

1. The Poynting one shows the way an electromagnetic field propagates. Geometrically they are contravariant rank 1 tensors, but algebraically they comprise a space over a field. Usually a stumbling block for students in elementary physics, most physical quantities are this type of object. Typically explained as having both magnitude and direction, FTP, name these mathematical objects often depicted as arrows.

Answer: vectors

2. Later in life, his wife Jane constantly wrote letters to their dead son, Bennie, and he befriended Nathaniel Hawthorne while attending Bowdoin College. A brigadier general in the Mexican-American War, his friend Jefferson Davis eventually served as his Secretary of War after he and his running mate Rufus King defeated the Whig candidate Winfield Scott. FTP, identify this namesake of a college in New Hampshire, whose victory in the 1852 election made him our fourteenth president.

Answer: Franklin Pierce

3. His early stories appeared under pen names such as The Doctor Without Patients, and his long nonfiction work *Sakhalin Island* tells of a two-year trip he made there. Hampered throughout his short life by a nasty case of tuberculosis, his first published volume was the short *Tales of Melpomene*. A friend of both Maksim Gorky and Leo Tolstoy, this man's other famous short stories include "The Steppe", "In the Ravine", and "The Lady with the Lapdog", but he may be best known for his plays. FTP, name this Russian author of *The Three Sisters* and *The Cherry Orchard*.

Answer: Anton Chekhov

4. Since monitoring began, in 1974 over four thousand earthquakes have been recorded in this area. However, only about one per year can be felt by the large populace in the zone. Experts believe a 6.0 quake is in the regions near future. This is significant because the buildings within the danger zone are not designed to resist earthquakes. FTP, name this fault zone named for a Missouri town that was destroyed in a series 8.0 and greater earthquakes in 1811 and 1812.

Answer: New Madrid Fault Zone

5. The thin line connecting the eyes of the two focal characters explicitly relates the symbiosis between human agriculture and livestock in the titular locale. The significance of the Orthodox Church to the community appears both in the foreground man's neck chain and the chapel in the background, where a scythe-bearer returns from a day in the fields to his upside down wife. A cow and a green-faced man share a knowing glance in, FTP, what surreal depiction of a Russian town painted by Marc Chagall?

Answer: I and the Village

6. In the titles of their songs, this band wants to tell "The Story of My Old Man" and they will "Say Anything" to get you "Movin On." But "Hold On" there might be "A New Beginning" but they are still "Wondering" why they are "Emotionless." They are confused by the "Riot Girl" who is their "Bloody Valentine." However they continue to proclaim the "Anthem" involving the "Lifestyles of the Rich & Famous" and "Boys & Girls." FTP, name these creators of the album *The Young and the Hopeless*.

Answer: Good Charlotte

7. When he first read it, Truman Capote sneered of it, "This isn't writing. It's typing." Written in two and a half weeks on 250 sheets of paper all taped together, it tells of visits to Remi Boncoeur and Old Bull Lee, along with Dean Moriarty and Carlo Marx, representations of real people whose lives and drugs eventually affect the protagonist. FTP, name this novel detailing the traveling adventures of Sal Paradise, written by Jack Kerouac.

Answer: On the Road

8. They can be derived from Maxwell's equations, however they were created years before that work was created. They instead were generalized from Georg Ohm's work. One of them is a statement of the conservation of electric charge. The other is a statement of the principal of conservation of energy. FTP identify these rules, one dealing with electrical current at a junction and the other dealing with electrical potential difference over a loop.

Answer: Kirchhoff's laws

9. **Warning: two answers required.** Stars appear on their heads during the Argonautic expedition after Orpheus plays his lute, and only one of them dies during their battles with Idas and Lynceus because only one of them is mortal. Born of eggs from Zeus' affair with Leda, one of them manages horses, while the other is a skilled boxer, which explains his name of "many fists". FTP, name these twin half-brothers of Helen, whose names also denote the twin stars in the constellation Gemini.

Answer: **Castor** and **Polydeuces** (accept **Pollux** for Polydeuces, and both answers are required)

10. Two pictures of him were featured in the first issue of *Jet* magazine to be reprinted, which appeared on September 15th, 1955. After J.W. Milam and Roy Bryant were acquitted by an all-white jury, they bragged to the press about killing him. Dragged from his great-uncle's house in Mississippi for whistling at a white woman, his mutilated body was later found in the Tallahatchie River. FTP, name this lynched 14-year-old Chicago boy whose open-casket funeral became the first media event of the civil rights era.

