T1. Known as Wagadu to its Sonink peoples, it was described in 773 by Al-Fazari as the "Land of Gold." The ruins of one of its capitals, Kumbi-Saleh, lies is southwestern Mauritania, but its central population was probably along the middle Niger. It lost much of its strength when its capital fell to the Berber Almoravids in 1076. FTP, name this ancient West African empire, located several hundred miles from the modern nation with the same name.

Answer: _GHANA_
T2. Dated March 24, 1721, there is no record that the composer received any renumeration, or even official thanks. Despite this, they remain some of the most recognized Baroque music. Commissioned by Christian Ludwig, the first 2 are written in F major, though four different keys are used in all. However, they were not written for the Margrave, but were instead chosen from works written for Prince Leopold of Anhalt-Cothen. FTP, name this collection of 6 concertos, composed by J.S. Bach.

## Answer: _BRANDENBURG_Concertos

T3. Defining God as that being than which nothing greater can be conceived, it continued by saying that if God existed only in the mind, He then would not be the greatest conceivable being, for we could imagine another being that is greater because it would exist both in the mind and in reality which would then be God, a logical contradiction. FTP, name this argument, put forth in the $11^{\text {th }}$ century by St. Anselm.

Answer: _ONTOLOGICAL_ argument (prompt on an early buzz of St. Anselm)
T4. The symptoms to this disease include fever, headache, and loss of appetite. After about two days, a rash of small blisters develops. A few days later, the blisters break and scab over. Highly contagious, it is acquired through the respiratory system and spread by the bloodstream to the rest of the body. However, symptoms rarely appear less than two weeks after exposure. FTP, name this disease, a normal part of growing up, but which can be dangerous to adults.

Answer: _CHICKEN POX_(or_Herpes Zoster_)
T5. Born Elizabeth Goldstein in Peoria, Illinois in 1921, she studied at Smith College. She did not become well known until 1963, upon the publication of her best known work. In 1981, she wrote _The Second Stage_, in which she emphasized the importance of both the new and the traditional roles of women. FTP, name this first president of the National Association for Women and author of _The Feminine Mystique_.

Answer: Betty _FRIEDAN_
T6. Muirfield, the Greenbrier, the Belfry, Eldorado, Royal Birkdale, Oak Hill, and Valderrama have all been privileged to host this event, which has occurred in every odd numbered year since 1927, except during World War II. Originally pitting America against Britain, now has them facing the best of Europe for the eponymous prize. FTP, name this golf tournament, the site recent questionable behavior by the American team.

Answer: _RYDER CUP_
T7. Established in 602, this position was held by Robert of Jumieges in the time of Edward the Confessor. Other holders included Cuthbert, Feologild, Oda, and Lyfing. William the Conqueror brought his own man for the job, Lanfranck. Currently held by George Leonard Carey, FTP, name this position held by St. Augustine, Thomas Cramner and Thomas a Becket.

Answer: _ARCHBISHOP_of_CANTERBURY_
T8. Although it took place eight years before his own birth, his great-grandfather's violent death in 1889 furnished this author material for two works. His great-grandfather, a military man from Mississippi, was himself the author of the popular romance _The White Rose of Memphis_He enlisted in the Canadian Air Force in 1918, but saw no active service, and after the war he worked odd jobs before his first publication in 1924, a book of verse entitled _The Marble Faun_. FTP, name this author, winner of Pulitzer Prizes for _A Fable_ and _The Reivers_ and recipient of the 1949 Nobel Prize for Literature.

Answer: William_FAULKNER_

T9. It's the Lebesgue (luh BAYG) measure of the Cantor set. It's the Haussdorff dimension of a single point. It is its own additive inverse, but it has no multiplicative inverse over the complex numbers. It's the number of non-trivial factorizations of 101 . When you divide it by itself, you may be able to use L'Hopital's Rule. FTP, name this number, which if denoted by a, and multiplied by x, you would get a back.

Answer: _ZERO_
T10. A student of Brunelleschi and called by some the "True Father of Renaissance painting," he stressed simplicity and evocative gesture in his painting. Drawing inspiration from Donatello's freestanding sculptures and reliefs, he applied sculptural considerations to his paintings, creating images of convincingly solid objects in a feasible space, using optical perspective. Born Tommasso di Giovanni, he is probably best known for his frescoes, including _The Expulsion of Adam and Eve from Eden_ and _Tribute Money_. FTP, name this Florentine artist, whose best known work can be found in the Brancacci Chapel.

