

ISU Fally Tourney
Round 10

1) Tossup: In the 1960's a system using cobalt-57 heated and diffused into iron, a loudspeaker driven at 10 Herz, and an annealed thin sheet of iron used as the detector were employed by Pound, Rebka, and Snyder of Jefferson Physical Laboratory at Harvard to measure it within 1% of the expected number, using the Mossbauer Effect. It relates the relativistic Doppler Shift from an accelerating light source to the ~~shift~~ ^{shift} in radiation frequency due to gravitational field. FTP name this phenomena explained by Einstein's General Theory of Relativity which explains why light from a height "H" has a higher frequency than light at height "0."

Answer: Gravitational Red Shift.

2) It presaged the leitmotifs commonly used by Wagner and Strauss with its innovative use of idee fixe, "a single melody that reappears throughout the work." Running sixty minutes, it has five movements entitled "Reveries-Passions," "A Ball," "Scene in the Country," "March to the Scaffold," and "Dream of a Witches Sabbath." Ostensibly it was about its creators love for English actress Harriet Smithson and told of a love affair that ended with the execution of a man for killing his lover. FTP, identify this symphony, subtitled "Episodes in the Life of an Artist," by Hector Berlioz.

Answer: Symphonie Fantastique or Fantastic.

3) In 1664 it began listing writings alphabetically instead of by subject. The last one was published in 1948 and it was suppressed in 1966. Works once on it include Richardson's *Pamela*, Montaigne's *Essays*, Hugo's *Les Miserables*, and all of Sartre's philosophical writings. It's organization was revised in 1897 by Pius X and it had ~~only~~ ^{been} altered in Benedict XIV's *Sollicitae Provida*. The first general one was published in 1559 although its history dates back to Pope Gelasius in 496. FTP name this list of books banned by the Catholic Church which also names a reference section in the back of most non-fiction books.

Answer: Index of Forbidden Books.

4) Covering about 4.2 million square feet with plans to expand it to 5 million by next year (it is the largest structure of its kind in the United States) Ground was broke for it on June 14, 1989 and this year it is celebrating its 10 year anniversary, ~~however~~ ^{for it} the land was sitting dormant since 1982 when the cities' football and baseball team moved into a new staduim. Since its opening an estimated 350 million people have visited it and it has employed up to 13,000 people. For 10 points name this place located in Bloomington, Minnesota where you can visit Camp Snoopy, Underwater Adventures and shop till you drop.

Answer: Mall of America.

5) Science

6) His first writings were under the pseudonym Incertus. A member of the literary circle of Philip Hobsbaun, his first collection, *Eleven Poems*, was written in conjunction with a Belfast festival. His other works include *Preoccupations: Selected Prose*, *Death of a Naturalist*, *The Haw Lantern*, *Seeing Things*, and an award winning translation of *Beowulf*. FTP name this the writer, generally regarded as the most important Irish poet since Yeats, the winner of the 1995 Nobel Prize for Literature.

Answer: Seamus Heaney.

7) Names the same. Herodotus described the first as very cosmopolitan housing Greek^s, Jews, Phoenicians, and Libyans. Its necropolis stretched 19 miles along the Nile's western bank. Ptah was the principle deity of this administrative capital of the Old Kingdom founded by Menes which declined only after Muslim^s ~~capitals~~ had established their capital only miles away at Cairo. The second is home to Historic Elmwood Cemetary, Libertyland Amusement Park, and the Cardinal's AAA affiliate Redbirds. FTP name this Tennessee City on the Mississippi home of Elvis and Graceland.

Answer: Memphis.

8) It ends with the Father discovering the youngest daughter drowned in the garden and the Young Boy

shooting himself with a revolver, after which the Manager calls off rehearsal. Before this the Father had allowed his wife to abscond with his secretary, leaving his son feeling abandoned and useless. Then, the father who is missing his children, nearly seduces his Step-Daughter, who has returned to the city with her mother and is being employed by Madame Pace as a prostitute. FTP this describes the plot of what Luigi Pirandello play.

Answer: Six Characters in Search of an Author.

