Penn Bowl 2015 Packet 12

Editors: Eric Mukherjee, Rob Carson, Chris Chiego, Patrick Liao, Saajid Moyen, Ike Jose, Eddie Kim Writers: JinAh Kim, Jaimie Carlson, Sarita Jamil, Max Smiley, Ben Cushing, Carol Wang, David Ferguson

## **Tossups**

1. A model of this situation with non-monotonic non-linear reaction functions was developed by David Rand and showed chaotic dynamics. The durability of a system of this type was demonstrated in a "linear city" model by Hotelling. Another model of this situation states that in absence of fixed costs of production, as N goes to infinity, price converges to marginal cost and was created after observation of a spring water market. A game that models this type of system has a leader and a (\*) follower take turns making changes in production quantity; that game assumes perfect information and is named after Stackelberg. The two main models of this system differ in whether firms adjust price or quantity; these are the Bertrand and Cournot (coor-NO) models. Barriers to entry can ensure these systems form and propagate. For 10 points, name this economic system in with only a few firms.

ANSWER: duopoly [or oligopoly; do NOT accept "monopoly" or "monopsony"]

2. When P-Y-K-2-B is knocked out, the marginal zone type of these cells do not develop at all. A DNA translocation causes overexpression of cyclin D in the mantle cell cancer of these cells. Blisibimod (bleh-SEE-bee-mod) binds to BAFF to decrease survival of these cells, and the monoclonal antibody rituximab also targets them by binding to C-D-20. These cells fail to develop in patients with mutations in Bruton's Tyrosine Kinase. Infection with Epstein-Barr (\*) virus has been correlated with cancers related to these cells, including the diffuse large cell one. Upon activation, these cells further differentiate into memory cells and plasma cells, the latter of which secrete antibodies. For 10 points, name these lymphocytes that are produced in the bone marrow.

ANSWER: **B cells** [or **B lymphocytes**; prompt on "lymphocytes"]

3. An uprising against colonial rule in this modern-day country was led by the MDRM political party and began during the fandroana New Year festival. One leader of this nation is best remembered for marrying a Prime Minister who helped murder the previous King and for banning Sunday markets. One war in this nation was triggered by the cancellation of the Lambert Charter. Under the missionary David Jones, the writing system of this nation was changed from the (\*) sorabe script to the Latin alphabet; this reform was conducted under the king Radama I. This nation, which was the site of the Franco-Hova wars against the Merina Kingdom, was suggested as a destination for the deportation of European Jews by Hitler. For 10 points, name this nation ruled by several queens named Ranavalona and home to the Malagasy ethnic group, an island off the coast of Africa.

ANSWER: Madagascar

4. One group of creatures known for their prowess at this activity turned white and dove into the sea at Aptera. During the Dreamtime, creator spirits moved across the world in "lines" named for this activity. Another person proficient at this activity was offered sex for nine nights if he could win a contest; instead, that student of Linus named (\*) Thamyris (tuh-MY-riss) was blinded. Joukahainen (YO-cuh-HIGH-nin) and Vainamoinen (VAY-nuh-MOY-nin) engage in a contest of this activity, after which Joukahainen sinks into a bog. A decapitated head continued to do this action even after its body was torn apart by the Maenads (MAY-nads). In order to counter one instance of this activity, a commander orders himself tied to the mast of a ship while his crew stuffed wax into their ears. For 10 points, name this action performed by the sirens to lure sailors into crashing.

ANSWER: **singing** [accept "**music**," though the clues are all about singing; accept word forms like "song"; do NOT accept things like "playing the lyre", as they are not singing]

