

ATHENA (Academic Tournament for High School Education N' Achievement) II

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PACKET 3 TOSSUPS

1. The last poem in this collection says to "let all my senses spread out," comparing it to "homesick cranes flying night and day." In one poem in this collection, children meet "on the seashore of endless worlds." In another poem, the speaker compares themselves to a "frail vessel" and "a little flute of a reed." This collection is said to have "stirred my blood as nothing has for years" in its introduction by W.B. Yeats. This collection opens with the line "Thou hast made me (*) endless, such is thy pleasure." For 10 points, name this poem collection of "Song Offerings" by Rabindranath Tagore.

ANSWER: Gitanjali [accept Song Offerings before mentioned] <CM; Ancient and World Literature>

2. This case was extended by *Berea College v. Kentucky*, and a "random thought" by William Rehnquist argued that this case should be reaffirmed. The local "Citizens' Committee" was charged nothing when hiring attorney Albion Tourgee for this case. A famous dissent in this case compared the law in question to a "badge of servitude" and was given by Justice John (*) Harlan. This case concerned a whites-only Louisiana train car, and it was overturned by *Brown v. Board of Education*. For 10 points, name this Supreme Court case that legalized the "separate but equal" doctrine of segregation.

ANSWER: Plessy v. Ferguson [accept names in any order] <KK; American History>

3. One organizational pattern of these structures involves attachment to a central rachis and is termed "pinnate compound". In some organisms, cells within these structures are arranged concentrically around a central vein in an arrangement known as Kranz anatomy. Specialized cells on the bottom face of these structures respond to blue light by pumping out hydrogen ions, preventing (*) water loss by closing guard cells. These organs are often primarily composed of parenchymal tissue pocketed by stomata. These organs are abscised when the hormone ethylene is expressed in the fall. For 10 points, name these typically-green plant organs that carry out photosynthesis.

ANSWER: leaves [or leaf; accept foliage] <JP; Biology>

4. When an economy's growth is balanced, the economy is guaranteed to also have this condition. Alfred Marshall created a form of analysis named for a "partial" form of this condition, which treats all markets but one as fixed. Leon Walras created a theory named for its "general" form. If mixed strategies are allowed, there exists at least one example of this condition, in which no (*) player can change their strategy to improve their situation, according to an Existence Theorem named for Nash. For 10 points, name this condition, the "economic" variety of which occurs when market supply and market demand are equal.

ANSWER: equilibrium [accept balanced-growth equilibrium; accept partial equilibrium; accept general equilibrium; accept Nash equilibrium; accept economic equilibrium; accept market equilibrium] <CS; Philosophy and Social Science>

5. **NOTE TO MODERATOR** (do not read aloud to teams): *Please read the part highlighted in gray SLOWLY*
One piece by this composer contains an *Andante religioso* tribute to Bach's Air on the G string and ends with a rigaudon. Another piece by this composer opens with a flute melody starting with the eighth notes "B-G sharp-F sharp-E-F sharp-G sharp." A third work by this composer re-orchestrates parts of Book Five of their *Lyric Pieces*. One of this composer's pieces was written for the 200th anniversary of Ludvig (*) Holberg's death. A famous movement from one of this composer's suites begins with pizzicato low strings and bassoons playing a B minor theme depicting the central character tiptoeing before being chased by trolls. For 10 points, name this composer of incidental music for *Peer Gynt*.

ANSWER: Edvard **Grieg** (all clues are from his suites) <CS; Fine Arts Auditory>

6. **The phenomenon was first proposed by Ida Noddack in her paper "On Element 93". Leona Woods worked with John Wheeler to help solve the xenon poisoning problem encountered during this process. Otto Frisch wrote a memorandum with Rudolf Peierls concerning this process that first calculated the size of its necessary critical mass, which was achieved at Chicago (*) Pile 1 by Enrico Fermi. Frisch's aunt, Lise Meitner, developed an explanation for this process after observing barium in a sample of uranium bombarded by neutrons. For 10 points, name this process in which a nucleus is split up into smaller nuclei.**

ANSWER: nuclear **fission** [do not accept or prompt on "nuclear fusion"] <KK; Physics>

7. **Tamara Karsavina premiered one staging of this role after Anna Pavlova declined it, dancing alongside the choreographer. In the unused Michel Fokine choreography, this character does not appear onstage in the 7/4 finale. A bassoon solo represents her singing a berceuse that puts monsters to sleep after she enchants them into an (*) "Infernal Dance" choreographed by Vaslav Nijinsky. She leads the protagonist to a casket on a stump containing an egg with Kaschei's soul and is summoned by Ivan with a magic feather. For 10 points, name this female lead role as the title creature of Stravinsky's first ballet.**

ANSWER: the **Firebird** [or *L'oiseau de feu*; or *Zhar-ptitsa*; accept descriptions like "the **bird** from *The Firebird*", prompt on **bird**, prompt on **phoenix**] <CS; Fine Arts Other>

8. **Two characters in this work decorate "John Thomas" and "Lady Jane" with flowers and joke about them getting married. A woman in this novel plans to fake an affair with a Venetian nobleman, but ends up pretending it is Duncan Forbes instead. In this novel, a successor to the playwright Michaelis is married to (*) Bertha Coutts, but is the lover of a woman who lives at Wragby with her paralysed husband. For 10 points, name this scandalous novel by D.H. Lawrence featuring the relationship between the gamekeeper Oliver Mellors and Clifford's adulterous wife Constance.**

ANSWER: **Lady Chatterley's Lover** <CM; British Literature>

9. **Adolf Furtwangler was the first to propose that this artwork is missing a pillar. The Art Institute of Chicago houses a version of it to which utilitarian drawers have been added. Twenty-eight copies of this artwork appear in Salvador Dali's *The Hallucinogenic Toreador*. When this sculpture arrived at the Louvre, the poor workmanship of an (*) arm holding an apple led to its removal. A now-lost plinth identified its artist as from Antioch on the Maeander, though it was first attributed to Praxiteles. A metal support was probably attached to the rest of this sculpture at the hole near its shoulder. For 10 points, name this sculpture found on a Greek island of an armless love goddess.**

ANSWER: **Venus de Milo** [or **Aphrodite of Melos**] <CS; Fine Arts Visual>

10. The "Persons" case in this country was challenged by a group called the Famous Five, who petitioned for the right of women to become senators. One leader of this country claimed that its budget deficit was unlikely to be reduced before the "end of the century" during a campaign against Jean Chrétien. That leader of this country succeeded (*) Brian Mulroney as leader of the Progressive Conservative Party and became its first female Prime Minister. For 10 points, name this country led by Kim Campbell, the geographically largest country in the British Commonwealth.

ANSWER: Canada <KK; World History>

11. In this work, a woman nicknamed "Alaiyo" threatens her nephew with a spray gun. That woman's boyfriend calls her choice to straighten her hair "mutilation" and invites her to Nigeria near the end of this play. After Bobo tells the central family that Willy Harris has run off with the (*) money for a liquor store, the family decides to move to Clybourne Park anyway. Beneatha studies medicine in this play where Walter refuses to concede to pressure from Karl Lindner. For 10 points, name this play about the Younger family, which is titled after a Langston Hughes quote and written by Lorraine Hansberry.

ANSWER: A Raisin in the Sun <CM; American Literature>

12. Bernardino Mendoza led an uprising against one ruler of this name in order to assist the Spanish Armada. A ruler of this name was assassinated by a group of bodyguards called the Forty-five. One ruler of this name crushed a German-Swiss army at Vimory with assistance from the Duke of Mayenne. In response to an invasion of the Spanish Netherlands, (*) Francois Ravaillac assassinated a ruler of this name. That ruler of this name stated "Paris is well worth a mass" to explain his conversion to Catholicism. For 10 points, give this regnal name shared by three combatants in the French Wars of Religion, including ones from Guise and Navarre.

ANSWER: Henry [accept Henry III before "group"] <KK; European History>

13. A leader from this city was exiled to Sicyon after launching the Perusine War. Women in this city were limited by the Oppian Law, which put a cap on the amount of money they could own. Lucretia committed suicide in this city after being dishonored by Sextus, leading to the overthrow of a certain monarch. This city signed a peace with a neighboring city after the (*) Sabine women intervened. The sacred fire was kept alight by the Vestal Virgins in this city, who were overseen by the *pontifex maximus*. For ten points, name this city once ruled by Tarquin the Proud, the Italian capital of a namesake republic.

ANSWER: Rome [accept Tusculum before "Oppian" is read since place of birth is disputed] <KK; Ancient and British History>

14. In one game, this country's player Diego Forlan equalized in the 55th minute and scored in the subsequent shootout to win. In that game, one player for this country controversially blocked the ball with his hands on the goal line, allowing his team to bring Ghana to extra time. In the 1950 World Cup Final, Obdulio Varela orchestrated this country's upset victory at the newly-built Maracana Stadium. One player from this inaugural World Cup host was suspended for (*) biting Giorgio Chiellini, and Diego Godin currently captains this country's national team. For 10 points, name this tiny South American country whose current stars include Edinson Cavani and Luis Suarez.

ANSWER: Uruguay <CC + KK; Trash>

15. An error in applying this equation may have been behind Fleischmann and Pons' claim of cold fusion. This equation can be derived using Boltzmann factors. A variation of this equation uses Tafel constants to account for overpotential and is called the Butler-Volmer equation. The Goldman equation applies this equation to a (*) cell membrane. The main term in this equation equals temperature times the ideal gas constant divided by the product of electrons and Faraday's constant. For ten points, name this electrochemical equation that finds the reduction potential for a half cell.

ANSWER: Nernst equation <KK; Chemistry>

16. After a man in this work gets a job as a bank attendant, his uniform grows dirty because he insists on always wearing it. A cleaning lady in this work uses a chair to threaten a character who treasures a picture of a lady in furs and hopes to send his sister Grete to a violin conservatory through the money he makes as a (*) travelling salesman. The protagonist of this work dies of an injury caused by an apple lodged in his back. For 10 points, name this novella where Gregor Samsa wakes up to find himself transformed into an enormous insect, by Franz Kafka.

ANSWER: *The Metamorphosis* [or *Die Verwandlung*; do not accept *Metamorphoses*] <CM; European Literature>

17. One follower of this tradition threw boiling oil in her face to make herself ugly on a journey that led to her becoming one of the Seven Perfected. Another figure in this tradition ate powdered mica to become immortal. The 81 chapter central text of this religion uses proverbs like "tragedy becomes comedy" to explain the linked nature of two central concepts symbolized by the (*) Taijitu, which is sometimes surrounded by the Eight Trigrams. Those two concepts are usually explained as contrasting masculine light and feminine darkness. For 10 points, name this religion symbolized by the Yin-Yang and founded by Lao Tzu.

ANSWER: Daoism [or Taoism] (first line is Sun Bu'er; second line is He Xiangyu, one of the Eight Immortals) <CS; Religion and Mythology>

18. Kurt Mahler divided numbers with this property into S, T, and U classes based on the bounds of minimum non-zero absolute values. Since P divided by k factorial plus Q divided by k factorial cannot equal zero, Charles Hermite was able to prove that one number was this type of number. The existence of these numbers was proven by Joseph (*) Liouville. The Lindemann-Weierstrass Theorem proved that e and π are examples of these numbers. For 10 points, name these non-algebraic numbers that cannot be the zeros of a polynomial with integer coefficients.

ANSWER: transcendental numbers <KK; Science Other>

19. The *thiasus* were the retinue of this deity, who often held a staff called a *thyrsos*. This deity was shown hospitality by Ikarios and Semachos, who met tragic ends. The rite of omophagia in the cult of this deity involved eating a bull torn with worshippers' bare hands. Most tragedies were premiered at an Athenian festival for this deity. Pentheus banned the worship of this deity, which led to his death at the hands of his own (*) mother Agave. After the king of Phrygia showed hospitality to this deity's follower Silenus, this deity gave Midas the ability to turn anything into gold. For 10 points, name this Greek god of wine.

ANSWER: Dionysus [or Bacchus] <CS; Religion and Mythology>

20. Gertrude Bell was summoned to this city as "Oriental Secretary," and lends her name to a wing of its archaeological museum. Bookstores line this city's Mutanabbi Street. Two giant crossed swords make up this city's Victory Arch, which is in its Grand Festivities Square. A green abstract sculpture built by the Najin stands in its Firdos Square where another monument was (*) pulled down in 2003. This city was formerly home to a great library called the House of Wisdom. Formerly ruled from the Republican Palace, for 10 points, name this capital city along the Tigris River that once had a giant statue of Saddam Hussein.

ANSWER: **Baghdad** <CS; Geography>

PACKET 3 BONUSES

1. The Tiger I and Tiger II models of these vehicles outclassed most of their Allied counterparts. For 10 points each:
[10] Name these armored vehicles that included the Soviet T-34 and the German Panzer. They brought about the end of trench warfare due to their ability to cross no man's land.

ANSWER: battle **tanks**

[10] This largest tank battle in history saw fierce fighting at Prokhorovka and dense Soviet fortifications. German losses at this battle removed their strategic advantage against the Soviets.

ANSWER: Battle of **Kursk**

[10] The Battle of Kursk was initiated by this operation, which sought to "pinch out" a salient of Russian territory from its supply lines. This operation was the last offensive the Germans were able to launch on the Eastern Front.

ANSWER: Operation **Citadel** [or Unternehmen **Zitadelle**] <KK; European History>

2. The cooling of austenite in this material creates pearlite. For 10 points each:

[10] Name this alloy of iron and carbon. A version of this alloy with 10% chromium is its "stainless" variety.

ANSWER: **steel**

[10] The "basic" version of this process is also named for Gilchrist and Thomas, while its "acid" version uses a clay lining. Slag is often formed from the impurities blasted off the molten iron with air in this steel-making process.

ANSWER: **Bessemer** process

[10] Steel is a classic example of this sort of alloy, in which smaller atoms fit into the "holes" in a metal lattice.

ANSWER: **interstitial** alloy <CS; Chemistry>

3. After nine years, the greeting of this person, who is "dressed in purest white," causes "the height of bliss" in a work where she eats a man's glowing heart. For 10 points each:

[10] Name this woman who acts as a guide in Heaven, or *Paradiso*, which is depicted as a set of concentric spheres surrounding Earth.

ANSWER: **Beatrice Portinari** [accept either name]

[10] This man only met Beatrice twice before she died at the age of twenty-five, but still made her a character in *Paradiso*, the third part of his work *The Divine Comedy*.

ANSWER: **Dante Alighieri** [accept either name]

[10] Dante also wrote this set of poems about Beatrice, where he pretends to love another lady as a "screen" and describes Beatrice as a "most gracious lady."

ANSWER: *La Vita Nuova* [accept *The New Life* or *Vita Nova*] <CM; European Literature>

4. This effect's namesake coefficient is the ratio of induced electric field to quantity "current density times applied magnetic field." For 10 points each:

[10] Name this effect in which a namesake voltage is produced transverse to a current by a perpendicular magnetic field.

ANSWER: **Hall** effect

[10] This man discovered the integer quantum Hall effect, and was subsequently awarded the 1985 Nobel. His namesake constant was used to derive the fine structure constant and has units of ohms.

ANSWER: Klaus **von Klitzing**

[10] The Hall effect occurs in these materials, which are described by the Drude model. Stephen Gray was the first to differentiate these materials from their opposites, which are called insulators.

ANSWER: **conductor** [do not accept or prompt on "semiconductors" or "superconductors"] <CS; Physics>

5. Identify the following about the work of women in astronomy. For 10 points each:

[10] This astronomer's younger sister Caroline acted as his assistant and was a formidable astronomer in her own right. She helped this astronomer discover Uranus.

ANSWER: William **Herschel**

[10] Henrietta Swan Leavitt was the first to discover the relationship between the period and luminosity of these pulsating stars, which allow us to accurately determine interstellar distances.

ANSWER: **Cepheid** variables [or Classical **Cepheids**; prompt on variable stars]

[10] This recently deceased American astronomer's pioneering work on galaxy rotation curves provided the first concrete evidence for dark matter. She was the second woman to win the Royal Astronomical Society's Gold Medal.

ANSWER: Vera **Rubin** <JP; Science Other>

6. A fictional witch born on this day undergoes a thirteen-day pregnancy that corresponds to political events involving the prime minister. For 10 points each:

[10] Name this day on which one thousand and one people are born between twelve and one AM, giving them special powers.

ANSWER: the day of **Indian independence** [accept **August 15**, 1947, or anything mentioning **partition** or the **separation of India and Pakistan**]

[10] Saleem Sinai, a boy whose large nose gives him telepathy, is the protagonist of this novel titled for those born just as India gained independence.

ANSWER: **Midnight's Children**

[10] *Midnight's Children* was written by this author, whose novel *The Satanic Verses* resulted in a fatwa being called against him.

ANSWER: (Ahmed) Salman **Rushdie** <CM; World Literature>

7. Charles Ives wrote a parody of the movement containing this section, which was marked by its composer as "Nice little easy sugar-plum sounds." For 10 points each:

[10] Name or describe this section from the second movement of a certain G major London symphony which begins "C-C E-E G-G E". The composer confessed that he made it to outdo his student Pleyel, rather than to wake up his audience.

ANSWER: the **Surprise** from the *Surprise* Symphony [accept descriptions and equivalents; accept, but do not otherwise reveal, Haydn's **Symphony No 94** in place of "Surprise Symphony"]

[10] This Austrian "Father of the Symphony" wrote 104 symphonies, including the Surprise Symphony.

ANSWER: (Franz) Joseph **Haydn**

[10] This portion of the musicians onstage plays the "Surprise" chord in the Surprise Symphony. This section of the orchestra plays the ritornello sections of Haydn's Trumpet Concerto, as it does in many Baroque concerti. A description is fine.

ANSWER: the whole **orchestra** [accept **tutti**; accept anything that communicates that the **entire orchestra** plays the chord / ritornello] <CS; Fine Arts Auditory>

8. This figure put small doses of poison into his king's food to build up immunity. For 10 points each,
[10] Name this chief advisor to both Bindusara and Chandragupta. He wrote the *Arthashastra*, an influential treatise on political science.

ANSWER: **Chanakya** [accept **Kautilya**, or **Vishnu Gupta**]

[10] Chanakya's *Arthashastra* is often compared to this Machiavelli work, since they both discuss how a monarch should rule. Unlike this work, the *Arthashastra* focuses on maintaining general prosperity, not just monarchical power.

ANSWER: ***The Prince*** [or ***Il Principe***]

[10] Chanakya, Bindusara, and Chandragupta were all officials in this empire, which ruled over India shortly after the conquests of Alexander the Great.

ANSWER: **Mauryan Empire** <KK; World History>

9. Judith Jarvis Thomson provided justification for this specific action using a thought experiment involving a master violinist and a blood transfusion. For ten points each:

[10] Name this action, which Don Marquis objects to on the basis that it deprives the embryo of a valuable future, making this action just as immoral as killing an innocent adult.

ANSWER: **abortion** [accept descriptions mentioning the **termination of pregnancy**]

[10] One counterargument to Thomson's violinist thought experiment hinges on the fact that the violinist's death would be an unintended yet foreseen consequence, abortion requires an intentional ending of the infant's life. That argument hinges on this creator of the *quinque viae*'s doctrine of double effect.

ANSWER: (Saint) Thomas **Aquinas** [accept Tommaso **d'Aquino**, **Thomas of Aquino**, Doctor **Angelicus** or Doctor **Communis**]

[10] This Princeton ethicist came under fire in 2015 for voicing support for "post-natal abortion" for disabled children. He also wrote *Animal Liberation*.

ANSWER: Peter **Singer** <CS; Philosophy and Social Science>

10. Answer the following about Boston college's radical feminist theologian Mary Daly. For 10 points each:

[10] Boston College was founded by this religious order which follows the *Spiritual Exercises* of its founder Ignatius of Loyola.

ANSWER: **Jesuits** [or **Society of Jesus**; or **Societas Jesu**]

[10] The second chapter of Daly's *Beyond God the Father* is titled "Exorcising Evil from [this figure]." The best-known part of Matthew Henry's commentary on Genesis 2 is that this woman was created "out of [a certain man's] side to be equal with him."

ANSWER: **Eve** [or **Eva**]

[10] Daly's early influences include Paul Tillich and Martin Buber, both theologians associated with this philosophical movement. A Christian member of this movement discussed a "qualitative leap" of faith in *Concluding Unscientific Postscript*.

ANSWER: **existentialism** [accept Christian **existentialism**; accept Jewish **existentialism**] (The second line refers to Soren Kierkegaard) <CS; Religion and Mythology>

11. The Denver Art Museum loaned this sculpture to the Seattle Art Museum after losing a bet on Super Bowl XLVIII [48]. For 10 points each:

[10] Name this Frederic Remington sculpture. The Rough Riders gave a cast of it to Teddy Roosevelt, and Remington based this bronze sculpture on his earlier Harper's Weekly illustration of "A Pitching [Horse]."

ANSWER: *The **Bronco Buster*** [or *The **Broncho Buster***]

[10] Marie-Anne Collot sculpted the head for Rococo sculptor Etienne Falconet's *The Bronze Horseman*, an equestrian statue of the namesake of this city. It is also home to the Winter Palace.

ANSWER: **St. Petersburg** [or **Peterburg** or **Petrograd**]

[10] This sculptor's *Gattamelata* was the first bronze equestrian statue cast since antiquity. He also created the first freestanding statue since antiquity, which was his bronze *David*.

ANSWER: **Donatello** di Niccolò di Betto Bardi [or Donato di Niccolò di Betto **Bardi**] <CS; Fine Arts Visual>

12. This person supposedly discovered an enemy trap, leading to the Massacre at Cholula. For 10 points each:

[10] Name this slave-turned-interpreter who facilitated negotiations for Hernan Cortes during his conquest of Mesoamerica. She secured an alliance with Tlaxcala, which supplied a large contingent of the Spanish-led army.

ANSWER: La **Malinche** [accept **Malinalli**, **Malintzin**, or Dona **Marina**]

[10] La Malinche was part of the Nahua ethnic group in this empire, whose capital of Tenochtitlan fell to Cortes in 1521. Its past rulers include Itzcoatl and Moctezuma II.

ANSWER: **Aztec** Empire

[10] La Malinche's son Martin is said to be one of the first of these people, which are people of mixed European and Mesoamerican descent. They fell in the middle of the *casta* system in New Spain.

ANSWER: **mestizos** <KK; World History>

13. For 10 points each, answer these questions about movies and the Bechdel test.

[10] The Bechdel test requires that two female characters with names in a movie have a conversation about something other than this kind of person.

ANSWER: a **man** [or a **male**]

[10] This movie, which depicts Sleeping Beauty and an evil witch played by Angelina Jolie, actually fails a "reverse Bechdel test," since never do two male characters speak to each other about anything other than women.

ANSWER: **Maleficent**

[10] This movie, like many others, barely passes the test with one brief conversation. In this movie, some of Ron Burgundy's coworkers discuss a cat fashion show.

ANSWER: **Anchorman**: The Legend of Ron Burgundy <AC; Trash>

14. Congratulations to the winner of the 2017 Nobel Prize in Literature! For ten points each:

[10] Name this Nobel Laureate and author of *Never Let Me Go*, which features students of Hailsham who are clones hoping to escape their fate as organ donors. He also wrote *An Artist of the Floating World* and *The Unconsoled*.

ANSWER: Kazuo **Ishiguro**

[10] Ishiguro won a Booker Prize for this novel in which the loyal butler Stevens recalls his past working for Lord Darlington during World War II.

ANSWER: ***The Remains of the Day***

[10] Most of Ishiguro's novels are set in Britain or Japan, with the exception of *When We Were Orphans*, where Christopher returns to this country. This country is home to the author of *The True Story of Ah Q*, Lu Xun.

ANSWER: **China** [or **Zhongguo**; accept People's Republic of **China**] <CM; British Literature>

15. In 2018, this action produced such people as Neve Gayford and Maile Bowsbey, as well as Prince Louis. For 10 points:

[10] Name this painful action that sometimes involves a C-section. New Zealand Prime Minister Jacinda Ardern and Illinois Senator Tammy Duckworth both carried out this action in 2018.

ANSWER: giving **birth** [or child**birth**; or going into **labor**; or **parturition**]

[10] After Duckworth gave birth, Senate rules were changed so that senators could perform this action on the Senate floor with a child under 1.

ANSWER: **breastfeeding** [or **nursing**]

[10] In 2018, this historically Catholic country repealed its country's Eighth Amendment in a popular referendum, overturning its ban on aborting a pregnancy.

ANSWER: Republic of **Ireland** [or **Eire**] <CC; Current Events>

16. This process is temperature-dependent in teleost fish and many reptiles. For 10 points each:

[10] Name or describe this process for which the SRY protein is responsible in humans. If SRY is activated, cells will secrete anti-mullerian hormone and testosterone, but if it is not activated, estrogen will be secreted instead.

ANSWER: **sex determination** [accept temperature-dependent **sex determination**; accept **TSD**; accept clear-knowledge equivalents referring to **determining** whether an organism is **male** or **female** or neither]

[10] This mammal has ten sex chromosomes, but its mechanism for sex determination is unknown. Like the echidna, it is a monotreme.

ANSWER: duck-billed **platypus** [or Ornithorhynchus **anatinus**]

[10] To distinguish the system of sex determination present in birds and some reptiles from the XY system, scientists use these two letters for the sex chromosomes instead. In this system, males have two copies of one chromosome while females are heterogametic, meaning sex is determined by the ovum rather than the sperm.

ANSWER: **Z** and **W** [or **ZW** sex-determination system] <CS; Biology>

17. The first known use of stone columns to support a building are traced back to one of these structures built by Imhotep. For 10 points each:

[10] Name this shape, a glass one of which would have been incorporated into the John F. Kennedy Presidential Library had the architect gotten his wishes. He was a bit more lucky with this attempt to create a glass one for the Rock and Roll Hall of Fame.

ANSWER: **pyramid** [prompt on **triangle** by asking for a 3-D shape]

[10] This hundred-year-old architect who co-names a firm with Cobb and Freed has made a couple of glass pyramids. He is best known for his glass pyramids in front of Paris' Louvre.

ANSWER: I(eoh) M(ing) **Pei** ["pay"]

[10] This British-Iraqi deconstructivist was the first woman to receive the Pritzker Prize. She created the "twin boulders" design of the Guangzhou Opera House in Pei's native China.

ANSWER: Zaha **Hadid** <CS; Fine Arts Other>

18. The title of a Nella Larsen novel refers to hiding this status, which Clare Kendry and Irene Redfield perform because of John Bellew's prejudice. For 10 points each:

[10] Identify this ethnic status which belongs to the title child in Kate Chopin's antebellum story "Desiree's Baby." A description is fine.

ANSWER: being part-**black** [accept **mulattos**; accept **quadroons**; accept **mixed-race** people]

[10] James Weldon Johnson wrote about a ragtime-playing man who passes as white in a novel titled for this genre. Benjamin Franklin famously wrote a book in this genre addressed to his son, William.

ANSWER: **autobiography** [or *The **Autobiography** of an Ex-Colored Man*; or *The **Autobiography** of Benjamin Franklin*]

[10] The Ex-Colored Man and many other characters in Johnson's *Autobiography* are only known by nicknames, just like this other black character who titles Ralph Ellison's most famous novel.

ANSWER: **Invisible Man** [accept "the" **Invisible Man**] <CS; American Literature>

19. Hierarchical proportion, in which the size of figures indicates their importance, is most common in the art of this country. For 10 points each:

[10] Name this home country of the Narmer Palette, where royalty was painted black and divinities in blue or gold. Artworks from this modern country often includes cartouches, snakes in the uraeus form, and a sceptre called the *was*.

ANSWER: **Egypt** [or **Misr**]

[10] The name for this symbol comes from the Egyptian for "life," as it symbolizes life. This symbol was often held by the loop at its top by deities in tomb paintings and has a resemblance to the cross.

ANSWER: **ankh**

[10] Another popular Egyptian religious symbol was the "eye" of this falcon-headed god. This son of Isis took the throne of Egypt after his father Osiris.

ANSWER: **Horus** <CS; Religion and Mythology>

20. A woman named Jigonhsasee [Jee-cone-sah-say] resolved tribal disputes for this people. For 10 points each:

[10] Name this "people of the longhouse," an alliance of five northeastern Native American tribes who split over the issue of the Revolutionary War. The Great Peacemaker and Hiawatha were instrumental in uniting this people.

ANSWER: **Iroquois** Confederacy [or **Haudenosaunee** Confederacy]

[10] The Haudenosaunee fought these conflicts against the French and the Huron to gain control over the fur trade.

ANSWER: **Beaver** Wars

[10] It is believed that the laws of the Haudenosaunee served as a basis for this more famous document, which was drafted during namesake conventions and replaced the ineffective Articles of Confederation.

ANSWER: United States **Constitution** [or American **Constitution**] <KK; American History>