2019 Wayzata Academic Invitational Tournament
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Packet 1

Tossups

1. These molecules can be converted to alcohols by treatment with mercuric acetate. Dehydrating an alcohol with strong acid produces these molecules in a mechanism that obeys Zaitsev's rule. While these molecules aren't cyclic, E/Z notation is used to specify the configuration of substituents of these molecules since they can display (*) cis-trans isomerism. These molecules possess a pair of adjacent sp2 [s-p-two] carbons and have a general formula of C_nH_{2n} [C-N-H-two-N]. Ethylene and propene are examples of, for 10 points, what hydrocarbons that contain a carbon-carbon double bond?
ANSWER: **alkene**s [or **olefin**s; prompt on "**hydrocarbon**s" before read] <BL> Ed. GC

2. Along with Theseus, this ruler was named as one of the founders of Athens on his namesake arch. Pompeia Plotina, the wife of this man's predecessor, facilitated his rise to power. This emperor created a secret police from a grain collection agency known as the (*) *frumentarii* [froo-MENT-uh-rye]. Sextus Julius Severus was sent by this man to quell a rebellion in Judea. This emperor, who crushed the Bar Kokhba [bar KOK-bah] revolt, had his deceased lover Antinous deified after drowning and named Antoninus Pius as his successor. For 10 points, name this emperor who built a namesake wall in Britain.
ANSWER: Publius Aelius **Hadrian**us <AK> Ed. TH

3. Members of this organization attempted to incarcerate writer Paulette Cooper in the failed Operation Freakout. A cruise ship belonging to this organization called *Freewinds* was quarantined in Saint Lucia in May 2019 due to a measles outbreak. In this organization, the Bridge to Total Freedom involves becoming an Operating (*) Thetan after reaching the Clear state. In this religion's Wall of Fire myth, humans were killed by hydrogen bombs placed in volcanoes by the alien Xenu. Tom Cruise is a practitioner of, for 10 points, what "religion" founded by science-fiction writer L. Ron Hubbard?
ANSWER: Church of **Scientology** [do not accept "Church of Science"] <CS> Ed. JK

4. A character in this novel advises her sister to seek help from Corrine and, after leaving her husband, creates a business making pants. Another character in this novel is jailed for saying "Hell, no" to the mayor's wife; that character's husband, Harpo, has an affair in this novel with Mary Agnes, whom he calls (*) Squeak. Another affair in this novel occurs between Mister and a blues singer billed as Queen Honeybee, Shug Avery. In this novel, a girl raped by her father writes letters to God. For 10 points, name this epistolary novel about Celie, written by Alice Walker.
ANSWER: The **Color Purple** <CS> Ed. JK

5. A work by this thinker opens, "We are deceived by the appearance of right"; that work by this thinker discusses how arts and sciences arose from vanity. This thinker discussed how *amour de soi* [a-mor de swah], or self-love, transformed into *amour propre* [a-mor proh-pruh], or pride. This thinker, who is often incorrectly associated with the term (*) "noble savage," wrote *A Discourse on Inequality*. It's not Lenin, but this thinker asked, "What is to be done?" after people form an agreement to be governed in exchange for security. "Man is born free, and everywhere he is in chains," opens a work by, for 10 points, what Enlightenment-era French philosopher of *The Social Contract*?
ANSWER: Jean-Jacques **Rousseau** <AK> Ed. GC

6. On an island in this body of water, Colonel John Wilcox started a short-lived "agricultural and horticultural association" that was actually a free-love community; that island in this body of water is the home of the Bluff Point Light and is Valcour Island. The Abenaki tribe gave the name Tatoskok to a large horned (*) serpent that allegedly lives in this lake. This lake, which separates the Adirondacks from the Green Mountains, sits adjacent to Fort Ticonderoga. For 10 points, name this lake that borders both New York and Vermont and is named for a French explorer.
ANSWER: Lake **Champlain** <BW> Ed. BS