Answer: _MASACCIO_(accept Tommasso di Giovanni on an early buzz)
T11. Despite being damaged by a storm, the forces confronting Themistocles were superior to his own. Using excellent tactics, he lured his enemy's navy into a narrow channel through which only three ships could enter at a time. Once he had them stretched out, his own fleet ambushed them resulting in great confusion amongst his foes. FTP, name the battle just described in which these tactics were employed to lead to an Athenian victory over the Persians in 480 BC .

Answer: _SALAMIS_
T12. Some say that she is three separate entities, one for poetry, one for the hearth, and one for midwifery. She is said to have been born at sunrise and with a tower of flames bursting from her forehead that stretched from heaven to earth. Nineteen virgin priestesses, called Daughters of the Flame kept her shrine in Kildare. A common tale also has her serving as the Virgin Mary's midwife. More officially she is said to have been a Druid's daughter who was baptized by St. Patrick. FTP, name this Celtic goddess and Irish Saint.

Answer: Saint _BRIGIT_
T13. His autobiography is entitled _The Magic Lantern_. Over the course of his life, he was married five times and had eight children, one of whom was born out of wedlock. At the age of 22, he was accepted as Assistant Director at the Royal Theatre, and five years later he directed his first film, "Crisis." Later films included "Autumn Sonata" and "Cries and Whispers." FTP name this Swedish director who won three Academy Awards, the most of recent of which was for the semi-autobiographical "Fanny and Alexander" in 1983.

## Answer: Ingmar _BERGMAN_

T14. He became a doctor, but gave that up shortly after World War I to become a writer. In 1930, this man sent a long and brave letter to Stalin, in which he pointed out that in 10 years of his literary activity, 300 reviews of his work had appeared in the press, of which 3 were favorable. Though he begged the government to allow him to leave the country, he died in the Soviet Union in 1940. Before the publication of his most famous work 26 years after his death, he was best remembered for stage adaptations of Gogol's _Dead Souls_ and Cervantes' _Don Quixote_ as well as his own drama _Days of the Turbins_. FTP, name this author of _The Master and Margarita_.

Answer: Mikhail_BULGAKOV_
T15. Residents of this town include Rebeca, Big Mama, Remedios the Beauty, Erendira, and Jose Arcadio. Often compared to William Faulkner's Yoknapatawpha County in scope and focus, magical events seem to be a routine occurrence. FTP, name this fictional town, whose most famous resident is Colonel Aureliano Buendia, featured in One Hundred Years of Solitude by Gabriel Garcia Marquez.

Answer: _MACONDO_
T16. Robert Gould Shaw, William H. Taft, Louisa May Alcott, Ray Bradbury, e.e. cummings, Amy Lowell, Frank Lloyd Wright, Horace Mann, Albert Schweitzer, Joseph Priestly, and Ralph Waldo Emerson were all members of this religion which was merged in 1961 from two branches, formed respectively in 1825 and 1793. FTP, name this Boston-based religion whose symbol is a flaming chalice inscribed by two circles.

Answer: _UNITARIAN UNIVERSALISM_(or Universalist)

T17. A 30 -something singleton falls desperately in love with her perfect boss, Daniel Cleaver, only to find out that he is sleeping with another woman. Meanwhile, her embarrassing mother and long suffering father have separated and she has run off with a man named Julio. To make matters worse a rude, self-absorbed barrister named Mark Darcy is beginning to come into this very complicated picture in a most unwelcome way. FTP, name this novel written by Helen Fielding which is based on Jane Austen's _Pride and Prejudice_.

Answer: _BRIDGET JONES'S DIARY_
T18. "In the discussion to which this interest has given rise, and in the arrangements by which they may terminate, the occasion has been deemed proper for asserting as a principle in which rights and interest of the United States are involved, that the American continents ... are not to be considered as subjects for future colonization by any European power." This is an excerpt from a speech given to Congress on December 2, 1823. FTP, name the statement of US foreign policy.

## Answer: _MONROE DOCTRINE_

T19. He studied at the Technical Institute of Liverno, where he experimented with a device to turn electromagnetic waves into electricity. His first successful experiments occurred at Bologna in 1895. Within the next six years, his invention would be used for communication across the English channel (in 1898) and across the Atlantic (in 1901). FTP, name this inventor of the radio.

Answer: Guglielmo _MARCONI_
T20. Born in 1895, this psychologist chaired the Vienna Psychoanalytic Society. In 1938, she emigrated to London, where she organized a residential war nursery for homeless children. She parlayed that experience into one of the first careers in child psychoanalysis. FTP, name this psychologist, generally working in the shadow of her more famous father.

