**ACF Nationals 2010**

**Packet by Rutgers and Yale**

1. This country is home to the world's largest walnut forest, Arslanbob, part of a tourist center with small and large waterfalls. The Toktogul Reservoir is located in its province of Jala-Abad in this nation, while its Batken province lies to the west of Osh provice, which contains this nation's exclave of Barak. This country's flag depicts a sun with forty yellow rays on red background, and its highest point occurs on the eastern border at Jengish Chokusu. This country is also home to Lake Issyk-Kul, the world’s second largest mountain lake, on its largest river, the Naryn River. It was the site of the 2005 Tulip Rebellion which forced President Askar Akayev out of office. For 10 points, name this landlocked nation located east of Uzbekistan and north of Tajikstan, with capital at Bishkek.

ANSWER: **Kyrgyzstan** or **Kyrgyz Republic**

2. At the end of the first printing of this play, the author included an epigram of Martial's, "Haec fuerint nobis praemis si placui," and thanked the actor Richard Perkins for his "well-approved industry." It features a ghost urging a brother to avenge a fallen woman, as well as a dirge sung by a grieving mother, “Call for the robin redbreast, and the wren.” The action is set in motion when the central character recounts a dream about a "goodly yew tree" whose branch falls on and kills two people trying to uproot it. This leads to a plot whose outcome is displayed by a Conjuror in the shows that make up Act II, scene ii: Camillo's death is staged as a vaulting accident, while the Duchess, Isabella, kisses a poisoned portrait of her husband. Flamineo carries out these murders in the service of the Duke of Bracciano and his adulterous lover, Vittoria. For 10 points, identify this revenge tragedy by John Webster.

ANSWER: *The* ***White Devil***

3. Naphthaline diimides exemplify the “threading” variety of this class of compounds. Most of them are cationic and planar in structure, a feature that allows them to displace the cationic sheath often formed by magnesium and sodium ions. The interaction of these compounds with their targets is facilitated by breathing and causes the targets to lengthen, differentiating these chemicals from compounds like distamycin A. Leonard Lerman described the “classical” model of these compounds based on his work with acridine orange. Another example, doxorubicin, is a topoisomerase II poison, while all of these compounds partially unwind their target substrate, inhibiting RNA polymerase II and causing insertions and deletions. For 10 points, name this group of mutagens which includes ethidium bromide, all of which distort the structure of DNA by inserting between base pairs.

ANSWER: **intercalating agents** [accept **intercalators**]

4. Participants on one side of this conflict produced electrum coinage featuring an incuse square divided into four smaller squares. The last major battle of this conflict saw navy under Dionysius of Phokae defeated by Datis the Mede after the defection of the Samians - that defeat at Lade resulted in the capture of the leading city of one side of this conflict. The designs of Aristagoras, first to take Naxos and, then, to retain power after that expedition’s failure, led to this war. The Carians were drawn in through the burning of Sardis, though Athens withdrew from this clash following the subsequent defeat at Ephesos. Claimed by Herodotos as the spur for Persia’s later attack of mainland Greece, for 10 points, name this conflict which featured the uprising of Miletos and other cities against Darius I, and occurred in the namesake region.

ANSWER: **Ionian Revolt** [accept obvious equivalents]

5. One of this author’s poetry collections contains such verses as “After the Storm” and “Eve,” while another is divided into sections like the “Illness Cycle” and the “Could I ever forget Cycle.” Those volumes, entitled *When It Clears Up* and *Themes and Variations*, respectively, were published 36 years apart and span a career that began by imitating Rilke. This man’s short stories include “The Apelles Mark” and a tale about the kidnapping of young boy named Tosha, who is rescued, but later executed by the Red Guards, called “Aerial Ways.” This author’s longer lyrics include a panoramic ode to the revolution and an autobiographical portrait of the leader of the Sevastopol mutiny. In addition to *1905* and *Lt. Schmidt*, this author published a work that centers on a young woman who rejects both her husband Pascha and the vindictive Komarovsky to be with a man she once worked with as a nurse. For 10 points, identify this Russian author, who created the lovers Lara and Yurii, in his *Doctor Zhivago*.