7. A scandal during this man's presidency was exposed after Henry McComb leaked damaging letters to *The Sun.* James Frisk and Jay Gould's attempted cornering of the gold market led to a panic dubbed Black Friday during this man's presidency. Oakes Ames was involved in a scheme in this man's presidency in which Ames undersold (*) railroad construction shares. Benjamin Bristow implicated this president's secretary, Orville Babcock, in another scandal. For 10 points, name this president whose presidency was troubled by the Crédit Mobilier [cray-dee moh-bil-ee-air] and Whiskey Ring scandals, a former Union general in the Civil War.
ANSWER: Ulysses S. **Grant** [or Hiram Ulysses **Grant**; or Ulysses Simpson **Grant**] <AK> Ed. TH

8. Defensive assistant Jerry Glanville created a swarming form of play for this team, earning it the moniker "Grits Blitz." Before Brett Favre was traded to the Packers, this team drafted him in 1991. In 2015, this NFL team hired former Seahawks defensive coordinator Dan (*) Quinn as their head coach. This team has lost their only two Super Bowl appearances: in 1999 to the Denver Broncos and in 2016 to the New England Patriots after blowing a 28–3 lead. For 10 points, Matt Ryan and Julio Jones play for what NFL team from Georgia?
ANSWER: **Atlanta** **Falcons** [accept either underlined portion] <AK> Ed. JK

9. This policy was divided into "petty" and "grand" forms and was largely based on *baasskap*. The 1950 Population Registration Act facilitated this policy, and this policy divided its subjects into ten "bantustans." Protestors of this policy's pass laws were killed in the (*) Sharpeville massacre. High schools protested this policy in the Soweto Uprising. F. W. de Klerk was one of the recipients of a Nobel Peace Prize granted for ending this policy. The Rivonia Trial prosecuted opponents of this policy, including Nelson Mandela. For 10 points, name this form of systematic racial segregation that ended in 1994 in South Africa.
ANSWER: **apartheid** <AK> Ed. TH

10. This process is modeled in reverse in coalescent theory, which typically relies on the Wright-Fisher model of this process. According to Motoo [moe-TOE-oh] Kimura's neutral theory, this process is the dominant driver of evolution. The assumption of large population size in Hardy-Weinberg equilibrium reduces the (*) effect of this process. A special case of this process that occurs when a small group in a population forms a new population is the founder effect. For 10 points, random sampling of organisms leads to what random change in the frequency of alleles within a population?
ANSWER: **genetic drift** [prompt on "**mutation**s" or "random **mutation**s" or "**drift**"] <BW> Ed. GC

11. This poem describes the "whining of a mandolin" "beside a public bar in Lower Thames Street." In this poem, the narrator asks Stetson if the corpse in his garden has "begun to sprout." Ezra Pound edited this poem, in which Phlebas the Phoenician is on a tarot card owned by the "wisest woman in Europe," Madame Sosostris. In this poem's section "A Game of (*) Chess," the narrator repeats the phrase, "HURRY UP PLEASE IT'S TIME." This poem ends with the Sanskrit mantra "Shantih Shantih Shantih." For 10 points, name this poem that begins, "April is the cruelest month," written by T. S. Eliot.
ANSWER: "The **Waste Land**" <CS> Ed. JK

12. In this opera, the English horn plays a ranz des vaches [ronce day vosh] theme during the Shepherd's Festival; that theme reappears in a section of this opera that starts with a cello prelude in E major. The fisherman Ruodi refuses to take Leuthold across a lake to escape a governor in this opera. This opera's overture features the violins playing ricochet to mimic a gallop and ends with the March of the **(*)** Swiss Soldiers. The title character of this opera is forced to shoot an apple off his son's head. For 10 points, name this Gioachino Rossini opera about a Swiss marksman that includes a famous overture.
ANSWER: _William Tell_ [or _Guillaume Tell_] **<BS>** Ed. TH

13. Change in this quantity is equal to the line integral of change in heat over time according to Clausius's inequality. Arthur Eddington proposed that this quantity defined the arrow of time. As is the case for heat, processes in which this quantity remains constant alternate with isothermal processes in the **(*)** Carnot cycle. This quantity is multiplied by temperature and then subtracted from enthalpy to get Gibbs free energy. This quantity is defined as Boltzmann's constant times the log of the number of microstates. The second law of thermodynamics concerns the universal increase of, for 10 points, what measure of disorder in a system?
ANSWER: **entropy** [prompt on "S"] **<AH>** Ed. GC

