**OLEFIN: Outstanding Like Excellent Fantastic Invitational**

**Edited and written by members of the 2010-2011 TJHSST QB team**

ROUND 3

Tossups

**1. This man's namesake particle is a black hole with a Schwarzchild radius close to its Compton wavelength, while his namesake unit of time is equal to 5.39 times 10 to the -40 seconds. A series of equations used to describe Brownian motion are named for this man and Fokker. One equation named for him, whose peak can be found by Wien's [veenz] law, resolved the (\*)** ultraviolet catastrophe by correcting the Rayleigh-Jeans law. His namesake postulate states that the energy of a photon equals h times frequency, which he discovered while working with blackbodies. For 10 points, name this man who postulated that energy is quantized and comes in multiples of his namesake constant.  
ANSWER: Max **Planck**

**2. The murderer Angulimala attempted to make this figure his 1000th victim and this figure was once so starved that a girl believed he was a spirit. On the night of this figure's conception, his mother Queen Maha Maya dreamed of a white elephant with six tusks entering her right side. After meeting an (\*)** old man, this figure ventured from his palace and met a sick man, a corpse, and an ascetic, which prompted him to become an ascetic himself. This figure advocated achieving freedom from suffering by following the Eightfold Path, which was his fourth Noble Truth. For 10 points, identify this figure who became enlightened while sitting under a Bodhi tree and founded a namesake religion.  
ANSWER: **Buddha** [accept Siddhartha **Gautama**]

**3. The ratio of the inertial force to this phenomenon is known as the Rossby number. The magnitude of this force is proportional to twice a constant times the sine of the latitude because it is proportional to the cross product of the angular velocity of a (\*)** frame and the velocity of a particle. This phenomenon is responsible for a flow of water perpendicular to prevailing winds known as Ekman transport. It is not present on the equator, explaining why hurricanes do not form there. For 10 points, name this force that deflects moving objects to the right in the northern hemisphere and to the left in the southern hemisphere, a fictitious deflective force observed in a rotating reference frame.  
ANSWER: **Coriolis** effect [accept **Coriolis** force]

**4. Entrance of military vessels into this body of water was restricted by the Montreux Convention of 1936. The Bug, Don, and Dneiper rivers drain into this body of water, which the Kerch Strait connects to the Sea of (\*)** Azov. The Crimean Peninsula has coastline on the Sea of Azov and this body of water. This sea is connected by the Bosporus, the Sea of Marmara, and the Dardenelles, which together compromise the Turkish Straits, to the Aegean Sea. For 10 points, identify this sea which receives the Danube and is bordered by countries including Ukraine, Russia, Romania, and Georgia.  
ANSWER: **Black** Sea

**5. The Heckscher-Ohlin model uses one concept attributed to him as the basis for prediction of international trade relationships. The statement that demand reacts similarly whether governments increase debt or taxes is an equivalence often named for this man and Barro. He argued for the use of gold rather than paper money in *The***(\*) *High Price of Bullion,* and explained his theory of rent in his most famous work. He argued that raising grain tariffs aided the aristocracy but not the lower classes, forming the basis of his opposition to the Corn Laws. For 10 points, name this economist who wrote *Principles of Political Economy and Taxation* and introduced the idea of comparative advantage.  
ANSWER: David **Ricardo**

**6. In this work, the autobiography-writing Gines de Pasamonter is part of a group of galley slaves freed by the titular character. Previously, the titular character had taken a barber's basin which he believed to be the helmet of (\*)** Mambrino. This work's protaganist promises his sidekick the governorship of an island for his service. This work's protaganist also creates a lover, Dulcinea, and travels on his horse Rocinante. In addition to mistaking windmills for giants, this work's title character enlists the help of Sancho Panza. For 10 points, identify this novel by Miguel de Cervantes about the adventures of the titular knight "of La Mancha."  
ANSWER: *The Ingenious Hidalgo****Don Quixote****of La Mancha* [accept *El ingenioso hidalgo****don Quijote****de la Mancha*]

**7. The perpetrator of this event had been a member of the New Orleans Civil Air Patrol and was the head of the New Orleans' branch of Fair Play for Cuba Committee. As a result of this event, the New Orleans District Attorney, Jim Garrison, charged Clay Shaw and Guy Banister with conspiracy. The (\*)** Magic Bullet Theory claims that all non-fatal injuries in this event were caused by a single bullet shot from the sixth story of the Texas School Book Depository. It was later determined that the possibility of a second shooter was not fully explored by the Warren Commission. Jack Ruby killed Lee Harvey Oswald after, for 10 points, what 1963 presidential killing?  
ANSWER: The **assassination** of **J**ohn Fitzgerald **Kennedy** [accept clear knowledge equivalents; accept **JFK** instead of full name; accept Lee Harvey **Oswald killing the President** and equivalents before end; prompt on **Kennedy assassination** and equivalents]

**8. This figure once was given 100 servants from a group of villagers by claiming that they had killed the sleeping son of God. A turtle once kept this figure from eating a meal by telling this god to take his jacket off, and after trying to kick the (\*)** Tar Baby this figure got his legs stuck. During floods this deity chooses the boundaries of oceans and rivers. This god captured a nest of hornets, a leopard, and a serpent and brought them to his father in exchange for the world's stories. For 10 points name this trickster god commonly featured in West African mythology, the son of Asase Ya and Nyame who appears as a spider.  
ANSWER: Kweku **Anansi**

**9. During this monarch's rule the Act of Uniformity and the Thirty-Nine Articles of Religion were passed as part of this monarch's namesake "Religious Settlement". After a failed invasion, this sovereign gave a speech at Tilsbury and this monarch's retirement was declared in the "Golden Speech." The Ridolfi plot attempted to assassinate this sovereign. William (\*)** Cecil advised this monarch, whose "spymaster," Francis Walsingham, uncovered the Babington Plot, which sought to replace this monarch with Mary, Queen of Scots. Also known as the "Virgin Queen," for 10 points, name this queen, the last of the Tudor monarchs.  
ANSWER: Queen **Elizabeth I**

**10. One character in this novel is constantly surrounded by yellow butterflies and is shot after being mistaken for a chicken thief. Another character in this work has seventeen sons who are all mysteriously murdered and spends the last years of his life making tiny golden fish. Early in this novel the gypsy (\*)** Melquiades parades his wares about town, while later in this novel two brothers are buried in the wrong coffins and Amaranta Ursula and Aureliano have an incestuous affair. For 10 points, Jose Arcadio Buendia's descendants inhabit Macondo in what magical realist book by Gabriel Garcia Marquez?  
ANSWER: ***One Hundred Years of Solitude*** [accept ***A Hundred Years of Solitude***; accept ***Cien años de soledad***]

**11. Opposition groups in this country studied the work of Gene Sharp on non-violent revolution, while Habib el-Adly was arrested on February 17 for ordering the use of live fire on protesters while Interior Minister. Saad Ketatni founded the Islamist Freedom and Justice Party in this country after the lifting of a ban on his organization's political activities. (\*)** Omar Suleiman had earlier been appointed as Vice President of this country though, as intelligence director, he had maintained close relations with Israel. Home to the original Muslim Brotherhood, for 10 points, name this African nation whose 2011 revolution, centered at Tahrir Square, forced out long-ruling President Hosni Mubarak.  
ANSWER: Arab Republic of **Egypt** [accept al-**Masr**]

**12. One character in this novel realizes another's parentage when he notices that the housekeeper Molly and that character make the same knitting motions with their hands. Characters in this novel include "the Aged P," Wemmick's father, and the pompous Mr. Pumblechook. One episode in this novel sees a bitter spinster's (\*)** dress catch on fire, and earlier in the novel Orlick attacks the protagonist's sister, Joe Gargery's wife. The protagonist of this work realizes the convict Abel Magwitch is his true benefactor, rather than Ms. Havisham, whose cold daughter Estella he loves. For 10 points, identify this novel about Pip, a work by Charles Dickens.  
ANSWER: ***Great Expectations***

