PACE NSC 2011

Edited by Mike Bentley, Matt Bollinger, Rob Carson, Kyle Haddad-Fonda, Hannah Kirsch, Trygve Meade, Bernadette Spencer, Guy Tabachnick, and Andy Watkins

Packet 20

Tossups

1. Later kings of this civilization identified their ancestor as a son of Pitkhana. Much of what is known about this civilization's early days comes from the Edict of Telipinus. Its official language was called Nesili, and its New Kingdom reached its military zenith during the reign of a man who destroyed the Mittani kingdom named (*) Suppiluliumash I. The Old Testament states that the husband of Bathsheba, Uriah, was from this kingdom. Leaders of these people included Muwatallis, and it was party to the oldest recorded peace treaty following a battle with Ramses II at Kadesh. With a capital at Hatussa, for 10 points, name this people of ancient Anatolia, known for their chariot and iron working skills.

ANSWER: the **Hittites**

<Bentley>

2. A model of circulation that occurs here proposed by Brewer and Dobson attempts to explain a disparity in this region's distribution, with respect to latitude, of a certain substance. A proposed solution to global warming involves seeding this region with sulfur aerosols. This atmospheric region's namesake property arises because of the absorption of (*) UVB and UVC rays by ozone here. Airplanes cruise here because of the reduced parasitic drag. This part of the atmosphere is named for its lack of regular convection, creating dynamicly stable sub-layers. For 10 points, name this layer of the atmosphere that lies below the mesosphere and above the troposphere.

ANSWER: stratosphere

<Watkins>

3. One character in this opera incites jealousy in another by claiming that a fan was found on an easel. A shepherd boy in its third act sings the morning song "Io de' sospiri." Another character searches for a private chapel where his sister has hidden some keys and clothes. That character, Angelotto, hides in a well in a garden and poisons himself when arrested by (*) Spoleta. The lead tenor remembers days alone with his lover as he awaits death in "E lucevan le stelle." The title character sings "Vissi d'arte, vissi d'amore" and later stabs Baron Scarpia before learning that he executed her lover, the painter Mario Cavaradossi. For 10 points, identify this work in which the title singer commits suicide by jumping out of a tower, an opera by Giacomo Puccini.

ANSWER: <u>Tosca</u> <Rosenberg>

4. A 2008 court case ruled this country's prime minister ineligible for his post because he hosted a cooking show, "Tasting and Grumbling." This country admitted using banned cluster munitions in an April 2011 clash in its Surin Province over the Ta Moan and Ta Krabey complexes. It lost a 1962 court case for control of the Preah Vihear Temple, at issue in an ongoing war that is blamed on Prime Minister Abhisit Vejjajiva by the People's Alliance for Democracy. In 2008, protesters poured (*) blood all around the parliament and donned red shirts in a rally against its then-prime minister, Thaksin Shinawatra, whom many accuse of insulting the monarchy. For 10 points, name this country fighting a border war with its neighbor to the east, Cambodia.

ANSWER: Kingdom of **Thailand**

<Haddad-Fonda>

- 5. The opening stage of this offensive, planned in accordance with the "bite and hold" strategy, was the Battle of Albert. This battle was highlighted by the detonation of the Hawthorn Ridge Mine. It also saw attempts to capture High Wood during fighting at Bazentin Ridge, as well as an attempt to drive German forces out of Thiepval during an assault on the Mouquet Farm. The Germans would eventually retreat to the (*) Hindenburg Line after it. Planned by Generals Rawlinson and Haig, it opened with an artillery barrage that failed to cut the German barbed wire. This battle set a record for most British casualties in a single day, and it also witnessed the first military usage of the tank. For 10 points, name this British offensive of 1916 intended to draw German troops away from Verdun, named for a river. ANSWER: First Battle of the Somme [or the First Somme Offensive]
- 6. Antibodies that localize to this organelle are associated with Sjogren's ("SHOW-grenz") syndrome, and a deficiency of a phosphatase localized to it causes Lowe's syndrome. This organelle is the site the sulfation of molecules like glycosaminoglycans and of sphingomyelin (*) synthesis. It receives vesicles tagged with COPII ("cop two") proteins on its cis face. This organelle, which buds exocytotic vesicles off its membrane, is made of stacks of flattened disks called cisternae. For 10 points, name this organelle that packages, modifies, and sorts proteins.