14. This poet wrote, "The river mingles its stubborn lament with the sea" in a poem declaring that he is "deserted like the wharves at dawn." Another poem by this author describes the subject as "a solitary man of war among these frail vegetables." This poet wrote many odes to everyday objects like tuna and socks in his collection **(*)** _Elemental Odes_ and wrote, "It is the hour of departure," in a poem that repeats, "In you, everything sank!" In one of this author's poems, he declares, "Tonight I can write the saddest lines." For 10 points, name this Chilean poet of _Twenty Love Poems and a Song of Despair_.
ANSWER: Pablo **Neruda** [accept Ricardo Eliecer Naftali Reyes **Basoalto**] **<BS>** Ed. JK

15. In this myth system, a goddess who dies giving birth to a fire god is followed into the underworld by her husband, who is horrified to see her rotting body. In this system, a sword from the tail of an eight-headed dragon is one of the gifts given to the royal grandson of a goddess born from her father's **(*)** left eye. In this myth system, a flayed horse from a storm god causes a goddess to abandon her realm before a mirror lures her out of a cave. Izanagi and Izanami are the creator gods of, for 10 points, what system that worships such kami as Susano'o and Amaterasu, a native religion of Japan?
ANSWER: **Shinto**ism [prompt on "Japanese myth" before "Japan"] **<BS>** Ed. TH

16. This character's room is left bare after a writing desk and chest of drawers is removed. This character's father refuses to take off his uniform after getting a job at a bank. Milk and bread are left uneaten by this character, who prizes a framed picture of a woman in a fur hat and boa. This character saves money to send his sister to a **(*)** violin conservatory. He is seen by three lodgers who leave without paying rent and dies after being injured by an apple thrown at his back. For 10 points, name this brother of Grete who turns into a giant bug in Franz Kafka's _The Metamorphosis_.
ANSWER: **Gregor Samsa** [accept either underlined part] **<BS>** Ed. JK

17. A class of objects named after this object includes 51 Pegasi b. Thebe and Metis orbit this body as part of its Amalthea group of satellites. This planet, which was first visited by Pioneer 10, was observed to collide with the comet Shoemaker-Levy 9 in 1994 by the Galileo probe. Exoplanets with short periods and **(*)** large masses are often called "hot" versions of this planet. This planet is responsible for the Kirkwood gaps in the asteroid belt. Ganymede and Europa are moons of, for 10 points, what largest planet in the solar system?
ANSWER: **Jupiter** [accept hot **Jupiter**s] **<BW>** Ed. GC

18. This composer used the C-F sharp tritone as a motif in a composition that includes a setting of the poem "Strange Meeting" in the *Libera me* **and was written for the reconsecration of Coventry Cathedral. A fugue opened by the flute is the fifteenth and final section of a piece by this composer, who set several Wilfred Owen poems in his (*)** *War Requiem*. He included 13 variations on a theme from Henry Purcell's [PUR-sul's] *Abdelazer* in a work intended to introduce various instruments to children. For 10 points, name this British composer of *The Young Person's Guide to the Orchestra*.
ANSWER: (Edward) Benjamin **Britten** <CS> Ed. RC

19. Supreme Chancellor Friedrich Wilhelm von Haugwitz helped bring about this monarch's reforms, including taxation of the nobility and mandatory coeducational schooling. This leader's state minister, Count Kaunitz, arranged the Diplomatic Revolution, which saw this leader's nation ally with (*) France. This leader lost control of Silesia when the Pragmatic Sanction, set up by her father, Charles VI, was violated by Prussia. This ruler became co-regent with her son Joseph II in 1765. For 10 points, name this Habsburg empress who ruled during the War of the Austrian Succession.
ANSWER: **Maria Theresa** Walburga Amalia Christina [or **Maria Theresia**; prompt on "Maria"] <BW> Ed. TH

