

ROUND 3: Questions by MIT Dielectric Material

TOSSUP 1

Devoted to mathematics, he stated that life was only good for two things: to do mathematics and to teach it. Among the things named for him are: the central bright spot in a circular Fraunhofer (FRON-hof-er) diffraction pattern; an equation relating the laplacian (la-PLAH-see-un) of electric potential to charge density; and a distribution used to model the occurrence of discrete random events per unit time. For ten points, name this French scientist with a piscene (PICE-een) surname.

ANSWER: Simeon-Denis _POISSON_ (pwah-SOHN)

TOSSUP 2

Warning: Two answers required.

Among the rules: The antagonist could stop at any time, if he were not a fanatic. Gravity is the antagonist's greatest enemy. Logically, the protagonist must stay on the highway. All action must be confined to the natural environment of the two characters -- the southwest American desert. FTP, what Chuck Jones-created animated duo, who first appeared in 1949's "Fast and Furry-ous," is permitted no dialogue with the exception of "Beep-Beep?" Answer: _ROAD RUNNER_ (Speedius speedius) and Wile E. _COYOTE_ (Droolibus hungrius)

Note to moderator: "A fanatic is one who redoubles his effort when he has forgotten his aim." - George Santayana

TOSSUP 3

This group defended Malaysia against Indonesian forces in the 1960s, and hunted SCUDs during the Gulf War. Conceived in 1941 by Scots Guard subaltern David Stirling as a small force capable of disabling airfields held by Rommel's Afrika Corps, it later took on counterterrorist missions such as the 1980 liberation of the Iranian embassy in London. "Who Dares, Wins" is the motto of, FTP, what British regiment specializing in covert military operations?

Answer: _S_pecial _A_ir _S_ervice

TOSSUP 4

Its chants can heal the sick and return vision to the blind, and pearls fall from its beak when it sings. Also known as Zshar-ptitsa, it feeds on golden apples such as those which grow in the garden of the ogre Kashchei. Ivan Tsarevich learns how to defeat Kashchei when he summons this creature by waving one of its radiant feathers. FTP, what is this winged title character of a 1910 Stravinsky ballet?

Answer: the _FIREBIRD_

TOSSUP 5

A man named Trevilian was the only survivor of this place because he rode a white horse up to high ground at Perranuthnoe. All that remains to view of it are the mountain peaks known as the Isles of Scilly. The birthplace of Sir Tristram, this land to the west of Cornwall was supposedly swept under the sea after the death of Arthur. Situated beyond Land's End was, FTP, what lost kingdom of southwestern England?

Answer: _LYONESSE_ or _LEONNOIS_

TOSSUP 6

He was born after his father was killed while on active military duty, and early in his life he suffered a severe, unidentified trauma. He became a Messianic figure after overcoming his sensory blocks, but as a child he was physically tortured by his Cousin Kevin and sexually molested by his Uncle Ernie. Nevertheless, he was London's "deaf, dumb, and blind" pinball wizard. FTP, name this title character of the Who's 1969 rock opera.

Answer: _TOMMY_ Walker

TOSSUP 7

This group of chemicals is responsible for the distinctive smell of a new car. Although these plasticizers have been used in plastics since 1930, recent findings by the National Environmental Trust have prompted Toys 'R' Us to remove all direct-to-mouth toys for children under 6 containing them from their shelves. FTP, what are these vinyl softening agents which have caused liver and kidney damage when ingested by laboratory animals?

Answer: _PHTHALATE_s

TOSSUP 8

He resigned from the Russian Army after the Bolshevik Revolution to organize the White Guards, who defended his native country from Communist insurgents in 1918. He came out of retirement in 1931 to lead Finnish defenses through the end of its involvement in World War Two and served as President from 1944 to 1946. FTP, name this Finnish general after whom a line of fortifications facing Leningrad was named.

Answer: (Field Marshal) Baron Carl Gustav Emil _MANNERHEIM_

TOSSUP 9

Three of the offspring of Gaia and Uranus, these monsters personified earthquakes and other forces of nature. Although Gyges and Cottus later revolted and were permanently imprisoned in Tartarus, they had fought alongside the Olympians against the Titans, with Briareus serving as Zeus' personal bodyguard. FTP, name these monsters who each had fifty heads and one hundred arms.

Answer: _HECATONCHIRES_

TOSSUP 10

The title character is a priestess of Artemis, and it is her duty to prepare captive foreigners for sacrifice on the orders of King Thoas. Although Pylades and his companion are captured while attempting to steal a statue from the temple, they escape when the companion and the priestess realize they are related. FTP, in which Euripides play is Orestes reunited with his sister who was supposedly sacrificed at Aulis?

Answer: IPHIGENIA IN TAURIS
Do not accept: Iphigenia at Aulis

TOSSUP 11

In an interview in 1965, this painter wondered aloud if her pictures were "more lyrical, because I'm a woman?" Soon after returning from college to New York in 1949, she developed "stain painting," the process of pouring thinned paint on to an unprimed canvas and spreading it with sponges. FTP, name this former wife of Robert Motherwell and abstract expressionist painter of "Mountains and Sea" and "Ocean Desert".

Answer: Helen FRANKENTHALER

TOSSUP 12

Philip Morris recently acquired several product lines from this division of the Brooke Group Limited for three hundred million dollars in cash. With the loss of the L&M, Chesterfield, and Lark brands, this company only retains one premium line of cigarettes, Eve. FTP, this was the ironic fate of what "turncoat" company which several months earlier had made public documents incriminating the tobacco industry?

Answer: LIGGETT Group Inc.

TOSSUP 13

In The Golden Book of Springfield, he portrayed a futuristic Utopian government by art and poetry. For years, this poet distributed his pamphlet Rhymes to be Traded For Bread in which he advocates his "Gospel of Beauty," while wandering, chanting poems in exchange for food and lodging. FTP, name this man who gained fame with the 1913 poem, "General William Booth Enters into Heaven."

Answer: Vachel LINDSAY

TOSSUP 14

His Presbyterian weekly, the St. Louis Observer, espoused freedom of the press and freedom of speech. His strident editorials after the burning of a slave led a pro-slavery mob to wreck his press in July 1836. He moved his Observer to Alton, Illinois, where he was killed by another mob on November 7, 1837, while attempting to install a new press. FTP, name this "Martyr on the Altar of American Liberty."

Answer: Rev. Elijah P(arish) _LOVEJOY_

TOSSUP 15

Selected as the 7th pick overall in the 1994 draft, he didn't disappoint, racking up six sacks and garnering NFL Defensive Rookie of the Year honors. After signing a six-year contract in 1997, he was troubled by injuries and accumulated only four sacks as his linemate Dana Stubblefield garnered most of the attention, but in 1998 he had already racked up 9.5 sacks before his season and possibly his career were ended by a broken leg. For ten points, name this 49ers All-Pro defensive lineman.

Answer: _B_ryant _YOUNG_

TOSSUP 16

It was probably visited by Magellan, who named the island "Ladrones," or "Thieves." It was ceded to the United States in the Spanish American War and has been an important military base since World War II. Its legislature is heavily Republican, but its delegate to Congress is Democrat Bob Underwood. Geckos abound in, FTP, what 'unincorporated' US territory in the North Pacific?

Answer: _GUAM_

TOSSUP 17

Its chapters begin with compressed quotations from the Dick and Jane passage that appears at the beginning of the book. It tells the story of a young black woman and her impoverished family. Raped by her father, she miscarries his child and eventually goes mad. Pecola Breedlove believes in her insanity that she has achieved what she sees as the epitome of beauty in, FTP, what Toni Morrison novel?

Answer: _THE BLUEST EYE_

TOSSUP 18

If the state granted one of them his independence, they joined the ranks of the neodamodes [nee-o-da-MOE-dez]. The ephors declared war on them every year and they were patrolled by the Krypteia [krip-TAY-ee-a]. Ethnically, they consisted of the conquered peoples of Messenia and the non-Dorian natives of Laconia. FTP, who were these state-owned serfs of ancient Sparta?

Answer: _HELOT_s

TOSSUP 19

In one version, two molecules of pyruvate are converted to oxaloacetates and then to glyceraldehyde-3-phosphate which combine to form one fructose-1,6-bisphosphate, which loses both phosphates and isomerizes to give glucose. In another version, lactates in the

liver are metabolized to increase the blood sugar level. Partially moderated by insulin, FTP, what anabolic pathway is the reverse of glycolysis?

Answer: _GLUCONEOGENESIS_ (Glu-co-Nee-oh-JEN-uh-Sis) or _GLUCOGENESIS_ (Glu-co-JEN-uh-Sis)

TOSSUP 20

Lasting roughly from 1400 to 1700, its effects were most apparent in the development of London English in the time between Chaucer and Shakespeare. Vowel sounds began to be made further to the front of the mouth and the letter "e" at the end of words became silent, and so "lif" [LIFF] changed to "life" and "huse" [HUH-SUH] changed to "house." FTP, what was this set of phonetic changes which accompanied the transition from Middle to Modern English?

Answer: The _GREAT VOWEL SHIFT_

TOSSUP 21

All the members of this extinct order were herbivores. Extant from the late Triassic to the end of the Cretaceous period, it consisted of two distinct suborders, Cerapoda and Thyreophora. It included Hypsilophodon and Fabrosaurus as well as the better-known Triceratops and Iguanodon. FTP, what is this order of dinosaurs whose name is Latin for "bird hips"?

Answer: Order _ORNITHISCHIA_

TOSSUP 22

Milton Friedman's Worker-Misperception Model. Rotemberg, Ball, Mankiw (MANK-you), and Romer's Sticky Price Model. Robert Lucas' Imperfect Information Model. Keynes' (CANES's) Theory of Wage Rigidity. These disparate sounding theories all describe the same relationship. FTP, name this economic relationship between the price level and the aggregate quantity of output that firms produce.

Answer: _AGGREGATE SUPPLY CURVE_

TOSSUP 23

Insecure about his writing livelihood, he had himself named honorary consul to Rangoon. He also served as a senator, although his career was cut short after a falling-out with President Videla. This friend of Garcia Lorca and supporter of Salvador Allende is best remembered for his body of work which included "Canto General" (CAHN-to HEN-er-al), and "Odas Elementales" (OH-dahs el-ay-men-TAL-es). FTP, who was this winner of the 1971 Nobel Prize for Literature?

Answer: Pablo _NERUDA_ or Neftali Ricardo _REYES_ Basoalto

BONI

BONUS 1

Identify the elementary excitation of condensed matter from the description, FTPE.

A. A quantum of vibrational energy associated with the normal modes of a crystal lattice.

Answer: _PHONON_

B. A fundamental collective electron wave in a free electron gas.

Answer: _PLASMON_

C. A combination of an electron and an empty electron state in a valence band which is free to move throughout a nonmetallic crystal as a unit.

Answer: _EXCITON_

BONUS 2

Identify these comic books about teams FTSNOP.

A. (5) This band of mutants was originally based out of Charles Xavier's Institute for Gifted Youths.

Answer: _X-MEN_

B. (10) Teen sidekicks Robin, Speedy, Aqualad, Wondergirl, and Kid Flash joined together to form the first incarnation of this team.

Answer: _TEEN TITANS_

C. (15) This longest-running comic book series about the Second World War centered on the adventures of Easy Company.

Answer: _SGT. ROCK_

BONUS 3

Identify the patron saints from the clues FTPE.

A. This 13th century woman was named the patron saint of television because one Christmas when she was too ill to leave her bed she saw and heard Christmas Mass even though it was taking place miles away.

Answer: St. _CLARE_ of Assisi

B. This patron saint of astronomers also founded the Order of Friars Preachers.

Answer: St. DOMINIC or Santa DOMINGO de Guzman

C. This patron saint of thieves was told by Jesus that "you will accompany me into paradise."

Answer: St. DISMAS

BONUS 4

Identify these works of Publius Ovidius Naso FTPE.

A. Ovid cited this manual of seduction and intrigue for the man about town, along with a personal "indiscretion", as the reasons for his banishment to Tomis in 8 AD.

Answer: ARS AMATORIA or The ART OF LOVE

B. This book of Roman holidays was to have covered all twelve months in the calendar, but Ovid was only able to complete the first six.

Answer: FASTI

C. Along with the "Epistulae ex Ponto", this is a collection of Ovid's pleas to the emperor to recall him from his banishment.

Answer: TRISTIA

BONUS 5

Answer the following questions about November's extradition conflict between Italy and Turkey FTPE.

A. Turkey demanded the extradition of what man arrested in Rome, whom it has branded a terrorist and holds responsible for over 30,000 deaths?

Answer: Abdullah "Apo" OCALAN

B. From what country was Ocalan recently expelled due to Turkish pressure?

Answer: SYRIA

C. Of what radical political party is Ocalan the head?

Answer: KURDISTAN WORKERS PARTY or PKK

BONUS 6

Answer the following questions about a recent incident in European soccer FTPE.

A. This Italian club was expelled from a European tournament when, during a match in that tournament, a supporter of rival club Salernitana (sah-LAIR-ni-Tah-nah) threw a firecracker on to the pitch, where it struck a referee's assistant.

Answer: _FIORENTINA_

B. The club that Fiorentina were playing was trailing four-nil on aggregate at the time of the incident, yet they will play in the next round. Name this club from Zurich, Switzerland.

Answer: FC _GRASSHOPPERS_ Zurich

C. Finally, name the tournament from which Fiorentina were expelled. It is the least prestigious of the three major European club tournaments.