ANSWER: <u>Golgi</u> body [or <u>Golgi</u> apparatus; or <u>Golgi</u> network; or <u>Golgi</u> complex] <Kirsch>

7. One poem by a longtime resident of this city describes a group that "gets bored with eloquence and orations" and noted "how solemn the faces have become." That poem, written in this city, asks "Why do the Senators sit and pass no laws?" as "the emperor waits to receive their (*) chief" and concludes "those people were some kind of solution." In addition to being the city where "Waiting for the Barbarians" was written, this home for most of the life of Constantine Cavafy is also the namesake for a series including *Justine* and *Balthazar*. For 10 points, name this city which titles a Lawrence Durrell "Quartet," and which housed many ancient texts in its namesake library.

ANSWER: Alexandria, Egypt

<Weiner>

8. Jurisprudence arising out of this amendment established the only two ways to lose citizenshsip, and Lochner vs New York used this amendment to strike down a law setting maximum work hours. One guarantee of this amendment is split into "procedural" and "substantive" types, and the phrase "fundamental rights" in this amendment has been interpreted to prevent state governments from depriving their citizens of protections offered in the Bill of Rights, a process known as incorporation. For 10 points, name this amendment to the Constitution passed directly after the civil war which guaranteed "Equal protection" for all citizens of the United States.

ANSWER: <u>Fourteenth</u> Amendment to the United States Constitution <Meade>

9. In one work by this author, the father of the protagonist has a habit of winding up a clock at the beginning of every month. That protagonist has his nose flattened at childbirth by Dr. Slop. One work by this author satirizes Tobias Smollett as Smelfungus, was written largely as a response to Smollett's *Travels Through France and Italy*, and sees the protagonist obtain a passport after he convinces an official that he is the court (*) jester from Hamlet. This author wrote another work featuring a man named Yorick, a parson who appears alongside the title character and Uncle Toby. For 10 points, name this author of *A Sentimental Journey* and *Tristram Shandy*.

ANSWER: Laurence <u>Sterne</u> <Cohen>

- 10. In this work, the protagonist's romantic experiences consist of being pushed into an open fire hydrant by a neighborhood boy. The protagonist of this work fashions the name Zeze the X as a name for herself and protagonist walks around in high heels with Rachel and Lucy. A promiscuous girl who marries a man eighth grade, Sally, abandons the protagonist of this novel before she is (*) sexually assaulted by a group of boys. This novel is composed of "lazy poems," a series of vignettes that culminate in Esperanza's departure from her barrio in Chicago. For 10 points, identify this work of Chicano literature by Sandra Cisneros. ANSWER: The <u>House on Mango Street</u> <Gupta>
- 11. This artist painted a woman being helped up a man next to red fabric lying on the ground in *The Blunder*. A clown on a donkey can be partially seen at the bottom of this man's work which shows a *commedia dell'arte* figure dressed in white with red laces, the full-body portrait *Gilles*. Some hay lies below a portrait of Louis XIV being packed away in a box at the left of a work by this artist showing a room whose walls are filled with paintings, (*) *Gersaint's Shopsign*. He painted a floral arrangement snaking down an armless statue on the right side of one work. In that painting, several cupids fly around while couples stand by a golden boat on an island. For 10 points, name this Rococo painter of *fêtes galantes* such as *The Embarkation for Cythera*.

ANSWER: Jean-Antoine <u>Watteau</u> <Nediger>

12. Several scholars have noted the influence of Wilhelm Dilthey on this thinker, who at times described his works as a study in the "hermeneutics of being." The incomplete second half of his most famous work was to be a complete history of philosophy, culminating in its destruction. Other scholars have noted a major shift in this thinker's philosophy which they term the (*) "kehre." His most famous work begins by inquiring about an entity about to consider its own being; he called that entity *Dasein*. For 10 points, name this philosopher who drew controversy for affiliating himself with the Nazi party after the publication of his work *Being And Time*.