20. A black-and-white re-creation of this work appears in the background of *The Portrait of Emile Zola***, who defended this work upon its exhibition. In a work inspired by this painting, a seated man holding a cane gazes up at the title figure. Paul Cezanne created a "modern" version of this painting, which Victorine (*)** Meurent modeled. In this painting, a black cat stands at the feet of a woman, whose pose mimics that of Titian's *Venus of Urbino*. A black slave holds a bouquet of flowers behind a nude prostitute reclining on a bed in, for 10 points, what painting by Édouard Manet?
ANSWER: *Olympia* <CS> Ed. TH

Tiebreaker: **The impact factor describes a form of scattering named for this scientist. This man coined the terms for alpha and beta radiation. This man was the principal investigator of an experiment in which flashes on a zinc sulfide screen were observed, although that experiment was mostly conducted by (*)** Marsden and Geiger. This man conducted an experiment that invalidated the "plum pudding" model proposed by J. J. Thompson. For 10 points, name this physicist who conducted the gold foil experiment.
ANSWER: Ernest **Rutherford** <BW> Ed. GC

Bonuses

1. The hero of this epic poem shoots an arrow through the holes on twelve ax-heads. For 10 points each:
[10] Name this epic poem following a hero's journey home to his wife, Penelope, and son, Telemachus in Ithaca.
ANSWER: The *Odyssey* [do not accept "Odysseus"]
[10] This king, the keeper of the winds, gives Odysseus a bag containing winds to sail home. Odysseus's crew opens the bag while Odysseus is asleep, returning the winds back to this king's land.
ANSWER: **Aeolus** [accept **Aiolos**]
[10] In 2017, Emily Wilson became the first woman to perform this action with *The Odyssey*. John Keats wrote a poem that praises George Chapman's role in doing this.
ANSWER: **translating** Homer [accept common knowledge equivalents like **translating** into English; accept word forms; prompt on "writer," "author," or "poet"] <CS> Ed. JK

2. This actress played Naomi Lapaglia, the wife of Jordan Belfort, in *The Wolf of Wall Street*. For 10 points each:
[10] Name this Australian actress, who also played a former psychiatrist named Harley Quinn in the 2016 film *Suicide Squad*.
ANSWER: Margot **Robbie**
[10] Robbie appeared in this Oscar-nominated film alongside Sebastian Stan and Allison Janney. It focuses on the title character's role in a 1994 attack on the figure skater Nancy Kerrigan.
ANSWER: *I, Tonya*
[10] Robbie was nominated for a BAFTA for her role as Elizabeth I in *Mary, Queen of Scots*, which features this Irish actress in the title role. This actress also starred in *Lady Bird*.
ANSWER: Saoirse [sir-shuh] **Ronan** (be lenient with the pronunciation of Saoirse) <BS> Ed. JK

3. This building has two elliptical theaters on its lower floors, and its main tower is composed of a white isosceles triangle. For ten points each:
[10] Name this building that houses such collections as the briefings from the Cuban missile crisis.
ANSWER: John F. **Kennedy** Presidential **Library** [accept **JFK** Presidential **Library**]
[10] This architect designed the JFK Presidential Library. He also worked on the glass pyramid at the Louvre and the Dallas City Hall.
ANSWER: Ieoh Ming **Pei** [pay][or I.M. **Pei**]
[10] Pei's firm designed the John Hancock Tower in this city. The building became a significant embarrassment after its glass panels began to fall off.
ANSWER: **Boston** <BL> Ed. JK

4. For water, this quantity is equal to approximately 1.333. For 10 points each:
[10] Name this quantity equal to the ratio of the speed of light in a vacuum to the speed of light in a material.
ANSWER: **index of refraction** [or **refractive index**; prompt on "n"]
[10] Taking the inverse tangent of the ratio of two indices of refraction returns this angle. Light reflected at this angle is completely polarized.
ANSWER: **Brewster**'s angle
[10] This phenomenon occurs when the refractive index is wavelength or frequency dependent. The most well-known example of this process is the separation of white light by a prism.
ANSWER: **dispersion** <BW> Ed. GC