9) Both armies were small, as the invaders marched in a single column and the opponents squared off against each other for seven days despite not having supply trains. The invaders, having been stretched to their logistical limit, gave battle in order to preserve their plunder. The defenders, mostly footmen, contrary to the myth that they were mounted knights using the recently invented stirrups, formed a phalanx and repelled repeated charges from the enemy horse, finally turning the enemy flank and killing their commander, Abd-ar-Rahman. FTP name this momentous 732 battle in which a Frankish army commanded by Charles Martel repulsed a Muslim advance into France.

Answer: Tours.

10) Trained as a lawyer in England, he spent much of his early career in South Africa where he raised an ambulance corps to serve in the Boer War and founded the Natal Indian Congress. Among his failures was not keeping Mohammed Jinnah in the Indian National Congress and allowing Jawaharlal Nehru's plan of a modern industrializing India to defeat his predominantly rural vision. Among his many successes was the march to Dandi to protest the salt tax. FTP name this Indian, assassinated by a religious fanatic in 1948, a proponent of Satyagraha and non-violent activism.

Answer: Mahatma or Mohandas Gandhi.

11) "The key word is 'If he stays healthy'." "The key to the Atlanta defense is that they play well... on defense." "From the waist down, Earl Campbell has the biggest legs I have ever seen on a running back." The classic for the ages, however, might be "I think the quarterback is going to be involved with the next play." All of these quotes were actually spoken by, FTP, what namesake of EA Sports football games who has joined Al Michaels as color commentator on Monday Night Football?

Answer: John Madden. (prompt on Cam Cleeland during the first sentence)

12) In later years she worked with magazines representing the Urban League and the NAACP as well as founding the first adoption house for international and interracial children. The theme of interracial love loomed large in her works especially *The Angry Wife* and *The Hidden Flower*. She also explored the problems of mentally handicapped children in *The Child Who Never Grew Up* based on her own daughter. However, her best known works are about ~~the~~ China, the country she was raised in. FTP name this author of *East Wind, West Wind*, and *The Good Earth*, who, in 1938, became the first female American to win the Nobel Prize for Literature.

Answer: Pearl S. Buck.

13) Science

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

Answer: Vidiadhar Suraprosad Naipaul.

15) Currently scholars accept the weak relativistic version of it, which is nearly void of content, because the strong deterministic version has not been empirically confirmed. Its genesis partly lay in one of its namesake's study of the Hopi Indians who do not distinguish between past, present, and future tenses. Stated quite plainly by its other formulator in *The Status of Linguistics as a Science*, "the 'real world' is to a

large extent unconsciously built up on language habits of a group." FTP name this linguistics theory, named for two American anthropologists, which tries to explain why Eskimos have so many words for "snow."

Answer: Sapir-Whorf Hypothesis or Whorfianism.

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

Answer: Trajan's Column.

17) Established in 1762 by Irish traders at the crossroads of Catawba Indian trails, it was a hotbed of rebels during the Revolutionary War and received its nickname from a comment by General Cornwallis. It experienced a gold rush in the early 1800's, was the place of the last meeting of the Confederate cabinet, and has recently become an international banking center and home to Duke Energy, the biggest electric utility in the nation. FTP, name this largest city in North Carolina which recently lost its NBA team, the Hornets.

Answer: Charlotte.

18) Names the same. One was an Oceanid and the wife of Thaumus, whose offspring included Iris and the Harpies. The second was a daughter of Atlas whose sons, by Zeus, were Iasion and Dardanus. The most famous is either said to have married a noble but poor Argive farmer, or Pylades, the companion of her brother. The title character of plays by both Sophocles and Euripides, in the former her sister Chrysothemis provides a foil for her and in the latter she actively participates in the murder of her mother. FTP name this daughter of Clytemnestra and Agamemnon and sister of Orestes.

Answer: Electra.

19) Science

20) His father, a converted Christian, collaborated with the U.S. but later renounced them when they illegally took land. Although newspapers called him "The Red Napoleon," it was really his younger brother Olikut and another chief named Looking Glass who led the warriors. His retreat was forced upon him when 20 warriors raided a settlement after being commanded into reservations by General Oliver Howard, and it fell short of his Canadian destination. FTP name this Nez Pierce chief who said "I will fight no more forever"

Answer: Chief Joseph.

