

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 10

Tossups

1. **A general appointed by this body, Jean Humbert, was defeated at the Battle of Ballinamuck in a failed attempt to capture Ireland. This government executed Gracchus Babeuf, the head of the Conspiracy of Equals. With the Austrian Empire, this entity signed a treaty recognizing the Ligurian and Cisalpine Republics, the Treaty of (*) Campo Formio. This government ended a revolt in the Vendee, and it was preserved when a certain general defeated a rebellion with a “whiff of grapeshot.” This entity included two houses, the Council of Five Hundred and the Council of Elders, and was controlled by five namesake executives. Established by the Constitution of 1795, for 10 points, name this French Revolutionary government that gave way to the Consulate of Napoleon.**

ANSWER: the French Directory [or Executive Directory; or Directoire exécutif; prompt on Council of Five Hundred or Council of Elders before read]
<Bollinger>

2. **In one poem, this man tells readers not to “revile” a figure “who might/have lighted up and led his age,” but was “fiend-goaded, down the endless dark.” That poem was written in reaction to Daniel Webster’s support of the Fugitive Slave Act. Another work by this poet of (*) “Ichabod” tells of how “Lee marched over the mountain-wall” into Frederick but was defied by a 90-year-old woman, who kept the American flag flying. This man described the sun cheerlessly rising on a brief December day only to give out at noon in a work subtitled a “A Winter Idyl.” For 10 points, name this American poet of “Barbara Frietchie” and “Snow-Bound.”**

ANSWER: John Greenleaf Whittier
<Cohen>

3. **The equation that balances a pressure difference against this force times twice the mean curvature is given by Young and Laplace. Mass transport due to differentials in this force is named for Marangoni. Molecules with nonpolar and polar ends, which often may be used as (*) detergents or emulsifiers, act to decrease it; they are called surfactants. This force, which causes capillary action, arises in its namesake location because cohesive forces are exerted from only one direction, unlike in the bulk fluid. For 10 points, name this force present at the surface of a liquid.**

ANSWER: surface tension
<Watkins>

4. This artist painted a young Hercules holding up a globe next to the title king in his *Allegorical Portrait of Charles V*. The title figure wears a red cloth and sleeps in the background while John the Baptist points backward at the Madonna and Child in this artist's *Vision of St. Jerome*. One work by this man features a distorted window at the top and a large right hand with a ring on its pinky finger at the bottom; that hand belongs to (*) the artist. A small man unrolls a scroll next to a free-standing column in a work by this artist which depicts an unusually large infant Christ in the arms of the title figure. For 10 points, name this painter of *Self-Portrait in a Convex Mirror* and *The Madonna of the Long Neck*.

ANSWER: Parmigianino [or Girolamo Francesco Maria Mazzola]

<Nediger>

5. Robert Calef and Thomas Brattle offered contemporary criticism of these events in *More Wonders of the Invisible World*. One participant in these events tested the “effluvia” theory by feeding a dog a cake with urine baked into it. Biologist Linnda Caporael claims they coincided with the consumption of infected rye bread. William Stoughton presided over these events during William Phips’s governorship. They started after doctor (*) William Griggs provided treatment for certain hysterical fits, and “spectral evidence” during these events was allowed by Cotton Mather. Participants in these events included Betty Parris and Abigail Williams, and during these events stones were piled on Giles Corey. A slave named Tituba was also implicated in these events. For 10 points, name these 1692 Massachusetts events in which many accused heretics were killed with little evidence.

ANSWER: Salem witch trials [prompt on alleged acts of witchcraft in Salem or equivalents]

<Jackson>

6. This poem was originally published in *The Indicator* with a few underwhelming revisions made at the behest of Leigh Hunt. The speaker notes the the title figure's “foot was light” before witnessing that figure “[sigh] full sore,” which prompts him to use four kisses to “shut her wild eyes.” This poem relates how the title figure (*) “made sweet moan” and speaks “I love thee true,” inspiring a line of “pale kings and princes true” to warn the speaker about her “thrall.” Opening when “the sedge has withered from the lake/And no birds sing,” it sees a knight left “alone and palely loitering” after being seduced by the title female. For 10 points, name this John Keats work with a French title.