Answer: Emmett **Till**

11. Except for a hydroxyl group it is indistinguishable from another common biological molecule. The rarest variety is the ds type which is only found in certain viruses. More common are the t and m types which are essential to DNA transcription and translation. Often proposed as the historical precursor to DNA as the carrier of genetic information, FTP, name this biological molecule that is structurally similar to DNA but uses the base uracil in place of thymine.

Answer: **RNA** or **ribonucleic acid**

12. One reading of the gospels may indicate he was the first cousin of Jesus and therefore was logical for Jesus to put his mother in his care before the crucifixion. He is believed to be martyred in 44 C.E. at the hands of Herod Agrippa I. He is also considered to have brought the Gospel to Spain, where his body was taken and interred in Santiago de Compostela. FTP, name this son of Zebedee and apostle of Jesus who was found fishing with his brother John.

Answer: Saint **James** the Greater

13. The subject of a famous 1715 tragedy by Nicholas Rowe, this woman was actually fluent in several languages, including ancient Greek. John de Feckenham tried to convert her to Catholicism at the request of Mary I, and she married Guilford Dudley, the son of the earl of Northumberland. The popular revolt of Thomas Wyatt prompted her execution, as Philip II of Spain wanted to nullify her claim to the throne. FTP, name this woman who ruled as Queen of England for either nine or thirteen days in 1553.

Answer: Lady Jane **Grey**

14. "Dog on Fire", the theme song to this show, is performed by They Might Be Giants. Former segments of the show include "Th-hers-day (for the Ladies)", "Out at the Movies", "Five Questions" and "This Week in Hate". Current segments include "Great Moments in Punditry as Read by Children", "Back in Black", and "This week in God". In October, its first spin off, *The Colbert Report*, starring Stephen Colbert, will premiere. FTP, name this Comedy Central show hosted by Jon Stewart.

Answer: *The* **Daily Show**

15. In this poem, the speaker finds his love to be "far above" transient human passion, although it leaves him with a "burning forehead" and "parched tongue". The nature of time is addressed when the speaker describes the piper's melodies as being sweeter than mortal melodies due to their immortality, and the speaker's reflections on the four different artworks on the title object finally lead to his assertion that "beauty is truth, truth beauty – that is all ye know on earth, and all ye need to know". FTP, name this Keats poem about an ancient sculpted object.

Answer: **"Ode on a Grecian Urn"**

16. Its composer lamented the poor quality of its coda, saying he wished that it could have been a success. Franz von Gernerth and Josef Weyl [*WHILE*] wrote accompanying lyrical texts for this piece, which was originally written for string orchestra. Featured prominently in the soundtrack for *2001: A Space Odyssey*, FTP, give the English name of this famous waltz by Johann Strauss the Younger, which he titled "An der schönen blauen Donau".

Answer: "By The Beautiful **Blue Danube**"

17. Minor characters in this play include Pablo, a Prostitute, and a Doctor, who takes the protagonist away against her will at the end. That protagonist flirts with a confused paperboy who reminds her of her husband Allan, who committed suicide. The cruel Stanley beats his wife and reveals to his poker buddy Mitch the sordid past of the woman that he falls in love with, who is the sister of Stella Kowalski. FTP, name this play centering on the tribulations of Blanche Dubois, written by Tennessee Williams.

Answer: A *Streetcar Named Desire*

18. Rising from the springs Senir and Dan [*DAH*N] at the base of Mount Hermon, this river drops quickly to swampy Ha-Hula Lake near the Rift Valley. Tributaries entering it include the Yarmouk and Jabbok Rivers, and it meanders quite a bit before finally flowing into the Dead Sea, where it ends. Also flowing into the Sea of Galilee, it forms a border between Israel and its namesake kingdom. FTP, name this Middle Eastern river which shares its name with a nation whose capital is Amman.

Answer: Jordan River

19. This mineral's name is literally from the Greek meaning "not extinguishable." Because of its ability to resist fire and chemicals, its flexibility, and its strength, it has been put to a variety of uses. Rumor has it that Charlemagne's tablecloth was made from this material and that he threw it into the fire to clean it. Because its fibers can be a thousand times thinner than human hair, it can be easily inhaled, which is a problem because it is a known carcinogen. FTP, name this mineral, a formerly common insulating and fire-proofing material.

Answer: asbestos

20. Its base covers an area of about six acres, and it measures 48 meters high, 188 meters long, and 156 meters wide. Built on the site of the Domus Aurea, it is currently situated in the rione Monti. Dio Cassius claims that nearly 10,000 wild animals were killed in the celebration of its opening, and it was begun under the reign of Vespasian and completed by his son Titus. A venue for animal fights, executions, and fights between gladiators and other sportsmen, FTP, name this gigantic stadium in Rome.