Bonus: Identify the persons associated with Louis XIV FTPE.

1. This disciple of Richelieu became the regent for young Louis and Anne of Austria, whom he allegedly had an affair with. He successfully concluded the 30 years war with the Peace of Westphalia and defeated the Fronde.

Answer: Cardinal Jules Mazarin or Giulio Mazarini.

2. He was the minister of finance for the Sun King. A proponent of mercantilism, he argued that France needed to be self-sufficient so it could maintain a favorable balance of trade. He did little for internal trade, although he improved roads.

Answer: Jean-Baptiste Colbert.

3. An orator and churchman who tutored Louis' son, he authored *Discourse on Universal History* as well as *Treatise of the Knowledge of God and One's Self*. He argued for the necessity of absolute monarchy and

opposed the Quietists.

Answer: Bishop Jacques Bossuet.

Bonus: Identify the characters from the Robin Hood legends.

2) 1. Originally a yeoman with a long-time feud with Robin, when they finally meet Robin kills him and disfigures his face in order to trick the Sheriff of Nottingham. In later legends he becomes a nobleman and a more prominent villain, often with a desire for Maid Marion.

Answer: Guy of Gisborne.

2. Often a relative of Robin Hood and his companion in exile, in some stories he is portrayed as fiery tempered, while on some occasions he is a fun-loving gentleman dandy.

Answer: Will Scarlett.

^{addition}
3. A late ~~edition~~ addition to the legends, this minstrel is sometimes the narrator of the popular ballads. Robin helped him marry his true love who was promised to another man and in return he spreads the legend of Robin Hood, although he only occasionally fights the bad guys.

Answer: Alan a Dale.

Bonus: Give the Roman poets from descriptions FTPE.

3) 1. This 1st century B.C. writer wrote a beautiful poem about passing the grave of his brother, but he is better known for his raunchy poems about barflies and especially his love poems to Lesbia.

Answer: Gaius Valerius Catullus

2. This son of a former slave and friend of Virgil was patronized by Augustus. He wrote the *Ars Poetica*, as well as the *Epistulae* which contained his satires, but he is most famous for his odes collected in *The Carmina*.

Answer: Quintus Horatius Flaccus or Horace

3. This poet wrote the ambitious six book didactic poem De Rerum Natura which has a marvelous invocation to Venus and presents a philosophical system based on Epicurus.

Answer: Lucretius.

3. This friend of Pliny the Younger and the emperor Titus was a frequent invitee to dinner parties to provide witty amusement. He wrote 15 books of epigrams that graphically portray 1st century Roman life.

Answer: Martial.

bonus

FTPE, identify the following about terms associated with a 19th century French mathematician:

4) 1. A sequence of points is said to be what if "for every epsilon greater than 0 there exists an N such that if little m and little n are greater than N, the absolute value of the quantity $x_{\text{sub little n}} - x_{\text{sub little m}}$ is less than epsilon?"

Answer: Cauchy.

2. "A sequence of real numbers converges if and only if the sequence is Cauchy." This important theorem for testing for convergence bears what name?

Answer: Cauchy Criterion (also accept Criterion of Cauchy or Cauchy's Theorem).

3. The Cauchy-Schwarz Inequality states that "the absolute value of the dot product of two vectors" compares how to "the product of the norms of the two vectors?"

Answer: is less than or equal to (do not prompt on less than).

Bonus: Refer to the attachment. FTPE Identify the post-impressionists who painted the following.

5) 1. Figure A.

Answer: Paul Cézanne. Cezanne

2. Figure B.

Answer: Henri Rousseau.

3. Figure C.

Answer: Henri Matisse.

Bonus: Identify the lakes from clues FTE.

6) 1. This second deepest lake in the world borders Tanzania, Burundi, the Congo, and Zaire and is also the ~~largest lake in Africa~~. Due to its isolation from other bodies of water it boasts many species of fish completely unique to it.

Answer: Tanganyika.

