

Princeton University Buzzerfest Resurrection: Episode IV, A New Hope

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Playoffs Round One

Packet by Princeton (Jeff Hoppes, Steve Lawrie, Larissa Kelly, Barbara Slote, David Isaacson, Charles Steinhardt, Lenny Kostovetsky, Dave Sachs, Michael Chiswick-Patterson, and Ray Yang), DePauw (Stan Jastrzebski et.al.), and Indiana (Jerry Hagen et.al.)

Tossups

1. Start with a mixture of 1,3-butadiene and ethene, then add energy. The pi systems of the diene and the alkene will overlap, and the end carbons of both the diene and the alkene will rehybridize from sp² to sp³. Thus, the original diene and alkene will become a single cyclohexene. FTP, what reaction, named for the 2 chemists who received the 1950 Nobel Prize in Chemistry for discovering it, have I just described?

ANSWER: Diels-Alder reaction

2. She is unaware of her true parentage and station in life, which is understandable given that Antigonus, the only link to her past, was eaten by a bear when she was just a baby. Her innate nobility, however, allows her to win the heart of the Bohemian Prince Florizel, and her eventual return to Sicily results in the reunion of her father, Leontes, with her mother, Hermione. FTP, name this heroine of *The Winter's Tale*, who shares her name with Pongo's love-interest in *101 Dalmatians*.

ANSWER: Perdita

3. If it was not for this "particle," an important part of the standard model of the atom, the components of the nucleus would fly apart. Unlike photons, this type of particle can carry a color charge. Since they are charged, they can in theory group together to form an odd amalgamation of elementary particles. FTP, name these particles, which are the mechanism that carries the strong nuclear force.

ANSWER: gluon

4. The origin of this deity is uncertain, but he was known to have been worshipped by the Sabines. He was absorbed into Roman mythology as a god of the state along with Jupiter and Mars, and was given a consort, Hora. One of the hills of Rome is even named for him. FTP, identify this deity, later thought of as the deified form of Romulus?

ANSWER: Quirinus

5. At 6:22 AM, John McCown's Confederate division swarmed out of the fog and overwhelmed the unprepared Union brigades of August Willich and Edmund N. Kirk. McCown's assault was continued up the line, as the divisions of Patrick Cleburne and Benjamin Cheatham swept the Army of the Cumberland back into a jackknife formation, despite the gallant stand of General Joshua Sill. Final Confederate assaults against the Round Forest petered out and failed to dent William Rosecrans' position at, FTP, what battle fought on New Year's Eve 1862 for control of Middle Tennessee?

ANSWER: Stones River (Accept grudgingly: Murfreesboro)

6. This work was inspired when the composer fell helplessly in love with an actress named Harriet Smithson, whom he saw perform in a production of Shakespeare's *Romeo and Juliet*. Its five movements are entitled "Reveries and Passions," "Scene in the Country," "A Ball," "March to the Scaffold," and "A Sabbath Night's Dream," and the composer originally publicized it by giving it the descriptive title: "The Life of an Artist." FTP, give the more common title of this most famous orchestral work of Hector Berlioz.

ANSWER: Symphonie Fantastique

7. Sanctioned by Pope Julius II in 1506, this piece of legislation completed on June 7, 1494 demarcated a line that would run through a point located 370 leagues west of the Cape Verde Islands, dividing up all colonial land holdings of Spain and Portugal. FTP, what treaty was this, that greatly reduced Portuguese holdings but allowed them to retain possession of Brazil?

ANSWER: Treaty of Tordesillas

8. Homer described giving this man a peck on the forehead by saying "it's like kissing a peanut!". Some other important events in his life include: teaching a class on how to eat an orange, living through AMC gremlin crashes, and directing and starring in the original film version of "Man Getting Hit by Football". FTP, name this man, who hosted the morning show on K-Jazz Radio, where he ran a 4 part series about the agonizing pain in which he lives every day.

ANSWER: Hans Moleman

9. In what was likely intended as a compliment, Ben Jonson said that this writer was second only to Jonson himself as a writer of masques. He also composed poems such as *The Shadow of Night*, completed Marlowe's *Hero and Leander* and wrote the two-part tragedy *Bussy D'Ambois* and *The Revenge of Bussy D'Ambois*. However, he is perhaps best known for his translations of *The Iliad* and *The Odyssey*. FTP name this multitalented writer whose name was immortalized in a poem by Keats.