ANSWER: Boris **Pasternak**

6. One of his compositions for six vocalists is based on a single B-flat ninth chord and requires the singers to emphasize overtones up to the 24th partial . He included a serialized part for a mime making prayer gestures in his *Inori*, and *Plus-Minus* was the first of his "process compositions." His work with indeterminacy includes *Zyklus*, a spirally-bound score that can begin on any page, and *Refrain*, which features circular notation. Another piece is scored for three orchestras with three conductors, and is called *Gruppen*. Each part of his most ambitious work opens with a "Greeting" and ends with a "Farewell." The "Farewell" for *Thursday* was played, at its premiere, from the rooftops of the square outside La Scala. For 10 points, identify this composer of several *Klavierstücke*, the seven-part operatic cycle *Licht*, and the *Helicopter Quartet*.

ANSWER: Karlheinz **Stockhausen**

7. One treaty of this name confirmed the Peace of Nikosburg and was signed by Ferdinand II with Gabriel Bethlen. The second treaty of this name saw Vladislaus of Hungary renounce claims on lower Austria and stipulate that Maximilian I would succeed him if he left no heir.  The most famous treaty of this name saw the surrender of Venetia and Dalmatia to Italy, and the cession of Augsburg to Bavaria was forced upon its signatory Count Gyulai. Francis II replaced Francis I of Austria, and the earlier Treaty of Luneville was confirmed by this agreement which paved the way for the Confederation of the Rhine. For ten points, name this treaty which withdrew Austria from the Third Coalition after defeats at Ulm and Austerlitz, and which effectively ended the Holy Roman Empire upon its signing in 1805.

ANSWER:  Treaty or Peace of **Pressburg**

8. This author’s stories include a one centered on a dying woman who beseeches the narrator to dig her grave with a “large pearl oyster shell,” as well as a tale about a father trying to abandon his child in a forest. Both of those works were published in the collection *Ten Nights’ Dreams*. An unemployed man goes to visit a hospitalized man to blackmail him in the novel *Light and Darkness*. In another work, a student befriends a Sensei, who reveals a love triangle that featured his best friend K and his landlady. Another novel contains the characters “Porcupine” and “Redshirt” and the protagonist’s times as a teacher in Matsuyama. His major work features a nameless narrator who leaves behind the alley life and is adopted by the family of a man with digestive difficulties, whom he dubs Mr. Sneeze. For 10 points, identify this Japanese author of the aforementioned works *Kokoro,* *Botchan,*and *I Am a Cat*?

ANSWER: Natsume **Soseki**

9. A reaction of this type using a molybdenum hexacarbonyl catalyst was developed by Banks and Bailey and yields 2-pentene as one of its products. Acidifying a solution of manganate ion yields a reddish-orange solution through this type of reaction. Microbes like D. propionocus catalyze a version of this process in which fractionation occurs between different isotopes of sulfur. As an alternative to combination, this process may be used to terminate free radical polymerization. In many bacterial species, a cytochrome C-associated protein catalyzes a reaction of this type which promotes the formation of water and oxygen from hydrogen peroxide; this reaction is also catalyzed by catalase. For 10 points, name this type of reaction in which compound undergoes both reduction and oxidation to yield two distinct species.

ANSWER: **disproportionation** [accept **dismutation**; on the Banks/Bailey clue, accept **metathesis**]

10. A forthcoming essay by this philosopher discusses the nature of the self and is based on a lecture he gave entitled, "The First Person." Other important unpublished works by him include a work on the theory of R.G. Collingwood as well as an algebraic proof of Godel's incompleteness theorem. His 1982 work on *Philosophical Investigations* provided the most comprehensive account of Wittgenstein's account of rules and private language. His best-known work uses the example of the possibility of heating or cooling a meter stick to demonstrate that the statement that one meter is equal to the length of a meter stick is false in some possible worlds. That work argues for the existence of necessary a posteriori and contingent a priori truths and introduces the concept of the rigid designator. For 10 points, identify this analytic philosopher and author of *Naming and Necessity*.

ANSWER: Saul **Kripke**

11. One of this dynasty’s most important figures was its great naval commander Sarkhel Angre.  This polity won the War of 27 Years after the death of its founder. Its childless ruler Pratapsinh was succeeded by his widow Tarabai, who won a key military victory at the Narmada River. Based in Satara, this empire obtained its apex under Baji Rao I, before splintering into a pentarchy including the Bhonsles in Nagpur and the Peshwas in Pune. This empire is the namesake of three wars with Britain, and was eventually absorbed by the East India Company.  For 10 points, identify this empire founded by Shivaji which rose to great heights after the subjugation of the Mughals.