ANSWER: “La Belle Dame sans Merci”

<Ray>

7. These entities may be described by their Strahler order, and the Bradshaw model relates the characteristics of their upper and lower courses. Hack's law relates their length to their basin area, and Baer's law describes a weak influence on their erosion. Peneplains are low-relief plains that form due to erosion from these entities. These entities may be guided by (*) channelization and the construction of embankments. Meanders in these structures can become isolated, forming oxbow lakes. For 10 points, name these water-bearing structures that flow towards the sea.

ANSWER: rivers

<Watkins>

8. This man incorporated a modernized fugue for string quartet and string orchestra in his *Introduction and Allegro*. Hans Richter was a champion of this man's early works like his *First Symphony in A-flat major*. He depicted his native country in the overture *Cockaigne*. This man wrote a choral work which contains the chorus "Praise to the Holiest" and is based on a poem of Cardinal (*) Newman. He also wrote a work containing a hidden theme that is never played and whose sections are dedicated to people like "EDU" and "Nimrod." The aforementioned choral work is *The Dream of Gerontius*. For 10 points, name this English composer of the *Enigma Variations* and a march ubiquitous at graduations, *Pomp and Circumstance*.

ANSWER: Sir Edward Elgar

<Rosenberg>

9. Although self-government in this country was not recommended by the Coussey Committee, it was eventually granted thanks to Charles Arden-Clarke. Later, the CIA backed a coup by Joseph Arthur Ankrah that overthrew the leader of this country's Convention People's Party. That CPP leader, who published *Neo-Colonialism: The Last Stage of Imperialism* and (*) *Africa Must Unite*, was a leader of the pan-African movement and a champion of building the Akosombo Dam in this country. In addition to being ruled by Kwame Nkrumah, this country's flag honors Marcus Garvey through its black star. For 10 points, name this country colonized by Britain as the Gold Coast, whose capital is Accra.

ANSWER: Republic of Ghana [accept Gold Coast until "Ankrah" is read]

<Haddad-Fonda>

10. In this work, a stout woman nicknamed "The Terrible Dragon" berates a female protagonist for failing to kill herself with arsenic, and a purplish dog named Gray howls next to a birch tree after an unseen shot kills Platon. One character uses numerology to prove he must kill the Antichrist. One scene in this work impersonally describes a moon cut out of cardboard on an opera set which (*) Anatole and his sister Hélène watch. Its narration is often interrupted by its author's deterministic theory of history. At its end, Princess Marya weds the soldier Nikolai, whose sister is Natasha Rostov. For 10 points, name this work featuring Pierre Bezukhov and Napoleon's invasion of Russia, by Leo Tolstoy.

ANSWER: War and Peace [or Voyna i mir]

<Jackson>

11. Simon Bolivar Square in Garden City can be reached by going south from this location alongside the Mogamma, the center of the municipal bureaucracy. It can also be accessed from Zamalek by the 6th of October Bridge, from the north by the Corniche, and from the east by a street named for Talaat Harb. It was formerly home to the headquarters of the National Democratic Party, and (*) Lara Logan was sexually assaulted here. A museum on its north side was broken into and damaged during a period in which its Hardees was a makeshift hospital for some of the million people camped in it. The Nile runs just west of, for 10 points, what main square in central Cairo?

ANSWER: Tahrir Square [or Liberation Square; or Maydan al-Tahrir]

<Haddad-Fonda>

12. Berlin and Kay attempted to refute this idea with their research into a universalist theory of colors. Preceded and influenced by the *Weltanschauung* ideas of Wilhelm von Humboldt, Steven Pinker ridiculed an alleged proof of this theory involving chemical workers who smoked in a room containing empty gasoline drums but not one containing filled gasoline drums. It was first applied to the (*) Hopi people's perception of time and the refuted example of Inuit words for snow. For 10 points, name this hypothesis that the use of language influences categories of thought.