ANSWER: Martin **Heidegger**

<Watkins>

13. Elevated ALT levels signal damage to this organ. The left triangular ligament connects it to the diaphragm. It is the site of synthesis insulin growth factor and of an enzyme cleaved by renin, angiotensinogen. This organ is bisected by the falciform ligament, and the (*) transverse fissure separates its caudate and quadrate portions. This organ, which is the site of processes like gluconeogenesis, is fed in large part by the portal vein, and cholesterol and lipid synthesis also occur in it. Viruses like hepatitis lead to this organ's scarring, or cirrhosis. For 10 points, name this organ that filters and detoxifies the blood.

ANSWER: <u>liver</u> <Kirsch>

14. Oskar Klein discovered that applying his equation to scattering with an electric potential did not conserve total probability, and a "sea" named for this physicist refers to a description of the vacuum. He took the square root of the wave operator by giving each spatial derivative, as well as the time derivative, coefficients that he found to be (*) four-by-four matrices; those matrices define his namesake algebra and underlie one of his most prominent contributions, a wave equation consistent with special relativity that describes the behavior of fermions. For 10 points, name this pyhsicist who predicted the existence of antimatter.

ANSWER: Paul Adrien Maurice Dirac

<Watkins>

15. During the Napoleonic Wars, Andreas Marggraf developed an alternative method to producing this product. During the "Special Period," one country was no longer able to trade this product for oil. *Mocambos* and *quilombos* were formed by individuals who ran away from the *engenhos* that produced this product in one country. The Sherman Antitrust Act was tested on a trust that controlled the trade of this product in the (*) *E. C. Knight* case. Along with cotton, it was the principal crop of nineteenth century Louisiana, while an 18th century gold rush helped alleviate decreased production of this crop in Brazil. A liquid byproduct of this crop was eventually turned into rum as part of the Triangular Trade and is known as molasses. For 10 points, name this food harvested from beets and canes.

ANSWER: <u>sugar</u> cane [accept <u>sugar</u> beet before "special period" is read; prompt on <u>molasses</u> before read]

<Bentley>

16. One figure in this tradition has a hundred or more epithets, each signifying a possibly non-physical "path." One of its rituals involves a wooden board onto which sixteen palm nuts are thrown, and its initiations include one named for a group called "The Warriors." Known for its divination ceremony, Ifá, its believers make offerings called *ebos* and believe that a spiritual energy called *ashé* comes from their chief god, (*) Olurun or Oludumare. Rooted in traditions of the Yoruba people, and reverent of spirits called *orishas*, for 10 points, name this religion for which the US Supreme Court upheld the right to religious animal sacrifice, an Afro-Cuban faith often translated "Way of the Saints."

ANSWER: <u>Santería</u> [or <u>Regla de Ocha</u>; or La Regla <u>Lukumi</u>; prompt on <u>Yoruba</u> religion until "Yoruba-based" is read]

<Jackson>

- 17. This figure once slept with all fifty of the daughters of King Thespius on consecutive nights. Falsely accused of stealing from the flock of Eurytus, this man threw Iphitus off of a cliff. This twin brother of Iphicles left the crew of the *Argo* to search for his companion Hylas, who was abducted by a nymph. This man married (*) Hebe and gave his arrows to Philoctetes after dying of poison left by the centaur Nessus for Deianeira. After killing Megara and their children, this man performed such labors as killing the Nemean Lion and cleaning the Augean Stables. For 10 points, name this Greco-Roman hero known for his great strength. ANSWER: Heracles [or Hercules]
- 18. The Babbock and Wilcox Company was sued for four billion dollars in the aftermath of this event. Richard Thornburgh was criticized for statements made during this event regarding women, and it was investigated by the Kemeny Commission. This event was partially blamed on a yellow paper maintenance bag that concealed information from (*) Met Ed employees, while the FDA ordered thousands of potassium iodide solution bottles to respond to it. The contemporaneous film *The China Syndrome* is credited with exacerbating fear about this incident. On April 1st, a decision was made to vent a bubble of gas into the air, although a mandatory evacuation of Harrisburg was not made. For 10 points, name this 1979 incident where a partial meltdown occurred at a Pennsylvania nuclear power plant.