ANSWER:  **Maratha**n Confederacy

12. This novel features a character that eats 10,400 peaches in order to donate the stones to the military, as well as a man who relates the story of Sir Hercules and his wife, a dwarf couple who commit suicide after they learn that their normal-height son plans to make them dance drunkenly for his friends. In another scene, it is revealed that the towers were constructed so that their builder, Sir Fernando Lapith, might defecate nearer to God. This novel’s protagonist receives advice from Mr. Barbecue-Smith on how to write by tapping into his subconscious and later realizes that his love for Anne is the object of ridicule when he discovers caricatures drawn by the nearly deaf Jenny. All of these characters have been invited to visit the home of Henry Wimbush in, for 10 points, what novel centering on Denis Stone’s visit to the titular estate, a work by Aldous Huxley.

ANSWER: ***Crome Yellow***

13. A problem named for this man is equivalent to finding the number of free distributive lattices with n generators, but it is more commonly stated as determining the number of monotonic increasing Boolean functions of n variables. His number-theoretic psi function involves taking the product over all distinct prime factors p of n of (1 + 1/p), then multiplying by n. A type of integral domain named for him is an integrally closed Noetherian domain for which every nonzero prime ideal is also a maximal ideal. Another concept associated with this mathematician is a partition of the rationals into two nonempty subsets S1 and S2 such that all members of S1 are less than those of S2, and S1 has no greatest element. For 10 points, identify this mathematician who thus constructed the reals from the rationals with his namesake "cuts."

ANSWER: Richard **Dedekind**

14. A mosaic of this event was found in Pompeii in the House of the Faun and modeled on an earlier Greek painting by Philoxenus of Eretria. Jan Bruegel’s depiction of the same subject was painted in 1602 and is in the Louvre, but the most famous remains the one commissioned by Duke William IV. Oddly there is a crescent moon at the top left and a sparkling sun at the upper right. More suspicious are the presence of a group of women on the left, the excessive size of Cyprus, and the presence of mountain ranges in particular the large mountain at the center of this painting. The historian Aventinus provided the numbers and information, later rewritten in Latin, that appear in the tablet hanging from the sky at the top, as well as the information on the banners of the two principal forces. For 10 points, this is what depiction of a victory of Alexander the Great over Darius III in 333 BC by Albrecht Altdorfer?

ANSWER: *The****Battle of*** *Alexander at* ***Issus*** (or ***Alexanderschlacht***)

15. In an account of Plutarch, this deity’s infidelity is discovered when a garland is accidentally left behind by her lover. In one story, this figure, disguised as a dancer, is dispatched by Ra, along with Khnum, Isis, Heqet, and Meshkhenet in order to help Rededdet give birth to three kings, and in another story, this figure along with Serqet convinces Isis to summon Ra’s help when Horus is stabbed by a scorpion. This deity is frequently depicted wearing a basket, which is also the hieroglyph representing her name, “lady of the house.” Her brother inadvertently impregnated her with a child she later abandoned; that child, Anubis, was born when this youngest daughter of Geb and Nut had sex with Osiris. For 10 points, name this Egyptian goddess, the sister of Isis and wife of Set.

ANSWER: **Nephthys** [or **Nebet-het** or **Nebthet**]

16. Recent evidence collected here has suggested that the lime-rich marl clay prompted residents to locate this site in the middle of an immense marshland. More recent work by Martin and Russell has overturned the earlier claim by Perkins that it was the earliest center of cattle domestication, and Halbaek has cited the discovery of hackberries at all levels here as evidence of alcohol production. Its commercial importance was related to Hasan Dag, a nearby volcano and the source of obsidian. Plastered auroch skulls and other objects decorated by horns are taken as evidence of an important bull cult here, though since the discovery of an obese female statue with two leopards by Melaart, this site has been associated with goddess worship. With a name meaning “fork mound” in Turkish, for 10 points, name this Neolithic archaeological site in the Konya Plain in Asia Minor.

ANSWER: **Catal Huyuk**

17. David Kennedy wrote a book about this woman's career that skeptically treated her story of experiencing a vision following the death of Sadie Sachs. This woman's visit to Spain with Lorenzo Portet resulted in a series of anti-clerical articles she wrote for the magazine of the New York Modern School. She used the alias “Bertha Watson” when she fled to Britain in October 1914 after being indicted for publication of *The Woman Rebel.* She married James H. Slee after her first husband, William, was jailed for thirty days for distributing a pamphlet that violated the Comstock Laws. For 10 points, name this author of “What Every Girl Should Know” and *Family Limitation*, an early advocate of birth control.

ANSWER: Margaret **Sanger**

18. According to an old German tradition, single women who want to marry should sleep naked on the eve of this man’s feast day. This man’s remains were brought to the cathedral of Amalfi by Peter of Capua after Constantinople was taken by the French. In *The Golden Legend*,Voragine tells of this man’s meeting with an old lecher and his subsequent fast for the Lord to forgive Nicholas’ sins. According to some accounts, he was said to have traveled to the land of the anthropophagi, though Origen describes Scythia as his mission field. In the Bible it was this man who asked how five loaves of bread and two fish would feed so many. This disciple of John the Baptist was martyred at Patras on an X shaped cross. For 10 points, identify this apostle, the first disciple of Christ and the patron saint of Scotland.

ANSWER: Saint **Andrew**

19. Its final section lists fiddling with tea leaves as one of many “features of the Press.” The speaker of this work recalls “fruition, fulfillment… or even a very good dinner” but asserts that some may have had “the experience but missed the meaning,” and later asks, “I sometimes wonder if that is what Krishna meant.” With their invocation of an April dooryard and the clanging of a bell, lines 36 and 48 of this work have been interpreted as allusions to Whitman and a sort of homecoming for its author. Section four is addressed to a Lady who is encouraged to pray for all “who are in ships” from a shrine “on a promontory.” Composed in five sections, it begins, “I do not know much about gods,” and is named for a rock formation off the coast of Massachusetts. For 10 points, name this T.S. Eliot poem, which is a part of the *Four Quartets* along with “East Coker,” “Burnt Norton,” and “Little Gidding.”

ANSWER: **“The Dry Salvages”** (pronounced to rhyme with “assuages”)

20. The pointlike type, in the presence of an external four-form field, puffs up into a fuzzy two-sphere, in an instance of the Myers effect exhibiting their dielectric properties with respect to Ramond-Ramond forms. The BFSS matrix theory is based on quantum mechanics of the type with zero spatial dimensions. The NS5 variety of these carry a magnetic charge, while the F-string variety carry an electric charge. The D(-1) variety are instantonic. In heterotic M-theory, one dimension is an interval with “end-of-the-world” ones at the boundaries. As one moves through spacetime, it sweeps out a worldvolume. The “0” type is pointlike while the “1” type is a string. For 10 points, identify these entities from string theory that occupy a certain number of dimensions, and whose “2” variety are usually just called membranes.

ANSWER: **branes** [Accept membranes before the final word. **P-branes** is acceptable at any time. **D-branes** or **Dp-branes** are acceptable answers until “NS5” is read.]

21. This thinker's work is the subject of a study by Harry Oosterhuis entitled Stepchildren of Nature. His 1875 textbook on forensic psychiatry analyzed crime as an act of will. In one work, he describes Hammond's research on Pueblo Indians of New Mexico and their idea of the "mujerado," pairing it with Herodotus' story about the "insanity of the Scythians." This author of An Experimental Study in the Domain of Hypnotism distinguished between fallacies in "exactness of the reproduction of ideas" and in content of ideas in his Textbook of Insanity. He differentiates between "anaesthesia," or lack of appetite, "hyperaesthsia," or too much appetite, and "paraesthesia," or misdirected appetite, in his most well-known work, which argues that procreation is the only logical purpose of desire. For 10 points, name this author of *Psychopathia Sexualis*, a German who studied sex in the 19th century.  
ANSWER: Richard von **Kraft-Ebbing**

22. The artist placed his name on the base of a bench in the right foreground whereas in the left background a man in a yellow cloak walks with a staff and leaves the scene along with the figure in red with a raised hand to his right. To the left of the title figure a lamp sends out a plume of smoke and at the base of the bench on the left are a scroll and an opened inkpot. Other features include the lyre on the bed in the center and the manacles on the floor. Nine of the ten figures in the foreground are in various states of despair, with the lone exception being the title character with his left arm raised and his right reaching toward the kylix. For10 points, name this painting by David in which the title event will be fulfilled by the goblet of hemlock in the center.

ANSWER: *The* ***Death of Socrates*** [or *La* ***Mort de Socrates***]

23. During this period, the Rheic Oceans disappeared, while the Hercynian and Appalachian Mountains formed as Laurussia and Godwanaland collided together. It saw the diversification of skates, rays, and other members of Elasmobranchii. Arthropleura and Meganeura, the largest documented invertebrate and flying insect, respectively, overcame traditional limitations on gigantism as atmospheric oxygen levels reached 35%. The Gzhelian Age at the end of this period featured a diversification of reptiles as sea levels receded, and tetrapods gained greater access to inland areas due to the development of the amniote egg. The development of lignin and the evolution, from cordaites, of conifers during this period contributed to its namesake fossils. For 10 points, name this geological period that follows the Devonian, whose name derives from the many coal beds that were laid down during it.

ANSWER: **Carboniferous** period

**Rutgers and Yale Bonuses**:

1. For 10 points each, answer some questions on rotation.

[10] The force caused by this effect is proportional to v cross omega and causes circular motion in objects in rotating frames. For a falling object in the Earth’s gravitational field, it causes a horizontal deflection.

ANSWER: **Coriolis** effect

[10] This is a standardized way of expressing the orientation of a set of axes (U,V,W) with respect to fixed axes (X,Y,Z). Two of them, denoted phi and psi, relate to the orientation of the so-called “line of nodes” shared by the UV and XY planes.

ANSWER: **Euler angles** [or **Eulerian angles**]

[10] A rigid body has three principal moments of inertia, so motion of a complicated shape can be approximated, neglecting friction, by an equivalent one of these quadric surfaces with three length scales, as shown by Poinsot.

ANSWER: equivalent **ellipsoid**

2. Name these things about aquatic vessels depicted in paintings, FTP each:

A. The last ship of the line from Trafalgar was the subject of his *Fighting Temeraire*, but the exact name of his titular *Slave Ship* is unknown.

Answer: Joseph Mallord William **Turner**

B. His paintings with maritime settings include *Seashore With Shipwreck By Moonlight* and *Sea of Ice* or *The Wreck of the Hope*.

Answer: Caspar David **Friedrich**

C. This Fauvist was known chiefly for his depiction of horse races and boat races, the latter in such works as *Marine*, *Henley Regatta*, and his chief work *Regatta at Cowes*.

Answer: Raoul **Dufy** [doo-FEE]

3. The D Manuscript of this text dedicates five sentences to Harold Godwinson’s defeat at Hastings and that manuscript is one of two to continue this account past 1066. For 10 points each:

[10] Name this work of historiography, one of the earliest to appear in a vernacular language, which provides a mostly annalistic account of the history of the namesake people.

ANSWER: ***Anglo-Saxon Chronicle***

[10] The composition of the *Anglo-Saxon Chronicle* has generally been ascribed to the literary program of this great Wessex king, who is himself credited with translating Boethius’ *Consolation of Philosophy*.

ANSWER: **Alfred** the Great

[10] This Archbishop of Canterbury notably held a copy of Version A of the Chronicle. He approved the Thirty-Nine Articles after being appointed by Queen Elizabeth in 1559, and he published the Bishops' Bible.

ANSWER: Matthew **Parker**

4. The speaker focuses on not only the beauty of the titular flower, but also on how short its “frail duration is”, which is “but an hour,” for 10 points each:

[10] This is what poem that begins “Fair flower, that dost so comely grow, / Hid in this silent, dull retreat, / Untouched thy… blossoms blow.”

ANSWER: *“The****Wild Honeysuckle****”*

[10] “The Wild Honeysuckle” is by this “Poet of the American Revolution,” best known for his “The Indian Burying-Ground.”

ANSWER: Philip **Freneau**

[10] Written while Freneau was an undergrad at Princeton, this work which alludes to Ossian’s song opens by addressing the titular entity with the lines, “Wakeful, vagrant, restless thing ever wandering on the wing.”

ANSWER: ***“The Power of Fancy*”**

5. Heinrich Schutz produced an outstanding collection of them and the publication of *Musica Transalpina* in 1588 spurred great interest in this musical form among British composers, for 10 points each:

[10] Identify this form which sets a poem to music. Typically the same music is repeated for each stanza, but the concluding ritornello will have its own music. Monteverdi published 8 books of them.

ANSWER: **madrigal**(s)

[10] This pupil of William Byrd and author of *Plaine and Easie Introduction to Practical Musicke*, produced a series of notable madrigals.

ANSWER: Thomas **Morley**

[10] This 20th Century composer wrote a number of madrigals set to texts by Joseph Weinheber. His other works include the song cycle *The Life of Mary* and a set of 12 fugues for piano, *Ludus Tonalis*.

ANSWER: Paul **Hindemith**

6. For 10 points each, answer these questions about clouds.

[10] Clouds of this type generally appear at altitudes above 28,000 feet as thin, wisplike filaments. They can be used to observe differences in the wind shear at low and high altitudes and are often found near hurricanes.

ANSWER: **cirrus** clouds

[10] This type of vertical cloud is associated with strong thunderstorms and heavy precipitation and may be found at squall lines. Often featuring an anvil dome, they can develop into supercells and tornados.

ANSWER: **cumulonimbus** clouds

[10] This process can occur if supercooled ice crystals and water droplets are present together in a mid- or upper- latitude cold cloud. Water freezes upon contact with the ice crystals, thus enlarging them before their eventual precipitation in the form of ice pellets or freezing rain.

ANSWER: **Bergeron**-Findeisen process

7. His later works include the story of a miserly bookseller called *Riceyman Steps*, while his earlier works featured such characters as Auntie Hamps and Darius Clayhanger,for 10 points each:

[10] Identify this British novelist who wrote *These Twain* andcreated a fictional analogue of Stoke-on-Trent in a series of novels.

ANSWER: Arnold **Bennett**

[10] This Arnold Bennett work focuses on the disparate choices of two sisters, Constance and Sophia Baines, who are reunited to live out the end of their lives in the town of Bursley.

ANSWER: ***The Old Wives’ Tale***

[10] As a critic, Bennett famously said of this groundbreaking 1929 work, “It is not ‘feminist.’” This essay by a British woman imagined a fictional sister for Shakespeare, and promoted the literary concept of “androgyny.”

ANSWER: ***A Room of One’s Own***

8. A camp for families of this people was included at Birkenau and they were forced to wear an inverted brown triangle to identify them and the related Sinti people. For 10 points each:

[10] Name this Indo-Aryan people, long the subject of persecution throughout Europe, whose common name of Gypsy was derived from a supposed Egyptian origin.

ANSWER: **Romani** [or **Roma** or **Rom**]

[10] The camp at Birkenau was part of the larger Romani Holocaust, which is known by this name, from a Romani word meaning “Devouring”.

ANSWER: **Porajmos**

[10] This non-Gypsy-related massacre was discovered when a mass grave of Polish officers was found by the Germans in 1943, probably a result of executions committed by the NKVD in Smolensk.

ANSWER: **Katyn** or Katyn Wood/Forest Massacre

9. For 10 points each, name some things about epistemology.

[10] This Platonic dialogue takes place between Theodorus, Socrates and the title person. It rejects the three possibilities that “knowledge is perception,” that “knowledge is true belief,” and that “knowledge is justified true belief.”

ANSWER: ***Theaetetus***

[10] Despite being rejected in the *Theaetetus*, the idea of knowledge as being justified true belief remained popular until these namesake problems called that into question. They are based on the idea that justification is logically complete, so that if a logically entails b and c justifies a then c justifies b.  
ANSWER: **Gettier** Problems or Paradoxes or Issues

[10] One attempt to solve the Gettier paradox is this account of knowledge which holds that factors unrelated to the mental state of the agent determine whether a belief is justified. Alvin Goldman's formulated it as “reliabalism.”

ANSWER: **externalism**

10. For 10 points each, answer these questions about a chemical process.

[10] In this process, a zinc coating is used to protect an underlying metal, usually iron or steel, by acting as a sacrificial anode.

ANSWER: **galvanization**

[10] This term refers to the size of the zinc crystals after galvanization is complete. Grain size can be adjusted by varying the parameters used to set up heterogeneous nucleation of the zinc on the base metal surface.

ANSWER: **spangles**

[10] Galvanization is a cheaper alternative to the use of corrosion-resistant stainless steel, which is an alloy of steel and chromium. The chromium protects the steel by forming an oxide layer via this process.