5. In this collection's section "Spleen and Ideal," the poet describes an animal's body as "lithe and brown." For 10 points each:
[10] Name this collection of poetry. In addition to "The Cat," this collection includes a poem that compares a "vast sea bird" to a poet "exiled on earth" whose "giant wings prevent him from walking."
ANSWER: The *Flowers of Evil* [accept *Les Fleurs du mal*]
[10] This French Symbolist poet wrote *The Flowers of Evil*.
ANSWER: Charles **Baudelaire**
[10] In the opening poem of *The Flowers of Evil*, Baudelaire refers to this figure as a "hypocrite," "my double," and "my brother." In a different work, Jane Eyre informs this figure that "I married him."
ANSWER: the **Reader** <CS> Ed. JK

6. The tuberofundiular and mesolimbic pathways involve this molecule. For 10 points each:
[10] Name this catecholamine [cat-uh-ko-la-meen] produced by cells in the substantia nigra.
ANSWER: **dopamine**
[10] This neurodegenerative disease is caused by a lack of dopamine production and protein aggregations in neurons called Lewy bodies. Its symptoms including tremors and shuffling gait.
ANSWER: **Parkinson**'s disease
[10] Lewy bodies are mostly composed of this intrinsically disordered protein encoded by the SNCA [S-N-C-A] gene.
ANSWER: **alpha-synuclein** <BW> Ed. GC

7. This religion has two main sects, the Digambara and Svetambara, both of which practice asceticism. For 10 points each:
[10] Name this Indian religion of pacifism and rejection of worldly possessions.
ANSWER: **Jain**ism
[10] To adhere to this practice, Jains sometimes wear a white cloth mask and forgo eating meat. This word means nonviolence.
ANSWER: **ahimsa**
[10] Another Jain practice is sallekhana, which happens at the end of one's life and involves doing this action.
ANSWER: **fasting** [accept anything about dying or suicide through **self-starvation**] <AH> Ed. JK

8. The Swedish phase of this war curiously saw Catholic France financially support the Protestant cause against the Habsburgs. For 10 points each:
[10] Name this seventeenth-century conflict lasting from 1618 to 1648 that began with the Second Defenestration of Prague and concluded with the Peace of Westphalia.
ANSWER: **Thirty Years'** War
[10] The Bohemian phase of the Thirty Years' War concluded at this battle, where the brief reign of the "Winter King," Frederick V, was ended by forces led by the Count of Tilly.
ANSWER: Battle of **White Mountain** [Bitva na **Bílé hoře**, or Schlacht am **Weißen Berg**]
[10] The Treaty of Bärwalde, which brought Sweden into the Thirty Years' War, was negotiated by this cardinal and shrewd minister of Louis XIII.
ANSWER: Cardinal **Richelieu** [or Armand Jean **du Plessis**] <BW> Ed. TH

9. This event is said to be preceded by three consecutive winters. For 10 points each:
[10] Name this event, in which Loki will join an army of giants against Odin and the warriors of Valhalla. The sound of the Gjallarhorn [YALL-er-horn] will alert the gods to the start of this event.
ANSWER: **Ragnarok**
[10] At Ragnarok, Odin will die fighting Fenrir after Fenrir breaks free from this chain. Tyr lost a hand binding Fenrir with this chain, which dwarves made from paradoxical materials such as the roots of a mountain and the beard of a woman.
ANSWER: **Gleipnir**
[10] This creature and Thor are fated to die killing each other. In an earlier myth, Thor caught this creature on a fishing line, but Hymir cut the line in fear of bringing about Ragnarok.
ANSWER: **Jormungand**r [YOR-men-gone-dur] [accept the **Midgard Serpent**; prompt on "World Serpent"]
<CS> Ed. TH

10. In 2018, this nation's King Mswati III announced that he would be changing its name. For 10 points each:
[10] Name this small southern African country between Mozambique and South Africa. The name change was done to rid this nation of a lasting reminder of its colonial past.
ANSWER: Kingdom of **Eswatini** [accept **Swaziland**; or Umbuso we**Swatini**]
[10] Eswatini's executive capital is this most populous city, which is located on a namesake river. It was founded after Eswatini's traditional capital of Lobamba.
ANSWER: **Mbabane** [bah-BON]
[10] Eswatini's currency, the lilangeni, is pegged to this currency of South Africa.
ANSWER: South African **rand** [or **ZAR**; prompt on "R"] <BW> Ed. BS

11. In an article titled "Kin beyond Sea," this prime minister lauded the US Constitution as "the most wonderful work ever struck off at a given time by the brain and purpose of man." For 10 points each:
[10] Name this Liberal "Grand Old Man," a longtime rival of Benjamin Disraeli.
ANSWER: William Ewart **Gladstone**
[10] Gladstone rebuked Disraeli for failing to respond to Ottoman crimes against this ethnic group, who revolted in the April Uprising in 1876.
ANSWER: **Bulgarians**
[10] Gladstone stated that two of his principles of foreign policy were "good government at home" and the "blessing of peace" in this campaign. During this campaign, Gladstone criticized the Disraeli government's "Beaconsfieldism," and he won a Scottish parliamentary seat.
ANSWER: **Midlothian** campaign [or **Midlothian** speeches] <BL> Ed. TH

12. This painting depicts its artist wearing a red cross in front of an easel. For 10 points each:
[10] Name this painting in which a mirror reflects an image of the royal couple. The Infanta Margarita is offered a red cup and stands next to a dwarf with his foot on a dog in this work.
ANSWER: *Las **Meninas*** [accept *The **Maids of Honor***]
[10] This artist of *Las Meninas* was the court painter of Philip IV of Spain. His other works include *Portrait of Pope Innocent X* and *The Triumph of Bacchus*.
ANSWER: Diego **Velazquez**
[10] In this painting, Velazquez depicted Justin of Nassau handing over the key to the title Dutch city to the Spanish general Ambrosio Spinola.
ANSWER: *The **Surrender of Breda*** [or *La **Rendición de Breda***; accept *The **Surrender at Breda***; accept *Las **Lanzas***; or *The **Lances***] <BS> Ed. TH

13. In this novel, Kathy and Tommy fail to convince Madame to save Tommy's life by showing her Tommy's artwork, resulting in Tommy's "completion." For 10 points each:
[10] Name this book that describes the lives of three human clones who grew up in Hailsham. This novel's title derives from a line in a fictional cassette that the main characters find.
ANSWER: *Never Let Me Go*
[10] This British author wrote *Never Let Me Go*. He also described the butler Stevens's unfulfilled romance with Ms. Kenton in his novel *The Remains of the Day*.
ANSWER: Kazuo **Ishiguro**
[10] In 2017, Ishiguro was the recipient of this prize awarded by the Swedish Academy. Other winners of this prize include Bob Dylan and Ernest Hemingway.
ANSWER: **Nobel** Prize in **Literature** [prompt on "Nobel Prize"] <BL> Ed. JK

14. This element forms a network covalent solid in diamond. For 10 points each:
[10] Name this element that defines the field of organic chemistry. It has an atomic number of 6.
ANSWER: **carbon** [or **C**]
[10] This two-dimensional allotrope of carbon exists as a hexagonal lattice. Relative to its thickness, it has approximately 100 times the tensile strength of steel.
ANSWER: **graphene** [do not accept or prompt on "graphite"]
[10] Inorganic analogues of carbon allotropes are typically composed of these two elements, which, along with hydrogen, are found in a molecule called inorganic benzene. The wurtzite form of a compound made of these two elements is isoelectronic to and stronger than diamond.
ANSWER: **boron** and **nitrogen** [accept answers in either order; or **B** and **N**; accept **BN**; accept **boron nitride**] <AH> Ed. GC