- 5. Anna Chromy used this material to make the fifteen-foot high Cloak of Conscience. Edward Onslow Ford used it to create the Shelley Memorial at University College, Oxford. The two sculptures Blessed Soul and Damned Soul were made out of this substance. Auguste Rodin used this material for the version of his sculpture The Kiss that was a companion piece to his Monument to Balzac. This material was used to create a sculpture in which its subject holds a staff and a golden orb of victory that work shows (\*) Napoleon as Mars the Peacemaker. Antonio Canova's (kuh-NOH-vuh) statues of Cupid and Psyche and The Three Graces were made using this material, since it was used to represent austerity in neoclassicism. Thomas Bruce, an English lord, controversially exported a frieze whose sculptures were made out of it. For 10 points, name this rock which gives its name to a set of sculptures pilfered by Lord Elgin. ANSWER: marble
- 6. The protagonist of a story by this author imitates the accents of the Rigleys while inquiring with them if another character had been seen in the Prince of Wales pub. After putting John and Annie to bed, the protagonist of that

story attempts to track down her late-arriving husband Walter, only to learn of his death in a coal mine collapse. He wrote a story in which Oscar (\*) Cresswell ensures that Hester will receive "one thousand pounds at a time" on her birthday for the next five years. In that story by this man, Paul is driven by the house whispering "there must be more money" to win 80,000 pounds by riding a certain toy for hours into the night. For 10 points, name this author of "Odour of Chrysanthemums" and "The Rocking-Horse Winner," who scandalized audiences with Constance's relationship with the gamekeeper Oliver Mellors in *Lady Chatterley's Lover*.

ANSWER: D.H. <u>Lawrence</u> [or David Herbert <u>Lawrence</u>]

- 7. This period saw the collision of the Smartville Terrane with the North American Plate as part of the Nevadan Orogeny that produced the Mother Lode of gold in present-day California as well as the oldest plutons of the batholith of the Sierra Nevada. The lobster-like Eryon (AIR-yon) is one of many well-preserved fossils in a lithographic limestone formation laid down during this period in salty lagoons that produced a complete feathered Archaeopteryx (AR-kay-OP-ter-icks) in the Solnhofen Limestone. Rivers and floodplains along the shores of the (\*) Sundance Sea produced layers of reddish-grey siltstone and sandstone that make up its Morrison Formation. Alexander von Humboldt helped name this period for rocks in a French mountain range and it includes fossils of Stegosaurus and Allosaurus. For 10 points, identify this geologic period that comes after the Triassic and before the Cretaceous. ANSWER: Jurassic period
- 8. The second part of this text claims that an ancestor is transformed into a god at the "maximum of fear," and ends with advice to oppose the "conscience-vivisection and cruelty to the animal self." The author of this work, which criticizes Ernest Renan for being a "contemplative" historian, claims that this polemic was inspired by his anger at reading a treatise on the origins of altruism by Paul Rée. Its second section, which discusses guilt, imagines a race of conquerors and lords who establish a "state" since their enemy is formless. This book blames priestly advocacy of repentance for plagues of dancing mania and witch-hunts, and posits science and "comedians of the ideal" as ways to oppose (\*) damaging asceticism. This work analyzes the debtor-creditor relationship and discusses "bad conscience," and its idea of the "blond beast" returns in the author's *The Twilight of the Idols*. For 10 points, name this 1887 book by Friedrich Nietzsche about the development of conceptions of good and evil.

ANSWER: On the <u>Genealogy of Morals</u> [or On the <u>Genealogy of Morality</u> or <u>Toward the Genealogy of Morals</u> or <u>Zur Genealogie der Moral</u>]

9. This navy was significantly expanded after the Haldane Mission failed. The founder of this navy put forward the idea that its opponents would be unable to concentrate its forces against this navy locally, an idea he called Risk Theory. This navy, the bulk of which was headquartered at Jade Bight, attempted to take Estonia during the Battle of Moon Sound, as part of Operation Albion. This navy was ordered to stay near port after a battle in which David (\*) Beatty's forces inflicted severe damage to it at the Battle of Heligoland Bight. The majority of this navy was scuttled in Scapa Flow a few days before the signing of the Treaty of Versailles. This navy was taken by surprise when Admiral Jellicoe managed to cross the T against them at the Battle of Jutland. For 10 points, name this fleet significantly expanded by Admiral Alfred von Tirpitz (TURR-pits) for Kaiser Wilhelm I.