**13. This structure is located in the sella turcica and is the site of intermedin synthesis. The pars distalis and pars tuberalis are part of the adeno- section of this organ. This organ receives secretions from the paraventricular nucleus, and one of its functions is promoted by GnRH. A malfunction of its (\*)** neurohypophysis can lead to diabetes insipidus, which is caused by insufficient release of vasopressin from it. This organ is divided into anterior and posterior sections and located under the hypothalamus. Responsible for the secretion of ADH and oxytocin, for 10 points, name this endocrine gland that is important in homeostasis and sex development.  
ANSWER: **pituitary** gland [accept **hypophysis** before "neurohypophysis"]

**14. This man avoided disaster by opening up negotiations with General Cantillo at the Battle de Las Mercedes. This man's revolutionary movement was named after the date of his attack on the Moncada Barracks. During his trial for those attacks, this man declared that "History will absolve me." One crisis involving his country ended when (\*)** Jupiter missiles were removed from Turkey. Che Guevara joined this man’s 26th of July Movement. He came to power after leading a coup against Fulgencio Batista. The Bay of Pigs invasion failed to overthrow this man. For 10 points, name this man who, in 2008, was succeeded by his brother Raul as President of Cuba.   
ANSWER: **F**idel **Castro** [prompt on “Castro”]

**15. This artist painted one preparatory study entitled *The Orphan Girl at the Cemetery*. One of this painter's works features a nude begging for mercy before an Assyrian king lounging on a pink bed; that painting is *The (\*)****Death of Sardanapalus*. This painter was heavily influenced by Gericault's *Raft of the Medusa* in his painting in which an old Greek woman looks toward an unseen object as an Ottoman on a horse watches. This artist's most famous work features a woman in a yellow dress waving the *tricolore* of the French Revolution. For 10 points, name this French painter of *The Massacre at Chios* and *Liberty Leading the People*.  
ANSWER: Eugene **Delacroix**

**16. One character in this novel carries a "dirty picture" and imagines himself and two scouts as the Three Musketeers; that character from this novel is Roland Weary. The protagonist of this novel discusses another character with Eliot Rosewater after he is incarcerated in a mental hospital for preaching his fatalistic message after a (\*)** plane crash. That message is inspired by aliens known as Tralfamadorians. This book ends with the words "Poo-tee-weet?" and the phrase "so it goes" follows every death in this novel, including the firebombing of Dresden that the protagonist survives. For 10 points, name this novel by Kurt Vonnegut in which Billy Pilgrim becomes "unstuck in time."   
ANSWER: ***Slaughterhouse-Five****: or The Children's Crusade: A Duty Dance with Death*

**17. One character in this work calls himself Gualtier Maldé, prompting another to sing the aria "Caro nome." The curse of Count Monterone plays a major role in this opera, and near the beginning of this opera another character sings "Questa o quella" at a palace ball. After Maddalena's begging, this opera sees the (\*)** assassin Sparafucile kill Gilda instead of a character who believes that "woman is fickle"; that character is the Duke of Mantua, who soon reprises the "La donna e mobile" aria. Based on the play *Le roi s'amuse* by Victor Hugo, for 10 points, identify this opera by Giuseppe Verdi about the titular court jester.  
ANSWER: ***Rigoletto***

**18. This figure contributed to military victories at the towns of Meung, Patay, and Jargeau before being captured by Burgundians. This military leader allied with the Duke of Alençon and the lord of Dunois before testifying at an ecclesiastical trial headed by Pierre Cauchon. This figure claimed to have received (\*)** visions from Saints Margaret, Catherine, and Michael which told her to crown Charles VII at Reims after she relieved the Siege of Orleans. This figure was burned at the stake for heresy, but was later named a martyr by Pope Callixtus III and canonized. For 10 points, name this "Maid of Orléans," a patron saint of France.  
ANSWER: Saint **Joan** of **Arc**

**19. One of this artist's paintings shows a naked teenage girl staring at the viewer sitting on a white bed and covering herself with her hands; her shadow takes up much of the top right portion of the canvas. In another of his portraits this artist painted his sister Sophie, who died of tuberculosis at age 15. This painter of *Puberty*, *Self-Portrait with a Burning Cigarette,* and *The (\*)****Sick Child* is more well-known for a painting appearing in his *Frieze of Life* series depicting a figure standing on a bridge before a swirling red background. For 10 points, identify this Norwegian painter who depicted a distressed individual in *The Scream.*  
ANSWER: Edvard **Munch**

**20. Smart rubber uses these to heal itself after being torn. The parallel parts of a beta sheet are connected by these. They play a role in the secondary structure of proteins in addition to linking complementary base pairs in (\*)** DNA. They were proven to have a small degree of covalent character in the late 1990s, a property hypothesized by Pauling, while the viscosity of glycerol, the high boiling point of water, and the ability of ice to float on water are attributed to these interactions. For 10 points, identify these bonds that occur when relatively electronegative atoms, such as oxygen, nitrogen, or fluorine, are linked with atoms of the namesake element.  
ANSWER: **hydrogen bond**s

EXTRA: **In one poem by this author, in which "every spirit upon earth / Seemed fervourless as I," the narrator was unaware of "some blessed Hope"; that poem begins with the line "I leant upon a coppice gate" and describes birdsong. This author wrote about Bathsheba and Gabriel Oak's misfortunes in (\*)** *Far from the Madding Crowd.* One of this author's protagonists kills Alec to be with Angel Clare, while in another of his novels one character hangs himself and his siblings "because we are too menny"; that novel's protagonist marries Arabella Donn and later Sue Bridehead. For 10 points, identify this author of *Jude the Obscure* and *Tess of the D'Urbervilles.*  
ANSWER: Thomas **Hardy**

Bonuses

1. Name some things about a late 19th century political movement, for 10 points each:  
[10] This movement advocated for the U.S. to adopt bimetallism. It was ended when McKinley signed the Gold Standard Act.  
ANSWER: **Free Silver**  
[10] Also known as the "Great Commoner" this man advocated bimetallism in his "Cross of Gold" speech. He resigned as Wilson's Secretary of State after the sinking of the *Lusitania*.   
ANSWER: William Jennings **Bryan**   
[10] Largely viewed as a failure, this doubly eponymous act passed over Cleveland's veto. It required the U.S. Treasury to purchase a minimum of 2 million dollars worth of silver and then to release it as silver dollars.   
ANSWER: **Bland-Allison** Act

2. One character in this play reveals to another that he is engaged to be married after kissing her. For 10 points each:  
[10] Identify this play in which Jim pays a visit to the crippled Laura Wingfield.  
ANSWER: *The****Glass Menagerie***  
[10] This author of *The Glass Menagerie* created Blanche DuBois and Stanley Kowalski in *A Streetcar Named Desire.*  
ANSWER: Tennessee **Williams**  
[10] This mother of Laura and Tom in *The Glass Menagerie* was once a Southern belle and is preoccupied with finding gentleman callers for Laura.  
ANSWER: **Amanda** Wingfield

3. Synthetic versions of them were used as herbicides in Agent Orange, and they stimulate expansins to promote cell elongation. For 10 points each:  
[10] Name this class of plant hormones which includes indoleacetic acid and moves through plants via polar transport.  
ANSWER: **auxin**s  
[10] Charles Darwin studied this effect in plants and found that it only occured when tips of coleoptiles were exposed to light, prompting auxins to stimulate growth on the shoot's dark side.  
ANSWER: **phototropism** [accept **heliotroism**]  
[10] Auxin inhibits this other plant hormone's namesake process, the shedding of leaves or fruit. This hormone also closes stomata and promotes dormancy.   
ANSWER: **abscisic acid** [accept **ABA**]

4. The Tulley-Fisher relationship relates their luminosity and their velocity width. For 10 points each:  
[10] The Milky Way Galaxy is one of these galaxies, which are known for their distinct arm structures.  
ANSWER: barred **spiral** galaxy  
[10] The galaxy rotation problem, first observed in spiral galaxies, is thought to be caused by this mysterious form of matter. Its "cold" version is believed to be made up of WIMP's and MACHO's.  
ANSWER: **dark** matter  
[10] These objects, which exhibit remarkably high red-shift, can be found in early spiral galaxies with active galactic nuclei. They are the brightest objects in the universe and a sub-type, known as blazars, are found in elliptical galaxies.  
ANSWER: **quasar** [accept **quasi-stellar radio source**]

5. The second of these wars was ended by the Treaty of Vereeniging. For 10 points each:  
[10] Name these wars in which the British fought against the Transvaal Republic and its allies. The Battle of Majuba Hill was a disastrous loss for the British in the first of these wars.  
ANSWER: **Boer** wars  
[10] This man, who put down the Madhi uprising at the battle of Omdurman, led the British during the Second Boer war. He implemented a scorched earth policy and was blamed for the Shell Crisis of 1915.  
ANSWER: Lord Herbert **Kitchener**, First Earl of Kitchener  
[10] This other independent Boer republic allied with the Transvaal republic in the Second Boer war. It shares its name with the royal house that William the Silent belonged to.  
ANSWER: **Orange Free State**

6. This painting was commissioned for the Church of Santo Tome. For 10 points each:  
[10] Identify this painting depicting Philip II as well as St. Stephen and Augustine parting to receive the titular nobleman in Heaven.  
ANSWER: *The****Burial of Count Orgaz***  
[10] This artist of *The Burial of Count Orgaz* received his nickname from his birthplace on Crete. He painted numerous naked souls receiving white robes as St. John looks on in his work *The Opening of the Fifth Seal.*  
ANSWER: **El Greco** [accept Domenikos **Theotokopoulos**]  
[10] Unusual lighting from the clouds is present in this El Greco painting, one of only two landscapes he painted. The Castle of San Servando can be seen in the painting.   
ANSWER: ***View of Toledo***

7. It was described as "man's emergence from his self-incurred immaturity." in one work. For 10 points each:  
[10] Name this 17th century movement that advocated the use of reason. Montesquieu and Condorcet were two French philosophers who subscribed to this movement.  
ANSWER: **Enlightenment**   
[10] Name this German thinker who claimed that we can never know things in themselves in his *Critique of Pure Reason*. He also wrote *What is Enlightenment?*  
ANSWER: Immanuel **Kant**  
[10] Kant attempted to rationalize morality with this concept. Its first formulation states that you should "act only according to that maxim whereby you can at the same time will that it should become a universal law."  
ANSWER: **categorical imperative**

8. This man's standards include "Mooch the Moose" and he was a frequent collaborator with Dizzy Gillespie. For 10 points each:  
[10] Name this jazz musician, commonly known as "The Bird," who composed the "Yardbird Suite."  
ANSWER: Charles **Parker** [accept Charlie **Parker**]  
[10] Charlie Parker, along with the artist behind the album *Giant Steps,* was a famous player of this woodwind instrument that was popular with jazz musicians. John Coltrane played this instrument on the album *Kind of Blue.*  
ANSWER: **sax**ophone [accept word forms]  
[10] Charlie Parker recorded this song, based on Ray Noble's "Cherokee," during the "Savoy Sessions," with Dizzy Gillespie. It's first 8 bars feature the trumpet and saxophone in unison octaves.  
ANSWER: "**Ko-Ko**"

9. In an ending designed by the composer's brother, Siegfried and Odette drown themselves. For 10 points each:  
[10] Name this ballet, in which Odette in transformed into the titular creature by von Rothbart.  
ANSWER: ***Swan Lake*** [accept ***Lebedinoye ozero***]  
[10] Name this composer of *Swan Lake* as well as the *1812 Overture* which commemorated Russia's defeat of Napoleon's forces.  
ANSWER: Pyotr Ilyich **Tchaikovsky**  
[10] Tchaikovsky's *Glory* is an arrangement of the epilogue from the chorus of this man's *A Life for the Tsar*. He also composed the opera *Ruslan and Ludmilla*.  
ANSWER: Mikhail **Glinka**