ANSWER: George Chapman

10. The person mentioned in the title of this work stands at the apex of a group consisting of his assistants, among others. To that man's left is a clerk, while tiers of students are seen in the background. One veiled woman shrinks away in horror from the person lying in bright white sheets in front of her. FTP, identify this painting depicting a surgical amphitheater at Jefferson Medical College and painted by Thomas Eakins.

ANSWER: The Gross Clinic

11. It is found in, of all places, in a freshly baked roll, and its discoverer is so terrified that he throws it off a bridge. However, that doesn't prevent it from returning to taunt its rightful owner, Major Kovalyov, by parading past him in the garments of a state councillor. Eventually, for no discernable reason, it returns to its rightful location and Major Kovalyov is free to enter society once more. FTP name this object that gives the title to a short story by Nikolai Gogol.

ANSWER: The Nose

12. In May of 1945, this country interned almost 500 fleeing Russian soldiers who had fought with the Germans, and refused to hand them over to the Soviets; this non-cooperation was especially notable for a tiny country that hasn't had an army since 1868. Formed from the two Holy Roman Empire lordships of Schellenberg and Vaduz, FTP, what constitutional principality joined a customs union with Switzerland in

1923?

ANSWER: The Principality of Liechtenstein or Fürstentum Liechtenstein

13. His mother's wedding to Sualtim Mac Roth was disrupted by the bride's sudden disappearance with a flock of fifty shadowy birds for handmaidens. During her journey, Dechtire bore a child by the god Lugh Lamhfada. The child would grow up to fall in love with Emer and drove her father to fling himself from the turret of his stronghold. His other loves included Fand the Pearl of Beauty and Blathnat of Munster. FTP, name this defender of Ulster against Medb of Connacht, the legendary hero of the Red Branch Cycle.

ANSWER: Cuchulainn (Also accept: Setanta)

14. "Transformations," published in 1971, is a collection of retold fairy tales. Other collections of poetry by this author include "The Awful Rowing Toward God," "All My Pretty Ones," and "The Book of Folly." Her first work, "To Bedlam and Part Way Back," contains the poem "You, Doctor Martin," and was published 14 years before she took her life via carbon monoxide poisoning. FTP, name this American poetess.

ANSWER: Anne Sexton

15. It is caused by *Trypanosoma cruzi*, which is spread to humans by the Reduviid bug. While originally widespread among animals, it is a relatively recent disease in humans. The chronic symptoms of the disease include an enlarged heart and digestive tract, altered heart rate or rhythm, and eventual heart failure. FTP, identify this disease, named for the doctor who identified it, which is most prevalent in Central and South America.

ANSWER: Chagas' Disease (accept American Trypanosomiasis before "named

for the doctor", and prompt on it after that)

16. He worked to create the Third Republic and was premier under President Grevy briefly from 1881-82. However, his earlier opposition to the Second Empire of Napoleon III and work as Minister of the Interior in the provisional government during the Franco-Prussian War are more notable. FTP, name this man who raised armies and won a few

battles in a losing cause after escaping from Paris in a balloon.

ANSWER: Leon Gambetta

17. Over the dissents of several justices including the normally liberal John Paul Stevens, the Supreme Court declared this practice to be constitutionally protected in Texas v. Johnson and U.S. v. Eichman. A proposed constitutional amendment giving Congress the power to ban it, supported by the legislature of every state but Vermont, narrowly failed in the Senate in March 2000. FTP, name this controversial means of symbolic expression.

ANSWER: flag burning (Accept flag desecration or other clear-knowledge equivalents)

18. Born in 1856 in Ryazan, Russia, he taught mathematics at St. Petersburg University for 36 years. His early work dealt with continued fractions and convergence of series, as well as some approximation theory, but his 20th century work on probability theory is what made him famous. FTP, name the mathematician that proved the central limit theorem and whose namesake chain analysis has been used in everything from econometrics (often along with Monte Carlo methods) to determining the proper wager on Jai Alai.

