

**REQUIRES ATTACHMENT FOR BONUS**

1. "Masetto da Lamporecchio Pretends to be Deaf and Dumb In Order to Become a Gardener to a Convent of Nuns, Where All the Women Eagerly Lie With Him." Also, "Two Men Are Close Friends, and One Lies With the Other's Wife. The Husband Finds it Out and Makes the Wife Shut Her Lover in a Chest, and, While He is Inside, the Husband Lies With the Lover's Own Wife on the Chest." These aren't just plot descriptions, they're actual titles of the tales purportedly told by seven young ladies and three men who left plague-ridden Florence for nearby villas in 1348. FTP name this collection of tales by Giovanni Boccaccio.

Answer: The **Decameron**

2. Most of his work was either published posthumously or edited in French by Dumont and compiled in the *Traites de legislation*; The *Introduction to the Principles of Morals* and *Fragment on Government* are exceptions. He attempted to make the law more accessible to the lay person by using paraphrasis - rewording legal terms to associate them concretely with pleasure or pain. Among his practical ideas were the Panopticon, a circular prison that needed only one guard and the proposal, put forth in *Auto-Icon*, that the monument to a dead person should be his own body. FTP name this British thinker who asserted that the "fundamental axiom is the greatest happiness of the greatest number," the founder of Utilitarianism.

Answer: Jeremy **Bentham**.

3. Larry Bowie, J.R. Niklos, Ryan Pickett, Chris Ward, Rob Thomas, Terrence Wilkins, Jeff Wilkins (no relation), Jamie Duncan, Adam Timmerman, Ernie Conwell, Orlando Pace, Torry Holt, Marshall Faulk, and Kurt Warner are all -- for ten points -- players on what surprisingly awful NFL team located in St. Louis?

Answer: St. Louis **Rams**

4. They only feature one form of chlorophyll, chlorophyll "a." They also have played a tremendous role in the evolution of life on Earth. They were likely the first oxygen-evolving organisms and are responsible for the conversion of the atmosphere from anoxic to oxic. They also probably evolved into the chloroplast through a symbiotic relationship. FTP, name these microbes, also known as blue-green algae.

Answer: **Cyanobacteria**. [Prompt on early buzz of "blue-green algae"]

5. Edgar Lee Masters described him as an "infinite paradox" with "his sadness, and kindness." Late in his career he defended a black family, who used violence against a mob trying to throw them out of a white neighborhood. He was himself acquitted of bribing a juror in 1912 and also managed to get acquittals for Eugene Debs, on charges in the aftermath of the Pullman strike, and Bill Haywood, on assassinating the ex-governor of Idaho. A staunch determinist, he used this philosophy to save Leopold and Loeb from a death sentence. FTP name this American lawyer who defended biology teacher John Scopes.

Answer: Clarence **Darrow**.

6. The name's the same. One is the film that appeared at Cannes and was invited to the Istanbul Film Fest, but which Yilmaz Karakoyunlu called "a shameful production." Created by a Canadian of Armenian descent, it's a historical film about the genocide of Armenians during World War One that has created much Turkish criticism for Atom Egoyan. The other is a remote 17,000-foot mountain in Turkey, the target of a forthcoming unprecedented international archaeological expedition. FTP name the Biblical mountain on which Noah's Ark alighted.

Answer: **Ararat**

7. Nicknamed "The Great Snake" because of his cleverness, Mark Twain comically asserted that his name was supposed to be pronounced "Chicago." He defeats his enemy Magua while rescuing Cora and Alice Munro but Magua pretends to be dead and escapes, later killing this man's son. However, he remains a stoic figure and at the funeral tells the mourners that they should not be disconsolate because his son is now in "the happy hunting grounds." After his death, recorded in *The Pioneers*, his lifelong companion Natty Bumppo decides to head west again. FTP name this Cooper character, father of Uncas and last of the Mohicans.

Answer: **Chingachgook**.