ANSWER: <u>Three Mile Island</u> Crisis <Chiego>

19. This composer's early habanera for two pianos was probably cribbed by Claude Debussy in his *Night in Granada*. One of his works consisted of six movements in the style of a much earlier composer, including a forlane and a rigaudon, each dedicated to a friend who died in World War I and was called *Le Tombeau de Couperin*. He wrote a work originally for solo piano, which he imagined as a (*) Renaissance dance that its generic dedicatee might have performed. This composer of *Pavane for a Dead Princess* wrote a piece which finally switches from C to E at the end of a 15-minute crescendo underpinned by a snare drum ostinato in which two sixteen-bar melodies alternate. For 10 points, name this composer of *Boléro*.

ANSWER: Joseph-Maurice Ravel

<Tabachnick>

- 20. One character in this story, Placida Linero, fails to interpret her son's dream about trees and birds. One character recieves a mother of pearl music box as a gift from a man who later buys her the house belonging to the widower Xius, and later she writes unanswered letters weekly to her that man for seventeen years. The visiting (*) bishop never descends from the boat. Those two commit this novel's central crime when Bayardo San Roman discovers that his bride Angela is not a virgin. For 10 points, name this novel by Gabriel Garcia Marquez in which Pedro and Pablo Vicario announce their plans to murder Santiago Nasar. ANSWER: <u>Chronicle of a Death Foretold</u> [or <u>Cronica de una muerte anunciada</u>]
- 21. During his tenure, an illegal naval shipment was made to Israel as part of the Cherbourg Gunboats affair. While running for president, this man was rumored to have been involved in the death of a bodyguard of the movie star Alain Delon named Stefan Markovic, although this man blamed rival Maurice Couve de Murville for that scandal. After working for the Rothschilds, this man replaced Michel Debre as Prime Minister. As President, he substituted (*) Pierre Mesmer for his prime minister Chaban Delmas. This man devalued the franc by 12.5 percent, and during his presidency his country hosted Le Duc Tho and Henry Kissinger's negotiations to end the Vietnam War. For 10 points, name this French president from 1969-1974, who succeeded Charles de Gaulle and also names a modern art museum.

ANSWER: Georges Jean Raymond **Pompidou** <Bollinger>

22. This author described how Turkish armies are cheaper to maintain than European armies since they can feed themselves on the blood and flesh of their horses. One work by this author was written after his encounter with a native taken back to Europe by the explorer Villegagnon. That work opens by describing (*) Pyrrhus's encounter with a Roman army and notes how humans will label any culture different than their own as barbaric. He defended Raymond Sebond's *Theologia Naturalis* and wrote "Of Cannibals," which is found in a collection which is French for "trial" or "attempt." For 10 points, name this French author of the *Essays*.

ANSWER: Michel de **Montaigne** < Cohen>

23. Pathological enlargement of this organ is called Menetrier's disease, and hematemesis can result from persistent bleeding in it. The uppermost portion of this organ is called the fundus, which contains glands whose chief cells secrete zymogens. Another secretion of this organ is necessary for B12 absorption and is called (*) intrinsic factor. Its surface area is increased by folds called rugae. This organ's parietal cells secrete hydrochloric acid, which, along with enzymes like pepsin, works to produce chyme from macerated food. For 10 points, name this organ between the esophagus and the small intestine.

ANSWER: stomach

<Kirsch>

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Packet 20

Bonuses

1. This author wrote "too rare, too rare, grow my visits here" in his elegy for Arthur Hugh Clough, *Thyrsis*. For 10 points each:

[10] Identify this Victorian poet and social critic, who wrote of a figure inspired by a Joseph Glanvill story who abandons Oxford for the countryside in "The Scholar-Gipsy."