ANSWER: Andrey Andreyovich Markov

19. Four younger lads (Harry, Beaver, Jonesy, and Pete) rescue a Downs Syndrome boy from his tormentors and realize they like Duddits, who is regularly beaten by school bullies, and who can telepathically communicate with them. However, they grow up and only re-unite each hunting season. This particular season, though, an alien race lands and tries to infect the four with a deadly fungus that will destroy the race as a whole. All this happens in, FTP, what newest release from Stephen King?

ANSWER: Dreamcatcher

20. In the bottom left corner there is an elliptical orange bottle. The background features a sea and a sky that blend together, but meet a rocky hill on the right. There is one of its famous objects hanging on a tree on the left, while another is in draped over a mysterious white, cloth-like object. The third sits half on the table, next to the orange bottle. For 10 points, name this famous work by Salvador Dali, located in the Museum of Modern Art that features 3 hanging, or "melting" timepieces.

ANSWER: The Persistence of Memory

OT 1. Give the last name: The son would take an unfortunate dive out of a window, but though the city was the same, unlike his predecessors of 1618 this man died. The father was the first president of the newly created Czechoslovakia, and held that position well into the 1930s. The son was serving as Foreign Minister when the Soviets defenestrated him, and Communist hegemony ensued. FTP, identify the first family of Czechoslovakia.

ANSWER: Masaryk

OT 2. This title is added to the name of the person, and is considered honorable after the performance of the act of the same name. Although the practice is becoming more common, less than 10% of Muslims earn the title. FTP, what is this honorary title given to Muslims after they make a pilgrimage to Mecca, sometimes lasting years?

ANSWER: hajji

OT 3. He was born in Albany in 1797, and demonstrated an early model of the telegraph in 1831, several years before Samuel Morse. He was Professor of Natural Philosophy here at Princeton from 1832 to 1848, and our physics labs here at Princeton bear his name in tribute. FTP, name this famous American scientist, the first secretary of the Smithsonian Institution, whose name is also the SI unit of inductance.

ANSWER: Joseph Henry

Bonuses

Name these people and places associated with Saint Cuthbert FTPE.

- a. Cuthbert's island hermitage, it is today a bird sanctuary home to puffins, razorbills, eiders, and roseate terns.

ANSWER: Farne Island

- b. Cuthbert's most distinguished biographer, this monk of Jarrow is perhaps better known for his *Ecclesiastical History of the English People*.

ANSWER: the Venerable Bede

- c. In later medieval times St. Cuthbert's incorruptible body was moved to this city on the River Wear, the namesake of the British Army's 68th and 106th Light Infantry regiments as well as a city in North Carolina.

ANSWER: Durham

2. FTPE, name these macroeconomically significant quantities.

A. Calculated by dividing nominal GDP by the nominal money supply, this measures how rapidly the stock of money in an economy "turns over".

ANSWER: Velocity

B. This value measures income inequality in a population by taking the area between the Lorenz Curve and the 45% line. It is zero if income is equal and 1 if one person earns everything and everyone else earns nothing.

ANSWER: Gini coefficient

C. This ratio, calculated by dividing a particular type of capital's market value by its replacement cost, is supposed to predict the rate of investment in that type of capital.

ANSWER: Tobin's q

3. The dinosaurs on your team may appreciate a bonus about their own kind, FTPE.

a. It was originally thought that this ornithomimid from the Cretaceous period had a single horn at the tip of its snout, but it was later discovered that the bone thought to be a horn was in fact a bony spike at the thumb that was probably used for defense.

ANSWER: Iguanodon

b. This Jurassic period sauropod's name means "double beam," and was one of the longest dinosaurs, as it could grow up to 26m in length.

ANSWER: Diplodocus

c. No doubt a predator of the previous dinosaur, this theropod was the largest carnivore of the Jurassic period.

ANSWER: Allosaurus

4. 30-20-10, name the artist from works.

30) "Apollo and Marsyas" and "The Knight's Dream"

20) "Madonna del Granduca" and "Madonna of the Goldfinch"

10) "Triumph of Galatea" and "The School of Athens"

ANSWER: Raphael (or Raffaello Santi or Raffaello Sanzio)

5. Identify these players from the Salem Witchcraft trials FTSNOP.

5 – She was a Caribbean slave whose stories and rituals helped to inspire the panic.

ANSWER: Tituba

10 – Tituba lived in the household of this unpopular Salem minister, who fanned local hysteria and whose daughter and niece were among the possessed girls.