8. In music, it's the proper name for a key change. The pulse variety might be used to vary duration or presence of pulses, which is how compact discs work. The single-sideband type is common on the HF bands of amateur radio, and broadcasters rely on the amplitude and frequency types. FTP, name the process by which a wave is modified so that it can convey information.

Answer: **Modulation.**

9. Theodore Roosevelt dedicated a plaque to it in 1903 calling its delivery "one of those memorable scenes in accordance with which the whole future of a nation is molded." It was stated north of the Brewster House in response to a question concerning situations prior to the formation of state constitutions. The answer stated that the people of a territory could exclude slavery because slavery could not exist without the support of local police. FTP, identify Stephen Douglas's response to a question by Abraham Lincoln, named for the Illinois city where the debate took place.

Answer: **Freeport Doctrine**

10. Containing over 70 islands and possibly a Nessie-esque monster, it was home of the world's second steamship. One of the traditional invasion routes from Canada into the U.S. it is defended by Forts Crown Point and Ticonderoga, and Thomas Macdonough defeated a British fleet in its Plattsburgh Bay in 1814. Recently a Senate Bill declared it the Sixth Great Lake to boost the economy of Vermont whose largest city, Burlington, lies on its shores. FTP, name this long lake hedged in by the Adirondack and Green Mountains, the largest in New York, named after a French explorer.

Answer: Lake **Champlain.**

11. The July 15, 2002 issue of *Physical Review Letters* contained a proposal for using these in conjunction with carbon nanotubes with possible applications in quantum cryptography and computing. Current technology involving these particles includes an X-ray detector that is based on a Josephson junction. These composite bosons consists of two electrons related in momentum space in a ground state. FTP, name these pairs central to the current theory of superconductivity.

Answer: **Cooper pairs**

12. After 9-11 President Bush threatened sanctions on this party's country if its candidate was elected president. Formed in 1962 to combat Anastasio Somoza, it finally ousted him in 1979 after launching offensives from Costa Rica and Honduras. But after this victory, its leadership adopted strict Marxist doctrines, and nationalized industry and banking. Soon widespread opposition arose, although it did not lose the presidency until Violeta Chamorro defeated Daniel Ortega in the 1990 elections. FTP name this revolutionary party of Nicaragua, opposed by the U.S.-backed Contras.

Answer: **Sandinistas or Sandinista National Liberation Front.**(Prompt on early Nicaragua).

13. In the 1950's he worked as a free-lance journalist for the BBC. His nonfiction works include *Among the Believers* and *Beyond Belief* about Muslim fundamentalism in non-Arabic countries like Indonesia. Self-described as "rootless" and "content to be a colonial, without a past, without ancestors" his novels include *The Mystic Masseur*, *The Mimic Men*, *Guerillas*, and *The Enigma Arrival*. Honors he has received include the Booker Prize, a knighthood, and the 2001 Nobel Prize for literature. FTP name this Trinidad native, of Indian ancestry, author of *In a Free State* and *A House for Mr. Biswas*.

Answer: **Vidiadhar Suraprosad Naipaul.**

14. It posits six universal substances: Consciousness, Matter, Medium of Motion, Medium of Rest, Time, and Space. Nothing is created or destroyed, although many changes occur. There are Five Great Vows which Monks must follow strictly and lay people as their lives allow them: They include Nonviolence, Truthfulness, Non-Stealing, Chastity, and Non-Possession. Many followers believe that nudity is required to adhere to these while others wear plain white garb. FTP name this Indian religion based on a belief in a mutual dependence with all things in nature, reformed by Mahavira.

Answer: **Jainism.**

15. Pete Ross tried out for the football team on a whim and made it, but could not stop the protagonist from being strung up like a scarecrow in a field with a soon-to-be familiar emblem emblazoned on his chest. Chloe Sullivan must not be a good journalist, as she hasn't figured out the man she went to the Spring dance is not what he seems. Whitney Fordman used the season one finale to join the Marines, leaving trophy girlfriend Lana Lang in a lurch. FTP, all these are supporting characters on what series where Tom Welling plays a young Clark Kent?