10. Alexander Lebedev and this man recently formed the Independent Democratic Party of Russia. For 10 points each:  
[10] Name this last head of the Soviet Union, who met with Reagan beside a fireplace at the Reykjavik Summit.  
ANSWER: Mikhail **Gorbachev**  
[10] This policy, instituted under Gorbachev, granted Soviets greater freedom of speech.  
ANSWER: **Glasnost**  
[10] Contrary to popular belief this man, not Gorbachev, succeeded Brezhnev as the head of the Soviet Union. He was the head of the KGB during Prague Spring and Soviet Ambassador to Hungary during their 1956 revolutions.  
ANSWER: Yuri **Andropov**

11. One of this man's plays centers on a meeting between Hugo Pludek and Mr. Kalabis. For 10 points each:  
[10] Name this playwright of *The Garden Party* and *The Memorandum.*  
ANSWER: Vaclav **Havel**  
[10] This other Czech author wrote a novel that features the dog Karenin and the womanizer Tomas entitled *The Unbearable Lightness of Being.*  
ANSWER: Milan **Kundera**  
[10] This term was first coined by the Czech playwright of *R.U.R.*, Karel Capek. Isaac Asimov formulated the four laws of these entities.  
ANSWER: **robot**

12. They produce a monotonous B flat below middle C note. For 10 points each:  
[10] Name these controversial South African horns that create a distinct buzzing noise at futbol games.  
ANSWER: **vuvuzela**  
[10] Controversy over vuvuzelas climaxed at the 2010 running of this FIFA run futbol tournament. Held every four years, fourteen yellow cards were issued in Spain's one to nothing victory over the Netherlands in last year's final.  
ANSWER: FIFA **World Cup**  
[10] Vuvuzelas first gained widespread notoriety at this other FIFA organized tournament. In 2009, the United States faced Brazil in the finals after defeating Spain.  
ANSWER: FIFA **Confederations Cup**

13. Though the structure of the atom hasn't changed throughout history, humans' view of it has. For 10 points each:  
[10] This model of the atom, developed by J. J. Thomson, places electrons in a namesake blob of positive charge.  
ANSWER: **plum-pudding** model  
[10] This 1909 experiment disproved the plum-pudding model by showing that the positive charge was concentrated in the center of the atom.  
ANSWER: Rutherford **gold foil** experiment [accept **Geiger-Marsden** experiment, accept **Rutherford** experiment]  
[10] The currently-accepted model of the atom describes the electron cloud as consisting of these areas of electron density each containing up to two electrons. Lone pairs are ones of these that are not part of covalent bonds, while each can be described by a set of three quantum numbers.  
ANSWER: atomic **orbitals**

14. He killed Acrisius with a discus at funeral games in Larissa. For 10 points each:  
[10] Name this Greek mythological figure born from Danae after she was impregnated by a beam of light.  
ANSWER: **Perseus**  
[10] Perseus managed to slay this monster using the reflection on the Aegis. Pegasus and Chrysaor sprang from the head of this snake-haired Gorgon.  
ANSWER: **Medusa**  
[10] Perseus used this object, gifted by Hades, to hide and escape from the Gorgons after killing Medusa. Athena wore this object to aid Diomedes against Ares in the Trojan War.  
ANSWER: **helm of invisibility** [accept reasonable alternatives such as **cap of invisibility** or **hat of invisibility**; prompt on partial]

15. He wrote "The Moving Finger writes: and, having writ / moves on." For 10 points each:  
[10] What poet wrote a collection of quatrains, one of which describes "A Jug of Wine, a Loaf of Bread--and Thou?"  
ANSWER: Omar **Khayyam**  
[10] Khayyam wrote in this language, which is spoken in Iran. Other poets of this language include one called the "Roman," Rumi, and one who memorized the entire Koran, Hafez.  
ANSWER: **Persian** [accept **Farsi**]  
[10] This aforementioned collection of quatrains by Khayyam was translated by Edward Fitzgerald.  
ANSWER: ***Rubaiyat****of Omar Khayyam*