ANSWER: Samuel Parris

15 – This 71-year old accused witch was considered "saint-like" in the community. Public disgust at her execution is credited turning the tide of belief against the accusers.

ANSWER: Rebecca Nurse

6. Identify these plays by Friedrich von Schiller, FTPE.

A) This work is a domestic drama concerned with the relations between the aging King Philip II of Spain, his third consort, Elizabeth of Valois, and his son by his first marriage.

ANSWER: Don Carlos

B) This two play cycle concerns the commander-in-chief of the armies of the Holy Roman Empire during the Thirty Years' War.

ANSWER: Wallenstein

C) In this work, the heroine, Joan of Arc, dies in a blaze of glory after a victorious battle.

ANSWER: The Maid of Orleans, or Die Jungfrau von Orleans

7. Get out your pith helmets and answer these questions about the career of Charles Gordon FTPE.

He gained the nickname "Chinese Gordon" after he and a band of mercenaries known as the Ever Victorious Army helped to put down this revolt.

ANSWER: The Taiping Rebellion

Gordon died in Khartoum at the hands of this man's followers. Born Muhammad Ahmed, he believed that he was the leader promised by the prophet Muhammad who would free all Muslims from oppression.

ANSWER: The Mahdi

The relief column under General Herbert Stewart was delayed at this January 17, 1885 battle. It was memorialized in Henry Newbolt's poem *Vitai Lampada*: "The sand of the desert was sodden red/ Red with the wreck of a square that broke/ The Gatling's jammed and the Colonel's dead/ And the regiment blind with dust and smoke."

ANSWER: Abu Klea

8. Identify the following questions related to the Millennium million-dollar Clay Institute unsolved problems from clues 5-10-15

Proving that this equality was true would make salesman very happy and top-secret encoders very nervous.

ANSWER: P = NP

Thought to be related to the distribution of prime numbers, the second of these is $\pi^2/6$.

ANSWER: Riemann Zeta Function

15) The 3 dimensional case of this problem is the only one that is unsolved. It deals with manifolds and asks is every 3-dimensional manifold with the same homotopy type as a 3-sphere

actually homeomorphic to a 3-sphere

ANSWER: The Poincare Conjecture

9. Identify these Thomas Hardy novels from characters, FTPE.

A) Gabriel Oak and Bathsheba Everdene

ANSWER: Far From the Madding Crowd

B) Arabella Donn and Sue Bridehead

ANSWER: Jude the Obscure

C) Damon Wildeva and Clem Yeobright

ANSWER: The Return of the Native

10. Give the musical key from its key signature, FTPE:

A. Four Sharps, major key

ANSWER: E major

B. Three flats, major key

ANSWER: E-Flat Major

C. No Sharps or Flats, minor key

ANSWER: A minor

11. For ten points, each, answer these questions about Ancient Egyptian creation myths.

a. In pre-dynastic Heliopolis, it was believed that this first God arose from the primordial waters of Nun. All other Egyptian deities as well as mankind were descended from him.

ANSWER: Atum

b. By the second dynasty, Atum became associated with this other God who had the head of a scarab. He was believed to be the creator of the universe as well as the Sun God.

ANSWER: Re (accept Ra)

c. In early Memphis, it was believed that this God of craftsmen had created the universe by simply speaking words. He is represented as a man in a tight white cloak carrying a staff.

ANSWER: Ptah

12. Identify this reactions or reagents named for scientists, FTPE.

A) These organometallic reagents containing magnesium or lithium won the scientist they are named for the 1912 Nobel Prize in Chemistry.

ANSWER: Grignard reagents

B) This reagent is a phosphorous compound containing three phenyl groups and is an ylide, containing opposite charges on adjacent atoms. It is used to change carbonyl compounds into alkenes, and its discovery won its namesake the 1979 Nobel Prize in Chemistry.

ANSWER: Wittig reagent

C) This reaction involving a nucleophilic attack on one of a pair of conjugated double bonds, especially if that nucleophile is an enolate, is named for the American chemist who discovered them.

ANSWER: Michael condensation/reaction/addition

13. Identify the ineffectual men from Edith Wharton novels, 5-10-15.

Trapped by snow and his hypochondriac wife, his one brief chance at happiness is ended by a sled crash.

ANSWER: Ethan Frome

10- Even after his wife has died, his old-fashioned sense of decorum keeps him from a reunion with Ellen Olenska, the love of his life.