Answer: **Smallville**

16. In the colonies it saw the French burn destroy Deerfield, Massachusetts, the English take Port Royal, and a Carolina force capture St. Augustine. In Europe battles included Friedlingen, Turin, Oudenarde, Ramillies, and the Pyrrhic English victory at Malplaquet. The most famous battle, however, was the defeat of Marshal Tallard by Eugene of Savoy and the Duke of Marlborough at Blenheim in 1704. FTP name this European War settled at Utrecht in 1713, in which it was determined that Philip V, grandson of Louis XIV, would remain on the throne of Spain.

Answer: **War of Spanish Succession.** (prompt on early Queen Anne's War)

17. Very involved with theater he composed music for many of John Dryden's plays and collaborated on several successful semi-operas for Thomas Betterton of the Dorset Garden Theater. These include *The History of Dioclesian*, *King Arthur*, *The Indian Queen*, and *The Fairy Queen*. As organist at Westminster Abbey, he composed funeral music for Queen Mary II which was also used at his own funeral following his premature death at age 36 in 1695. FTP name this English composer who saw the Chelsea girl's school perform his most notable opera, *Dido and Aeneas*.

Answer: **Henry Purcell.**

18. Born to an interracial family, he flunked out of the 9th grade in Pittsburgh, where he co-founded the Black Horizons Theatre and set all but one of his plays. He used a cab company as the setting for his first play, *Jitney*, the 1970s segment of a projected 10 play cycle on the twentieth-century African-American experience. FTP--name the playwright, whose other segments of that cycle include *Moon Going Down*, *King Hedley II*, and *Ma Rainey's Black Bottom*, *The Piano Lesson* and *Fences*.

Answer: **August Wilson**

19. Today, he is a leading dissident intellectual on the American left. From his perch at MIT he criticizes aid to Israel, hypocrisy in foreign policy and the media's reporting, and condemns the Indonesian invasion of East Timor. That he gets attention is not due to his current work, but rather his insights forty years ago, found in such works as "Syntactic Studies" and "Aspects of a Theory of Syntax." FTP name this linguist.

Answer: **Noam Chomsky**

20. The ratio of the universal gas constant to Boltzman's number is the same as the ratio of Faraday's constant to the charge of an electron. While Maxwell and Kelvin both postulated rough versions of its value, J. Perrin in 1908 was the first to call it the name by which we know it today. It is named for the man who formulated the theory that at the same conditions of temperature and pressure, equal volumes of gases contain the same number of molecules. FTP name this important constant roughly equal to  $6.02 \times 10^{23}$  [six point oh two times ten to the twenty-third.]

Answer: **Avogadro's Law or Principle or Number**

21. Thomas Carlyle asserted that he "creat[ed] a whole new democratic world." Coming from a wealthy family constantly feuding with the guilds, he started his career at the archiepiscopal mint, later becoming a goldsmith. He ended his life in poverty, provided only with a small pension given him by Count Adolph of Nassau, because he lost a lawsuit to Johann Fust and had to turn over all his equipment, including a Bible produced by his innovative new methods. These included the use of linseed oil in ink and a type of uniform height. FTP name this German who pioneered the use of moveable type, developing the printing press.

Answer: **Johann Gutenberg.**

22. Probably the brainchild of Apollodorus of Damascus, it survived the Middle Ages largely because it was admired by Pope Gregory I who consecrated the land around it. A mausoleum containing the empress Plotina and its namesake emperor is at its base and a naked statue of the same emperor stood atop it until the 17th century when it was replaced by a statue of St. Peter. However its most distinct feature is the shallow relief sculpture wrapping around it and telling of the emperor's two triumphs over the Dacians. FTP name this 128 foot monument in Rome dedicated to Nerva's successor.

Answer: **Trajan's Column.**

23. Remains of Cyclopean structures suggest it was once home to a flourishing Celtic culture and since then it has been invaded by numerous groups including the Vandals, Byzantines, and Muslims who made it a base of pirates in the Middle Ages. An autonomous region since 1983, it is currently renowned for its tourism industry; with a population of 800,000 it can make comfortable accommodations for 600,000 visitors. Fish, fruit, wine, and olive oil are also important exports. FTP name this group of islands, which include Formentara, Ibiza, Menorca, and Mallorca, located 120 of the Eastern coast of Spain.