ANSWER: **passivation**

11. The first of these was passed in 1651 under Oliver Cromwell, and quickly sparked the First Anglo-Dutch War. For 10 points each:

[10] Give the collective name for the acts which restricted trade to and from the American Colonies, others of which were passed in 1660 and 1663.

ANSWER:  **Navigation** Acts

[10] The Dutch United Provinces agreed to recognize the first Navigation Act by this 1654 treaty, which ended the First Anglo-Dutch War.  It also names the 1674 treaty that ended the Third Anglo-Dutch War.

ANSWER: Treaty of **Westminster**

[10] These orders famously objected to by James Otis were issued by English courts to authorize seizure and inspection of American ships to enforce the navigation acts.

ANSWER: **Writs of Assistance**

12. It was published in a namesake collection that also included the works “The Lady’s Maid” and “Her First Ball,” for 10 points each:

[10] Identify this short story that ends with Laura leaving the title event at the Sheridan Household to visit the widow of the recently deceased Mr. Scott.

ANSWER: “**The Garden Party**”

[10] “The Garden Party” was written by this New Zealand author whose other works include *Bliss* and *In a German Pension*.

ANSWER: Katherine **Mansfield**

[10] In this Mansfield story the titular pair of kids, with odd names, wakes up during their parents’ get-together. After being allowed to join the fun, one of them ruins the Mother’s perfect centerpiece and they are sent off to bed again.

ANSWER: “**Sun and Moon**”

13. For 10 points each, answer these questions about price indices.

[10] This type of price index measures the average cost of goods and services that are purchased by those living in a given region over a certain length of time. In the United States, the national one is used to set the federal poverty level.

ANSWER: **consumer** price index or **CPI**

[10] Because methods to calculate price indices first formulated by Paasche and Laspeyres overstate and understate inflation, this doubly eponymous method based on the use of arithmetic means was developed.

ANSWER: **Marshall-Edgeworth** price index

[10] This index is used to track the price of single family homes on a quarterly basis. It comes in national, 10-city and 20-city composites, and 20 individual metro area varieties and was developed by two economists along with Allan Weiss.

ANSWER: **Case-Shiller** home price index

14. This fragmentary work, which highlighted the importance of “miracles” as the foundation of the Church, first appeared in its entirety in 1844, for 10 points each:

[10] Identify this collection that includes such sections as “The Fundamentals of the Christian Religion,” and argued for the importance of faith by noting that “The heart has its reasons, which reason does not know.”

ANSWER: ***Pensees*** or ***Thoughts***

[10] Perhaps the most notable part of the *Pensees* is its presentation of this namesake scenario, God either exists or He does not. If you bet that He doesn’t exist, and He does, you lose all, but if you bet that He does you gain all.

ANSWER: **Pascal’s Wager**

[10] Pascal’s wager is discussed at length in this William James work that notes its essential pragmatism, but also points out that if such a proof works for Pascal’s God it would work for any god whatsoever.

ANSWER: ***The Will to Believe***

15. For 10 points each name these things about a particular type of art form:

[10] This art form, often associated with Islam or Hanzi, involves the stylistic writing of words and letters.

ANSWER: **calligraphy**

[10] Mehmed II had one of these calligraphic seals that read “Mahmud Khan, son of Abdulhamid is forever victorious.” They involved the writing of multiple words and phrases over and around each other in a geometric design and were primarily associated with the Ottomans, though they have also been used by Emperor Akihito and Vladimir Putin.

ANSWER: **tughra**

[10] Calligraphy is also used for visual depictions of this Arabic noun that represents a phrase read before each sura except the ninth and which means “In the name of God, Most Gracious, Most Merciful “

ANSWER: **bismillah** or **basmala**

16. Divided into three partitions, it quotes Leonartus Fuchsius on the misery of scholars in a section entitled “Love of Learning, or, Overmuch Study,” for 10 points each:

[10] Identify this 1621 work that appeared in five different editions during its author’s lifetime, who wrote it under the pseudonym Democritus Junior.

ANSWER: ***The Anatomy of Melancholy***

[10] *The Anatomy of Melancholy* was written by this British author.