Answer: _U_nion of _E_uropean _F_ootball _A_ssociations _CUP_ or "YOO-AY-FA" CUP

BONUS 7

Emily Bronte's "Wuthering Heights" had an tangle of people with the same names. Given names shared by two characters in the book, give their relationship, F15PE.

A. Linton Heathcliff and Edgar Linton

Answer: _UNCLE AND NEPHEW_ (accept equivalents)

B. Catherine Earnshaw and Catherine Linton

Answer: _MOTHER AND DAUGHTER_ (accept equivalents)

BONUS 8

Identify the following about things which rotate FTPE.

A. This phenomenon demonstrated by gyroscopes and spinning tops consists of a comparatively slow rotation of the axis of rotation of a spinning body about a line intersecting the spin axis.

Answer: _PRECESSION_

B. This term describes the uneven "wobbling" motion of the Earth which causes an irregularity in the precession of the equinoxes.

Answer: _NUTATION_

C. Both precession and nutation are results of the conservation of what quantity?

Answer: _ANGULAR MOMENTUM_ (Do not prompt on "momentum")

BONUS 9

Identify these Scholasticists FTPE.

A. This author of "Opus Majus" believed that there were four causes of ignorance: appeals to an unsuited authority; the undue influence of custom; the opinions of unlearned crowds; and displays of wisdom that simply cover up ignorance.

Answer: Roger _BACON_

B. In discussing the problem of individuation, this Scottish Franciscan held that there was no difference between being and essence and that therefore it was form that distinguished one thing from another, and not matter. He also argued for the Immaculate Conception against Aquinas.

Answer: John _DUNS_ Scotus

C. This English philosopher stated that "it is vain to do with more what can be done with fewer".

Answer: William of _OCCAM_

BONUS 10

Identify the cities from the description FTPE.

A. This city at the confluence of the Blue and White Nile rivers takes its name from the Arabic for "Elephant's Trunk".

Answer: _KHARTOUM_

B. Located on the coast of the Arabian Sea immediately northwest of the Indus River delta, this seaport city is the capital of Sindh province and the largest city in its nation.

Answer: _KARACHI_

C. This city is situated at the eastern end of the Inland Sea on Osaka Bay and was struck by a powerful earthquake in 1995.

Answer: _KOBE_

BONUS 11

Identify the following about Julius Caesar's adventures in Gaul FTPE.

A. In 58 BC, Caesar prevented this tribe from Switzerland from migrating west of the Rhone River.

Answer: _HELVETIANS_ [hel-VEE-shuns] or _HELVETII_ [hel-VEE-tee-ee]

B. The Helvetii were fleeing from the aggression of several German tribes led by this king, who was crushed by Caesar later that year.

Answer: _ARIOVISTUS_

C. At the Battle of Alesia in 52 BC, the last major Gallic battle fought by Caesar, who led the army of eighty thousand man Gauls that Caesar defeated?

Answer: _VERCINGETORIX_

BONUS 12

Identify these giants FTPE.

A. According to the first book of Samuel, this giant from Gath, Philistia was killed by David.

Answer: _GOLIATH_

B. In Norse myth, he is the Fire Giant who at Ragnarok sets the world on fire with his flaming sword.

Answer: _SURT_

C. This native of Alton, Illinois who died in 1940 holds the record as the tallest man in medical history of whom there is irrefutable evidence.

Answer: Robert _WADLOW_

BONUS 13

F15P each, name the following albums based on a description of their covers:

a. This Rolling Stones album cover was designed by Andy Warhol. It features a picture of a man's pants, with a working zipper attached to the cover.

Answer: _STICKY FINGERS_

b. This Beatles album featured drawings of the Fab Four as designed by manager Brian Epstein.

Answer: _REVOLVER_

BONUS 14

Answer the following about the work of Ludwig Boltzmann FTPE.

A. In 1871, Boltzmann generalized on the work of what physicist to determine the statistical distribution of the energies of the particles in a free, classical gas?

Answer: James Clerk MAXWELL
(this is the Maxwell-Boltzmann distribution)

B. What law, based on the work of Maxwell and Boltzmann, states that a system of free particles in equilibrium at absolute temperature T will have an average energy of $1/2 kT$ associated with each degree of freedom, where k is Boltzmann's constant?

Answer: Law of Energy EQUIPARTION or EQUIPARTITION Theorem (accept equivalents)

C. By applying statistical mechanics to the Second Law of Thermodynamics, Boltzmann defined his eponymous constant as the ratio of what quantity to the natural logarithm of the occupied microscopic phase space states?