Answer: **Balearic Islands** (accept any of the individual islands before population given).



**BONI – FINALS      TREVOR'S TRIVIA: BOB SELCER MEMORIAL 2002 -- UT-CHATTANOOGA**  
**REQUIRES ATTACHMENT FOR BONUS**

1. Hats off to the demented folks at DePauw who wrote this bonus. What's your poison – German Beatles or Spanish Monkees? – choose now!

*German Beatles* – Identify these Beatles songs from lyrics in German, FTPE.

A. Aber wenn ich nach Hause zu dich ankommen, finde Ich die Sachen, die Sie machen – sie f\_hlt mich gut

Answer: **Hard Day's Night**

B. Sehr geehrter Herr oder Frau, wollen Sie mein Buch lesen? Es hat mir viel Jahre zu schreiben, w\_rden Sie einem Blick zu lassen.

Answer: **Paperback Writer**

C. ...holt den Reis in die Kirche ab, die die Hochzeit ist gewesen, wohnt in einen Traum...

Answer: **Eleanor Rigby**

*Spanish Monkees* – Identify these Monkees songs from lyrics in Spanish, FTPE.

A. Usted está intentando hacer su marca en sociedad. Usted está utilizando todos los trucos que usted utilizó en mí.

Answer: **(I'm Not Your) Stepping Stone**

B. Podría ocultar debajo de las alas del bluebird mientras que ella canta. Los seis hora del alarmar nunca sonarían.

Answer: **Daydream Believer**

C. No, no quiero luchar. Soy un poco incorrecto, usted es un poco correcto. Y digo "va" y usted sabes que es verdad.

Answer: **A Little Bit Me, A Little Bit You**

2. Answer the following about a particular Russian FTPE.

1. First, FTP, name the dramatist whose works include *Ward No. 6*, *Peasants*, and *Three Sisters*.

Answer: Anton **Chekhov**

2. In this Chekhov play, the Ranevskys, an old noble family returning from Paris, lose their family farm due to mismanagement, and the enterprising "new man" Lopakhin buys it.

Answer: The **Cherry Orchard**.

3. The title character of this Chekhov drama manages Professor Serebryakov's farm. He comes to realize that the professor is not the great scholar he previously believed he was and falls in love with his second wife. Later, he tries to kill Serebryakov when he learns that he is planning to sell the farm.

Answer: **Uncle Vanya**.

3. Name the following things associated with light FTPE.

1. It is defined as the cross product of the electric field and the magnetic field divided by the permeability of free space. It gives the directions of energy transport and the wave's direction of travel.

Answer: **Poynting vector (POINT-ing)**

2. Light incident on a refractive material at this incident angle have a reflected component that is totally polarized perpendicular to the plane of incidence. It is named after its 1812 discoverer.

Answer: **Brewster angle**

3. The angle of a refracted ray of light is related to the incident angle by the index of refraction of the two mediums. Name the law that gives that relationship.

Answer: **Snell's Law**

4. Name these minor wars in North American history, FTPE:

[10] It saw the invasion of Florida by Britain because of the alleged mistreatment of English seamen by the Spaniards, and takes its name for an object shown in the House of Commons in 1738.

Answer: The War of **Jenkins' Ear**

[10] This early war was declared by Thomas Jefferson to limit the amount of tribute that the United States had to pay to avoid raids by pirates. Though America was victorious, it didn't really achieve freedom from piracy until a decade later.