ANSWER: Matthew Arnold

[10] Arnold is probably best known for this poem, which recalls "the eternal note of sadness" heard "long ago" by Sophocles "on the Aegean." It ends by noting "we are here as on a darkling plain. . . where ignorant armies clash by night."

ANSWER: "Dover Beach"

[10] This essay collection by Arnold heaps the love on Bishop Wilson's *Maxims of Piety and Christianity* and outlines the Victorian concerns over the two contrasting title concepts.

ANSWER: <u>Culture and Anarchy</u>

<Ray>

2. This model approximates neutral intermolecular or interatomic attraction as the difference between an inverse twelfth and an inverse sixth power term. For 10 points each:

[10] Name this model, superseded by models like the Stockmayer potential.

ANSWER: **Lennard-Jones** potential

[10] The inverse sixth power term corresponds to the van der Waals force, which governs interactions between permanent, induced, and instantaneous examples of these entities.

ANSWER: <u>dipole</u>s [or <u>molecular dipole</u>s; or <u>bond dipole</u>s; accept any reasonably chemical or physical modifiers to <u>dipole</u>s]

[10] The inverse twelfth power term corresponds to repulsion due to this principle.

ANSWER: Pauli exclusion principle

<Watkins>

3. This man's initial sympathies for the Greenback Party led him to name his fourth son Legal Tender. For 10 points each:

[10] Name this populist who was arrested for walking on the Capitol Lawn in 1894, causing the expedition he led to collapse.

ANSWER: Jacob Sechler **Coxey** [or General **Coxey**]

[10] This president dealt with Coxey's Army and put down the Pullman Strike after beating incumbent Benjamin Harrison to win a second term. He beat James Blaine for his first term.

ANSWER: Stephen Grover Cleveland

[10] During Cleveland's second term, this bill reduced rates from the McKinley tariff, but also featured the first nationwide income tax, triggering the case *Pollack v. Farmer's Loan and Trust*.

ANSWER: <u>Wilson-Gorman</u> tariff [or <u>Wilson-Gorman</u> act; or <u>Wilson-Gorman</u> bill] <Jackson>

- 4. This work by the author of *Beyond Freedom and Dignity* includes Frazier, one of the Planners of an experimental community. For 10 points each:
- [10] Name this work, written by a behaviorist psychologist.

ANSWER: Walden Two

[10] This inventor of the air crib wrote Verbal Behavior and Walden Two.

ANSWER: Burrhus Frederic Skinner

[10] Skinner demonstrated that these creatures could develop superstitions.

ANSWER: pigeon

<Watkins>

- 5. This work begins as a letter from Nathanel to Lothare and describes a lawyer named Coppelius who performs secret alchemy experiments. For 10 points each:
- [10] Name this work that describes a being that takes the eyes of children that will not go to sleep.

ANSWER: The <u>Sandman</u> [or Der <u>Sandmann</u>]

[10] The Sandman was a work by this author whose "tales" were the subject of an Offenbach opera.

ANSWER: Ernst Thedor Wilhelm Hoffmann

[10] Hoffmann was one the leading figures of the Romantic Movement, along with this author of *Atala* who is considered the founder of French romanticism.

ANSWER: Francois-Rene de Chateaubriand

<Cohen>

- 6. This quantity is the first moment of a distribution. For 10 points each:
- [10] Name this quantity, which differs from the median and mode when a distribution is skewed left or right. It is zero for the standard normal distribution.

ANSWER: mean

[10] A normal distribution is a good approximation for this discrete distribution which measures the probability of succeeding n times in a given number of trials.

ANSWER: binomial distribution

[10] This is the name given to trials which have a probability of success *p* for any given trial, and can thus be modeled with a binomial distribution.

ANSWER: Bernoulli trials

<Tabachnick>

- 7. The finale of this piece uses the tune of "Gaudeamus igitur," and the bassoon and oboe play sarcastic snippets of student drinking songs. For 10 points each:
- [10] Name this piece written to thank the University of Breslau for awarding its composer an honorary degree.

ANSWER: Academic Festival Overture

[10] This man wrote the *Academic Festival Overture* and *Tragic Overture*, along with *A German Requiem* and a famous lullaby.