ANSWER: Newland Archer

15- Although he loves Lily Bart, she rejects him because he works for a living. After Lily falls into disgrace, he is at first unwilling and then unable to save her.

ANSWER: Lawrence Selden

14. Europeans can be smelly, stupid, and annoying. They can also be useful, though rarely. Thus, name these smelly, stupid, and/or annoying Europeans.

For 10 points, name the foreign minister of France.

ANSWER: Hubert Vedrine

For 10 points, name the foreign minister of Germany, in trouble lately for the pictures of him beating a police officer in the 60s.

ANSWER: Joshka Fischer

For 10 points, name the leader of the British Tories.

ANSWER: William Hague

15. This organelle is known as the "powerhouse of the cell". FTSNOP.

A) First, FFP, name it.

ANSWER: mitochondrion

B) The electron transport chain is the main source of energy produced by

the mitochondrion. FTP, Name either of the two other more modern names by which that set of reactions is known.

ANSWER: chemiosmotic coupling/process or oxidative phosphorylation

C) F15P, this scientist won the 1978 Nobel Prize in Chemistry for his contribution to the understanding of biological energy transfer through the formulation of the chemiosmotic theory.

ANSWER: Peter Mitchell

16. Name these geographical features of Alaska 5-10-15.

a. (5) The peninsula that includes Nome is named after this man, who purchased Alaska in 1867.

ANSWER: William Henry Seward

b. (10) Famed for its gigantic brown bears, this island was the site of an early Russian settlement at Three Saints' Bay in 1784.

ANSWER: Kodiak Island

c. (15) This mountain chain runs west to east across the northern half of the state; its northern foothills form part of the Arctic National Wildlife Refuge.

ANSWER: Brooks Range

17. 30-20-10, name the movie from its actors and the roles they played.

30 - Oliver Platt as Harvey, David Duchovny as Brad and Stanley Tucci as Vernon. All are villains and/or snide yuppies.

20 - Bonnie Hunt as Alice Newton, Charles Grodin as George Newton. The Newtons are a married couple with three children and a house full of drool.

10 - Mike J. Reagan in a dogsuit and Kris, a lovable Saint Bernard, alternated in the title role.

ANSWER: Beethoven

18. Answer these questions on a variety of topics that are related only in that they are all lyrics from Gilbert and Sullivan's classic, "I Am the Very Model of a Modern Major General," FTPE.

a. About this theorem the Major General is "teeming with a lot of news." It states that, for any integer n , the n th power of the sum of two numbers a and b may be expressed as the sum of $n + 1$ terms of the form n choose r times a to the $n-r$ power times b to the r power.

ANSWER: Binomial Theorem

b. The Major General "can tell you every detail," of this man's uniform, which isn't much, considering he is said to have fought in the nude. In the first century, he was king of the British tribe of the Trinovantes, and led the Celtic resistance against the Roman invasion of Britain during the reign of Emperor Claudius.

ANSWER: Caractacus or Caradoc

c. The Major General "can tell at sight," this kind of rifle "from a javelin," it being any of a family of bolt-action rifles that were selected by the Prussian government in 1884 as their basic infantry weapon.

ANSWER: Mausier

19. Identify the author from works, 5-10-15.

5 - *I am Not Spock* and *I am Spock*

ANSWER: Leonard Nimoy

10 - *Beyond Uhura*

ANSWER: Nichelle Nichols

15 - *To the Stars*

ANSWER: George Takei

20. Name the author, 30-20-10.

30 - His writings were considered almost wholly lost to modern audiences until the twentieth century, when archaeologists began to recover papyrus texts from Egyptian mummy wrappings.

20 - Some of his works include *The Girl from Samos*, *The Arbitration* and *Dyskolos*, alternately translated as "The Grouch," "The Curmudgeon" and "Old Cantankerous."

10 - The foremost master of Greek New Comedy, his plays influenced Plautus and Terence, and through them the English dramatists of the seventeenth century.

ANSWER: Menander

OT 1. Identify the poet from works, 30-20-10.

30) "Death to Van Gogh's Ear" and "At Apollinaire's Grave"

20) "Please Master" and "Plutonian Ode"

10) "Kaddish" and "Howl"

ANSWER: Allen Ginsburg