ANSWER: Imperial <u>German</u> Navy [or the German <u>High Seas Fleet</u>; or <u>Kaiserliche Marine</u>; or <u>Hochseeflotte</u>; or <u>Deutsche</u> Marine; prompt on "Marine"; do not accept "Kriegsmarine"]

- 10. James Russell Lowell referred to one author with this surname as "an angel with clipped wings". That author wrote the book *Observations on the Principles and Methods of Infant Instruction*, which was much better-received than his series of dense, incomprehensible "Orphic Sayings". Another author with this surname created the vaguely Satanic Philip Tempest, who tracks Rosamond Vivian across Europe in the titular "long fatal love chase". This is the surname of the author who created a family that shares its Christmas breakfast with the poor (\*) Hummels, much to the delight of the matriarch Marmee. That author by this surname created a character who writes stories for the *Daily Volcano* and marries Professor Bhaer instead of Theodore Laurence, who marries her sister Amy instead. For 10 points, give the surname shared by father Amos Bronson and daughter Louisa May, the author of *Little Women*.

  ANSWER: Alcott
- 11. A character in this play quotes a poem which claims it is not much use to warm a single body, and that it would be better to have a rug ten thousand feet long. That character in this play pays 20 silver dollars for walnut shelves worth much more, and ignores the carpenter when he asks to do business with his cousin instead. The protagonist of this work buys a tobacco shop with the rent she receives for one night's lodging, and is the only person to help the water-seller (\*) Wang at the beginning of the play. After being arrested for his murder, it is revealed that the protagonist's cousin was invented by her as a self-interested male alter ego to help her survive in the town, and the Illustrious Ones

realize that they have prevented Shen Te from becoming the title entity. For 10 points, name this play in which Shen Teh struggles to maintain an ethical life in a certain Chinese city, by Bertolt Brecht.

ANSWER: The <u>Good Woman of Setzuan</u> [or The <u>Good Person of Szechwan</u>; or Der <u>gute Mensch von Sezuan</u>]

12. This theory is uniquely described by P-P-N parameters of beta and gamma that are equal to one and the rest are equal to zero. One phenomenon predicted by this theory was confirmed by the observation of Q0957+561. Solutions to one equation central to this theory that are spherically symmetric must also asymptotically flat and static. One side of the central equation of this theory is 8 pi G over c to the fourth power times the (\*) stress-energy tensor. Predictions of this theory include the idea that light radiating away from a massive body will have longer wavelengths and that orbits carve out a rose curve shape over time. The original version of that equation included a value that multiplied the metric tensor to achieve a static universe; that is the cosmological constant. For 10 points, name this theory developed by Einstein, which states that gravity is caused by the curvature of space by massive bodies.

ANSWER: General Relativity [or GR]

- 13. The sudden transition between two different mechanisms of this process is illustrated on the Nakiyama curve and is sometimes called this namesake process' "crisis." The entropy of this process is equal to approximately ten point five times the ideal gas constant according to Trouton's (TROW-tonz) rule. One device used to affect this chemical process contains a motor that rotates a flask containing the sample; that apparatus is used for (\*) solvent removal. Nucleation during this process can cause a rapid expulsion of substance out of the tube in a process called bumping, which can be prevented by porous granules called chips. The temperature at which this occurs is elevated by the addition of solute in a colligative property. For 10 points, name this process in which a liquid changes into a gas. ANSWER: boiling [or evaporation]
- 14. During this event, women participants have their hair braided into three braids. Women can use up to five pieces of cloth during this event, while men traditionally use three. Same-gendered family members perform ghusl on the participant in this event at least three times, but can continue for any number of odd times. The prayer for this event has no bowing or prostration but, like the Eid prayer, has an additional four takbirs (tuck-BEERZ). That prayer takes place in an auxiliary room or courtyard, but cannot take place in a (\*) mosque itself. Some women must observe the iddah after this event for four months and ten days, during which they cannot interact with na-mahram. The Salat al-Janazah (sal-AT al-juh-NAAZ-uh) prayer is performed during this event. Kafan is the use of an inexpensive white cloth in preparation for this event, which involves placing three handfuls of soil into the ground perpendicular to the qiblah (KEY-bluh). For 10 points, name this event which must be undertaken immediately after death in Islam.