ANSWER: Johannes Brahms

[10] The composition of this name and number by Brahms was derisively called "Beethoven's Tenth" because of its similarity to that composer's work. The work of this name and number by Mahler is nicknamed "Titan" because of the large ensemble required to play it.

ANSWER: <u>Symphony</u> No. <u>1</u> [or <u>First Symphony</u>]

<Kirsch>

- 8. This monarch chopped the charging cavalryman Henry de Bohun's head in half, and murdered John Comyn before becoming a rival claimant for his country's throne to John Balliol. For 10 points each:
- [10] Name this Scottish monarch who, in 1314, defeated the British to secure Scotland's independence at Bannockburn.

ANSWER: **Robert I** [or **Robert** the **Bruce**]

[10] After Bannockburn, this Scottish city's namesake castle, an English refuge, was taken back by the Scots. Andrew de Moray and William Wallace crushed the English in 1297 at its namesake bridge.

ANSWER: **Stirling** [or **Stirling** Castle; or **Stirling** Bridge]

[10] Edward I, the so-called Hammer of the Scots, also had to deal with Simon of Montfort, whom he defeated at the Battle of Evesham in a war given this name.

ANSWER: Second Barons' War

<Jackson>

- 9. Answer these questions about the geography of cocoa production for 10 points each.
- [10] In March 2011, Laurent Gbagbo tried to nationalize the cocoa industry in this country, the world's largest producer, in a desperate bid to raise money to stay in power. Gbagbo's reign ended when Abidjan fell to Alassane Ouattara in April.

ANSWER: <u>Côte d'Ivoire</u> [or <u>Ivory Coast</u>]

[10] This second largest cocoa producer has had a nationalized cocoa industry since the 1940s. The decreasing rate of cocoa production around Kumasi in its Ashanti region has been cause for recent concern.

ANSWER: Ghana

[10] This country, the world's fifth leading cocoa producer, experiences an agricultural boom every time Côte d'Ivoire has a political crisis, with more and more cocoa exported from its main port of Douala.

ANSWER: Cameroon

<Haddad-Fonda>

- 10. Name these Christian saints, for 10 points each.
- [10] This saint preached to birds and saved the town of Gubbio by talking a wolf out of eating people. Now the patron saint of animals, he received the stigmata at Mount La Verna and founded a namesake monastic order.

ANSWER: Saint **Francis** of Assisi

[10] This saint, one of the Twelve Apostles, is the patron saint of hospitals and desperate causes. He is usually shown carrying the icon of Christ at Edessa.

ANSWER: Saint <u>Jude</u> Thaddeus [or <u>Lebbaeus</u>; or <u>Jude</u> of James; prompt on "Thaddeus"]

[10] According to biographer Sulpicius Severus, this soldier in the late Roman Empire donated half his cloak to a beggar, only to find that God's grace restored it in the morning to repay his magnanimity. He later became a bishop of Tours.

ANSWER: Saint <u>Martin</u> of Tours [or Santctus <u>Martin</u>ius Turonensis] <Jackson>

- 11. Answer these questions about American sculpture, for 10 points each.
- [10] This city's aquatic edifices include the Fountain Terrace in front of Dumbarton Oaks and a long reflecting pool on The Mall leading up to a memorial featuring a colossal seated statue by Daniel Chester French's.

ANSWER: Washington, District of Columbia [accept either]

[10] This sculptor created a frieze of Robert E. Lee, Jefferson Davis, and Stonewall Jackson at the site where the second KKK was founded, Stone Mountain, years before designing the presidential heads at Mount Rushmore.

ANSWER: John Gutzon de la Mothe Borglum

[10] This Irish-born artist of the Beaux-Arts school and designer of coins for the US Mint crafted a statue of General Sherman for Central Park and the Robert Gould Shaw Memorial for Boston Common.

ANSWER: Augustus Saint-Gaudens

<Jackson>

- 12. The belligerents in this conflict called for the abolition of the *todfall*, a type of tax on succession, as part of the Twelve Articles. For 10 points each:
- [10] Identify this conflict, whose participants were blasted in a text calling them "Murderous and Robbing Hordes."

