

1) This planet has one natural satellite, an orbital eccentricity of .0167, and a mass of 5.97×10^{24} kg. It has an orbital inclination of 0 degrees and a rotational inclination of 23.45 degrees. Its semi-major axis is 1 Astronomical Unit, and its average surface temperature is 45 degrees Fahrenheit. FTP, name this planet that revolves around the sun in 365.256 days.

Answer: **Earth**

2) Born in 1808 in a small Kentucky town, he was elected to Congress from Mississippi in 1840. But in 1846 he resigned his post to serve in the Mexican War. After the war he became U.S. senator from Mississippi from 1847 to 1851, then secretary of war in the cabinet of President Franklin Pierce from 1853 to 1857, and then U.S. senator from 1857 to 1861. For 10 points, name this man who served in another office between 1861-1865.

Answer: **Jefferson Davis**

3) There is a story that his death was caused by a gust of wind sent by Zephyr, rather than the more usual tale that blames Apollo's aim. He was killed while competing at discus throwing with his dearest companion, the god Apollo. Actually it was Apollo that threw the discus that cracked his head. FTP identify either the youth of Greek myth, or the flower that bears his name.

Answer: **Hyacinthus or hyacinth**

4) English is one complicated language. This word has several scientific definitions. It can be defined as any agent that transfers genetic material from one cell to another. It can be used to describe an organism like a mosquito or tick that spreads disease-causing microorganisms from one host to another. It can also mean a course to be followed, and it is a synonym for a one-dimensional matrix. For ten points, name the word that is most commonly known as a quantity with magnitude and direction.

Answer: **Vector**

5) Born in London on December 9, 1608, he went to school at Cambridge University where he majored in theology. When he was done he planned on becoming a clergyman in the Church of England, but his growing dissatisfaction of the way the clergyman handled themselves led him to give up his dream of becoming a man of the cloth. He started writing about political happenings such as in the novel *Areopagitica* in which he shows a disapproval of the English parliament. Later in his writing career he changed his writing style to writing about religion; after many unpopular books and poems about religion he wrote probably his most famous poem, which was released in 1667. FTP, name this author who wrote "Paradise Lost."

Answer: **John Milton**

6) This battle centered on the control of a single bridge. The 1st Airborne was unable to take the bridge on their initial assault because their drop zone was too distant and unexpected German resistance was encountered. A single battalion of the 1st under Colonel John Frost was able to take the north end of the bridge, but they could not budge the German resistance at the far end of the bridge. Frost and his outnumbered battalion would eventually be overrun after a brave stand before Allied reinforcements could arrive. FTP name this battle which was the final portion of Market Garden and is often referred to as a "Bridge too far."

Answer: **Battle of Arnhem**

7) Philip Francis Nowlan created him for the serial "Armageddon: 2419" in *Amazing Stories* in 1928. Dick Calkins picked up on that, and turned him into a comic strip character, which ran from 1929 until the late 1960s. By 1932, he'd moved into radio as well, with Jack Johnstone writing plots for him, his lovely co-pilot Wilma Deering, and the brilliant Dr. Huer. For 10 points, name this hero, who made it to TV in the late 70s, starring Gil Gerard and Connie Sellecca.

Answer: **Buck Rogers**

8) According to the American Library Association, it is the 41st most-frequently challenged or banned book in the US from 1990 to 2000. Presumably, very few of those challenges came from Chicago, as the city has instituted the One Book, One Chicago campaign to get all Chicagoans to read & discuss it over a seven-week period. For 10 points, name this 1960 book, which relates the story of a black man falsely accused of rape and the white lawyer who defends him, told through the eyes of the lawyer's young daughter, Scout Finch.

Answer: ***To Kill a Mockingbird***

9) Attacked by both Vikings and Russians between A.D. 900 and 1100. Taken over by German invaders in the 13th century. Partitioned between the Poles, Swedes, and Lithuanians in 1561. Conquered by Russia in the early 18th century. Declared independent in 1918. Secretly declared no longer independent by Germany and the Soviet Union in 1939, and invaded by the Soviets in 1940. Taken by the Germans in 1941 and taken back by the Soviets in 1944. FTP name this hockey puck of history, after 1990 independent (for now, anyway), with its capital at Riga.