  ANSWER: funeral [also accept burial or equivalent, but do not accept "death"]
- 15. In the top left of one of this artist's paintings, angels who have been expelled from heaven transform into insects. That painting by this artist features Adam and Eve in front of the cherub with a flaming sword at the bottom left, and at the bottom middle of that painting a corpulent friar sits on a chair as he commands a nun to stuff the title "holy" substance into a sack. When that painting by this artist is closed, one can make view this artist's *The Wayfarer*. This artist made a painting in which a blue demon climbs a (\*) ladder to a tower across from a dentist in a painting where the title structure is pulled by an anthropomorphic fish demon. Another of this artist's triptychs, which also hangs in the Prado, shows a blue globe within a lake surrounded by scenes of Heaven and Hell. For 10 points, name this artist of *The Hay Wain* and *The Garden of Earthly Delights*.

ANSWER: Hieronymus Bosch

ANSWER: The Brief Wondrous Life of Oscar Wao

16. The protagonist of this novel stops hanging out with his friends Al and Miggs when they get girlfriends and, later, falls in love with a girl he sees reading *Tropic of Cancer* at an SAT review course, but Ana rejects him for Manny. After two Elvis-like cops beat a character in this novel and cause her to have a miscarriage, leaving her for dead in a cane field, a golden-eyed (\*) mongoose leads her to safety. This novel's third chapter is titled for the "three heartbreaks" of the protagonist's mother, Belicia Cabral. The central families of this novel are haunted by a *fukú*, or curse, incurred in part by defiance of Rafael Trujillo. Yunior is the narrator of, for 10 points, what novel about a nerdy Dominican teenager growing up in New Jersey, written by Junot Diaz?

17. In September 2015, Thomas Nyhan, the director of one of these called Central States, filed an application to restructure one of these things that would exempt UPS but would greatly affect the Teamsters. New York State Comptroller Thomas DiNapoli announced that he was reducing an assumption regarding one of these from 7.5 to 7 and DROPs are often used to compensate people who delay drawing from these entities. The PBGC partially insures these entities and Governor Jerry Brown signed legislation in October 2015 that removed (\*) coal companies from

one of these known as CALPers. Defined benefit plans that draw from these entities have been losing favor compared to 401k-style plans that match employee contributions in investments. For 10 points, identify these financial asset pools meant to provide payments to employees in retirement.

ANSWER: pension funds [Accept more specific forms like defined benefit pensions; prompt on "retirement" plans]

18. Parson Brownlow attempted to curb the activity of this organization by hiring Seymour Barmore to infiltrate it. Members of this organization often used concealed flasks to appear to drink enormous amounts of water. A leader of this group, James "Catfish" Cole, was attacked by Lumbee Indians outside of Maxton, North Carolina. Stetson Kennedy infiltrated this organization and gave its (\*) codewords to the creators of the *Superman* radio show. One leader of this group imprisoned for the murder of Madge Oberholtzer was D.C. Stephenson. A revival of this group was conducted by William Joseph Simmons at a ceremony on top of Stone Mountain, while its first iteration was founded in Pulaski, Tennessee and was headed by Nathan Bedford Forrest. For 10 points, name this white supremacist organization notable for its cross burnings and white hoods.

ANSWER: KKK [or Ku Klux Klan]

19. One philosopher from this city proposed ten "tropes," including "objects are only known indirectly through the medium of air," to explain his rejection of absolute knowledge. A group of figurines found here have ropes with a sacral knot between their oversized breasts. The queen's megaron (MEG-uh-ron) found here contains a notable example of a flushing toilet. Water was brought here via aqueducts from a spring near Archanes (ar-KAY-neez), and this city, the home of several figurines of the (\*) Snake Goddess, was conquered by Mycenae (my-SEE-nay) around 1450 BC. The Wingspread Convention is used to describe one set of writing used here, which was deciphered by John Chadwick and Michael Ventris and called Linear B. A palace in this city contained around 1,300 rooms, including space for livestock and grain storage, and was partially restored with concrete by Arthur Evans. For 10 points, name this capital of Bronze Age Crete, which was probably not really home to the Minotaur.