ANSWER: German <u>Peasants' War</u> [or Deutscher <u>Bauernkrieg</u>; do not accept "Peasants' Revolt"]

[10] This religious reformer condemned the Peasants' War in his aforementioned tract, *Against the Murderous and Robbing Hordes of the Peasants*. He also wrote the 95 Theses.

ANSWER: Martin **Luther**

[10] Among the instigators of the Peasants' War were the Zwickau Prophets and Thomas Muntzer, advocates of this religious sect.

ANSWER: <u>Anabaptists</u>s [or <u>Re-baptists</u>; prompt on "Mennonites"] <Bentley>

- 13. For 10 points each, answer the following about figures made from the parts of others.
- [10] Some sources say the birth of Aphrodite came after the castration of this sky deity by his son, Cronus.

ANSWER: **Ouranos** [or **Uranus**]

[10] It took three days, but this deity was formed from Ymir. The first god, his grandchildren include Odin, Vili, and Ve.

ANSWER: Buri

[10] One story concerning his birth indicates that he was made from dirt that his mother Parvati washed off, and was made to prevent Shiva interrupting her bath, which didn't end well.

ANSWER: Ganesha

<Taylor>

- 14. This process sees the rotation access change with constant second Euler angle. For 10 points each:
- [10] Name this process, which also refers to the orderly movement of Earth's axis, causing the North Pole to point to different stars over a twenty-six thousand year cycle..

ANSWER: precession

[10] When the second Euler angle does change, this type of motion arises.

ANSWER: nutation

[10] Precession may be classified according to whether this rotational analogue of force is present. Defined as the cross product of lever arm with force, it is also the time derivative of angular momentum.

ANSWER: torque

<Watkins>

- 15. Chapter titles in this work include "Strangle Knot" and "A Rolling Hitch," selections from the *Ashley Book of Knots*. For 10 points each:
- [10] Name this Annie Proulx novel, in which Quoyle and his daughters join his aunt Agnis Hamm at their family home in Killick-Claw, Newfoundland. There, Quoyle writes the title column for the local paper, The Gammy Bird.

ANSWER: The Shipping News

[10] Annie Proulx is perhaps best known for this story from Close Range: Wyoming Stories, about the romance between Jack Twist and Ennis del Mar.

ANSWER: "Brokeback Mountain"

[10] Another Annie Proulx work is titled for this type of "Songs." Edgar Allen Poe wrote about the "Tell-Tale" one of these.

ANSWER: "heart"

<Surya>

- 16. This work depicts two small boats in Le Havre, France. For 10 points each:
- [10] Name this painting in which an orange disk appears within a continuous blue region that straddles the horizon between sky and sea.

ANSWER: <u>Impression: Sunrise</u> [or <u>Impression: soleil levant</u>]

[10] This Frenchman created many paintings of water lilies, Rouen Cathedral, and the surroundings of his garden at Giverny after his Impression: Sunrise inspired the Impressionist movement.

ANSWER: Claude <u>Monet</u> [do not accept "Manet"; ask teams to specify or spell if needed] [10] In 1890 and 1891 Monet made 25 paintings of these objects. Each depicts one or two of these objects from harvest time to the following spring, often with "morning effect" or "snow effect."

ANSWER: <u>haystack</u>s [or <u>grainstack</u>s; or <u>wheatstack</u>s]

<Jackson>

- 17. Its central idea is the "eternal recurrence of the same," which had first been introduced in *The Gay Science*. For 10 points each:
- [10] Name this work, whose title figure, named for an ancient prophet, declares "I teach you the superman."

ANSWER: <u>Thus Spoke Zarathustra</u>: A Book for All and None [or <u>Also sprach Zarathustra</u>: Ein Buch für Alle und Keinen]

[10] This philosopher, who greatly influenced nihilism and existentialism, wrote *Thus Spoke Zarathustra*.

ANSWER: Friedrich Wilhelm Nietzsche

[10] This founder of logotherapy famously rejected Nietzsche's nihilism and wrote *Man's Search for Meaning*.