Answer: Colosseum

21. In the eleventh and twelfth centuries it expanded its borders to include the kingdoms of Catalonia and Navarre. The Royal Shipyards in modern day Barcelona produced a navy that helped it control the Balearic Islands and much of the Eastern Mediterranean. It was this naval power that was coveted in its alliance against the Islamic Kingdoms of Southern Spain. FTP, name this kingdom whose King Ferdinand II united Spain with his marriage to Isabella, also the birthplace of Henry VIII's first wife.

Answer: Aragon

22. Referring to metaphysics as "enough of this kind of fiddling", this thinker opposed rationalism and postulated that all ideas stemmed from a combination of sense-experience and reflection. Also known for political works like *Two Treatises on Civil Government*, he was later criticized by Berkeley for the means by which the primary and secondary qualities of objects created impressions upon the "*tabula rasa*" mind. FTP, name this empiricist author of *An Essay Concerning Human Understanding*.

Answer: John Locke

23. Consisting of 54 chapters, this long work tells of the son of Kiritsubo. Highly superstitious, the title character has an old man named Koremitsu tell him of a certain house before he goes there. That title character also meets Utsuemi at odd hours of the night and makes love to Yugao before she unexpectedly dies. Centering on the love affairs of a certain Japanese prince, FTP, name this eleventh-century story by Murasaki Shikibu, considered the world's first novel.

Answer: The *Tale of Genji* or *Genji monogatari*

1. Give these terms from ecology, FTPE.

[10] This treeless, marshy biome found in arctic and subarctic regions has a permanently frozen subsoil called permafrost.

Answer: tundra

[10] This large biome stretches across North America and Eurasia. Summers are warm while winters are cold with abundant snowfall. Coniferous trees are also common.

Answer: taiga

[10] Often denoted by a capital K, this quantity represents the limit of an ecosystem's ability to sustain a population.

Answer: carrying capacity

2. FTPE name these works of Mark Twain:

[10] This novel revolves around a simple clothing switch between young Tom Canty and another boy named Edward.

Answer: The *Prince and the Pauper*

[10] One of Twain's biggest sellers was this mostly factual narrative of his trip to the Mediterranean and the Holy Land.

Answer: The *Innocents Abroad*

[10] A devout Protestant named Hank Morgan is transported nearly 1300 years into the past in this Twain novel.

Answer: A *Connecticut Yankee in King Arthur's Court*

3. Name these leaders of Russia at one point or another, FTPE.

[10] Originally intending to become a priest, this Georgian became leader after Lenin's death and a power struggle with Leon Trotsky until his death in 1953.

Answer: Josef Stalin [or Djugashvili]

[10] He denounced Stalin and his cult of personality in his 1956 Secret Speech. He was deposed in an internal Kremlin coup by hardliners later on.

Answer: Nikita Khrushchev

[10] This former Leningrad mayor and KGB officer became Boris Yeltsin's last prime minister and chosen successor. His moves to reassert Russian dominance have worried many Western observers.

Answer: Vladimir Putin

4. Name the titular video game creatures from descriptions FTPE:

[10] This yellow circular character is married, has a child and ingests pills to fight four ghosts. Most of the time, he finds himself eating dots while being chased by said ghosts in a maze. Also, he loves fruit.

Answer: Pac-Man

[10] This two legged long nosed orange creature is prone to spouting profanity and changing squares on a pyramid different colors. The cartoon he starred in should be best left forgotten.

Answer: Q*bert

[10] This ape apparently had a penchant for kidnapping women and throwing barrels off of a construction site. He has since given up the kidnapping and now is never seen without wearing a tie.

Answer: Donkey Kong

5. Name these sort-of Spanish artists from works, FTPE.

[10] Born in 1904, this famous surrealist created the fifteen-minute film *An Andalusian Dog* with Luis Bunuel. He painted *The Temptation of St. Anthony* and *The Persistence of Memory*,

Answer: Salvador Dali

[10] This creator of *Las Meninas* was the court painter to Philip IV of Spain.

Answer: Diego Velazquez

[10] Born in Heraklion, this painter born Domenikos Theotokopoulos may be most famous for the *Burial of Count Orgaz* and *The View of Toledo*.

Answer: El Greco

6. Name the following things associated with slavery from descriptions, FTPE.

[10] This 1820 deal preserved the balance of free and slave states by admitting Maine as a free state and the namesake as a slave state.

Answer: Missouri Compromise

[10] This last-ditch attempt to prevent the Civil War attempted to extend the area influenced by the Missouri Compromise, but it and its namesake Kentucky Congressman were both eventually defeated.