ANSWER: Knossos

20. This composer's String Quartet No. 8 has a slow second movement marked "to be treated with much sentiment," and has an Allegretto third movement in which a middle section marked "Maggiore" (mah-JOH-ray) sits between outer sections in E minor, which is the piece's key. Two string quartets by this composer have an exotic "Thème russe" (tem rooss). His Piano Trio No. 7 is named for the royal title held by his patron (\*) Rudolf of Austria. This composer separately published the original finale of his String Quartet No. 13 as the *Grosse Fuge (GROSS-uh FOO-guh)*. He wrote the *Archduke* Trio and the *Razumovsky* Quartets, and used a theme from his ballet *The Creatures of Prometheus* in his Symphony No. 3, which includes a C minor funeral march second movement and was rededicated to the memory of a great man, rather than to Napoleon Bonaparte. For 10 points, name this composer of the *Eroica* Symphony. ANSWER: Ludwig van Beethoven

## Bonuses

1. This substance becomes tephra in explosive ejections. For 10 points each:

[10] Name this molten rock that is found below the Earth's surface and becomes lava once it reaches the surface.

ANSWER: magma

[10] This type of magma likely makes up the rising subduction-zone and is the hottest and fastest flowing, in contrast to the rhyolitic (RYE-oh-LIT-ick) and andesitic (AN-duh-SIT-ick) types.

ANSWER: **basal**tic lava [or **mafic** lava]

[10] This physical pattern is the result of fractional crystallization and describes the layers on the surface of rock formed from magma.

ANSWER: flow banding

- 2. In the "Jupiter, the Bringer of Jollity" movement of *The Planets*, these instruments play the opening theme over string ostinatos. For 10 points each:
- [10] Name this instrument which also plays a solo at the very start of the "Venus" movement. At the start of "Mars," the opening theme is presented by two of these instruments, plus two bassoons and a contrabassoon.

ANSWER: French horn [do not accept "English horn"]

[10] This English composer wrote *The Planets* in addition to two suites for military band.

ANSWER: Gustav Holst [or Gustav Theodore Holst; or Gustavus Theodore von Holst]

[10] This German composer wrote a Symphony in B-flat for Band. Music from his symphony *Mathis der Maler* was reworked into an opera about the painter Matthias Grünewald.

ANSWER: Paul Hindemith

- 3. According to Wikipedia, the event that sets the plot of this novel in motion involves "a stitching miracle". For 10 points
- [10] Name this work that ends with the main character, Medardo (muh-DAR-doh), marrying Pamela and regaining his position in Terralba after Dr. Trelawney rejoins Gramo and Buono, who are also known as "the Bad 'Un" and "The Good 'Un".

ANSWER: The Cloven Viscount

[10] The Cloven Viscount is by this Italian author of Cosmicomics and If on a winter's night a traveler. Marco Polo describes the title locations to Kublai Khan in his novel Invisible Cities.

ANSWER: Italo Calvino

[10] After finding that you have not in fact purchased *If on a winter's night a traveler* in the novel of that name, you return it to a bookstore, where you meet this character. Later, you also encounter her sister Lotaria.

ANSWER: Ludmilla Vipiteno [prompt on "the Other Reader"]

- 4. This monarch was opposed by an alliance of nobles led by the figurehead Duke of Berry, the League of the Public Weal. For 10 points each:
- [10] Name this king of France and successor to Charles VII, who seized the Duchy of Burgundy after winning a war against Charles the Bold.

ANSWER: <u>Louis the</u> Universal <u>Spider</u> [or <u>Louis XI</u> or <u>Louis the Cunning</u>]

[10] An uprising that the young Louis joined against his father was named for this city. A Prussian bombardment of this city in 1757 damaged its St. Vitus' Cathedral.

ANSWER: Prague

[10] Louis XI gained a significant advantage over Burgundy by signing this treaty with Edward IV of England. It also included the payment of a ransom of 50000 crowns for Margaret of Anjou.

ANSWER: Treaty of **Picquigny** 

- 5. A classic example of these things is related in a story about a visitor to Oxford, who is taken to several buildings, but then asks "where is the university?" For 10 points each:
- [10] Name this type of philosophical statement in which an object is given a property that it can't have, like saying that "time is green."

ANSWER: category error [or category mistake]

[10] The concept of "category errors" were outlined in this seminal philosophical text by Gilbert Ryle, which refutes the "ghost of the machine doctrine" presented by dualists.

