath in his true crime book *Fatal Vision*. For 10 points each:
[10] Name this longtime *New Yorker* writer who caused a scandal by contending that journalism is "morally indefensible" in *The Journalist and the Murderer*. Jeffrey Masson sued her for $10 million after she covered the controversy surrounding Masson's book *The Assault on Truth*.
ANSWER: Janet **Malcolm**
[10] Masson practiced this profession. In a book describing it as "the impossible profession," Malcolm profiled an ultra-orthodox practitioner of it named Aaron Green, who described the importance of the rule of abstinence in allowing transference.
ANSWER: **psychoanalysis** [accept word forms; prompt on therapy; prompt on analysis; prompt on psychiatry; prompt on psychology]
[10] Malcolm's "The Silent Woman" chronicled the tug-of-war between advocates for these two once-married poets over their legacy, which began with the publication of *Ariel* and *Letters Home* after one of them committed suicide. Both are required.
ANSWER: Sylvia **Plath** and Ted **Hughes**

14. This work describes paganism replacing the Church of the Tithes in a city which this work falsely claims was founded by Normans. For 10 points each:
[10] Name this work found in the Laurentian and Hypatian codices. It describes such events as the arrival of the Varangian brothers and the murder of Dir.
ANSWER: *Russian **Primary Chronicle*** [or the ***Tale of Past Years***]
[10] Nestor's Primary Chronicle details the history of this city. This city in modern-day Ukraine was later Christianized by Vladimir the Great as the capital of medieval Rus.
ANSWER: **Kiev**
[10] The first saints of medieval Rus were these two children of Vladimir the Great; according to the *Primary Chronicle*, they refused to resist their brother by force, leading to their murder planned by Sviatopolk the Accursed. Both are required.
ANSWER: **Boris** and **Gleb**

15. Early in this director's career, he made a series of films with the actress Gong Li, beginning with *Red Sorghum*, and he later directed the acting debut of Zhang Ziyi in *The Road Home*. For 10 points each:
[10] Name this Fifth Generation Chinese director whose oeuvre is a mixture of realist dramas such as *To Live* and lavish *wuxia* (WOO-SHYAH) films such as *Hero* and *House of Flying Daggers*.
ANSWER: **Zhang** Yimou (JAHNG yee-MOH)
[10] Zhang Yimou's fellow Fifth Generation director Chen Kaige (KYE-guh) achieved his greatest success with *Farewell My Concubine*, a film about performers of the Peking variety of this art form. A performer of this art form seduces Rene Gallimard in David Cronenberg's film *M. Butterfly*.
ANSWER: **opera** [prompt on singing]
[10] The work of Fifth Generation directors is often contrasted with the gritty, low-budget indie films of the Sixth Generation, which includes this director, whose most acclaimed works include the state-sanctioned films *The World* and *Still Life*, as well as the early underground masterpiece *Platform*.
ANSWER: **Jia** Zhangke (JYAH jang-KUH)

16. Answer some questions about ancient Central American cities, for 10 points each:
[10] This city, located in present-day Guatemala, contains the Plaza of the Seven Temples, the Lost World complex, and the Temple of the Great Jaguar; its architecture was heavily influenced by the city of Teotihuacan (tay-oh-tee-WAH-kahn).
ANSWER: **Tikal**
[10] This city, known in ancient times as "Big Water," is still as much as 90% unexplored. Its most famous ruler was Pacal the Great, who ruled for 68 years, and it contains Pacal's tomb, the Temple of the Inscriptions.
ANSWER: **Palenque** [or **Lakamha**]
[10] This city, located near Cancun, was one of the last inhabited Maya cities, managing to last 70 years after the arrival of the conquistadors. It served as a port for nearby Coba, and was a major trading hub for obsidian.
ANSWER: **Tulum**

17. The "operational" type of this device has infinite open-loop gain in the ideal case. For 10 points each:
[10] Name this general class of analog electronic devices that increase the power of a signal.
ANSWER: **amp**lifiers [accept specific examples, such as op-**amp**s]
[10] This AC circuit analysis technique replaces nonlinear components, such as amplifiers, with linear components, such as resistors, whose properties are given by their first derivatives near the DC bias points on their characteristic curves.
ANSWER: **small-signal** analysis [or **small-signal** modeling]
[10] This two-stage amplifier feeds a common emitter BJT into a common base BJT or a common source MOSFET ("moss"-fet) into a common gate MOSFET, which gives it better input-output isolation, gain, and bandwidth than a single stage.
ANSWER: **cascode** amplifier [DO NOT ACCEPT "cascade" – ask for spelling if necessary]

18. The narrator of this book goes to Battersea to look for her father's car, which was abandoned when he dropped dead in the street of a heart attack. For 10 points each:
[10] Name this memoir by Helen Macdonald about her efforts to train a bird of prey named Mabel while grieving for her recently deceased father.
ANSWER: *H is for Hawk*
[10] *H is for Hawk* frequently refers to the life and work of this earlier author, who wrote about his own attempt to train a hawk in *The Goshawk*. He also wrote the novel *Mistress Masham's Repose* and a fantasy novel comprising books including *The Ill-Made Knight* and *The Candle in the Wind*.
ANSWER: T. H. **White** [or Terence Hanbury "Tim" **White**]
[10] The aforementioned novel is *The Once and Future King*, which centers on this legendary character who marries Guinevere.
ANSWER: King **Arthur**

19. The final repetition of the words "und Kraft" in this piece unusually lands on a sustained, fortissimo E-flat major chord. For 10 points each:
[10] Name this composition, which begins with a freeform 26-bar *Adagio* during which the piano modulates from C minor to C major and back, and which contains variations on a theme from its composer's song "Gegenliebe."
ANSWER: the *Choral Fantasy* [or the *Choral Fantasia*; or *Fantasy for Piano, Chorus, and Orchestra*; or the *Chorfantasie*; or *Fantasie für Klavier, Chor und Orchester*; prompt on fantasy; prompt on fantasia]
[10] This composer conducted the disastrous premiere of his *Choral Fantasy* at an 1808 concert in Vienna, which also premiered his "Pastoral" Symphony.
ANSWER: Ludwig van **Beethoven**
[10] Beethoven also gave the public premiere of this G major work at the same concert, playing the solo part himself. After an opening phrase played by the soloist alone, the strings enter with a surprising B major chord.
ANSWER: **Piano Concerto** No. **4** [or the **Fourth Piano Concerto**; prompt on piano concerto]

20. A character in this play says he doesn't know where hamsters belong while defending his choice to let Nibbles run away on the sidewalk. For 10 points each:

[10] Name this play, in which two couples meet to discuss a playground altercation between their children and devolve into savagery. A turning point occurs when Annette vomits over previously praised coffee table books.

ANSWER: _**God of Carnage**_ [or Le _**Dieu du Carnage**_]

[10] _God of Carnage_ was written by this contemporary French playwright. Three friends turn against each other after one of them spends a fortune on a modern white painting in this author's play '_Art_'.

ANSWER: Yasmina **Reza**

[10] Reza's plays have won several French theatre awards named for this comic playwright of _The Miser_ and _The School for Wives_.

ANSWER: **Molière** [or Jean-Baptiste **Poquelin**]