## Answer: _ANNA FREUD_

T21. Vanadium makes up $.017 \%$ by mass. Flourine makes up $.046 \%$ and manganese makes up. $1 \%$. A total of 10 elements make up more than $99.5 \%$. This list includes Potassium, Calcium, Iron, and Aluminum. Oxygen and Silicon top the list at $45 \%$ and $27 \%$ respectively. FTP, name this outermost layer of the earth.

Answer: Earth's _CRUST_
T22. He named his home "Olana," and used Turkish architecture, which looks decidedly out-of-place in upstate New York. He died in 1900, probably due to lead poisoning from the paints he worked with on a daily basis. A student of Thomas Cole, his painting of Niagara Falls is considered to be the best done on that subject. The most financially successful of the Hudson River School artists, he was known for his panoramic paintings of natural scenes. FTP, name this man, who did much of his best work in the Andes and is most noted for .

## Answer: Frederick _CHURCH_

T23. Raised on the Laguna Pueblo reservation near Albequerque, this MacArthur Fellow wrote about the relationships between nature and culture, particularly the Native Americans live as part of the land, not just on it. A collection of letters between her and James Wright was published in 1985 under the title _The Delicacy and Strength of Lace_, but she is better known for _The Almanac of the Dead_and _Laguna Woman_. FTP, name this woman, the author of _Ceremony_.

Answer: Leslie Marmon _SILKO_
T24. The differential equation for a pendulum is given by T double prime plus K sine of T equals zero does not quite represent this type of motion, unless $t$ is very small. In this case, sine of $t$ is almost equal to $t$, giving the equation $T$ double prime plus K times T equals zero, also known as Hooke's Law. FTP, name this type of oscillatory motion, most characteristic of a spring.

Answer: _SIMPLE HARMONIC_ motion (prompt on harmonic)
T25. Believed by many to be the oldest river in North America, the pre-glacial form of this river is known as the Teays. At that time, it flowed north to the present-day Great Lakes region before turning west and south, forming the mainstem watershed of the time. Today, it crosses from North Carolina into Virginia near the town of Galax. Despite its size, it has relatively few large tributaries, until it is joined by the Greenbrier and Bluestone Rivers. At its confluence with the Gauley, it becomes the Kanawha, and flows to the Ohio. FTP, name this river, whose name belies its geological history.

Answer: _NEW_River

1999 Terrapin Invitational Tournament
Questions by Virginia B
BONUSES (All worth 30 points)
B1. Pencil and paper may be useful. Alex writes 2 tossups or 5 bonuses per hour. John writes 3 tossups or 10 bonuses per hour.

1. First, for 15 points, if used to best advantage, and both work until the packet is complete, how long will it take them to write 24 tossups and 20 bonuses? You have 15 seconds.
Answer: _SIX HOURS_
2. For another 15 points, name the economics law, which states in this case that even though John writes tossups faster than Alex, his
first priority should be bonuses.
Answer: Law of _COMPARATIVE ADVANTAGE_
B2. 30-20-10 Identify the author.
30) After serving in the 6th Illinois Infantry during the Spanish-American War, he wrote the pamphlet "Reckless Ecstasy" in 1904.
31) In 1910, he acted as an organizer for the Social Democratic Party and secretary to the mayor of Milwaukee. During these early years, he published his poems in Harriet Monroe's _Poetry , becoming part of the "Chicago Renaissance."
32) In his most famous poem, he portrays a city as "Hog Butcher, Tool Maker, Stacker of Wheat, Player with Railroads and Freight Handler to the Nation."

Answer: Carl _SANDBURG_
B3. Identify these Norse deities from brief descriptions for the stated number of points.

1. FTP, the most beautiful god, he was slain by his brother Hodur using a wand of mistletoe.

Answer: _BALDUR_
2. For 5 points, this wolf was the son of Loki.

Answer: _FENRIS_(or _Fenrir)
3. For 15 points, the wife of Aegir, she was also goddess of the sea.

Answer: _RAN_
B4. FTP each, given a chemical formula, name the compound.
$\begin{array}{ll}\text { 1. } \mathrm{MnCr}_{2} \mathrm{O}_{7} & \text { Answer: _MANGANESE DICHROMATE_ } \\ \text { 2. } \mathrm{H}_{2} \mathrm{SO}_{3} & \text { Answer: _SULFUROUS ACID_- } \\ \text { 3. } \mathrm{C}_{9} \mathrm{H}_{8} \mathrm{O}_{4} & \text { Answer: _ACETYLSALYCYLIC ACID_(or_aspirin_) }\end{array}$
B5. Given a description, identify the Supreme Court decision FTP each.