ANSWER: Sapir-Whorf hypothesis [prompt on linguistic relativity; prompt on linguistic determinism]

<Jackson>

13. This composer included a vocal and instrumental version of “A Gentleman’s Honor” in his chamber opera about Eadweard Muybridge, *The Photographer*. One of his operas includes the title character, his wife, and his mother singing at the Window of Appearances and ends with the narrator reading from a guide book. The first act of one of his operas begins on the Kuru Field of Justice and goes to Tolstoy Farm, chronicling a civil rights leader’s time in (*) South Africa. One work by this composer of *Akhmat*, staged by Robert Wilson, begins with a chorus counting repeatedly. That work includes sections on a Night Train and a Spaceship, as well as interludes called Knee Plays. For 10 points, name this composer of *Satyagraha* and *Einstein on the Beach*.

ANSWER: Philip Morris Glass

<Tabachnick>

14. This figure turned Chelone into a tortoise after refusing to attend his wedding. This god’s domain includes *xenia*, or hospitality to guests, and King Salmoneus once impersonated him. He was fed human flesh by an Arcadian tyrant named Lycaon, who he turned into a wolf. This god killed the dragon-woman Kampe before freeing (*) Briareos and the other two Hekatonchires, a set of hundred-handed giants. This deity was suckled by Amalthea, a goat on Mount Ida, after his mother replaced him with a stone eaten by his father Cronos. For 10 points, name this abductor of Europa, husband of Hera, and lord of Olympus.

ANSWER: Zeus [or Jupiter; accept Hera or Juno until “xenia” is read]

<Jackson>

15. The VENTRILOQUIST network was informed of this event when its planners broadcast two lines of Verlaine’s “Autumn Song” over the radio. Some participants in this event sought to capture the Merville Gun Battery as part of Operation Tonga. Prior to this event, preparations were made against Scandinavia in Operation Fortitude, which employed inflatable artillery. During this event, attacking forces suffered high casualties trying to capture Pointe-du-Hoc. The defenders in this operation had prepared for an assault on (*) Pas-de-Calais and were commanded by General Rommel. The planners of this military action marked out beaches called “Juno,” “Gold,” “Sword,” and “Omaha.” For 10 points, name this event codenamed “Operation Overlord” in which the Allies invaded Normandy.

ANSWER: D-Day [accept Operation Overlord or the allied invasion of Normandy before they are read; also accept Operation Neptune]

<Bollinger>

16. The X-linked illness Fabry disease is caused by malfunction of these organelles, and other diseases involving their malfunction include Pompe and Niemann-Pick. One compound found in these organelles hydrolyzes 1-4-beta glycosidic linkages commonly found in cell walls, and that namesake enzyme is also present in (*) albumin. Compounds destined for these organelles are tagged with mannose-6-phosphate. Chloride channels and hydrogen ion pumps allow them to maintain their pH of approximately 4.5, which permits the function of acid hydrolases and other digestive enzymes. For 10 points, name these organelles that break down macromolecules and cellular waste.

ANSWER: lysosomes

<Kirsch>

17. The *Mugdala Purana* text reveres eight incarnations of this deity, who is often depicted wearing a snake as a belt after an incident in which this deity's food-filled stomach split open. He cleverly circled his father or stood still to win a Mango of Knowledge by beating his brother, named Skanda or Kartikeya, in a race around the world. Vyasa used this deity as the (*) scribe for the *Mahabharatha*, and this god had his head cut off and replaced by Shiva, who fathered him with Parvati. For 10 points, name this mouse-riding remover of obstacles often prayed to before important competitions, a Hindu god with the head of an elephant.

ANSWER: Ganesha [or Ganapati]

<Jackson>

18. This man wrote of a smuggler of oranges containing diamonds, Ulises, who stabs the title character's soulless Grandmother in a story about "Innocent Erendira." He also wrote a novella about three views of the burial of a doctor who'd lived as a recluse for a decade. In another short story, a disobedient daughter transformed into a tarantula takes the popularity of the title figure, whom (*) Pelayo and Elisenda put on display. This author of "A Very Old Man with Enormous Wings" used the aforementioned novella *Leafstorm* to introduce a setting visited by Melquíades, which gets wiped out by a tornado, killing the last Aureliano. For 10 points, name this Colombian author who created the town of Macondo in *One Hundred Years of Solitude*.

ANSWER: Gabriel García Marquez

<Jackson>

19. A "checkerboard" form of this procedure is used before ELISA. An anode containing a base, an alcohol, iodine, and sulfur dioxide is employed in a form of this procedure developed by Karl Fischer, and the distinctive colors displayed when EDTA chelates metal ions contrast with those of organic dyes in the (*) complexometric form. Plots corresponding to this procedure display at least one inflection point. Requirements for mundane forms of this procedure include a buret, an indicator, and an acid or base of known concentration. For 10 points, name this procedure by which an unknown concentration is determined.

ANSWER: titration

<Watkins>

20. In one work, this man criticized the progress resulting from art and science as empowering governments and undermining friendship in *Discourse on the Arts and Sciences*. One work by this author advocates that only at adolescence can children understand complex emotions like (*) sympathy. Another of his works advocates small communities that allow for the conscience of their inhabitants to develop into an incontrovertible “general will.” For 10 points, name this author of *Emile* who declared that man is “born free, and everywhere he is in chains” in a book suggesting the title arrangement between the people and the Sovereign, *The Social Contract*.

ANSWER: Jean-Jacques Rousseau

<Watkins>

21. In England, an early use of this invention was credited with “hanging John Tawell,” and it only became popular after it was brought to Slough by William F. Cooke and Charles Wheatstone. This invention was expanded to global scale by the crew of the *Great Eastern* as part of an endeavor financed by Cyrus West Field. In the United States, the company that monopolized this invention was founded by Ezra Cornell and later went on to popularize the (*) stock ticker. This invention was used to promise a return of Arizona and Texas to Mexican control when it was operated by Arthur Zimmerman during World War I. The subject of the book *The Victorian Internet*, for 10 points, name this invention popularized by Samuel Morse.

ANSWER: the telegraph [or telegram]

<Bentley>

22. This author’s short story collection *Children Are Civilians Too* contains “Black Sheep,” which won the literature prize of Gruppe 47. He wrote about a man who can smell over the telephone, Hans Schnier, in one novel. This author of *The* (*) *Clown* also wrote a novel subtitled “How violence develops and where it can lead” in which Werner Tötges is killed by the title character, Katharina Blum. He also wrote a novel about the family of the architect Robert Faehmel. For 10 points, name this author of *Billiards at Half-past Nine*.

ANSWER: Heinrich Theodor Böll

<Nediger>

23. The relative importance of resonance structures for polycyclic aromatic examples of this general class of compound is given by Clar's rule. Despite its name, petroleum ether is an example of these compounds. The (*) Clemmensen reduction’s products are in general this type of compound. Arbitrary lengths of these compounds are created by the Fischer-Tropsch process. Exemplified by alkanes, alkenes, and alkynes, for 10 points, name these compounds, whose name comes from their two constituent elements of atomic numbers twelve and one.

ANSWER: hydrocarbons

<Watkins>

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Bonuses

1. The artist of this work shows himself in the shadows on the left, and one figure looks back at two giant paintings on the wall of the room in which this painting is set. For 10 points each:
[10] Name this group portrait in which eight of the thirteen figures wear diagonal blue-and-white sashes. One such figure is a small red-clad boy next to his father, a stout man in a black suit decorated with golden medals.

ANSWER: **Charles IV and his Family** [or *The Family of Charles IV*; or *Retrato de la familia de Carlos Cuarto*]

[10] This Spaniard created *Charles IV and his Family*. He later went deaf and produced *Fight with Cudgels* and *Saturn Devouring his Child* as part of his Black Paintings.

ANSWER: Francisco José de **Goya** y Lucientes

[10] Goya made two identically-postured portraits of an anonymous woman of this class, one nude and one clothed.

ANSWER: **majas**

<Jackson>

2. This city gets much of its water from a giant aqueduct that connects it with the Owens Valley. For 10 points each:

[10] Name this city in the American West that fought a “water war” with farmers starting in 1898.