Answer: **Latvia**

10) Its graceful and flowing fourth movement, subtitled "The Bringer of Jollity," was performed at the royal wedding of Charles and Diana in 1981, a sharp contrast to its harsh third movement, subtitled "The Bringer of War." Its other movements feature a Bringer of Peace, a Bringer of Old Age, a Mystic, a Magician, and a Winged Messenger. For 10 points, identify this 1918 Gustav Holst work, a mixture of music and astronomy.

Answer: **The Planets**

11) *Latimeria chalumnae* and *Latimeria menadoensis* are thought to be the only two surviving members of this once common family of fish. These ancient fish are thought to be related the fish that millions of years ago grew legs and became the first land-based creatures. These fish were thought to be extinct since prehistoric times until some were hauled in off the Comoros Islands by a fisherman in 1938. FTP name this type of fish that is pronounced different than its spelling.

Answer: **coelacanth** (see – la – kanth)

12) TWO ANSWERS REQUIRED: Smithson Tennant, the guy who proved diamonds were made of carbon by burning them, also discovered two new elements in 1804. Silvery-white metals, of course, they were similar to each other in many ways: one had a mass of 190.20 the other had a mass of 192.22. The former, with an average density of .81 pounds per cubic inch, is the densest of all elements, while the latter is perhaps best known for the traces of it that indicate the meteor strike many believe doomed the dinosaurs. FTP name in either order these elements with atomic numbers of 76 and 77.

Answer: **osmium and iridium**

13) Born on March 18, 1893, he returned to his native England in 1915 to enlist. He was wounded in March 1917 and sent home but declared fit to serve and sent back in August 1918. On November 4, 1918, just one week to the day before the Armistice, he was killed in a German machine-gun attack, ironic because his poetry speaks to the pointlessness of war. FTP, identify this author of "At a Calvary Near the Ancre", "On Seeing a Piece of Heavy Artillery", and "Dulce et Decorum Est."

Answer: **Wilfrid Owen**

14) Its most recent expansion was spearheaded by Mississippi Rep. Sonny Montgomery. Already expanded to include Korean War veterans, in 1966 it was further extended to anyone honorably discharged from the armed forces, even in peacetime. It provided for vocational rehabilitation and veterans' hospitals, low-interest mortgage loans, and stipends for tuition and living expenses for veterans attending college. FTP name this memorable law, formally known as the Servicemen's Readjustment Act of 1944.

Answer: **the G.I. Bill** (accept Servicemen's Readjustment Act before said)

15) This principle presents a geometrical method for finding the shape of a wave at one instance, if its shape is known at some previous time. All results obtained using this principle can be reproduced using Maxwell's equations. Name this principle that states that every point of a wave front may be considered the source of secondary wavelets that spread out in all directions with a speed equal to the speed of the propagation of the wave.

Answer: **Huygens' Principle**

16) This structure's most remarkable feature is a huge dome supported by four massive piers, each measuring approximately 100 square m at the base. In its entirety it measures 77 x 79 m and the impressive huge dome soaring 62 m. above the floor has a diameter of about 33 m. By clever arrangement the bearing structure is hidden from the eye, creating the impression that space expands in all directions and that the dome floats in the air. Roughly 600 persons, from priests to doorkeepers, were assigned to serve in it. For ten points, name this famous Byzantine church, constructed in 532 AD and located in what is today Istanbul.

Answer: **Hagia Sophia** (accept St. Sophia)

17) Thanks to the prefect of the praetorians, Sextus Afranius Burrus, and this man's former tutor Seneca, the first years of his reign were generally good ones. Then the fun started. He has his half-brother Britannicus poisoned, then had his mother killed because she did not like his mistress. In 67 A.D. he divorced his wife Octavia and later he had her killed. But he is most remembered for the emperor at the time when 2/3 of Rome burned to the ground, which he later blamed on Christians. FTP name the fifth emperor of the Roman Empire.

Answer: **Nero** Claudius Drusus Germanicus; accept Lucius Domitius Ahenobarbus if some wiseass insists on saying it.