Answer: The **Tripolitan** or **First Barbary War** [accept Tripolitanian – a few sources call it that]

[10] This 1839 war between Maine and New Brunswick luckily never saw a shot fired. Troops were dispatched, but the U.S. and Britain quickly agreed to compromise when they realized the border dispute was over a pointless piece of land.\_

Answer: The **Aroostook War**

5. **[handout labeled Round 12]**

Refer to the attachment. Either give me the title of these Renaissance paintings, or name their creators FTPE:

1. Figure A.

Answer: **Tribute Money or Masaccio.**

2. Figure B

Answer: **Primavera or Sandro Botticelli.**

3. Figure C.

Answer: **Battle of San Romano or Paolo Uccello.**

6. Disabled for more than a decade by lupus, a group of her letters was published posthumously under the title *The Habit of Being* while her other works include *The Violent Bear It Away*. FTPE:

1. Name this American author.

Answer: **Flannery O'Connor**

2. Name O'Connor's first novel, about Hazel Motes, a preacher for the Church without Christ in Tennessee who competes with Hoover Shoats and his Church of Christ without Christ

Answer: **Wise Blood**

3. O'Connor wrote this collection of 10 short stories that includes "Circle in the Fire" and "Good Country People"

Answer: **A Good Man is Hard to Find**

7. Every mythos needs a primal cow. Identify the Norse animals from descriptions FTPE.

1. This massive primeval cow provided the sustenance for Ymir, a giant man-like being.

Answer: **Audhumla.**

2. This offspring of Loki was the eight-legged horse of Odin.

Answer: **Sleipnir.**

3. This squirrel of strife ran up and down Yggdrasil telling Nidhug what the eagle perched at the top of the tree was saying about the dragon and vice-versa.

Answer: **Ratatosk.**

8. Solve the equations for x. You will get 5 points for each of the two values of x in these cases. (15 sec. per part):

1.  $x^2 + 4x + 3 = 0$ .

Answer:  **$x = -3$  and  $-1$ .**

2.  $x^2 - 2x - 8 = 0$ .

Answer:  **$x = 4$  and  $-2$ .**

3.  $x^2 + 2x - 35 = 0$ .

Answer:  **$x = 5$  and  $-7$ .**

9. Identify these early 20th century American politicians FTPE:

1. A financier by profession he never ran for public office but held multiple economic posts including Chairman of the War Industries Board during WWI and a member of the United Nations Atomic Energy Commission after WWII.

Answer: **Bernard Baruch.**

2. His posts include associate justice of the Supreme Court, Harding's Secretary of State, and chief Justice of the Supreme Court after his nomination by Hoover. He also unsuccessfully ran for president against Wilson in 1916.

Answer: **Charles Evans Hughes.**

3. The Senate Majority Leader from Massachusetts, this conservative republican was Wilson's main opponent in the battles for ratification of the Treaty of Versailles and entrance into the League of Nations.

Answer: **Henry Cabot Lodge.**

10. Answer these questions concerning speciation FTSNOP:

1. These are the two major forms of speciation. In the first, speciation occurs due to geographic separation. In the second, speciation occurs due to another reason such as chromosomal changes or nonrandom mating in spite of the fact that the two emerging species share a geographic location. Identify these two forms of speciation—in the correct order—FTPE; 5 points each if you say the right name in the wrong order..

Answer: **Allopatric speciation and Sympatric speciation.**

2. This theory associated with Stephen Jay Gould and relating to speciation suggests that species do not gradually diverge, but rather they remain relatively constant before undergoing relatively rapid change. Name it, FTP.

Answer: **Punctuated Equilibrium.**

11. FTPE, answer the following about a noted composer:

He used Russian folk melodies and modified Slav church themes in such works as *Russian Easter Overture* and *Mlada*, but many of his best-known works, such as “Flight of the Bumblebee” and “Song of India,” are more reminiscent of other musical traditions.

Answer: Nikolai **Rimsky-Korsakov**.

2. This symphonic suite by Rimsky-Korsakov is based on The Thousand and One Nights.

Answer: **Scheherezade**

3. This orchestral work in 5 movements that features two contrasting dance themes and an extremely original middle gypsy scene. Unusual instruments used include tambourines, triangles, and drum accompanies.