Answer: Crittenden Compromise

[10] He resided in several free states before he sued for his freedom in a famous 1857 case that went to the Supreme Court. Eventually, Roger Taney ruled that he was only property and couldn't sue. What a jerk.

Answer: Dred Scott

7. Name these German authors from works, FTPE..

[10] *Death in Venice*; *The Magic Mountain*

Answer: Thomas Mann

[10] *The Tin Drum*, *Cat and Mouse*, *Dog Years*

Answer: Günter Grass

[10] *Steppenwolf*, *The Glass Bead Game*, *Siddhartha*

Answer: Hermann Hesse

8. Answer the following questions about optics FTPE.

[10] This object transmits bent light rays. It usually comes in converging and diverging varieties.

Answer: Lens

[10] When rays of light diverge after leaving a lens or mirror, they can be extended backwards to identify the apparent location of an image. The image is then given this adjective.

Answer: Virtual

[10] This law of optics relates the angle of incidence to the angle of refraction for light waves passing through a medium boundary.

Answer: Snell's Law

9. Name these sets of three beings from world mythologies, FTPE.

[10] Celebrated in a famous Richard Wagner [*VOGG-ner*] work, these choosers of the slain select the most valorous warriors from the battlefield to assist Odin in battle.

Answer: Valkyries

[10] These three daughters of Ceto and Phorcys guard the entrance to the Underworld with their claws of brass and hair of snakes. Medusa is one of them.

Answer: Gorgons

[10] In Roman tradition, they live in the underworld. In Greek mythology, they roamed the earth and chased Orestes around a lot. Their punishment is very cruel, but it is meted fairly.

Answer: Furies or Erinyes or Eumenides

10. Name these world cities from landmarks found in them, FTPE.

[10] Merdeka Square; Petronas Twin Towers; namesake Hibiscus Garden

Answer: Kuala Lumpur, Malaysia

[10] Plaza del Sol; Crystal Palace; The Prado

Answer: Madrid, Spain

[10] Air Canada Centre; Dundas Square; CN Tower

Answer: Toronto, Canada

11. It takes place on the fictional island of Pianosa, and features the death of Snowden, the subsequent suicide of the fighter pilot McWatt, and Orr's escape to Sweden. FTPE:

[10] Name this novel also including Colonels Cathcart and Korn.

Answer: Catch-22

[10] Name the author of *Catch-22*, also known for his novels *Something Happened* and *Picture This*.

Answer: Joseph Heller

[10] Last, identify the man who introduces the concept of Catch-22 to Yossarian. This medical officer's family receives several notifications of his death, despite the fact that he is still alive

Answer: Doctor "Doc" Daneeka

12. Name these periodic table group based on a description, FTPE.

[10] This group of highly reactive elements typically form anions with charge -1.

Answer: halogens

[10] This group consists of highly reactive metals that typically form +1 charged cations.

Answer: alkali metals

[10] The elements in this relatively inert group all have filled valence shells.

Answer: noble gases [prompt on inert gases, an outdated and inaccurate but once-common term]

13. Name these scandals from American history that probably provided gossip for old ladies back in the day, FTPE.

[10] Oil fields at Elk Hills in Wyoming owned by the federal government were illegally leased to Mammoth Oil by Albert Fall, the Secretary of the Interior.

Answer: Teapot Dome

[10] Occurring in 1872 and resulting in the resignation of Schuyler Colfax, it involved Union Pacific and the namesake bank in collusion to build railways with federal subsidies.

Answer: Credit Mobilier

[10] Grant's treasury secretary, Benjamin Bristow, ripped apart distillers' attempts to defraud the government of liquor taxes from the creation of a certain alcoholic beverage.

Answer: Whiskey Ring

14. Answer these questions about the film *Batman Begins*, FTPE.

[10] The title role is played by this actor, who also played Patrick Bateman in *American Psycho* and John Preston in *Equilibrium*.

Answer: Christian Bale

[10] After getting into a fight while in jail, Bruce Wayne is offered a chance to join Ra's al Ghul's special army by Liam Neeson's fake character, who goes by this name.

Answer: Henri Ducard (accept either)

[10] After he releases the gas on potential victims, Jonathan Crane dons a mask which gives rise to hallucinations in its victims. Like Carmine Falcone, most begin to scream this word repeatedly.

Answer: "scarecrow"

15. Name these technology companies from clues, FTPE.

[10] Founded in 1982, this company is famous for its Solaris operating system and the Java programming language.