ANSWER: The Concept of Mind

[10] *The Concept of Mind* criticizes the dualism advocated by this philosopher. He used the example of wax to show that only the intellect can understand the properties of an object in his *Meditations on First Philosophy*.

ANSWER: Rene Descartes

- 6. Answer some questions about a model organism, for 10 points each.
- [10] This diploid organism has only five chromosomes and is usually genetically transformed using *A. tumefaciens (TOO-muh-FAY-sens)*. This plant is also called the thale cress.

ANSWER: *Arabidopsis* thaliana (uh-RAB-uh-dop-sis)

[10] MITE, *gypsy*-like, *copia*-like and the *Basho* family are some of these elements found in Arabidopsis. In *Drosophila* (*druh-SAW-fill-uh*), these genes include P elements.

ANSWER: <u>transposons</u> [or <u>transposable elements</u> or <u>jumping genes</u>]

[10] Retrotransposons include LINEs, SINEs, and those that contain these elements at their ends. HIV also has these elements at the ends of its genome which contain U3, R, and U5 regions.

ANSWER: **long terminal repeats** [or **LTR**]

- 7. One of these events in 1888 was named for the "Children" because it took place just as schoolteachers were letting pupils out of school. For 10 points each:
- [10] Identify these events, one of which in 1887 was known as the "Great Die Up." They often affected areas in Western Kansas and the Dakotas.

ANSWER: blizzards [accept: snowstorms]

[10] Many of these creatures perished during the Great Die Up, signaling the end of the "open range" and the consolidation of large ranches. Barbed wire was also used to control them.

ANSWER: **cattle** [accept: **cow**s]

[10] This 1883 event began after crackdowns on the rounding up of mavericks and affected ranches like the LIT and LS for about three months.

ANSWER: The Cowboy Strike

8. Answer the following about bears in mythology, for 10 points each:

[10] One kingdom in this modern-day country traced its royalty back to a bear; that bear lived in a cave for 100 days eating only garlic and mugwort before being turned into a woman for her perseverance.

ANSWER: Korea [prompt on China]

[10] A daughter of Lycaon (LIE-kay-on) named Callisto was raped by Zeus and turned into a bear. Callisto was a follower of this virgin huntress, whose mother Leto was forbidden to give birth on terra firma.

ANSWER: Artemis

[10] This son of Vishnu and "King of the Bears" assisted Rama. He fought Krishna and later gave him his daughter as a wife; he also saw Vamana and Kurma, and may have witnessed all nine avatars of Vishnu.

ANSWER: Jambavan

9. This character finds a poem pinned to a tree that claims "from the east to western Ind, no jewel is like" her.. For 10 points each:

[10] Name this character who disguises herself as a shepherd named Ganymede, then lives in exile in the forest with the fool Touchstone and her cousin Celia, who disguises herself as "Aliena".

ANSWER: Rosalind

[10] Rosalind and Celia marry Orlando and Oliver as Duke Senior is restored to his title at the end of this Shakespeare comedy. Jaques (JAY-kweez) describes the seven ages of man in this play's "All the world's a stage" speech.

ANSWER: As You Like It

[10] According to Nicholas Rowe, the character of Adam from *As You Like It* originally shared this distinction with the Chorus from *Henry V* and the ghost of Hamlet's father.

ANSWER: they were all roles **play**ed onstage by **Shakespeare** himself [accept similar answers that express the same idea]

10. Princesses emerge from this work's title objects; two die of thirst and one is turned into a giant rat. For 10 points each: [10] Name this satirical opera in which Leandro and Smeraldina help Fata Morgana try to kill the Prince because he

laughed when she fell over.

ANSWER: The Love for Three Oranges

[10] This Russian composer of *The Love for Three Oranges* and *Peter and the Wolf* also created a suite for a film in which a bureaucratic typo causes clerks to fake a military officer's life, *Lieutenant Kije*.

ANSWER: Sergei Prokofiev

[10] Prokofiev also composed this opera, in which Ruprecht falls in love with Renata, who believes that Otterheim is an heavenly creature with whom she fell in love.