15. This reclusive author wrote a story about Sergeant X, who receives a wristwatch from Esmé. For 10 points each:
[10] Name this author of "For Esmé—with Love and Squalor" and "Uncle Wiggily in Connecticut," which appear in his collection *Nine Stories*.
ANSWER: Jerome David **Salinger**
[10] In a Salinger story, a member of this family named Seymour tells Sybil Carpenter about bananafish before shooting himself. Salinger also wrote about members of this family in the novel *Franny and Zooey*.
ANSWER: **Glass**
[10] Holden Caulfield attends Pencey Prep and asks a cab driver where the ducks in Central Park go in the winter in this novel by Salinger.
ANSWER: The *Catcher in the Rye* <BS> Ed. JK

16. Anthony van Hoboken catalogued the works of this composer, who collaborated with librettist Gottfried van Swieten [SVEE-ten] on the oratorios *The Seasons* and *The Creation*. For 10 points each:
[10] Name this Classical-period Austrian composer known as the "father" of both the symphony and the string quartet.
ANSWER: (Franz) Joseph **Haydn**
[10] This Haydn symphony in F sharp minor ends with the musicians extinguishing candles and leaving the stage one by one.
ANSWER: *Farewell* Symphony [or **Symphony no. 45** in F-sharp Minor]
[10] Haydn's pioneering writing for this percussion instrument included solo passages for it in the *Military* Symphony and a section in the *Surprise* Symphony that requires its player to change its pitch.
ANSWER: **timpani** [or **kettledrum**s; accept **timp**s; prompt on "drums"] <BS> Ed. RC

17. Leslie Groves supervised this effort, which competed against the British project codenamed Tube Alloys. For 10 points each:
[10] Name this American operation that employed such physicists as J. Robert Oppenheimer to develop nuclear bombs.
ANSWER: **Manhattan Project** [prompt on answers describing the US nuclear program]
[10] This 1945 test at the White Sands Missile Range was the first successful test of the Manhattan Project. After witnessing this test, Oppenheimer was reminded of the line "Now I am become death" from the *Bhagavad Gita.*
ANSWER: **Trinity** test
[10] The US's counterintelligence Venona Project identified this German communist, who was a lead scientist of the Manhattan Project, as a Soviet spy. This man's confessions also helped incriminate the Rosenbergs of espionage.
ANSWER: Klaus **Fuchs** [fooks] <BL> Ed. TH

18. After refusing to respond to Japanese incursions, this man was kidnapped by two subordinates and forced to ally with his political opponents in the Xi'an [shee an] Incident. For 10 points each:
[10] Name this leader who reunified China during the Warlord Era.
ANSWER: **Chiang** Kai-Shek [or **Jiang** Jieshi; or **Chiang** Chungcheng; prompt on partial answers that do not include the underlined portion]
[10] During the Chinese Civil War, Chiang led this political party, which opposed the Communist Party. This party was in power during the Taiwanese "White Terror."
ANSWER: **Kuo Min Tang** [or **KMT**; or **Guo Min Dang**; accept **Nationalist**s]
[10] While led by Sun Yat-sen, the KMT overthrew this last dynasty of China during the Xinhai [shin-high] Revolution. This dynasty fought the Opium Wars and the Taiping Rebellion.
ANSWER: **Qing** Dynasty <BL> Ed. TH

19. Taylor series are used to approximate values of a function at a certain point by using an infinite series. For 10 points each:
[10] The numerator nth term of a Taylor series of a given function is equal to the nth order of this operation applied to the function.
ANSWER: **derivative** [or **differentiation**]
[10] The denominator of the nth term of a Taylor series is equal to this function of n. It is symbolized with an exclamation point.
ANSWER: **factorial**
[10] A Maclaurin series is a Taylor series centered at this value. This number is the derivative of any constant.
ANSWER: **zero** <BW> Ed. GC

20. This economist was a harsh critic of capitalism, calling it a "tacit ring or syndicate." For 10 points each:
[10] Name this man who developed the theory of conspicuous consumption in his book *The Theory of the Leisure Class*.
ANSWER: Thorstein **Veblen**
[10] This basic law of economics is violated by Veblen goods, which are products that see higher quantities sold even as price increases.
ANSWER: law of **demand**
[10] Another exception to the law of demand is this type of good, which is an inferior good that experiences greater consumption as price increases.
ANSWER: **Giffen** goods <BL> Ed. GC