1. This 1877 decision allowed states to regulate business when the public interest was involved.

Answer: _MUNN V. ILLINOIS_
2. This $\overline{9} 08$ decision allowed states to legislate maximum working hours.

Answer: _MULLER V. OREGON_
3. In this 1866 decision, among other things the Court held that the president's power to suspend the writ of habeas corpus in a time of war did not extend to creating another court system run by the military
Answer: _EX PARTE MILLIGAN_
B6. 30-20-10 Identify the composer from works.
30) The symphonic poem "Wood Nymph" and the cantata "Hymnus"
20) The symphonic poem "Noon Witch," and Piano trio \#4 in E minor, "Dumky"
10) Symphony \#9, "From the New World"

Answer: Antonin _DVORAK_
B7. Given the title of a Pulitzer Prize-winning book, name the author FTP each.

1. _The Killer Angels_
2. _A Confederacy of Dunces_
3. _Look Homeward: A Life of Thomas Wolfe_

Answer: Michael _SHAARA
Answer: John Kennedy _TOOLE
Answer: David Herbert _DONALD_

B8. Answer the following about Norse settlement of North America for the stated number of points.

1. First, two Icelandic sagas describe the settlement, and abandonment, near the year 1000 of a territory believed to be in North America. Name this territory for 5 points.
Answer: _VINLAND
2. Next, the first widely accepted archaeological evidence of a Norse settlement in North America was made in 1960 near L'Anse aux

Meadows. FTP, in which Canadian province is this located?
Answer: _NEWFOUNDLAND_
3. Finally, for 15 points, what Norwegian writer found the L'Anse aux Meadows site?

Answer: Helge _INGSTAD_
B9. Given a constellation, name its brightest star, FTP each.

1. Carina Answer: _CANOPUS
2. Bootes Answer: _ARCTURUS
3. Taurus Answer: _-ALDEBARAN_

B10. Most French departements are named after rivers. Given the name of such a departement, name the administrative capitol and largest city located within it, FTP each.

1. Loire-Atlantique
2. Bouches du Rhone
3. Bas-Rhin (Lower Rhine)

Answer: _NANTES
Answer: _-MARSEILLES
Answer: _-STRASBOURG_

B11. Given the ruler, name his royal house FTP each.

1. Frederick I Barbarossa
2. Pedro II of Portugal
3. Gustavus II Adolphus

Answer: _HOHENSTAUFFEN_
Answer: _-BRAGANZA_
Answer: _ _VASA_

B12. Given the line of poetry, name the poet and poem for five points each:

1. "Now as I was young and easy under the apple boughs . . ."

Answer: "_FERN HILL_" by Dylan _THOMAS_
2. "Fear not, fear not, thou Wedding-Guest!"

Answer: "The _RIME OF THE ANCIENT MARINER_" by Samuel Taylor_COLERIDGE_
3. "How do I love thee? Let me count the ways."

Answer: "_SONNET_No. _43_" by _E_lizabeth Barrett _BROWNING_ (prompt on "Sonnets from the Portuguese")
B13. Identify the American painter of the following works, FTP each.
$\begin{array}{ll}\text { 1. _I Saw the Figure } 5 \text { in Gold__ } & \text { Answer: Charles_DEMUTH_ } \\ \text { 2. _Woman in Manteau___Himself_ } & \text { Answer: Robert_HENRI_ }\end{array}$
3. _West Point_, _On a Leee Shore_- Answer: Winslow _HOMER_

B14. Name the philosopher from works, FTP each.

1. _Essay Toward a New Theory of Vision_
2. _Fear and Trembling_
3. _Metaphysic of Morals_

Answer: George _BERKELEY
Answer: Soren_KIERKEGAAR̄__
Answer: Immanuel _KANT_

B15. Evaluate the following mathematical expressions for 15 points each.

1. $\lim _{x * 1} \frac{x^{2}-1}{x-1}$ (The limit as x goes to 1 of x squared minus 1 over x minus 1.)

Answer: _TWO_
$\times 1$
2. $\overline{n=1} \overline{3^{n}}$ (The sum from $n$ equals 1 to infinity of 1 over 3 to the $n$ )

Answer: _ONE-HALF_(or_0.5_)

B16. Answer the following about the rise and fall of paganism in Ancient Rome for the stated number of points.