18) He dropped out of California State University-Sacramento in 1977 after his first year to pursue a career in theater. In 1982 he made his TV debut opposite Peter Scolari and Donna Dixon in the series "Bosom Buddies." He then made his movie debut in 1984 as Allen Bauer in the movie *Splash*. Plum roles like Rick Gasko in *Bachelor Party* and Richard in *The Man with One Red Shoe* soon followed, as did his work in *Volunteers*, where he met current wife Rita Wilson. FTP, name this man, the last actor to win back-to-back Oscars, for *Philadelphia* and *Forrest Gump*.

Answer: Tom **Hanks**

19) It ends with the execution of the protagonist for the attempted murder of Madame de Renal. She had jeopardize his plans to marry Mathilde, his boss's daughter, whom he had seduced. FTP name this character study of the ambitious Julian Sorel, published in 1830 and written by Stendhal.

Answer: The **Red and the Black** [or *Le rouge et le noir*]

20) Taken in a logical context, it is not simply a collection of propositions. Many passages from historical, literary, and scientific texts contain related propositions but completely lack this structure. The simplest kind consists of only one premiss and one conclusion claimed to follow from it, though the logician recognizes that one exists anywhere one proposition is claimed to follow from a group of propositions regarded as providing support or grounds for the truth of the proposition in question. FTP, identify this logical construction, which Monty Python accurately declares not to be the simple gainsaying of everything the other fellow says.

Answer: **argument**

21) This phenomenon, mentioned in Shakespeare's *The Tempest*, is caused by an electrical discharge that ionizes the surrounding atmosphere. The electricity usually gathers around nearby conductors, such as church spires, ship masts, and airplane wings. Traditionally, sailors who saw the beautiful blue glow that accompanies this occurrence as the protection of St. Erasmus, the patron saint of sailors. For ten points, name this phenomenon, which is also the name of a 1985 movie starring Demi Moore and Rob Lowe.

Answer: **St. Elmo's Fire**

22) He was born in Oxford, England in 1934. His father was wrongly arrested by the Franco government of Spain in 1940, and rather than admitting their mistake the government let his father out if they left the country. That is how he ended up in America. It took three years and five schools to get him through first grade, but by the time he got his BA in writing from Goddard College he had caught up with his peers. His first novel, *Chthon*, was also his thesis for his BA degree. His first successful novel was *A Spell for Chameleon*, the first of the Xanth novels. FTP identify this author of *Battle Circle*, *Race Against Time*, *Triple Détente*, and *The Source of Magic*.

Answer: Piers **Anthony** Dillingham Jacob

- 1) Was that tossup a dead duck? Name the extinct birds from clues for ten points each.
- a) These birds were natives of the island of Mauritius in the Indian Ocean were they had remained isolated for so long they lost their ability to fly. Name these flightless birds that became extinct in 1681.
Answer: **dodo**
- b) These birds were once the most abundant species of birds on earth. This North American species was decimated by commercial hunting until only a few thousand remained in 1880 making commercial hunting less feasible. It was too late and despite captive breeding efforts the species became extinct in 1914, name this species.
Answer: **Passenger Pigeon** (prompt on pigeon)
- c) Much like the dodo these birds lost the ability of flight due to isolated existence. Unlike most such species, their extinction was not caused by Europeans or those of European descent but rather is that to have been caused by the Maori. Name these flightless birds of which were thought to be extinct before the European colonization of New Zealand.
Answer: **Moa**
- 2) Hail and farewell, Sir Alec Guinness. In his distinguished film and TV career Guinness portrayed such historical figures as Hitler, Disraeli, Julius Caesar, Freud, and – FTPE -- these:
- a) Last of Rome's Five Good Emperors, noted for his Stoic philosophy as expressed in his Meditations
Answer: **Marcus Aurelius**
- b) King of England dethroned and eventually executed by Cromwell & co. in the English Civil War
Answer: **Charles I**
- c) Pope powerful enough to launch the Fourth Crusade, crush the Albigensians, and place all of England under interdict for transgressions of King John, but also the one who launched the Children's Crusade
Answer: **Innocent III**
- 3) Given three poems FTPE, identify the author.
- A) "Song IX", "The Unknown Citizen", "In Praise of Limestone"
Answer: W. H. **Auden**
- B) "To an Athlete Dying Young", "When I Was One-and-Twenty", "Because I Liked You Better"
Answer: A. E. **Housman**
- C) "Roadways", "A Wanderer's Song", "Sea Fever"
Answer: John **Masefield**
- 4) Name the series of novels based on clues on a 30-20-10 basis.
- 30-point clue: These novels span thousands of years and take the reader to many distant planets such as Wallach IX, Kaitain, Bene Tleilax (pron. Ben-ee Thigh-lax), and Ix.
- 20-point clue: The first book in the series was turned into a 1984 film which was directed by David Lynch and featured Linda Hunt as Shadout Mapes, Brad Dourif as Piter DeVries, and Sting as Feyd-Rautha.
- 10-point clue: Most of the novels focus on the planet Arrakis, the one source in the universe of the life-prolonging and awareness-expanding spice, melange.
Answer: The **Dune** series
- 5) We all know that the Duke University Blue Devils won the 2001 NCAA Men's basketball Final Four. So for 10 points each name the other three teams that took part in the 2001 Men's Final Four.
Answers: University of **Maryland**, **Michigan State** University, University of **Arizona**