ANSWER: The Fiery Angel

11. This man often collaborated with his wife Hilda, and the duo later worked on the excavation of the Tell-el-Ajull Mound in Gaza. For 10 points each:

[10] Name this archaeologist who was notable for using seriation during his excavations of Diospolis Parva. His most notable work may be the translation of the Merneptah (murr-NEP-tuh) Stele.

ANSWER: Sir William Matthew Flinders Petrie

[10] The Petrie's were most notable for their work in this nation. Champollion's (sham-POL-ee-onz) work on the Rosetta Stone allowed the translation of the hieroglyphs script used by its ancient forebearer.

ANSWER: Egypt

[10] The Merneptah Stele translated by Petrie was originally discovered at this archaeological site and ancient Egyptian city that lies within the modern city of Luxor.

ANSWER: Thebes

12. Name some short stories written by American women, for 10 points each:

[10] A cat named Pitty-Sing causes a car accident in, but is one of the few characters to survive, this Flannery O'Connor story that describes a family's encounter with a murderer named The Misfit.

ANSWER: "A Good Man is Hard to Find"

[10] Connie, the protagonist of this oft-anthologized Joyce Carol Oates story, often hangs out at a Big Boy restaurant, where she encounters a man in a writing-covered golden car who later leads her away from her house to an ambiguous fate. ANSWER: "Where Are You Going, Where Have You Been?"

[10] In this story by Eudora Welty, the protagonist complains about the favoritism her family shows to her sister, Stella-Rondo, who shows up at home with her "adopted" daughter Shirley-T.

ANSWER: "Why I Live at the P.O."

- 13. This quantity is measured using an apparatus whose internal resistance should be as close to zero as possible. For 10 points each:
- [10] Name this quantity symbolized I, which is equal to the amount of charge moving past a point per unit time. It is commonly measured in amperes.

ANSWER: current

[10] A microscopic version of Ohm's law states that this quantity is equal to the electric field times the electron's mobility. This quantity is equal to the speed an electron obtains as a field is applied to it.

ANSWER: drift speed or drift velocity

[10] Another expression of Ohm's law states that this quantity times the electric field is equal to the current density.

Symbolized sigma, it is increased in water by dissolving electrolytes and is measured in Siemens per meter.

ANSWER: conductivity

14. Dutchbat soldiers were unable to prevent this event, and the Zvornik 7 managed to escape this event, but were later tried for illegal possession of firearms. For 10 points each:

[10] Name this 1995 Massacre in which 8000 Muslim Bosniaks were killed in the namesake town. It was carried out by VRS and a paramilitary group called the Scorpions.

ANSWER: Srebrenica massacre (SREH-breh-neet-SAH)

[10] This war criminal nicknamed the "Butcher of Bosnia" is currently being tried alongside Radovan Karadzic (kuh-RADsick) by the Hague for his role in the Srebrenica (SREH-breh-neet-SAH) massacre. His arrest was an unstated condition for Serbia joining the EU.

ANSWER: Radko Mladic

[10] Intervention in the Bosnian War via the IFOR group was headed by this supranational military organization headquartered in Brussels. It also headed the 2001 invasion of Afghanistan and the 2014 bombings in Libya..

ANSWER: NATO [or North Atlantic Treaty Organization; or OTAN or Organization du traité de l'Atlantique Nord]

15. The Bezeklik Thousand Buddha Caves, home to an enormous amount of preserved Buddhist cave paintings, are found within this desert. For 10 points each:

[10] Identify this desert within the Tarim Basin that contains the ruins of the trading city of Gaochang as well as a unique system of wells that exploit the depth of the Turpan Depression to create oases.

ANSWER: Taklamakan Desert [or Taklimakan or Teklimakan]

[10] The Taklamakan is bordered on its north by this mountain range through which the Fergana Valley cuts. This range is located south of the Altai Mountains but north of the Pamir Mountains and contains Lake Issyk Kul.

ANSWER: Tian Shan

[10] The Taklamakan is part of the Xinjiang Autonomous region of this country despite the opposition of the local Uighur Muslim minority. This country also controls neighboring Tibet.

ANSWER: China

16. An example of one of these conditions is one in the Hmong (mong) that causes sudden death while sleeping, and "fan death" among Koreans. For 10 points each:

[10] Name these mental conditions that are recognized only within specific societies.

