

2015 NSC - Official Scoresheet

Round	24 - Emerg.	Room	
Bracket			
Reader			

Team									Team								
Player Names																	
Q#					Bonus	Steals	Ques. Total	Run. Score						Bonus	Steals	Ques. Total	Run. score
1																	
2																	
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20																	
TB1																	
TB2																	
TB3																	
SD																	
Player 20s																	
Player 10s																	
Point totals																	
Final score																	
	Substitutions before Tossup 11								Substitutions before Tossup 11								
	Out:				In:				Out:				In:				
	Out:				In:				Out:				In:				

Circle winning team above. Clearly mark if game goes to OT/SD. Fill out "Point totals" row completely. If there are substitutions, please note tossups by each player in "20s" and "10s" rows. Below is for Tab Room use only:

RH	RS	BH	BS	Left	Right	BH	BS	RH	RS
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PACE NSC 2015 - Round 24 - Emergency - Tossups

1. In this country, nearly 25,000 children, many of whose parents belonged to the DSE, were placed in "child towns." The destroyer HNS *Velos* refused to return to this country during a NATO exercise in protest of a right-wing military junta that came to power after a 1967 coup. After World War II, this country regained the Dodecanese Islands, and backed a coup against archbishop Makarios III in an attempt to realize its idea of *enosis* during its Regime of the (*) Colonels. This country suffered a civil war from 1946-49 that prompted Truman to formulate his namesake "doctrine." In 1974, this European country tried to unite with an island partitioned by the Green Line, with capital at Nicosia. For 10 points, name this country that fought with Turkey over Cyprus.

ANSWER: Greece [or Hellenic Republic; or Hellas] <Wang>

2. Owing in part to his failed experiment of mixing tempera and oil paints, this artist never completed a painting in the Hall of the Five Hundred. One of his sketches features a single dragon among an array of cats and horses in various poses. A mural he made for Santa Maria delle Grazie was painted on a surface of gesso, pitch, and mastic, causing it to quickly deteriorate. In another of his sketches, a circle is centered on the title man's (*) navel while a square cuts off at his head and feet. The man in that sketch both extends his arms horizontally and raises his arms over his head. He painted the twelve apostles reacting in shock as Jesus announces that a disciple would betray him. For 10 points, name this artist of the *Vitruvian Man* and *The Last Supper*.

ANSWER: Leonardo da Vinci [or Leonardo da Vinci] <Bentley>

3. The Epworth Scale is a short questionnaire that measures this phenomenon. K-complexes and namesake "spindles" form during one type of this phenomenon, during which nearly half of all growth hormone production happens. "Z-drugs" like zolpidem and zopiclone treat defects in this phenomenon. Stages of this process, from 1 to 4, can be measured on an EEG. Some scientists believe that in humans before the Industrial Revolution, the (*) "polyphasic" form of this phenomenon dominated. Obesity is a common cause of interruptions in breathing during this phenomenon known as obstructive apneas. Acetylcholine dominates during the REM phase of this process. For 10 points, name this physiological process that is impaired in people with insomnia.

ANSWER: sleep [or REM sleep; or rapid eye movement sleep; or NREM sleep; or non-rapid eye movement sleep; or polyphasic sleep; accept other forms] <Gupta>

4. A commonly-depicted creature in early Athenian vase painting has the foreparts of this animal and the tail and wings of a rooster. The city of Abdera was founded near where the youth Abderus was killed by these animals. Heracles attacks Troy to collect his gift of twelve of these animals promised to him by Laomedon. After Hera gives one of these animals the power of speech, it portends the death of Achilles. As a wedding gift, Peleus receives two of these animals named (*) Balius and Xanthius. These land animals are tamed by Poseidon. Hercules steals four man-eating animals of this kind, and turns them against their original owner Diomedes. For 10 points, name these animals that pull the chariots of Greek gods and heroes.

ANSWER: horses [or mares; or steeds; or Equus ferus caballus] <Gupta>

5. This number partly identifies a logical law from the book *Foundations of Arithmetic* which creates a "course-of-values" for functions. The failure of that "Basic Law" of this number by Gottlob Frege inspired Russell's paradox. As initially proposed by Philippa Foot, this is the number of people who would be *saved* if the switch is flipped in the "trolley problem." A famous set of this many arguments includes an argument from degree, an argument for a (*) "first cause," and a teleological argument. This many "Ways" of proving God's existence were proposed by Thomas Aquinas. Plato's *Timaeus* defines aether as the classical element of this number. For 10 points, give the number used since Aristotle for the number of senses humans have.
ANSWER: five [or 5] <Jackson>