ANSWER: Robert **Burton**

[10] Burton’s *Anatomy of Melancholy* continually cites the works of other authors, including this Roman whose own works include “On the Happy Life” and the tragedy *The Madness of Hercules*.

ANSWER: Lucius Annaeus **Seneca**

17. According to an Etruscan account, this figure was a seer captured by the Vipinas Brothers, while a Roman story describes him as a warrior captured by Tarchon. For 10 points each:

[10] Name this figure, who is described by Vergil as a monster living in the Palatine Hill, who was killed after being trapped in his cave because he stole some cattle.

ANSWER: **Cacus** [or **Cacu**]

[10] Cacus stole those cattle from this hero who then established an altar to himself, the Ara Maxima. An Etruscan myth sees this hero adopted by his step-mother Uni, or Juno, by sucking at her breasts, though in Greek myth, Hera hates this son of Alkmene.

ANSWER: **Herakles** [or **Hercules** or **Hercle**]

[10] In another Etruscan myth, Avle and Caele, the Vipinas Brothers, helped this figure, also known as Macstrna, to defeat Tarquinius Priscus. The name Macstrna or Mastarna has been interpreted to hint at this man’s slave origins.

ANSWER: **Servius Tullius**

18. Answer the following questions about Cnidaria, for 10 points each.

[10] Cnidaria are known for their cnidocytes, which are unique cells adapted for the capture of prey. While most Cnidaria have venom-injecting, barb-ridden nematocysts, Anthozoa like corals and sea anemones have this type of cell, which captures prey via sticky, entangling thread-like structures.

ANSWER: **spirocysts**

[10] Cnidaria feature either a polyp body structure or this bell-shaped body form. Most mature organisms with this body plan are commonly known as jellyfish.

ANSWER: **medusa**

[10] Some jellyfish are confused with this order of Hydrozoa, whose members consist of a colony of individually distinct medusoid and polypoid organisms, each of which performs a specialized function for the colony. The Portuguese Man o’War is this order’s best-known species.

ANSWER: **Siphonophora** [accept **siphonophores**]

19. During his adventures in the Kingdom of Gorre, this title character is struck by a lance from the sky and later crosses a giant sword which serves as a bridge to the tower of King Bademagu, for 10 points each:

[10] Name this short Old French work about a title character who is later identified as Launcelot, but who earned the titular sobriquet for being driven around in a vehicle by a dwarf.

ANSWER: *The* ***Knight of the Cart*** [or *Le* ***Chevalier de la Charrette***]

[10] *The Knight of the Cart*, as well as *Erec and Enide*, were works written by this French poet who served at the court of Marie de Champagne.

ANSWER: **Chretien** de Troyes

[10] Critics have asserted that this Chretien work was written as an analogue to the story of Tristan and Isolde; it focuses on the relationship between Alis, his wife Fenice, and her lover, the title character.

ANSWER: ***Cliges***

20. 28 members of these people were killed in the Myall Massacre. For 10 points each:

[10] Name these peoples who were victims of the “Stolen Generations”. Known to wear possum-skinned cloaks, these people's tribes include the Dyirbal, along the Upper Murray River.

ANSWER: **Aborigines** [or **Aboriginals** or **Indigenous Australians**; accept logical equivalents]

[10] The Stolen Generations are also spoken of in reference to the "islanders" of this strait, which separates Australia's Cape York Peninsula from Papua New Guinea.

ANSWER: **Torres** Strait

[10] This protest, organized in 1972 in part to protest issues of land rights, takes its name from a group of Aborigines who camped outside of Parliament in Canberra. It was re-founded in 1992 and has been present ever since.

ANSWER: Aboriginal **Tent Embassy**

Name some things tangentially related to RSA, for 10 points each:

[10] RSA may become compromised if quantum computing should work because it would be possible to solve this problem in polynomial time in the number of input bits. One can do it in exponential time by dividing n by all integers smaller than or equal to the square root of n.

ANSWER: **prime factorization**

[10] This quantum algorithm discovered in 1994 can solve for prime factorization in polynomial time and would defeat RSA if implemented. It has been used to factor the number 15 with NMR.

ANSWER: **Shor**'s algorithm

[10] Integer factorization belongs to this complexity class, as does Pell’s equation. It refers to those problems that a quantum computer can solve in polynomial time with an error probability of less than or equal to one third.

ANSWER: **BQP** [or **bounded error, quantum, polynomial** time]