16. The slope of this quantity's namesake curve is usually negative, but is positive for Giffen and Veblen goods. For 10 points each:  
[10] Name this quantity, the amount of product consumers are willing to purchase, often paired with supply.  
ANSWER: **demand**  
[10] The intersection of the demand curve with the supply curve gives this revenue-maximizing price.  
ANSWER: **equilibrium** price [accept **market clearing** price]  
[10] This quantity is the change in demand that occurs due to a change in price. It is usually low for necessities and high for luxury goods.  
ANSWER: price **elasticity of demand** [prompt on **elasticity**]

17. Representatives of three-quarters of all lemur species can be found in this nation. For 10 points each:  
[10] Name this island nation to the east of the mainland of Africa, with a capital at Antananarivo.  
ANSWER: **Madagascar**  
[10] This body of water lies to the west of Madagascar. Ports on this body of water include Beira and Majunga.  
ANSWER: **Mozambique Channel**  
[10] This group of islands in the northern portion of the Mozambique Channel includes three islands, which form an independent nation with a capital on Ngazidja, and Mayotte, which remains under French control.  
ANSWER: **Comoros**

18. William Bligh was ousted by George Johnston during this country's Rum Rebellion. For 10 points each:  
[10] Name this country, whose indigenous people are known as aborigines.  
ANSWER: **Australia**  
[10] Australians, along with New Zealanders, belonged to the ANZAC corps that were massacred at this WWI battle. Ataturk commanded troops here.  
ANSWER: **Gallipoli** [accept **Dardenelles** campaign]  
[10] This is the term used to describe the children of Australian Aborigines who were forcefully removed from their families. The Half-Caste acts contributed to this generation.  
ANSWER: **Stolen** Generations

19. The poet penned the line "glory be to God for dappled things" in one work. For 10 points each:  
[10] Identify this British poet, a priest and author of "The Windhover," who also penned the aforementioned line about "dappled things" in his poem "Pied Beauty."  
ANSWER: Gerard Manley **Hopkins**  
[10] Hopkins' "Pied Beauty" is an example of this type of 14 line poem. It comes in Shakespearean and Petrarchan forms.  
ANSWER: **sonnet**  
[10] This other poet wrote that "God's in his heaven, all's right with the world" in his poem "Pippa Passes," but may be better known for writing a dramatic monologue about a Fra Pandolf painting, "My Last Duchess."  
ANSWER: **R**obert **Browning** [prompt on partial]

20. Often times this type of decay is accompanied by electron capture. For 10 points each:  
[10] Name this type of decay that results in the emission of a positron or electron. The Kurie plot is used to study this type of radiation.   
ANSWER: **Beta** decay  
[10] These leptons that come in tau, muon and electron varieties are emitted during beta decay. When these particles, which a 2011 experiment suggests may travel faster than the speed of light, are Majorana particles they are not emitted by Double Beta decay.  
ANSWER: **neutrino**  
[10] Because neutrinos do not interact much with matter, they are usually detected by observing this blueish radiation, which occurs when a neutrino creates an electron or muon from interacting with a detection material.  
ANSWER: **Cherenkov** radiation

EXTRA: This quantity can be determined for an arbitrary object by integrating the square of distance to an axis with respect to mass. For 10 points each:  
[10] Name this quantity, the rotational analogue of mass, which describes how hard it is to rotate an object about an axis.  
ANSWER: **moment of inertia**  
[10] This formula can be used to find moments of inertia. It states that the moment of inertia about an arbitrary axis equals the moment of inertia about the center of mass plus mass times the square of the distance between the center of mass and the new axis.  
ANSWER: **parallel axis** theorem [or **parallel axis** formula]  
[10] The kinetic energy of a rotating body equals one-half times the moment of inertia times the square of this quantity. It is symbolized by omega.  
ANSWER: **angular speed** [or **angular velocity**; accept **rotational velocity**; accept **rotational speed**; do not accept or prompt on "speed" or "velocity"]