1. For 15 points, this Patriarch of Alexandria, and rival of the Arians, was charged with sacrilege before the synod of Tyre and exiled, though he was later beatified.
Answer: St. _ATHANASIUS
2. For 5 points, this emperor, called the Apostate, relaxed the laws against paganism in 360 .

Answer: _JULIAN_(or Flavius Claudius _Julianus_)
3. FTP, this emperor came to power in 379 along with Gratian, and eliminated the last vestiges of state-permitted paganism.

Answer: _THEODOSIUS THE GREAT_(or_Theodosius I_)
B17. Given a description of an economic principle, name the law FTP each.

1. To produce each additional increment of a specific good, an increasingly larger increment of an alternative good must be sacrificed if the economy's resources are being efficiently used.
Answer: Law of _INCREASING OPPORTUNITY COST
2. The quantity of a product supplied is usually directly related to its price.

Answer: Law of _SUPPLY
3. The more of a good consumed, the smaller the increase in "satisfaction" from consuming more units of the good assuming all other consumption remains constant.
Answer: Law of _DIMINISHING MARGINAL UTILITY_
B18. For 15 points each, name the Federico Garcia Lorca play given a description.

1. This play was inspired by a news item: a newlywed had fled on her wedding day with the man whom she secretly loved, and the rivals had killed each other.
Answer: _BLOOD WEDDING_(or _Bodas de Sangre_)
2. This play is about the torment of a woman who, despairing over her childless state, kills her sterile husband.

Answer: _YERMA_
B19. Given a quark-antiquark pair, name the meson FTP each.
$\begin{array}{ll}\text { 1. up, anti-down } & \text { Answer: _PI PLUS } \\ \text { 2. up, anti-up } & \text { Answer: _PI NOUGHT_- } \\ \text { 3. charm, anti-charm } & \text { Answer: _J-PSI_(accept one or both) }\end{array}$
B20. Identify the following about the Russian Revolution FTP each, all of which contain a month in their names.

1. It began when Nicholas II introduced bread and flour rationing in Petrograd. Three days later, soldiers fired on striking workers.

Answer: _FEBRUARY REVOLUTION_
2. In these, Lenin advocated the overthrow of the provisional government, redistributing land to peasants, and peace with Germany.

Answer: _APRIL THESES
3. During this period, Kerensky replaced Lvov as Prime Minister, Trotsky and Kamenev were imprisoned, and Lenin and Stalin fled.

Answer: _JULY DAYS_
B21. Given an African country, provide the year of its independence from a European nation within one year for 5 points each.

1. Ghana (Gold Coast)
2. Gabon
3. Gambia
4. Somalia
5. Burundi
6. Malawi

Answer: _1957
Answer: - 1960 -
Answer: _1965
Answer: _1960_
Answer: _1962_
Answer: _1964_

B22. One scholarly theory popular in the 1970's based on archaeological and anthropological evidence, though widely discredited, suggests that the Ancient Egyptians were very dark-skinned, and therefore some derived parts of Greek culture were of African origin.

1. First, for 15 points, name this theory.

Answer: _BLACK ATHENA_
2. One of the more analyzed books which gives a fictional account of this theory is Mumbo Jumbo. For another 15 points, who wrote this work?
Answer: Ishmael _REED_

B23. 30-20-10 Name the scientist from clues.
30) He died in a road accident in 1906, 5 years after becoming professor of Physics at the Sorbonne.
20) He discovered the piezoelectric effect, in which certain substances produce a current as a result of pressure.
10) With his wife, he won the 1903 Nobel Prize for Physics

Answer: _PIERRE CURIE_
B24. Name the Italian sculptor from works, FTP each.

1. _Apollo and Daphne_, Conaro Chapel Answer: Gian Lorenzo _BERNINI
2. _Perseus with the Head of Medusa_, Nymph_ Answer: Benvenuto _CELLINI
3. _Sacrifice of Isaac_, _St. Matthew_ Answer: Lorenzo _GHIBERTI_

B25. Given the occupation, name the patron Saint for 5 points each.

1. Altar Boys
2. Artists
3. Musicians
4. Writers
5. Librarians
6. Sculptors

Answer: _JOHN BERCHMANS_
Answer: _LUKE
Answer: _CECILIA_or_GREGORY_
Answer: _FRANCIS DE SALES
Answer: _JEROME
Answer: _-CLAUDE_-