Answer: ENTROPY
Moderator's note: Boltzmann had the equation " $S = k \log W$ " inscribed on his tombstone.

BONUS 15

The 1945 Pulitzer Prize in fiction was awarded to a novel depicting the Allied occupation of an Italian town, in which the military governor searches for a replacement for a confiscated town relic.

A. For 10 points, name this novel.

Answer: A BELL FOR ADANO

B. Now, for 10 more points, who wrote A Bell for Adano?

Answer: John HERSEY

C. Hersey's later books had a wider scope, but still dealt with the same issues of social morality and human nature. For a final ten points, name the 1960 Hersey novel in which Wissey Jones attempts to purchase young genius Barry Rudd from his parents.

Answer: The CHILD BUYER

BONUS 16

How well do you know your interesting alkaloids? 5-10-15, name the following compounds from descriptions.

A. For 5: This compound has formula $C_8H_{10}N_4O_2$ and is a stimulant. It sublimates at 176 degrees Celsius and, although odorless, has a very bitter taste.

Answer: CAFFEINE

B. For 10: The nux vomica tree is the chief source of this poisonous alkaloid. It has been used as a rat poison and, after initial symptoms which include tremors and cramps, causes death from asphyxiation.

Answer: _STRYCHNINE_ (STRICK-nine)

C. For 15: This alkaloid is also poisonous, but is nonetheless used in medicine. In ophthalmology, it is used to dilate the pupil for retinal examinations. It is also of use in reducing symptoms of hay fever by drying up nasal secretions. It was formerly used as an asthmatic treatment as well.

Answer: _ATROPINE_

BONUS 17

On April 1st, 1939, Franco's Nationalists unconditionally defeated the Popular Front Republican government. FTP each, name the following influential foreign groups in the Spanish Civil War.

A. This volunteer force which served from January 1937 to November 1938 was the first American military unit to be fully integrated, but were received with suspicion at home as "premature anti-fascists."

Answer: The _ABRAHAM LINCOLN BATTALION_ or the _ABRAHAM LINCOLN BRIGADE_

B. The Abraham Lincoln Battalion and the other members of the seven International Brigades were organized by what leftist group?

Answer: _COMINTERN_ or _COMMUNIST INTERNATIONAL_

C. This unit of the German Luftwaffe was detailed to Franco's Nationalists under the condition that it stayed under German control. It bombed Guernica on April 27, 1937.

Answer: _CONDOR LEGION_

BONUS 18

For ten points each, name the following musical terms:

A. A perfect or major interval the top note of which has been raised by a chromatic semitone.

Answer: _AUGMENTED_ Interval

B. This term indicates that the music is to move as fast as possible. It is the highest setting on most metronomes.

Answer: _PRESTISSIMO_

C. This is an inlay of wood around the edges of the back and belly of members of the violin family, which strengthens and decorates the border of the instrument.

Answer: _PURFLING_

BONUS 19

Give the name of the following works, which may or may not have something in common, from a description FTPE.

A. This 1966 John Barth novel explores Greek and Christian myth against a weird setting of huge, computer-run universities.

Answer: _GILES GOAT-BOY_

B. This novel focused on themes of earthly love and spiritual redemption. Farragut has been convicted of killing his brother, but his true crime seems to be looking too deeply at what life means to him. Name this John Cheever novel.

Answer: _FALCONER_

C. In this modernization of a Greek legend, a mortal shepherd falls in love with the goddess Diana. Name this long poem by John Keats, which shares its name with a legendary Greek youth who spent most of his life in perpetual sleep.

Answer: _ENDYMION_

BONUS 20

Answer the following questions about the Guerra de Futbol, or Soccer War, FTSNOP.

A. First, for 5 points each, what two nations fought the Soccer War?

Answer: _EL SALVADOR_
HONDURAS

B. For 5 more points: What international organization provided the framework for a truce and subsequent resolution of this war?

Answer: _ORGANIZATION OF AMERICAN STATES_ or _OAS_

C. For 15 points: What military leader and head of state of Honduras from 1963 to 1975 oversaw his country's involvement in the soccer war?

Answer: Col. Osvaldo _LOPEZ ARELLANO_

BONUS 21

30-20-10. Name the artist from works.

A. For 30: The movies "Un Chien andalou" (An Andalusian Dog) and "L'age d'or" (The Golden Age)

B. For 20: "Slave Market with Invisible Bust of Voltaire", "Velazquez Painting the Infanta Margarita with the Lights" and "Shadows of His Own Glory"

C. For 10: "Fantasy Diurnes," "The Persistence of Memory"

Answer: Salvador Felipe Jacinto DALI y Domenech