6. The second act of a play by this man opens with a pair of speeches offering the mottoes "Enjoy Yourselves" and "Save the Family". Food poisoning-stricken actors, including Miss Somerset, have to be replaced in the third act of that play by this man, which features a maid named Lily Sabina and a member of the "Ancient and Honorable Order of Mammals" who invents the wheel. A dead woman attempts to *relive her* (*) twelfth birthday in another of this man's plays, whose cast includes the alcoholic choir director Simon Stimson. The Antrobus family survives an ice age in one of his plays, while the Stage Manager officiates the wedding of Emily Webb and George Gibbs in *Grover's Corners* in another. For 10 points, name this playwright of *The Skin of Our Teeth* and *Our Town*.
ANSWER: Thornton Wilder [or Thornton Niven Wilder] <Carson>

7. This book highlights the unity and diversity of the fellowship of Christ by asking where the body's sense of hearing would be if the whole body were an eye. It instructs those who speak in tongues to additionally pray for the interpretation of tongues. The most famous section of this book concerns a concept that "is not easily angered" and "keeps no record of wrongs." This book controversially instructs women to (*) cover their heads in worship, and describes putting the "ways of childhood behind me" after becoming a man. Chapter 13 of this book describes a concept that "does not envy, does not boast," and notes that "Love is patient, love is kind." For 10 points, name this Pauline epistle, the first of two addressed to a church in Greece.
ANSWER: First Corinthians [or 1 Corinthians; prompt on Corinthians] <Kim>

8. The protagonist of this novel is the title subject of a 2013 "Counter-Investigation" by Kamel Daoud. Near the end of this novel, the protagonist answers affirmatively to the question "Do you really live with the thought that when you die, you die, and nothing remains?" posed to him by the Chaplain. On a "night alive with sand and stars", this novel's protagonist opens himself "to the gentle (*) indifference of the world". A railway worker in this novel who loses his scab-covered dog, Salamano, later testifies along with Marie at a trial resulting from the protagonist's having used Raymond's pistol to fire five shots. This novel opens with the line "Mother died today". For 10 points, name this novel in which Meursault shoots an Arab in Algeria, written by Albert Camus.
ANSWER: *The* Stranger [or *The* Outsider or *L'Étranger*] <Bentley>

9. Thermal expansion occurs because models for this quantity versus separation distance are asymmetric. This quantity is approximately the height of the well of a Morse potential. For a binary acid, this quantity equals proton affinity plus electron affinity minus ionization energy. It is exactly equal to the heat of reaction for homolysis, forming radicals. Though not heat of formation, this quantity is quite low for peroxides, explaining their (*) explosiveness. The heat of reaction equals the sum over this quantity for each of the reactants minus the sum of it for the products. It varies inversely with length and directly with order. For 10 points, name this quantity, the amount of energy released when two molecular fragments link covalently.
ANSWER: bond energy [or bond dissociation energy; or BDE; or bond strength; prompt on stability]
<Silverman>

10. In this non-science area of study, category members are organized around a core of most representative members in prototype theory. This field follows the principle of compositionality, which disregards implicatures. "Logic and Conversation" by Paul Grice introduced four maxims that distinguish this field. Violations in this field are marked by a pound sign. Noam Chomsky's sentence "Colorless green ideas sleep furiously" illustrates the difference between this field and the field one level below it in complexity, (*) syntax. Entailments and presuppositions are relations in this field, in which set theory relations can be used to express truth conditions of declarative sentences. For 10 points, name this field of linguistics that concerns the literal meaning of sentences.

ANSWER: semantics [prompt on linguistics until "syntax"; prompt on "cognitive psychology"; prompt on "meaning"] <M. Zhang>

11. The Lorenz number, equal to 2.4 times ten to the negative eighth, appears in the empirical Wiedemann-Franz Law for these materials. A classical model of these materials proposes a constant drift velocity from a uniform field and elastic electronic collisions. Sommerfeld adapted the Drude model of these materials into his free-electron model. Cold work prevents the movement of dislocations in these materials, resulting in strain hardening. Sequences of (*) quenching, then tempering, are used to strengthen these materials. Crystal lattices model the microstructure of these materials, which have delocalized "seas" of electrons. As a result, they have high conductivity, and are ductile and malleable. For 10 points, name these materials that are mixed in alloys.

ANSWER: metals [prompt on conductors or crystal lattices] <Silverman>

12. Elector John George II of Saxony refused the crown of Bohemia because taking it would have interfered with his participation this activity. Count Gaston III of Foix-Bearn wrote a popular medieval handbook on this activity, which was also the subject of Xenophon's *Kynegetikos*. The most dangerous form of this activity was called "par force." William the Conqueror's sons Richard and William (*) Rufus were both killed while participating in this activity. This activity ended with the baying, unmaking, and curee, and began with the quest and assembly. Royal Forests were established to protect this activity, whose variants include falconry. For 10 points, name this activity aided by hounds, which might reduce local populations of stags or foxes.