6) This bonus is about one of the biggest bastards in American history, James Wilkinson. FTPE:

a) Wilkinson was deputy to this general, and he was later suspected of being involved in the Conway Cabal, which planned to overthrow Washington as Commander in Chief in favor of this general, to whom Wilkinson was deputy adjutant general during the battle of Saratoga.

Answer: Horatio **Gates**

b) After his attempted deal with the Spanish to help Kentucky leave the U.S. failed, he agreed to help this former Vice President in his plan to take over Louisiana and split the western states from the eastern, then betrayed him and testified against him in his trial for treason.

Answer: Aaron **Burr**

c) He finally retired after leading a disastrous campaign in 1813 to take Montreal, much as this other upstanding Gates aide had similarly failed to do in 1775.

Answer: Benedict **Arnold**

7) Identify these apparatus that would most likely be found in a chem lab FTPE

1) This machine uses centrifugal force to simulate increased gravity and cause things to settle faster.

Answer: **centrifuge**

2) This apparatus consists of a long tube called a column through which a carrier gas and a sample are forced. The sample separates in the column and the individual components come out at different times.

Answer: **gas chromatograph**

3) This device uses light waves to characterize a sample, especially for things such as turbidity and color intensity.

Answer: **photospectrometer**

8) Answer the following questions about characters in Voltaire's classic short novel *Candide* for ten points apiece. Part 1: He was Candide's optimistic teacher of metaphysico-theologo-cosmonigology who was nearly killed by the Spanish Inquisitors and is portrayed throughout the story as a complete fool.

Answer: **Pangloss**

Part 2: She was the daughter of a minor European noble and, after her father's castle was ransacked and much of her family killed, Candide spends most of his life searching Europe and the New World for her.

Answer: **Cunegonde**

Part 3: He is almost the exact opposite of Pangloss, as he is an absolute pessimist who Candide finds in the New World. More than any other character in the story, he seems to represent Voltaire's real sentiments.

Answer: **Martin**

9) Answer the following questions that are related to Carl Gauss FTSNOP.

5 pts- Gauss proved that all roots of any algebraic equations are of the form $a + bi$ where i represents the square root of -1 . What kind of number is i generally referred as?

Answer: **imaginary**

10 pts-What quantity enclosed in a surface does Gauss's law say is equal to the total electric flux passing out of that closed surface?

Answer: **charge** (accept q)

5 pts-What quantity does the unit named for gauss measure?

Answer: **magnetic induction** or **flux density**

10) Biblical names make such great insults. FTPE name these Old Testament figures:

(a) The much-reviled wife of King Ahab in I Kings who was given authority to decree whom and how one could worship. Her persecution of the Jews eventually led to her being thrown out a window to her death.

Answer: **Jezebel**

(b) The much-reviled wife of Hosea, whom the Lord commanded Hosea to marry despite her adulterous nature. Her infidelity is presented as a symbol of Israel's unfaithfulness to God.

Answer: **Gomer**

(c) In Genesis 10 it's the name of "a mighty hunter before the Lord," son of Cush, who founded Babylon.

Answer: **Nimrod**

11) We love African capitals. For 5 points each, given an African capital with a cool-sounding name, give its nation:

a) Antananarivo

Answer: **Madagascar**

b) Nouakchott

Answer: **Mauritania**

c) Yamoussokro

Answer: **Cote d'Ivoire** or **Ivory Coast**

d) Addis Ababa

Answer: **Ethiopia**

- e) Yaounde Answer: **Cameroon**
f) Ouagadougou Answer: **Burkina Faso**

12) Identify the dying star from a description for ten points each.

a) They comprise approximately 10 percent of the stars in our galaxy and typically have about two-thirds the mass of the sun while maintaining the volume of Earth.

Answer: **white dwarf**

b) They have ceased to radiate because all their electrons have reached states below the Fermi level.

Answer: **black dwarf**

c) Following a supernova in which a star does not become a black hole, it might collapse to about 20 times the density of a white dwarf, ending its life as a degenerate gas.

Answer: **neutron star**

13) Name the author based on a short story he/she wrote FTPE:

a) "Bernice Bobs Her Hair"

Answer: F. Scott **Fitzgerald**

b) "The Rocking Horse Winner" and "Piano"

Answer: D.H. **Lawrence**

c) "Shooting an Elephant" and "Politics and the English Language"

Answer: George **Orwell**

14) For five points each, given a state give each of that state's current U.S. Senators.

a) New Mexico

Answer: Jeff **Bingaman** and Pete **Domenici**

b) Connecticut

Answer: Christopher **Dodd** and Joseph **Lieberman**

c) Iowa

Answer: Chuck **Grassley** and Tom **Harkin**

15) Mark Twain mocked them in "Fenimore Cooper's Literary Offences." FTPE name these works from Cooper's Leather-Stocking Tales:

a) Considered by many the first truly original American novel, this 1823 story contrasts Natty Bumppo, who sees the land as "God's wilderness," and those who want to tame the land. In this one Bumppo is actually called "Leather-stocking."

Answer: *The **Pioneers***

b) Showing Bumppo at the height of his powers, this tale of the French and Indian War features Uncas and Cora Munro.

Answer: *The **Last of the Mohicans***

c) In this 1827 novel, an old and philosophical Bumppo dies, already bemoaning the vanishing wilderness he helped conquer. Cooper intended it to finish a trilogy, although years later he sold out and cranked out two more tales.

Answer: *The **Prairie***

16) 30-20-10 name the year.

30 pts- The USSR launches a rocket with 2 monkeys aboard, the first nuclear-powered US commercial vessel is launched, and Gunter Grass writes *The Tin Drum*.

20 pts- De Gaulle is proclaimed President of Fifth Republic in France and Los Angeles beats the Chicago White Sox 4-2 in the World Series

10 pts- Fidel Castro takes over Cuba, Hawaii becomes the 50th state, and Charlie Steinbice is born. No, really.

Answer: **1959**

17) Given a definition for a term from physics, name it FTPE.

1) The ratio of the speed of light in a vacuum to the speed of light in a medium under consideration

Answer: **Index of Refraction**

2) The study of low-temperature phenomena.

Answer: **Cryogenics**

3) A physical system on which no outside influences act.

Answer: **Closed system**

18) Given three of its movements, identify the piece of concert band music FTPE.

A) "Lisbon", "Horkstow Grange", "The Lost Lady Found"

Answer: *Lincolnshire **Posy***

B) "Seventeen Come Sunday", "My Bonny Boy", "Folk Songs from Somerset"

Answer: *English Folk Song **Suite***

C) "C.A.E.", "W.M.B.", "Nimrod"

Answer: *Enigma **Variations***

19) Given a unit tell what quantity it measures FTSNOP.

5 pts- parsec

Answer: **length** (accept distance)

10 pts- slug

Answer: **mass** (do not accept weight)

15 pts- stokes

Answer: (kinematic) **viscosity**

20) Given a description of a law used in civil engineering and other fields, name it FTPE.

1) It is a special form of the general equation of settling assuming that the Reynolds number is less than 1.

Answer: **Stokes Law**

2) This law is generally used to quantify groundwater flow, or any flow of a liquid through a porous medium.

Answer: **Darcy's Law**

3) This theory states that an ideal material, when deformed due to loading, will assume its original unloaded shape when the deforming load is released.

Answer: **Elastic Theory**