ANSWER: **culture-bound** syndromes [or **culture-specific** syndrome or **folk illness**]

[10] Culture-bound syndromes occupy a section of the fourth edition of this manual of mental illnesses, whose fifth edition was published somewhat recently.

ANSWER: **DSM** [or **Diagnostic and Statistical Manual** of Mental Disorders]

[10] Another culture-bound syndrome is this one, common in Western Asia, which can be fended off by a charm called a nazar. Among Muslims, it is fended off by saying "praise God" in response to a compliment.

ANSWER: evil eye [accept ayn al-hasud]

17. This event occurs in the Lumbini Pleasure Garden while Queen Maya is holding onto a branch of an ashoka tree which magically bends down for her. For 10 points each:

[10] Name this event celebrated on the holiday of Vesakha, which was presaged by Maya having a vision of a white elephant entering her. A description is acceptable.

ANSWER: Birth of the Buddha [accept equivalents replacing Siddharta Gautama or Shakyamuni for Buddha]

[10] The birth and life of the Buddha is told in the Lalita-vistara one of these texts, others of which include the Diamond, Heart, and Lotus. Its name comes from the word for sewing and they are usually collections of aphorisms.

ANSWER: sutra

[10] The Buddha's first sermon was given in the modern day city of Sarnath, in one of these rustic locations.

ANSWER: <u>Deer Park</u> [or <u>Deer Forest</u>; accept <u>Migadaya</u> or <u>Mgrigadaya</u> or <u>Isipatana</u>; prompt on partial answer but it has to have "Deer" plus either "park" or "forest"]

18. Answer the following about the works of Kenzaburo Oe, for 10 points each:

[10] This novel describes the lives of brothers Mitsusaburo and Takashi, their return to their home village in Shikoku, and Takashi's organization of a football club among the youth of the village. It is revealed that Takashi had an incestuous relationship with their mentally retarded sister, and he commits suicide.

ANSWER: The Silent Cry [or Man'en Gannen no Futtoboru or Football in the First Year of Man'en]

[10] This protagonist of the semi-autobiographical novel *A Personal Matter* struggles with the care of his mentally disabled son, who was born with a brain hernia. He was originally in favor of letting the child die instead of living as a "two-headed monster."

ANSWER: **Bird** [or **Bado**]

[10] This 1972 novella is narrated by a dying man who sings "Happy Days Are Here Again" in expectation of his death. He recalls seeing "a shining gold chrysanthemum" that "irradiated his Happy Days."

ANSWER: The Day He Himself Shall Wipe My Tears Away [or Mikuzaka Waga Namida o Nugui Tamau Hi]

19. This art movement promoted a "Tactile Dinner," where guests have to wear sandpaper pajamas and bury their faces in plates of salad. For 10 points each:

[10] Name this avant-garde Italian art movement founded by Filippo Marinetti which praised speed and modernity and called war "the world's only hygiene."

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

[10] This futurist sculpted a running figure in *Unique Forms of Continuity in Space* and painted a woman on a balcony looking down at a busy lane in *The Street Enters the House*.

ANSWER: Umberto Boccioni

[10] Boccioni's first major futurist work was this painting of workers trying to hold down a red and blue horse with ropes. It depicts the construction of an electric power plant.

ANSWER: The <u>City Rises</u> or La <u>città che sale</u>

20. Gerhard Ertl won the 2007 Nobel partly for his work on the mechanism of this reaction. For 10 points each:

[10] This reaction, which operates at a pressure of 200 bar and a temperature of 500C, is currently the primary method of producing ammonia on an industrial scale, and uses nitrogen and hydrogen gas as its starting materials.

ANSWER: Haber-Bosch process

[10] The most popular Haber catalysts are iron-based, but the KAAP variation of the process uses catalysts based on this metal instead. Though more expensive, they are also 20 times more active than their iron counterparts.

ANSWER: **ruthenium** [accept **Ru**]

[10] Much of the ammonia formed from the Haber process is used in the production of this acid, which comes in red and white fuming varieties. It is also known as aqua fortis.

ANSWER: nitric acid [also accept HNO3; do not accept nitrous acid]