ANSWER: hunting [or venery; accept more specific answers like stag hunting or fox hunting] <Bentley>

13. One of this author's books opens with a description of an invisible Malay creature in the Tower of Victory called the A Bao A Qu. He created a character who suffers septicemia after gashing his head on a beam while excitedly planning to read a copy of the *Arabian Nights* and later resigns himself to death in a knife fight. In another story by this man, Jaromir (*) Hladik is given a year to finish his masterpiece before he is shot by a Nazi firing squad. This author of the *Book of Imaginary Beings* and "The Secret Miracle" wrote about Juan Dahlmann in "El Sur" and penned a story about a universe consisting of an infinite number of hexagons containing all possible books. For 10 points, name this blind writer of "The Library of Babel," which can be found in *Ficciones*.

ANSWER: Jorge Luis Borges [or Jorge Francisco Isidoro Luis Borges] <Jose>

14. The coefficients of Chebyshev polynomials of the first kind can be found using identities involving this function. This function of a complex number z is the arithmetic mean of e to the i times z and that exponential's reciprocal. This function is on the main diagonal of a two-dimensional rotation matrix. A complex number's magnitude times this function of its argument yields its (*) real part. This even function is equal to its own fourth derivative, and its Taylor expansion begins $1 - x^2/2 + c^2 - a^2 + b^2 - 2ab$ times this function of angle C , according to its namesake law in triangles. For 10 points, identify this trigonometric function, which for an angle in a right triangle equals adjacent over hypotenuse.

ANSWER: cosine <Schindler>

15. Four teenage boys from this country formed an embassy sent by Alessandro Valignano to Gregory XIII. After the wreck of the *San Felipe* in this country led to rumors about spies, the twenty-six martyrs were crucified here. In this country, people had to trample on flat bronze carvings of Virgin Mary and Jesus to prove that they weren't Christian. After traveling from (*) India, the Jesuit priest Francis Xavier introduced Christianity to this country in 1549. Christian peasants in this country revolted in the Shimabara Rebellion shortly after its government implemented the *sakoku* policy of national seclusion. For 10 points, name this country where the Portuguese originally helped spread Christianity from the port of Nagasaki.

ANSWER: Japan <Wang>

16. A dolphin-riding cupid clings to the right leg of a sculpture of one of these people, whose cuirass depicts the return of a stolen battle standard. A pair of cornucopias surrounds a shield at the base of a statue of one of these men. An upward-pointing hand and a head with enormous eyes remain as fragments of a colossal statue of one of these people. One of these men carries a club and wears the jaws and pelt of the (*) Nemean lion in a bust depicting him as Hercules. These people were often depicted raising their right arms in salute to their soldiers, as in a statue found at Prima Porta, as well as in an enormous equestrian statue that inspired Donatello's *Gattamelata*. For 10 points, name these supreme rulers, who included Commodus, Marcus Aurelius and Augustus.

ANSWER: Roman emperors [or word forms; or Caesar; or Augustus; or imperator; or princeps; prompt on soldier or warrior or equivalents] <Yu>

17. H.T. Dean's "21-city Study" helped start this policy, which was partly inspired when Frederick McKay noted a community in Pikes Peak that exhibited what was called "Colorado Brown Stain". Charles Bett claimed this policy was "better than using the atom bomb" at achieving Communist goals, a conspiracy theory satirized as an attempt to "sap and impurify" the "precious bodily fluids" of Americans in *Dr. Strangelove*. Grand Rapids was the first (*) city to implement this policy. Recently, Health and Human Services recommended this supplementation be reduced to 0.7 milligrams per liter since Americans already receive the additive used through toothpaste. For 10 points, name this process in which a namesake ion is added to the water supply to help prevent tooth decay.

ANSWER: fluoridation [or obvious equivalents such as adding fluoride to water] <Smart>

18. An official set of guides for outdoor tours in this state was begun by a woman with a fondness for its Rangeley region known as Fly Rod Crosby. The Marginal Way footpath is in this American state, whose northern border was once home to the unrecognized Republic of Madawaska. This state lies west of Campobello Island, which contained the summer home of Franklin (*) Roosevelt. It contains the Hundred-Mile Wilderness, the longest uninhabited section of the Appalachian Trail. This state's Schoodic Peninsula is part of its Down East region, across the water from its city of Bar Harbor. For 10 points, name this home state of Acadia National Park, located southwest of the Bay of Fundy and the Canadian province of New Brunswick.