Answer: Sun Microsystems

[10] This company made its foray into the console gaming industry with 2001's X-box system. This year's X-box 360 is a veritable entertainment supercomputer.

Answer: Microsoft

[10] Earlier this year they announced an end to their partnership with IBM, who makes their G5 processor. Their future computer lines will operate under Intel processors.

Answer: Apple

16. Name these Italian operas, FTPE

[10] A Japanese courtesan pines for an American naval officer who doesn't return the favor in this Puccini opera.

Answer: **Madama [or Madame] Butterfly**

[10] Bugs Bunny is a good match for Figaro, who in the actual opera schemes and plots to help his master Almaviva marry a beautiful woman in this Rossini opera.

Answer: **The Barber of Seville**

[10] This work of Donizetti takes its subject matter from a Sir Walter Scott novel. It tells of the love that the title character has for Edgar, but of the tragedy that occurs at the hands of Lord Ashton.

Answer: **Lucia di Lammermoor**

17. Answer the following questions about an allegory, FTPE,

[10] This work chronicles the journey of Christian to the Celestial City during which he encounters many complications, including being imprisoned in the Doubting Castle by the giant Despair.

Answer: **The Pilgrim's Progress**

[10] This author of *Grace Abounding to the Chief of Sinners* also wrote *The Pilgrim's Progress*.

Answer: John **Bunyan**

[10] This is the city that Christian leaves in the beginning of the work, leaving his family behind.

Answer: City of **Destruction**

18. Answer these questions about a philosopher that, shockingly, Sudheer has actually read, FTPE.

[10] This French author of *Émile, or on Education* and *The New Heloise* wrote about how man is a "noble savage" in his early publications.

Answer: Jean-Jacques **Rousseau**

[10] Jean-Jacques Rousseau may be best known for this work, in which he describes the necessity of the title object in eliminating the brutish condition that results from the "state of nature".

Answer: **The Social Contract** or **Du contrat social**

[10] Rousseau was more optimistic about the ability to tame human nature than Thomas Hobbes, who wrote in this work that without some controls being imposed on it, life would be "nasty, brutish, and short."

Answer: **Leviathan**

19. Name these battles from the Napoleonic wars, FTPE.

[10] Napoleon's loss at this September 7, 1812, battle at the hands of General Kutuzov marked the end of his entry into Russia. Ultimately, the French would retreat and the Russian winter would kill most of them.

Answer: Battle of **Borodino**

[10] The British were led by Wellington and the Prussians by von Blucher in this battle, which marked Napoleon's final defeat and the end of his rule.

Answer: Battle of **Waterloo**

[10] Also known as the "Battle of the Three Emperors", this December 1805 battle marked a decisive French victory over the joint Russian and Austrian forces led by Generals Kutuzov and von Weyrother.

Answer: Battle of **Austerlitz**

20. Name these dimensionless numbers from physics, FTPE.

[10] This intrinsic property of a medium is defined as the ratio of the speed of light in a vacuum to the speed of light in the medium.

Answer: **index of refraction**

[10] The factor by which a material inserted between the plates will increase the capacitance.

Answer: **dielectric** constant

[10] This number is characteristic of the reflectivity of a surface. A value of 1 indicates a perfect transmitter, while a value of 0 indicates a blackbody.

Answer: **albedo**

21. Identify the following about a seminal text of cinema studies, a 1967 collaboration between two directors, FTPE.
[10] This British director of *The Man Who Knew Too Much*, *North by Northwest*, and *Psycho* was the subject of this book-length interview.

Answer: Alfred Hitchcock

[10] This film critic, who became a founding father of the French New Wave cinema with such works as *The 400 Blows* and *Jules and Jim*, reveled in the opportunity to interview his idol.

Answer: Francois Truffaut

[10] The work expounded upon this cinematic theory in which the imprint of the director is the primary creative force in filmmaking. It takes its name from the French for "author".

Answer: Auteur theory

22. Name these assorted treaties from European history, FTPE.

[10] This 1555 agreement attempting to end the religious wars in Europe promised to allow each region of Germany to decide on its religion; unfortunately, it recognized only Lutheranism as a valid Protestant sect.

Answer: Peace of Augsburg

[10] Signed by Vittorio Orlando, David Lloyd George, and Georges Clemenceau among others, this 1919 treaty signed in France forced Germany to pay massive amounts of reparation costs to other nations.

Answer: Treaty of Versailles

[10] Ending the War of Spanish Succession or Queen Anne's War, it gave Philip V the rights to Spain, which in turn gave Gibraltar and Minorca to the British and other territories to Emperor Charles VI.

Answer: Peace of Utrecht