Answer: **\_Spanish Caprice or \_Capriccio Espagnol**

12. Identify the U.S. cities from clues FTPE.

1. Located with ninety minutes of Kings Canyon, Sequoia, and Yosemite National Parks, it is often called “The Gateway to the Sierra Nevadas” and grew by an amazing 63 percent during the decade of the 1980’s.

Answer: **Fresno**.

2. Divided into east and west sides by the Willamette Valley, from it you can see Mts Hood, St. Helens, Ranier, and Adams. It is also the only port on the west coast that boasts a fresh water harbor.

Answer: **Portland**.

3. Part of the territory in the Gadsden Purchase its population has multiplied by ten during the past fifty years. Nearby tourist attractions include Sabino Canyon and Saguaro National Monument.

Answer: **Tuscon**.

13. Identify the man 30-20-10

30. He wrote, produced, directed, and starred in the 1993 film *Praying with Anger* and wrote and directed the 1998 film *Wide Awake*.

20. He plays Ray Reddy, the man who accidentally kills Mel Gibson’s character’s wife in 2002’s *Signs*.

10. He was the writer and director of *Signs* as well as *Unbreakable* and *The Sixth Sense*.

Answer: M. Night **Shyamalan**. (be lenient on the pronunciation)

14. Give the 20th century British novelists from works and clues 5-10-20-30:

1. This man worked for British Intelligence in WWII which is reflected in works such as *Our Man in Havana*, and *The Third Man*. Other important works include *The Power and the Glory* and *The Heart of The Matter*.

Answer: Henry Graham **Greene**.

2. He worked as a secret agent in the First World War. His most notable works are *The Moon and Sixpence* based on the life of Gauguin, and *Of Human Bondage*.

Answer: William Somerset **Maugham**.

3. This man wrote about intellectuals in the 1920’s and 30’s in his works *The Loved One*, *Vile Bodies*, and *Decline and Fall*. His best known work is *Brideshead Revisited*.

Answer: Evelyn **Waugh**.

4. This outspoken Catholic and intellectual opponent of Wells and Shaw hearkened back the old days of the Victorian period and even the Middle Ages. His novels include *The Napoleon of Notting Hill*, *The Man who was Thursday*, and *The Innocence of Father Brown*.

Answer: G.K. **Chesterton**.

15. Name the metabolite associated with the TCA cycle, FTPE.

1. Prior to the start of the TCA cycle, pyruvate dehydrogenase catalyzes the breakdown of pyruvate to carbon dioxide and this compound.

Answer: **Acetyl-CoA or Acetyl-Coenzyme A**.

2. Acetyl-CoA combines with oxaloacetate to produce this six-carbon molecule at the start of the TCA cycle.

Answer: **Citrate or Citric Acid**.

3. Succinate is converted to this compound by succinate dehydrogenase in a reaction step that produces a FADH<sub>2</sub> molecule.

Answer: **Fumarate or Fumaric Acid**.

16. FTPE answer questions about British progressivism in the 19th century.

1. First, what laws, first enacted in 1689 and designed to protect British landowners from foreign competition, were finally repealed in 1846 due to growing discontent from the middle class, especially around Manchester?

Answer: **Corn Laws.**

2. These acts, passed in 1832, 1867, and 1884 extended voting rights to more and more citizens as well as doing away with rotten boroughs and making the distribution in Parliament more representational.

Answer: **Reform Acts.**

3. Formed in 1838 by William Lovett, this group advocated for the payment of M.P's, "the abolition of the requirement that Members of Parliament be property owners" and most radically, enfranchising all adult males.

Answer: **Chartist Movement or Chartists.**

17. Give the Euripides plays from short descriptions FTPE

1. In this play the title character escapes by means of a chariot driven by dragons and bound for Athens. She is forced to flee because she has caused the death of Creon, king of Corinth, and his daughter, as well as her own two sons.

Answer: **Medea**

2. The play centers around Hecuba who acts as spokesman for herself and the other title characters. Among the great moments of the play are a mad scene with Cassandra, Andromache giving up her son, and the trial of Helen before Menelaus.