ANSWER: Maine <Wang>

19. This instrument plays the opening solo over tremolo strings in the "Nocturne" from Maurice Ravel's *Daphnis and Chloe Suite No. 1*, and it also plays the main solo in the "Pantomime" from Act III of the original ballet. In Gabriel Faure's *Pavane*, this instrument plays the opening theme over pizzicato strings. This instrument opens another French piece with a chromatic descent from (*) C-sharp to G-natural which then rises back up. Claude Debussy wrote the solo piece *Syrinx* for this instrument, which introduces the repeating theme of Ravel's *Bolero* and plays the beginning of Debussy's *Prelude to the Afternoon of a Faun*. For 10 points, name this woodwind instrument whose smaller sibling is the piccolo.

ANSWER: flute <Rosenberg>

20. A poem by this author ends with the lines, "If I should meet thee / After long years, / How should I greet thee? / With silence and tears". This author of "When We Two Parted" wrote a poem that lists "A mind at peace with all below" and "A heart whose love is innocent" among a particular woman's virtues. "Ianthe" is the dedicatee of long semi-autobiographical poem by this man whose title character (*) wanders across Europe and Asia Minor. Anne Wilmot is the subject of a poem by this man that notes "all that's best of dark and bright / Meet in her aspect and her eyes". For 10 points, identify this namesake of a type of moody Romantic hero, a British poet who wrote *Childe Harold's Pilgrimage* and "She Walks in Beauty" before he died fighting in Greece.

ANSWER: Lord Byron [or George Gordon, Lord Byron] <Bentley>

21. Gregory of Tours wrote about a massive tsunami caused by a landslide that destroyed this city in the sixth century. The future Antipope Clement VII, known as the butcher of Cesena, was born Robert, the count of this city. This city annually celebrates L'escalade, to commemorate the defeat of a 1602 surprise attack led by the Duke of Savoy. This city's governing council burnt the trinitarian Michael (*) Servetus at the stake. Prior to the publication of the King James Version, Protestants used a Bible translation produced in this city. The author of the *Institutes of the Christian Religion* moved to this city and established his own Protestant denomination. For 10 points, name this Swiss city, home to John Calvin.

ANSWER: Geneva, Switzerland [or Genf; or Ginevra] <Gupta>

22. A man irritates others at this location by singing a sailor ditty written by either Ralph Waldo Emerson, Jonathan Edwards, or the dean of Harvard Divinity School. One of this location's occupants calls it "the last harbor" where "nobody has to worry about where they're going next", while another character here repeatedly recites a line of poetry beginning "The days grow hot, O Babylon!" Two Boer War veterans hang out in this building, which is where a character confesses to (*) murdering his wife Evelyn. Don Parritt jumps off a fire escape at this location, horrifying Larry Slade. For 10 points, identify this location operated by Harry Hope where "Hickey" Hickman encourages drunkards to abandon their "pipe dreams," the setting of Eugene O'Neill's *The Iceman Cometh*.

ANSWER: Harry Hope's saloon [accept equivalents such as "the saloon in *The Iceman Cometh*"; accept synonyms for "saloon" like bar or pub] <Cheng>

23. In glucose-6-phosphate deficiency, these cells lack a semicircular portion and are known as "bite cells." Adhesion in these cells is driven by ICAM-4, or the LW factor. The A1C form of a protein expressed in these cells is measured in a common test for diabetes. These cells have a typical lifespan of 120 days before being destroyed in the (*) spleen. They mature from reticulocytes. These cells completely lack a nucleus, have a bi-concave shape, and can co-dominantly express the A and B antigens on their surfaces. A glutamic acid to valine mutation of a protein in these cells causes them to take a sickle shape. For 10 points, name these cells that carry oxygen and give blood its color.

ANSWER: red blood cells [or RBCs; or erythrocytes] <Mukherjee>

24. This country sent no troops to participate in World War I because its army was busy suppressing the Contestado Rebellion. Officers from this country known as *tenentes* staged several uprisings. Soldiers from this country defeated a group of millenarian "rebels in the backlands" led by Antonio the Counselor. This country's fascist Integralist movement was crushed by a leader whose apparent involvement in the Rua Tonelero scandal prompted his (*) suicide. This nation was led by Washington Luis, the last of the "coffee and milk" presidents. Dictator Getulio Vargas established the Estado Novo in this nation, which is home to slums called favelas. For 10 points, name this country, one of the ABC powers alongside Argentina and Chile.

ANSWER: Brazil [or Federative Republic of Brazil or Brasil] <Bentley>



PACE NSC 2015 - Round 24 - Emergency - Bonuses

1. In macrolecithal species, the large amount of this substance results in formation of a blastodisc on top of it that undergoes meroblastic cleavage. For 10 points each:

[10] Identify this substance enveloped by a namesake sac connecting it to the embryo. This yellowish-orange substance is surrounded by a clear liquid called albumen.

ANSWER: **yolk**

[10] Unlike lecithotrophy, adelphophagy and placental nutrition occur in forms of this reproductive method characterized by live birth and dependence on the mother for food during gestation.

ANSWER: **viviparity** [or **vivipary**; or **viviparous**]

[10] In these fish, nutrients can be siphoned off from embryos to feed the father, who undergoes pregnancy and gives birth. These fish belong to the genus *Hippocampus*, which reflects their resemblance to a namesake land mammal.

ANSWER: **seahorses** <Smart>

2. This character is told by her brother Walter, "Who the hell told you you had to be a doctor? If you so crazy 'bout messing 'round with sick people - then go be a nurse like other women - or just get married and be quiet". For 10 points each:

[10] Identify this member of the Younger family, a college student whose decision to wear an Afro is influenced by her African suitor Joseph Asagai.

ANSWER: **Beneatha** Younger [prompt on **Younger**]

[10] Beneatha Younger is a character in this Lorraine Hansberry drama, the first play written by an African-American woman to hit Broadway.

ANSWER: **A Raisin in the Sun**

[10] In the play, Karl Lindner attempts to prevent the Youngers from moving into this white neighborhood of Chicago. A 2012 Tony-winning play by Bruce Norris is titled for this fictional neighborhood, and its first act is about the white family whose house the Youngers attempt to buy.

ANSWER: **Clybourne Park** <Bentley>

3. An "Intergovernmental Panel" on this topic shared the 2007 Nobel Peace Prize and released its Fifth Assessment Report in 2015. For 10 points each:

[10] Name this phenomenon whose main cause is shown by the Keeling Curve. Michael Mann led a 1999 paper that introduced a "hockey stick graph" depicting the likely origin of this phenomenon.

ANSWER: **global warming** [or global **climate change**; prompt on atmospheric **CO2** increase; prompt on **greenhouse** effect; prompt on increased **greenhouse gas** emissions]

[10] The Intergovernmental Panel on Climate Change shared its Nobel Prize with this former United States vice president, who narrated the documentary *An Inconvenient Truth*.

ANSWER: Albert Arnold **Gore**, Jr.

[10] In 2009, the Climatic Research Unit of this non-U.S. university was hacked by climate change skeptics who alleged data manipulation. By 2011, all climate scientists involved had been exonerated of misconduct.

ANSWER: University of **East Anglia** [or **UEA**] <Kothari>

4. Give the following French ballet terms, for 10 points each:

[10] It takes tremendous foot strength and special flat-toed shoes to dance in this manner, in which the dancer stands on the tips of their toes. It is used to make the dancer appear weightless, as in Filippo Taglioni's *La Sylphide*.

ANSWER: *en* **pointe**

[10] In this move, the dancer performs a full turn on one foot, usually on the toes or ball of the foot.

ANSWER: **pirouette**

[10] In this technique, the dancer throws their weight from one foot to the other. The 'grand' variety is a full leg split in mid-air.

ANSWER: **jete** <Rosenberg>

5. A work of art in this medium now in Milan's Museo Poldi Pezzoli depicts a hunting scene and was created by Giyath-ud-Din Jami. For 10 points each:

[10] Identify these objects, some of which were woven in Persia's silk capital of Kashan.

ANSWER: oriental **rugs** [or oriental **carpets** or Persian **rugs** or Persian **carpets**]

[10] Persian carpets often featured a center medallion inspired by artists working on the outer-most layer of these books, which often featured elaborate border designs and finely painted miniatures, sometimes even including pictures of Muhammad.

ANSWER: illuminated **manuscripts** [or religious **manuscripts** or illustrated **manuscripts**]

[10] Christians over in the west also worked on illuminated manuscripts, such as this book which contains the four synoptic gospels accompanied by serpentine illustrations on almost every page. It is named for a monastery in Ireland.

ANSWER: Book of **Kells** <Bentley>

6. Answer the following about the novel *Love in the Time of Cholera*, for 10 points each.

[10] It was written by this Colombian author of *One Hundred Years of Solitude*.

ANSWER: Gabriel **Garcia Marquez** [or Gabriel José de la Concordia **García Márquez**]

[10] Despite being the lifelong love of Florentino Ariza, this character from the novel marries the wealthy doctor Juvenal Urbino. She smokes cigarettes while taking a vacation with her cousin Hildebranda.

ANSWER: **Fermina Daza** [accept either underlined portion]

[10] In the first line of *Love in the Time of Cholera*, the smell of this food in the home of Jeremiah de Saint-Amour reminds Juvenal Urbino of "the fate of unrequited love."

ANSWER: bitter **almonds** <Sy>

7. This party signed the Matignon Accords, mandating two weeks of paid annual leave for all workers, and induced auto-makers to develop better cars to compete with German manufacturers by sponsoring the "Million Franc Race." For 10 points each:

[10] Name this alliance of various left-wing parties that controlled France from 1936 to 38 during the premiership of Leon Blum.

ANSWER: **Popular Front** [or **Front populaire**]

[10] Blum's appointment to the post of French Prime Minister initiated a surge of this sentiment among his Catholic opponents. A similar wave of this racist sentiment had bloomed in France during the Dreyfus Affair.

ANSWER: **anti-Semitism** [accept word forms]

[10] The Popular Front initiated the failed Blum-Viollette proposal to grant citizenship to natives of this country, who were economically dominated by the *colons* and by the *ped-noirs*.

ANSWER: **Algeria** [or **al-Jazair**; or People's Democratic Republic of **Algeria**; or Tagduda **Tadzayrit** Tugduyant Tagherfant] <Gupta>

8. Answer the following about scales used to assess damage during natural disasters, for 10 points each.

[10] This scale, named for an Italian scientist, quantifies the extent to which an earthquake causes damage. Unlike the Richter scale, it doesn't quantify the energy released by an earthquake.

ANSWER: **Mercalli** scale

[10] Less than one in a thousand tornadoes reach this highest value on the Fujita Scale, in which trees are uprooted and giant objects, such as cars, are tossed over a hundred meters.

ANSWER: **F5**

[10] The Keetch–Byram scale quantifies the extent to which this phenomenon occurs, though it is sometimes used to assess the probability of wildfires. The Palmer index assesses this condition by examining soil.

ANSWER: **drought** [or obvious equivalents] <Jose>

9. Plutarch reports that this man struck coins made of red-hot iron cooled in vinegar, instead of using the typical gold and silver, to reduce greed and dependence on money. For 10 points each:

[10] Name this legendary lawgiver who established the Great Rhetra constitution, outlined the function of the five *ephors*, and called for a council of twenty-eight men known as the *gerousia* to wield equal power to the two royal houses.

ANSWER: **Lycurgus**

[10] Lycurgus reformed this militaristic Greek city-state, whose citizens were supported by a vast underclass of slaves called *helots*.

ANSWER: **Sparta** [or **Lacedaemon**]

[10] Lycurgus also developed this system that educated and gave military training to Spartan male youths until they turned 20. Graduates of this system were enrolled in an anti-*helot* secret-police known as the *krypteia*.

ANSWER: **agoge** <Bentley>

10. The servant Fimafeng is killed during this event, near whose end Thor angrily shows up and repeatedly threatens to silence an unruly attendee with his hammer. For 10 points each:

[10] Identify this event in the *Lokasenna* during which Loki shows up uninvited and insults all of the gods present.

ANSWER: Aegir's **feast** [or obvious equivalents]

[10] Among the participants at Aegir's feast is this god of poetry whose lengthy dialogue with Aegir makes up the *Skaldskaparmal*.

ANSWER: **Bragi**

[10] The *Lokasenna* concludes by explaining that Loki's son Narfi turns into one of these animals. A very large one named Fenrir attends the feast and will break free from its chains at Ragnarok.

ANSWER: **wolf** <Kim>

11. On a T-xy diagram, these systems form when the two curves intersect between the pure species, forming a pinch point. For 10 points each:

[10] Name these non-ideal systems in which the vapor phase mole fraction is identical to the liquid phase mole fraction.

ANSWER: **azeotropes** [or binary **azeotropes**]

[10] For instance, water forms an azeotrope with this two-carbon alcohol at 4% water, which can be broken by adding an entrainer like benzene.

ANSWER: **ethanol** [or **ethyl alcohol**]

[10] Another way to remove the last bit of water from an azeotropic mixture is to add one of these materials, which often include cobalt chloride as an indicator. These hygroscopic compounds include silica.

ANSWER: **desiccants** [or **drying** agents] <Silverman>

12. Answer some questions about Marguerite Yourcenar, for 10 points each:

[10] Though she did much of her work in France, Marguerite Yourcenar was born in this country. It was also the home of the symbolist author of *The Blue Bird*, Maurice Maeterlinck.

ANSWER: Kingdom of **Belgium** [or **Belgie**; or **Belgique**; or **Belgien**]

[10] Marguerite Yourcenar's *The Abyss* is narrated by a Belgian acolyte of this name, which is also the name of an ancient philosopher who articulated many paradoxes about the "infinite."

ANSWER: **Zeno** [accept **Zeno of Bruges** or **Zeno of Elea**]

[10] Yourcenar's *Memoirs of Hadrian* is set in Rome, much like this author's novel *Jenny*. *The Mistress of Husaby* and *The Bridal Wreath* are two entries in a trilogy of novels she wrote about Erlend Nikulausson and Kristin Lavransdatter.

ANSWER: Sigrid **Undset** <Jose>

13. This man underwent an adult circumcision in order to make *haji* despite being non-Muslim, centuries after fellow European Ludovico di Varthema made that journey. For 10 points each:

[10] Name this man. He led a tumultuous expedition to the large lakes of southern Africa with John Hanning Speke.

ANSWER: Sir Richard Francis **Burton**

[10] Richard Burton produced an often-erotic translation of this collection, whose sub-tales such as the City of Brass and the seven voyages of Sinbad the Sailor are relayed by Scheherezade to postpone her execution.

ANSWER: **Arabian Nights** [or *A **Thousand and One Arabian Nights***; or *The Book of the **Thousand Nights and a Night***; or *Alf layla wa layla*]

[10] After returning from his expedition with Speke, Burton set out to explore this sect, which he chronicled in *City of the Saints*. An "Extermination Order" was issued against members of this faith during a war that included the Battle of Crooked River.

ANSWER: **Mormonism** [or Church of Jesus Christ of **Latter Day Saints**; or **LDS** Church; prompt on "Christians"] <Bentley>

14. This man's carefully-chosen bondsmen for his loan from a wealthy matron, God and the sea, conspired to drive a princess from a foreign land insane, to make her toss a chest containing her valuables into the sea, and to have the chest wash ashore near the house of the matron. For 10 points each:

[10] Name this first and second century CE rabbi who systematized Jewish law and was murdered, while praying, by the Romans during the Bar Kokhba revolt.

ANSWER: Rabbi **Akiva** ben Joseph

[10] Akiva was a key contributor to this codification of the Jewish oral Torah, which together with the Gemara makes up the Talmud.

ANSWER: **Mishnah**

[10] Akiva once passed a test by giving half of the straw he and his wife slept on to this prophet, who miraculously extended the supply of widow's flour and oil, and ascended to heaven in a chariot of fire in front of his successor, Elisha.

ANSWER: **Elijah** <Gupta>

15. This man had to drop out of Marshall University due to economic hardship, and was already in the Senate before he finished his law degree. For 10 points each:

[10] Identify this long-serving West Virginian senator who once gave a 14-hour speech to filibuster the 1964 Civil Rights Act.

ANSWER: Robert Carlyle **Byrd** [or Cornelius Calvin **Sale**, Jr.]

[10] Byrd was elected to Congress in 1952 despite evidence coming out that he had been a member of this racist organization and wrote an admiring letter to one of its grand wizards.

ANSWER: **Ku Klux Klan** [or **KKK**]

[10] Byrd served on this powerful committee starting with his first year in the Senate. This committee controls drafting bills that are funded by discretionary spending.

ANSWER: Senate Committee on **Appropriations** [or **Appropriations** Committee] <Bentley>

16. Answer the following about William Golding, for 10 points each.

[10] R. M. Ballantyne's young adult novel *The Coral Island* inspired Golding to write this novel, his first, in which a group of young boys are marooned on an island and eventually split into "tribes" led by Ralph and Jack.

ANSWER: *The **Lord of the Flies***

[10] The title character of this Golding novel, his third, is the sole survivor of the sinking of a destroyer. The title character has a series of hallucinations while perched on a rocky outcropping in the North Atlantic, though it's eventually revealed that he's been dead the whole time.

ANSWER: ***Pincher Martin*** [or *The **Two Deaths of Christopher Martin***]

[10] In winning the 1980 Booker Prize, Golding's novel *Rites of Passage* beat out *Earthly Powers*, a novel by this British author. This man wrote the Enderby quartet and a novel whose protagonist undergoes the Ludovico technique.

ANSWER: Anthony **Burgess** [or John Anthony Burgess **Wilson**] <Carson>

17. This man's father was nicknamed "the man who brought the mail to Chile" and left this man his large estate in Concepcion after waffling over whether or not to recognize him. For 10 points each:

[10] Name this illegitimate son who ruled Chile as Supreme Director starting in 1817, after securing that country's independence with Jose de San Martin.

ANSWER: Bernardo **O'Higgins** [or Bernardo **Riquelme**]

[10] The Spanish empire used this term for Europeans born in the New World with no more than one-eighth Indian blood, such as O'Higgins' Irish father. This term also denotes languages which develop a consistent grammar after blending multiple existing languages, such as the French-derived one of Haiti.