ANSWER: **Los Angeles**

[10] A 1922 compact governs the use of water from this river that is dammed by the Hoover Dam. That compact has come under criticism in recent years because it specifies a hierarchy in which all water flow to Las Vegas would be shut off before water for agriculture is reduced.

ANSWER: **Colorado** River

[10] Thanks to the All-American Canal, the main user of Colorado River water is this California county on the border with Arizona, whose farmers are repeatedly at odds with citizens of Las Vegas and Los Angeles.

ANSWER: **Imperial** County

<Haddad-Fonda>

3. This principle holds that pressure applied at one point in a fluid is transmitted everywhere throughout the fluid. For 10 points each:

[10] Name this principle, by which the change in pressure between two locations depends only on the elevation change.

ANSWER: **Pascal**'s principle

[10] That principle, especially the latter description, is essential to the operation of these devices, which use tubes to transfer liquids from a higher to lower elevation even though the tube might require liquid to locally flow uphill.

ANSWER: **siphons**

[10] Siphons are often misunderstood to rely on water's tensile strength. The tensile strength, measured as a pressure reduction, of a liquid can be found using this device, a tube named for its shape placed on a rotating surface.

ANSWER: **Z**-tube

<Watkins>

4. This theory was adapted by Robert Lucas to form part of his namesake "islands" model. For 10 points each:

[10] Name this theory, which states that all deviations from optimal behavior by consumers are the result of random error, meaning that agents acting within a model always act as if the model's predictions are correct.

ANSWER: **rational expectations** theory

[10] Name the economist who proposed rational expectations theory and wrote "Rational Expectations and the Theory of Price Movements."

ANSWER: John **Muth**

[10] "Rational Expectations and the Theory of Price Movements" partially treats the pricing of this type of security, which represents a share of ownership in a particular company.

ANSWER: **stocks**

<Meade>

5. Democrats in this state were the subject of Abraham Lincoln's Birchard Letter. For 10 points each:

[10] Identify this state home to House Member Clement Vallandigham.

ANSWER: **Ohio**

[10] Vallandigham, like the namesake of this Supreme Court case, was a Copperhead. The court ruled that civilians couldn't be tried in military courts in this case, and it shouldn't be confused with the similarly named *Ex parte Merryman*.

ANSWER: Ex parte Lambdin P. **Milligan**

[10] Milligan had been a member of the Knights of the Golden Circle, who would rename themselves after this earlier political group. They erected a certain type of pole topped with a cap, and members included Joseph Warren and James Otis.

ANSWER: The **Sons of Liberty**

<Bentley>

6. This deity's attendants include Gna and Fulla. For 10 points each:

[10] Name this queen of the gods, the wife of Odin.

ANSWER: **Frigga**

[10] Frigga once sent an apple of fertility to King Rerir, allowing his wife to become pregnant with this son. This hero was eventually killed by Siggeir, who had married this man's daughter, Signy.

ANSWER: **Volsung**

[10] Frigga's husband, Odin, owned two ravens representing thought and memory. Name either.

ANSWER: **Hugin** or **Munin**

<Bollinger>

7. This tissue layer is avascular, relying on diffusion from underlying tissue layers to receive nutrients, and its color comes from pigments called melanins. For 10 points each:

[10] Name this outermost layer of the skin.

ANSWER: **epidermis**

[10] Cells of the epidermis have become cornified, meaning that an extensive matrix of this protein has formed inside them and they have subsequently died. This protein's monomers assemble to form filaments in epidermal cells.

ANSWER: **keratin**

[10] Cornified epidermal cells, which are also called keratinocytes, cause inflammation upon damage by secreting interleukins and TNF, both of which are types of this general class of signaling proteins. These proteins modulate immune activity.

ANSWER: **cytokines**

<Kirsch>

8. This man's many lengthy correspondences by letters included one with Europe's foremost occasionalist, Nicolas Malebranche, and he invoked "pre-established harmony" in his cosmological argument. For 10 points each:

[10] Name this German polymath who summed up his argument that a perfect God was bound to create the best possible world in his work on indivisible subunits, "Monadology."

ANSWER: Gottfried Wilhelm **Leibniz**

[10] That argument, found at length in Leibniz's *Theodicy*, uses this fundamental principle that every occurrence has, and must have, a complete explanation.

ANSWER: **principle of sufficient reason** [prompt on "PSR"]

[10] In one essay, Leibniz defined the primary type of these statements as those whose predicate contains their subject, arguing that all such non-primary statements reduce to the primary kind. He also distinguished such statements between those "of reason" and "of fact."

ANSWER: **truths** [or **true** statements; or **wahrheiten**; or **verité**; or **veritas**]

<Jackson>

9. The last movement of this work has a fugal coda mixing the five different themes in it. For 10 points each:

[10] Name this last symphony by Mozart whose nickname takes after a Roman god.

ANSWER: Symphony No. 41 in C major, K. 551, "Jupiter" [accept any]

[10] The last fourth movement of this other Mozart symphony contains a startlingly atonal chromatic sequence. This piece opens with a galloping theme of E flat-D-D repeated three times followed by a B flat.

ANSWER: Symphony No. 40 in G minor, K. 550 [accept either]

[10] Mozart wrote thirteen of these pieces, including the "Haffner" and "Posthorn" and the last, for strings, *Eine kleine Nachtmusik*.

ANSWER: serenades

<Tabachnick>

10. The Cavalier Parliament held sway for much of this leader's reign, and he converted to Catholicism on his death bed to honor the oath he made in the Treaty of Dover. For 10 points each:

[10] Name this English monarch, a Stuart who was restored to the throne several years after his father's decapitation.

ANSWER: Charles II

[10] Algernon Sidney and the Duke of Monmouth were implicated in this attempt on Charles's life, which aimed to ambush him near a certain estate as he returned from the Newmarket horse races.

ANSWER: Rye House plot

[10] Charles II had earlier notably not been harmed by the Popish Plot, which was actually a web of conspiracy theories fabricated by this perjurer and associate of Israel Tonge. This man's lies led to the death of fifteen Catholics.

ANSWER: Titus Oates

<Austin>

11. Members of this phylum have radial symmetry and contain a mesoglea between two thin epithelial layers. For 10 points each:

[10] Name this phylum that most notably includes jellyfish.

ANSWER: Cnidarians

[10] Cnidarians have stinging cells from which they fire these venom-containing structures, which have a long, barb-like structure that penetrates the skin, allowing the toxin to be injected from an attached bulb.

ANSWER: nematocysts [or cnidocyst]

[10] Cnidarians have two forms, the polyp and this form. Some members of the phylum cycle between the sessile polyp and this mobile, sexually reproducing, larger, broader form.

ANSWER: medusae

<Kirsch>

12. One section of this prayer begins “Shehu noteh shamayim, v’yosed ha’aretz,” and the words “You cause wind to blow and rain to fall” are added to it in springtime. For 10 points each:

[10] Name this eighteen-part component of the Jewish prayer service, which begins by addressing the God of Abraham, Isaac, and Jacob.

ANSWER: Tefilat HaAmidah [or Shmone Esre]

[10] The Amidah is reduced to seven sections on this frequent Jewish holiday mandated in the Ten Commandments. Its foods include *challah* bread.

ANSWER: Shabbat [or Shabbos; or the Sabbath; prompt on Saturday]

[10] The Sabbath day traditionally ends with the saying of the Havdallah at this time of day, which also ends the obligations of Muslims to fast during Ramadan.

ANSWER: sundown

<Jackson>

13. This work begins before the beginning of a rehearsal of *The Rules of the Game*. For 10 points each:

[10] In this play, the Stage Manager grows frustrated as the Child drowns, the Boy commits suicide, and Madame Pace convinces the Stepdaughter to become a prostitute.

ANSWER: Six Characters in Search of an Author [or Sei personaggi in cerca d'autore]

[10] The officer Rico Verri becomes a possessive husband in this play, in which Mommina dies while singing an aria from *Il Trovatore* to her daughters after being forbidden to see her sister? opera troupe.

ANSWER: Tonight We Improvise [or Questa sera si recita a soggetto]

[10] This author of *Tonight We Improvise* and *Six Characters in Search of an Author* also wrote a play in which an actor who has fallen from his horse believes he is Henry IV.

ANSWER: Luigi Pirandello

<Angelo>

14. This dynasty began around 1530 BC with the ascendancy of Ahmose, who is credited with defeating the Hyksos. For 10 points each:

[10] Identify this first Egyptian dynasty of the New Kingdom. Thutmose III, a famed conqueror, was a member of this dynasty.

ANSWER: 18th dynasty of Egypt [or Dynasty 18; prompt on Thutmosid dynasty]

[10] The tomb of this 18th dynasty Pharaoh was found almost entirely intact by Howard Carter in 1922.

ANSWER: Tutankhamun I [or Tutankhaten I; or King Tut]

[10] One of the important historical sources for the 18th Dis the letters named for this place sent between people like Amenhotep III and the Babylonian king Burnaburiash. This place contained the North Riverside Palace, which was open to the sky.

ANSWER: Tel el-Amarna [or Akhetaten; or Akhetaton]

<Bentley>

15. In linear algebra, the “row” or “column” type can be derived from matrices, and a set of them can “span” a space if they cover all dimensions of that space. For 10 points each:

[10] Name these objects often described as quantities with both magnitude and direction.

ANSWER: **vectors**

[10] For a given space, a linearly independent set of spanning vectors has this name. Any vector in such a space can be obtained through adding scalar multiples from this set.

ANSWER: **basis** set

[10] The Gram-Schmidt process yields this kind of basis for a space, composed entirely of unit vectors for which the dot product between any two such vectors is 0.

ANSWER: **orthonormal** basis [do not prompt on “orthogonal”]

<Jackson>

16. For 10 points each, name these Gothic cathedrals.

[10] Abbot Suger kick-started the Gothic style with his plans for this cathedral where French kings were traditionally buried.

ANSWER: Basilica of **St. Denis** [or Abbey of **St. Denis**; or Basilique **St. Denis**]

[10] This cathedral fifty miles outside of Paris has a labyrinth on its floor. Its stained glass includes the Blue Virgin Window, and it was the first building to require flying buttresses.

ANSWER: Cathédrale Notre-Dame de **Chartres** [or Our Lady of **Chartres** Cathedral; do not accept “Notre-Dame”]

[10] Napoleon was crowned at this famed cathedral in Paris whose south tower holds the bell Emmanuel. Its Galerie des Chimères is named for its many Gothic-style gargoyles.

ANSWER: Cathédral **Notre-Dame** de Paris [or **Our Lady** of Paris Cathedral]

<Tabachnick>

17. Its main character sees a rabbit and “men who crawl like babies” in the forest; those men are soldiers who remind him of circus clowns. For 10 points each:

[10] Name this short story in which a six-year-old boy with a wooden sword realizes that a forest fire is coming from his parents’ burning house but cannot warn them because he is a deaf-mute.

ANSWER: “**Chickamauga**”

[10] In this other Civil War short story, Peyton Farquhar imagines escaping his hanging and reaching his front porch before suddenly blacking out, realizing it was all a fantasy he worked up in the seconds before his death.

ANSWER: “An **Occurrence at Owl Creek Bridge**”

[10] This American author of “Shiloh” wrote “Chickamauga” and “An Occurrence at Owl Creek Bridge.” His other works include one about a murderous chess-playing robot, “Moxon’s Master,” and *The Devil’s Dictionary*.

ANSWER: Ambrose **Bierce**

<Jackson>

18. Identify the present-day countries once dominated by empires, for 10 points each.

[10] Jayavarman II founded the empire of the Khmer people, who later built Angkor Wat under Suryavarman I. The Khmer were centered in this present-day country where Angkor Wat is located.

ANSWER: **Cambodia**

[10] The Pagan Kingdom grew from the fortified town of Pagan to encompass much of this present-day country. Its rulers practiced Theravada Buddhism, and it extended eastward at least to the Salween River.