ANSWER: Viktor Frankl

<Watkins>

- 18. The Col type of these elements produces toxins deadly to other bacteria. For 10 points each:
- [10] Name this circular piece of bacterial DNA that can function independently of regular chromosomal DNA.

ANSWER: plasmid

[10] In this process, one bacterium passes a plasmid or other genetic material to another bacterium. The F plasmid or Hfr chromosomal gene are necessary for it to occur.

ANSWER: conjugation

[10] This is the name for the bridge between two bacteria that allows plasmid transfer. The F plasmid codes for the ability to form it.

ANSWER: **pilus** [or **pili**]

<Kirsch>

19. The Sook Ching Massacre of ethnic Chinese and the Alexandra Hospital Massacre of mostly British doctors and injured patients occurred in this present-day country. For 10 points each:

[10] Name this country, the last major British outpost in East Asia, which Arthur Percival surrendered to the Japanese in 1942.

ANSWER: Singapore

[10] Upon independence in 1963, Singapore briefly joined Malaya, Sabah, and Sarawak in a federation whose capital was this city on the Malay Peninsula. It also happens to be the capital of modern day Malaysia.

ANSWER: Kuala Lumpur

[10] This politician served as Singapore's prime minister from before independence in 1959 until 1990 and remains active in the administration of the new prime minister, his eldest son.

ANSWER: Lee Kuan Yew

<Haddad-Fonda>

20. This author wrote of a man named Mole who, inspired in part by the eupcaccia, an insect able to subsist only on its excrement, builds an underground bunker. For 10 points each:

[10] Name that author of *The Ark Sakura*.

ANSWER: Kobo Abe

[10] In this work, Abe wrote of an experiment in genetic engineering producing part-fish children to survive the rising sea levels due to global warming.

ANSWER: *Inter Ice Age 4* [or *Daiyon kampyoki*]

[10] Abe is perhaps best known for this work about the entomologist Niki Jumpei, who becomes trapped with a widow endlessly shoveling sand.

ANSWER: <u>Woman in the Dunes</u> [or <u>Woman of the Dunes</u>; or <u>Suna no onna</u>; or <u>Sand woman</u>] <Watkins>

21. Hiram Paulding was relieved of his command as Rear Admiral for arresting this man. For 10 points each:

[10] Identify this first president of the short-lived Republic of Sonora, who in another office he briefly held in 1856 ran afoul of the Accessory Transit Company owned by Cornelius Vanderbilt.

ANSWER: William Walker

[10] William Walker was briefly president of this Central American nation. Before choosing Panama, the US proposed building a canal here that would have made use of its large namesake lake.

ANSWER: Republic of Nicaragua

[10] Later rules of Nicaragua included several members of this political family, including two separate men named Anastasio.

ANSWER: Somoza

<Bentley>

22. One work in this form is Jose Joaquin Olmedo's *Victory at Junin*, and one of these "of the Cross" by Jose Maria Alfaro Cooper is the only known Costa Rican work in this form. For 10 points each:

[10] Name this genre that describes both the *Iliad* and *Odyssey*, of which Calliope was the Muse.

ANSWER: epic poetry

[10] This epic poem by Lucan details the struggle between Julius Caesar and Pompey and is named after the battle at which Caesar finally triumphed.

ANSWER: Pharsalia

[10] This Japanese epic poem describes the conflict between the Taira and Minamoto clans during the Gempei War.

ANSWER: Tale of the Heike [or Heike Monogatari]

<Wynne>

- 23. This statement is employed to find the lattice energy of an ionic solid in the Born-Haber method. For 10 points each:
- [10] Name this statement, which suggests that the enthalpy change for a series of reactions process is independent of the sequence of reactions taken.

ANSWER: Hess's law

[10] Hess's law holds because enthalpy is this kind of quantity, which depends only on the current values of variables.

ANSWER: state function

[10] This process, analogous to applications of Hess's law but for free energy, uses a similar principle to find unknown free energy changes

ANSWER: **Bordwell** thermodynamic cycle

<Watkins>