ANSWER: **creole** [or **criollo**]

[10] Bernardo O'Higgins joined with Jose de San Martin to form the Army of the Andes, which defeated Spanish forces at this February 12, 1817 battle. After this battle, the victors took Chile's capital, Santiago.

ANSWER: Battle of **Chacabuco** <Bentley>

18. This man helped supplant the Cannon-Bard theory by proposing that people use a "cognitive label" to make sense of states of physiological arousal. For 10 points each:

[10] Name this psychologist. His experiments with Jerome Singer helped verify his two-factor theory of emotion.

ANSWER: Stanley **Schachter**

[10] Schachter's experiment used this method to administer a drug they called "Superoxin," which was actually just adrenaline or saline solution. Sodium thiopental is used in a controversial "lethal" form of it.

ANSWER: **injection**

[10] This hormone, which promotes trust and pair bonding and whose levels might be increased by sexual activity, has been administered through inhalation in later emotion studies.

ANSWER: **oxytocin** <Jackson>

19. This composer's large hands allowed him to tackle difficult works like his D minor third piano concerto. For 10 points each:

[10] Name this Russian composer of four piano concertos, *Symphonic Dances*, and *Rhapsody on a Theme of Paganini*.

ANSWER: Sergei **Rachmaninoff** [or Sergei **Rachmaninov**]

[10] Rachmaninov wrote this choral symphony to a translation of Edgar Allen Poe's poem of the same name. Like many of his works, it quotes the "Dies Irae" theme.

ANSWER: *The **Bells*** [or ***Kolokola***]

[10] Rachmaninov's most popular prelude, widely known as "The Bells of Moscow," is in this key. Other works in this key include Beethoven's String Quartet No. 14, Opus 131 and the "Moonlight Sonata."

ANSWER: **C-sharp minor** [do not prompt on partial answer] <Rosenberg>

20. Steam is superheated in the Rankine cycle to avoid completely destroying these devices with excess liquid. For 10 points each:

[10] Name these devices which convert high-pressure steam to electrical energy in power plants, and are used inside of windmills to generate power.

ANSWER: **turbines**

[10] A gas turbine engine following the Brayton cycle will undergo this process at constant pressure. This heat-producing process occurs at constant volume in an Otto engine, but at constant pressure in a Diesel engine.

ANSWER: **combustion** of fuel [or **burning** fuel; or obvious equivalents]

[10] This type of engine uses a modified Brayton cycle inside a closed system, which contains its own oxidants, rather than air. These engines increase in performance as their velocity increases in the Oberth effect.

ANSWER: **rocket** engine <Silverman>

21. The Grand Lodge of Freemasons in New York established an award named for this man. For 10 points each:

[10] Name this sixth Governor of New York whose namesake "folly" was a construction project completed in 1825. He lost the presidential election of 1812.

ANSWER: **DeWitt Clinton** [prompt on **Clinton**]

[10] Clinton was a major backer of the project to build this artificial waterway running from Albany to Buffalo, connecting the Atlantic with the Great Lakes.

ANSWER: **Erie Canal**

[10] The first leg of the Erie Canal ran from Rome, New York, to this New York city, the county seat of Oneida County. A stopover city between Albany and Syracuse, it was known as "Sin City" during the 20th century because of massive corruption.

ANSWER: **Utica** <Cheyne>

22. The ecliptic is the path of the sun on this construct. For 10 points each:

[10] Name this sphere of arbitrarily large size, centered on the earth. The stars in the sky are often imagined to be projected onto the inner side of this construct.

ANSWER: **celestial** sphere

[10] The right ascension used to define the celestial sphere uses the "vernal" one of these days as a reference point. These days are contrasted with solstices and mark the beginning of spring and autumn.

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

[10] The tilt that causes the ecliptic and the seasons are one component of these "cycles" named for a Serbian scientist, which help describe the periodic variation in the Earth's climate.

ANSWER: Milutin **Milankovic** <Jose>

23. This person is said to be "fairer than the evening air / clad in the beauty of a thousand stars" by a man who declares that "all is dross that is not" her. For 10 points each:

[10] Identify this woman. A character asks her to "make me immortal with a kiss" after rhetorically asking if she has the "face that launch'd a thousand ships / and burnt the topless towers of Ilium".

ANSWER: **Helen** of Troy [or **Helena**]

[10] The shade of Helen of Troy is summoned by Mephistophilis on the orders of Doctor Faustus in a play by this Elizabethan poet and playwright, who also wrote *The Jew of Malta*.

ANSWER: Christopher **Marlowe**

[10] This unfinished poem by Marlowe is about a youth from Abydos who swims across the Dardanelles to meet the second title person, a woman who lives in a tower of Sestos. It was finished by George Chapman.

ANSWER: "**Hero and Leander**" <Jose>