ANSWER: **Burma** [or **Myanmar**]

[10] Historically, some of the most powerful factions in this present-day country were Hindu rajahnates like the Tondo Kingdom and Sunni Muslim sultanates in its southern portions such as the Sultanate of Maguindanao. An insurgency here was led by Emilio Aguinaldo.

ANSWER: The **Philippines**

<Haddad-Fonda>

19. The title character of this novel supports the application of a “third force” to Vietnam. For 10 points each:

[10] Name this novel, narrated by Thomas Fowler, in which the idealistic CIA agent Alden Pyle wishes to marry Fowler’s girlfriend Phuong and dies because of his controversial plans for Vietnam.

ANSWER: *The **Quiet American***

[10] This author of *The Quiet American* also described Henry Scobie's struggle with his Catholicism in colonial West Africa in *The Heart of the Matter* and set *The Power and the Glory* in Mexico.

ANSWER: Graham **Greene**

[10] This character from *The Power and the Glory* is pursued by the police lieutenant because of his illegal profession, hated by his illegitimate daughter Brigida, and mistaken for a doctor by the dentist Mr. Tench.

ANSWER: the **Whiskey Priest**

<Angelo>

20. Identify some ancient Greek poets, for 10 points each.

[10] Her poetry, which mostly survives in fragments, includes an address to Aphrodite for help with unrequited love. She has a namesake metrical stanza and hails from Lesbos.

ANSWER: **Sappho**

[10] This man's namesake odes have been grouped into Olympian, Pythian, Nemean, and Isthmian. His Epinician odes celebrate victory.

ANSWER: **Pindar**

[10] This Hellenistic poet was a pioneer of pastoral poetry and is known for his *Idylls*, one of which is addressed to the tyrant of Syracuse.

ANSWER: **Theocritus**

<Angelo>

21. The first of these laws, passed in 1866, had to be strengthened in 1871 following the actions of the Ku Klux Klan. For 10 points each:

[10] Identify this common name for legislation like the one passed in 1964 that banned organizations receiving government funding from practicing discrimination to promote the namesake freedoms.

ANSWER: **Civil Rights** Acts

[10] The constitutionality of Title II of the Civil Rights Act of 1964 was upheld in this Supreme Court case, argued alongside *Katzenbach v. McClung*. The namesake Georgia lodging facility was ordered to no longer refuse service to African Americans.

ANSWER: **Heart of Atlanta** Motel, Incorporated v United States, et al. [accept in either order]

[10] This man opposed the Civil Rights Act of 1964 with the justification that “you can’t legislate morality.” His nuclear policy was attacked in the infamous Daisy Ad.

ANSWER: Barry Morris **Goldwater** [prompt on **Mr. Conservative**]

<Bentley>

22. One work that exemplifies this period ends with Sir Sampson Legend and Foresight laughing at the romantic entanglements of their children. For 10 points each:

[10] The premiere of Congreve’s *Love for Love* started the “war of the theaters” during what literary period spurred on by Charles II’s preference for sexually explicit humor?

ANSWER: **Restoration** comedy

[10] This author’s play about the “jilting wench” Lucetta’s seduction of Blunt, a companion of Willmore, *The Rover*, was published after Charles II kept not paying her for spying on the Dutch. She also wrote *Oroonooko*.

ANSWER: Aphra **Behn**

[10] This Irish restoration comic wrote about Captain Plume’s love for Sylvia in *The Recruiting Officer* and about Archer and Aimwell’s plan to steal from rich ladies in *The Beaux’ Strategem*.

ANSWER: George **Farquahar**

<Gupta>

23. Answer some questions about data compression for 10 points each:

[10] Video compression and decompression software are given this term. They include WMV and DivX.

ANSWER: **codecs**

[10] Name the optimal code that begins by constructing a binary tree that assigns the most common symbols the shortest possible codes and that ensures that no code is also the beginning of another code.

ANSWER: **Huffman** coding

[10] Some image compression algorithms employ these self-similar objects named for their non-integer Hausdorff dimension.

ANSWER: **fractals**

<Watkins>