2. Discovered by Alonso de Ojeda in 1499 this Venezuelan lake is nearby some of the largest oil deposits in the world and at 5,100 square miles, is the largest lake in South America.

Answer: Maracaibo.

3. Part of the Lake Agassiz system, its major tributaries are the Red, Saskatchewan, and its namesake and it drains into Hudson Bay via the Nelson River. At 9,465 square miles it is the 3rd largest Canadian Lake.

Answer: Winnipeg.

Bonus: Identify the Eastern European leaders from clues FTPE.

7) 1. He led the Yugoslav Communist guerillas in WWII against the Nazis as well as the Royalist Guerillas, whom he quickly defeated. After the war he became his nation's leader maintaining absolute power until his 1980 death and also keeping his nation from becoming a mere Soviet satellite.

Answer: Tito or Josip Broz.

2. This man became the leader of "Prague Spring" after becoming the First Secretary of Czechoslovakia following Antonin Novotny's resignation in 1968. His attempt at liberalism and "socialism with a human face" sputtered upon Soviet military intervention.

Answer: Alexander Dubcek.

3. This 1983 Nobel Peace Prize winner led Poland's Solidarity movement after its inception in 1980 eventually leading Poland away from the USSR and becoming his country's first non-Communist President in 1990.

Answer: Lech Walesa.

Bonus: Answer questions about a work of Japanese literature FTPE.

4) 1. This classic of the Heian period was written about 1000 and is our best source for the culture of Medieval Japan. It is a prose work that is a quasi-diary consisting mostly of unorganized anecdotes and essays. It is the first work of Zuihitsu or "miscellany" that became popular in Japanese lit.

Answer: Pillow Book.

2. This lady in waiting at the Japanese court authored the *Pillow Book*. Impressively for her time she knew Chinese and was familiar with many Buddhist scriptures.

Answer: Sei Shonagan. (pronounced Shay)

3. This author of *The Tale of Genji* was a contemporary and some say rival of Sei Shonagan at the empress's court.

Answer: Murasaki Shikibu.

Bonus: Identify the following philosophical works of the 20th century from clues FTPE.

1. The goal of this three volume, 2,000 page work by Bertrand Russell and Alfred Whitehead was to define mathematical terms using pure symbolic logic, thus in affect, reducing them to logic. It dealt with set theory, ordinal numbers, and real numbers among many other things.

Answer: Principia Mathematica.

9) 2. In this, his most famous work, Thomas Kuhn argued that scientists do "normal science" following the predominant paradigm until too many inconsistencies arise. A period of change follows often in which critics of the old paradigm are attacked. Finally a "paradigm shift" takes place in which the new system is adopted.

Answer: The Structure of Scientific Revolutions.

3. This Karl Popper book was written during his stay in New Zealand during WWII. It asserts that Democracy is the ideal political system because it is best suited to "minimize avoidable suffering" and "correct mistakes of policy without violence."

Answer: The Open Society and its Enemies.

Bonus: Give the 19th century British prose writers from works FTPE

10) 1. *Modern Painters, The Stones of Venice, Modern Manufacture and Design, Praeterita*.

Answer: John Ruskin.

2. *Murder Considered as one of the Fine Arts, The English Mail Coach, Confessions of an English Opium Eater*.

Answer: Thomas de Quincey.

3. *The French Revolution, Heroes Past and Present, Sartor Resartus*

Answer: Thomas Carlyle.

3. *Studies in the History of the Renaissance, Marius the Epicurean*.

Answer: Walter Pater.

Bonus: Captains of Industry or Robber Barons? Who cares because all you have to do is identify them ~~from~~ ^{from} clues FTPE.

11) 1. Born of poor Scottish origins, he launched Pittsburgh as the center of the steel industry. In his *Gospel of Wealth* he asserted that the rich have a duty to give back to the community which he did - most notably by creating public libraries.

Answer: Andrew Carnegie.

2. This man bought Carnegie steel to form the U.S. Steel Corporation, the first billion dollar corporation in the U.S. He began his career in banking and helped President Cleveland stabilize the economy after the 1893 panic.

Answer: J.P. Morgan.

3. Known as the "Commodore," he was first involved in shipping lines and then became a railroad magnate. He donated one million dollars to found a namesake university in the south.

Answer: Cornelius Vanderbilt.

3. This railroad owner bought the Denver Rio Grande and the Western Pacific RRs to compete with E.H. Harriman in the west and connected Baltimore to Toledo in the east to challenge the Pennsylvania RR. However, he lost nearly everything in the Panic of 1907.

Answer: George Jay Gould.

Bonus: Identify the man 30-20-10

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

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

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

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

Bonus: Identify economics or banking terms that begin with the letter C from their definitions. (From the What you Need to Know about Economics Glossary).

13) 1. Communication and/or coordinated actions among firms, usually aimed at affecting market prices or quantities.

Answer: Collusion.

2. Financial cooperative organization of individuals who have a common bond, such as a place of employment, residence, or membership in a labor union. [They] accept deposits from members, pay interest (in the form of dividends) on the deposits out of earnings, and use their funds mainly to provide consumer installment loans to members.

Answer: Credit Union.

3. An institution where mutual claims are settled between accounts of member depository institutions.

Answer: Clearinghouse.

Bonus: Identify the novels from opening lines.

14) 1. "In my younger and more vulnerable years my father gave me some advice that I've been turning over in my mind ever since."

Answer: The Great Gatsby.

2. "To the red country and part of the gray country of Oklahoma, the last rains came gently, and they did not cut the earth. The plows crossed and recrossed the rivulet marks."

Answer: The Grapes of Wrath.

3. "Robert Cohn was once middleweight boxing champion of Princeton. Do not think that I am very much impressed by that as a boxing title, but it meant a lot to Cohn."

Answer: The Sun also Rises

Bonus: Identify the type of blood cell from a brief description, FTPE.

15) 1. Hemoglobin makes up 33% of the protein of this anuclear cell type.

Answer: Erythrocytes or Red Blood Cells

2. These cells release histamine and heparin much like mast cells, but they have differences which distinguish them from mast cells.

Answer: Basophils

3. This cell type is the most abundant white cell type found in the blood. ~~The~~ ^{They} phagocytose, oxidize, and

hydrolyze invading bacteria.

Answer: Neutrophils

Bonus: Identify the Ottoman Rulers from clues FTPE.

1. Known as "The Lawgiver," this man's reign saw the capture of Belgrade, the defeat of the Hungarians at Mohacs in 1526, as well as the expulsion of the Knights of St. John from Rhodes, and is generally considered to be the high point of Ottoman rule.

Answer: Sulieman the Magnificent.

16) 2. This father of Sulieman was nicknamed "The Grim" for his tyrannical rule as after his father abdicated he killed all the members of his family with a claim to the throne. He also defeated the Persians and made gains in Syria and Egypt eventually calling himself the new Muslim Caliph.

Answer: Selim I

3. He was known as the conqueror primarily because he captured Constantinople in 1453. ^{He} also made many other gains expanding the European empire to the Danube and his Asian holdings to the Euphrates.

Answer: Mehmet II or Muhammed II.

4. This emperor defeated the Serbian army at Kosovo in 1387 but was killed during that battle. His previous takings included the Greek cities of Adrianople and Thessalonica and he had made the Byzantine emperor his vassal.

Answer: Murad I.

Bonus: Name the particle, FTPE.

17) 1. This fundamental particle gives every massive particle its mass; unfortunately, it hasn't actually been detected yet, so it's still considered theoretical.

Answer: Higgs boson.

2. Consisting of a charm quark and a charm antiquark, it has more than three times the mass of a proton. This meson, discovered in the 1970s, actually proved the existence of the charm quark.

Answer: J/psi particle.

3. If this particle exists, it is the magnetic analog of the elementary electric charge on a particle.

Answer: magnetic monopole.

Bonus: FTPE, tell whether the following woodwinds are transposing instruments or not, and if so, what key they are in.

18) 1. Oboe

Answer: not transposing.

2. Tenor Saxophone

Answer: transposing, B-flat

3. English Horn

Answer: transposing, F (accept F-natural)