Answer: **The Trojan Women.**

3. Orestes and Pylades go to the Black Sea region and there discover that Orestes' sister, the title character, is the High Priestess in the temple of Artemis.

Answer: **Iphigenia in Tauris.**

18. Identify the Medieval Philosophers from clues FTPE.

1. A 6th century Roman nobleman he translated and wrote commentaries on much of Aristotle's works which proved invaluable in the Middle Ages. He is best remembered for his *Consolation of Philosophy* written in prison before his execution by Theodoric the Ostrogoth.

Answer: **Boethius**

2. This 12th century Frenchman was probably the greatest logician of the Middle Ages. He authored the *Logica Incredentibus*, *Dialectica*, and *Sic et Non* (Yes and No) as well as the *Historia Calamitatum* which tells of his tragic love affair with Heloise.

Answer: **Peter Abelard or Pierre Abailard.**

3. This 14th century Englishman known as "The more than Subtle Doctor" spent much of his life in conflict with the pope over the poverty of monks. Philosophically he is remembered for his theory of nominalism and his dictate that "Entities should not be multiplied beyond what is needed."

Answer: **William of Occam or Ockham.**

19. FTPE answer the following questions about a colonial war.

1. In 1878 the British sparked a war with these South African people led by King Cetshwayo. Earlier they rose to prominence led by Shaka.

Answer: **Zulu.**

2. In this first major battle of the war the Zulus surprised and overwhelmed a camp of 1300 troops under Col. Pulleine while its commander Gen. Lord Chelmsford had left in order to find the Zulus.

Answer: **Isandlwana.**

3. After Isandlwana this outpost, defended by only 145 men under Lieutenants Chard and Bromhead, held off a massive Zulu attack. 11 of its defenders won the Victoria Cross.

Answer: **Rorke's Drift.**

20. For the stated number of points, name these thermodynamic quantities that all have something in common.

1. (5) This is the sum of the internal energy and the product of pressure times volume, usually denoted by the letter 'H'.

Answer: **Enthalpy**

2. (10) This is the ratio of the actual fuel-air ratio to the fuel-air ratio for complete combustion with the theoretical amount of air.

Answer: **Equivalence\_Ratio**

3. (15) This is the maximum theoretical work obtainable as the system interacts to equilibrium. This energy may or may not be utilized by the system and therefore is may be lost to the surroundings.

Answer: **Exergy**

21. Name the following about a school of French poetry, FPTE.

1. A reaction of mostly Parisian poets against the realist school this group used complex metaphorical language to express emotions and delve into the human mind and spirit. Their members included Mallarme, Maeterlinck, and Verlaine.

Answer: **Symbolists.**

2. A precursor of the symbolists, this man probably had more influence on them than any other poet. His literary achievements include translations of Edgar Allan Poe's work into French and his single volume of poetry, *The Flowers of Evil* (Les Fluers de Mal).

Answer: Charles **Baudelaire.**

3. Writing all his poetry, including *Les Illuminations*, *The Drunken Boat*, and *A Season in Hell*, before the age of twenty, this man had an affair with fellow symbolist Paul Verlaine who shot him in the arm in jealousy.

Answer: Arthur **Rimbaud.**

22. Given the first few numbers of a sequence, name the sequence FTPE:

1. 6, 28, 496, 8128, 33550336

Answer: **perfect** numbers.

2. 1, 1, 2, 5, 15, 52

Answer: **bell** numbers (accept **exponential**).

3. 1, 1, 2, 5, 14, 42

Answer: **catalan** numbers.



Round 12, Bonus 5 -- Figure A



Figure B



Figure C



- a)  
Answer:
- b)  
Answer:
- c)  
Answer:
- d)  
Answer:

- a) 10 pts.:  
5 pts.:  
Answer:
- b) 10 pts.:  
5 pts.:  
Answer:
- c) 10 pts.:  
5 pts.:  
Answer:

- a)  
Answer:
- b)  
Answer:
- c)  
Answer:
- d)  
Answer:
- e)  
Answer:
- f)  
Answer:

- 30)
- 20)
- 10)
- Answer: