

Princeton University Buzzerfest Resurrection: Episode IV, A New Hope

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Packet by Florida Atlantic (Raj Dhuwalia and Seth Finberg)

Tossups

1. Its coat of arms includes the three towers Guaita, Cesta, and Montale, which are atop Mount Titano. Rivers within its borders include the Re, Ausa, Fiumicello, and one which shares its name with the country. Founded around 350, it is currently led by Captains Regent Zafferani and Baciocchi, and its capital, with about 2500 people, has nearly a tenth of the national population. FTP, name this Most Serene Republic, located in the Apennines.

ANSWER: San Marino

2. He studied under Hegel in Berlin, but abandoned Hegelian idealism for a naturalistic materialism. In the 1830s, he attacked the concept of personal immortality and argued that Christianity had become irrelevant, in such works as *Abolard und Heloise*, *Thoughts on Death and Immortality*, and *On Philosophy and Christianity*. In 1841's *The Essence of Christianity*, he argued that God is merely the projection of man's inward nature. FTP, name this German "neo-Hegelian" philosopher whose views were later endorsed by Marx and Engels.

ANSWER: Ludwig Feuerbach

3. This phenomenon was discovered in 1913, and its explanation was one of the first applications of perturbation theory in quantum mechanics. A typically asymmetric type of line splitting, it has been far more useful in analyzing molecular rotation spectra than in atomic structure. FTP, name this effect in which spectroscopic line splitting is observed in powerful electric fields, named for its German discoverer.

ANSWER: the Stark effect

4. Its premiere was conducted by Liszt in Weimar, on the 101st anniversary of Goethe's birth. Set in the tenth century, it opens with a troubled situation in Brabant, where Gottfried has disappeared, and Friedrich accuses Elsa of fratricide. An unnamed knight defeats Friedrich in a fight and marries Elsa, after arriving via swan. In the end, the knight reveals that he is the son of Parsifal, and the swan is later transformed into Gottfried. FTP, name this Wagner opera, perhaps most famous for its Bridal Chorus.

ANSWER: Lohengrin

5. In 1850, this mathematical problem was proposed by Francis Guthrie, who could not prove his theorem about it. Because of its visual nature, the problem defied direct attack by computer, but it was solved in 1972 by Kenneth Appel and Wolfgang Haken, who proved Guthrie's theorem by constructing 1,936 possible maps with certain complicated properties and testing them with 1200 hours of computer time. FTP, name this problem, considered the first major non-number-crunching mathematical problem solved via computer.

ANSWER: Four-color problem or Four-color map (Prompt on: "color map" or variants)

6. After he aided Heracles, he was bound in chains for a year by Hades as punishment. He was portrayed as a squalid, mean old man with a bad temper or sometimes as a winged demon carrying a double hammer. The son of Erebus and Nyx, he demanded the fee of an obol from his passengers. FTP, name this ferryman of the dead across the river Styx.

ANSWER: Charon

7. In a recent survey, 63% of Americans thought this company was Japanese, while only 3% correctly guessed its home country. Begun in 1865 by Fredrik Idestam as a wood-pulp mill, it later manufactured paper, rubber, and chemicals, before diversifying into telecommunications in the 1960s. With its emphasis on creative design under chief designer Frank Nuovo, it overtook Motorola in 1998 to become the world leader in the cell phone market. FTP, name this Finland-based company which also sponsors the annual Sugar Bowl.

ANSWER: Nokia

8. On March 20th, 2001, this nation replaced Ricardo Lopez Murphy with its third Economy Minister in as many weeks, Domingo Cavallo. On the same day, students here staged an "Anger March" to protest the government's economic plans.

The Alliance Party hopes that Cavallo can cure the spiraling economic situation, just as he helped curb hyperinflation in the early 1990s. FTP, name this nation, in which Cavallo and President Fernando de la Rúa face opposition from the Peronist Party.

ANSWER: Argentina

9. This book did not become a classic until the 12th century, when it was published by Zhu Xi as one of the Four Books. A Confucian text concerning government, it maintains that the welfare of the common people comes before every other consideration. It consists of the sayings and doings of a 4th-century BCE philosopher who argued that when a ruler no longer practices benevolence and righteousness, the mandate of heaven is withdrawn. FTP, name this Chinese book, named for the Confucian philosopher sometimes known as "The Second Sage."

ANSWER: Mencius (or Meng-tzu or Mengzi)

10. The high-density type can be made via the Phillips process or the Ziegler process. The low-density type, made from high-pressure polymerization of a gas, is useful in making cables, wiring, and toys. Standard recycling codes for this polymer are 2 and 4 in the United States. FTP, identify this wide-ranging polymer, used most often in containers and plastic bottles, and made from hydrocarbon monomers.

ANSWER: polyethylene (Accept: polyethene, polythene, or PE)

11. First discovered in 1841, it covers up to 50 degrees of longitude and 7 degrees of latitude, though the latter dimension is shrinking. Its southern edge lies along the foot of the Queen Maud Mountains and Queen Alexandra Range, and its northern edge runs from the Edward VII peninsula to an island which shares its name with this feature. Currently, one can get from the mainland to Roosevelt Island by walking on it, but global warming may change that. FTP, name this ice shelf, which shares its name with the adjacent sea.

ANSWER: Ross Ice Shelf

12. After attending Grinnell College in Iowa, he moved to New York City, where he met Franklin Roosevelt. He served as federal administrator of Emergency Relief in 1933, administrator of the WPA from 1935-38, and Lend-Lease administrator in 1941. His official role during the war, in so far as he had one, was as a special presidential envoy on delicate foreign missions. FTP, name this advisor and close friend of FDR who lived in the White House for much of the Roosevelt administration.

ANSWER: Harry Hopkins

13. . In such books as *Escape from Freedom* and *Man for Himself* in the 1940s, he argued that specific personality types are linked to specific socioeconomic patterns. Breaking from the biologically-oriented theories of his time, he believed humans are products of culture, and that attempts should be made to create harmony between the drives of the individual and that individual's society. FTP, name this German-born American psychologist, author of *The Heart of Man*, *Beyond the Chains of Illusion*, and most famously, the 1956 bestseller *The Art of Loving*.

ANSWER: Erich Fromm

14. It begins in the childhood home of the woman who will be mother and grandmother of the clan, Clara del Valle, who has telepathic abilities and who is mute for nine years after the death of her sister, Rosa the Beautiful. She marries Rosa's former fiancée, Esteban Trueba, and later Truebas include Blanca, Jaime, Nicolas, and Alba. Inevitably, the politics of the outside world creep into their "big house on the corner," with tragic consequences. FTP, name this 1985 novel, the first novel of Isabel Allende.

ANSWER: The House of the Spirits or La Casa de Los Espiritus

15. The crowd reflected in the background is watching an acrobatic performance, of which only a trapezist's feet can be seen. The carefully-rendered foreground objects include English Bass beer, a bowl of oranges, and several bottles of champagne. Critics in 1882 ridiculed the so-called "mistake" of failing to show the customer who is seen in the mirror talking to the melancholy barmaid, whose stillness contrasts with the lights, smoke, and motion of the background. FTP, name this painting, the last large canvas by Edouard Manet.

ANSWER: The Bar at the Folies Bergere or Le Bar Aux Folies Bergere

16. In 1573, upon the death of Reginald Wolfe, he took over a project to write a massive history of the world. With the

assistance of Richard Stanihurst and William Harrison, he completed a scaled-down version of the project before his death in 1580. The history fills five massive volumes with the history of the British Isles, and it arrived at a crucial time in the history of British literature. FTP, identify this historian whose Chronicles of England, Scotland, and Ireland provided the source material for many of Shakespeare's plays.

ANSWER: Raphael Holinshed or Hollingshead

17. In one of his first appearances, he pays to see an elephant but instead gawks at a "pointy haired little girl." His kids include Tiffany, Heather, Cody, Dylan, Dermot, Jordan, Taylor, Britney, Wesley, Rumor, Scout, Cassidy, Zoe, Chloe, Max, Hunter, Kendall, Kaitlin, Noah, Sasha, Kyra, and Q-Bert, and he saves 300 pretzel coupons so they'll have dinner. He has apparently eaten a skunk, according to the brief tune about him. FTP, name this Simpsons character, whose name completes the rhyme, "Most folk'll never lose a toe, and then again some folk'll."

ANSWER: Cletus, the Slack-Jawed Yokel

18. This dynasty's rulers included Yazid and Marwan II, whose defeat ended the dynasty. Al- Walid ruled during the building of the Great Mosque in Damascus 83 years after the Hegira, and after they were overthrown, Abd al-Rahman escaped to Cordoba and founded a new emirate in 756. FTP, name this dynasty whose Damascus caliphate was ended in 750 AD by the Abbasids.

ANSWER: Umayyad or Omavvad dynasty

19. A resident of Frederick, Maryland, she was 96 years old when the fictional encounter took place. Despite this woman's display of a Union flag, Stonewall Jackson ordered Confederate troops not to harm her. FTP, name this title character of the John Greenleaf Whittier poem that includes the famous lines, "'Shoot if you must this old, grey head, / But spare your country's flag,' she said."

ANSWER: Barbara Frietchie

20. Located on an island, the head of its works department is Mr. Alquist, and its general manager is Harry Domin. Helena Glory is sent there by the Humanity League on a mission to gain better living conditions for its occupants, but she ends up staying with Domin. Ten years later, the humans are overthrown by its occupants, who now have human concerns because Helena persuaded Dr. Gall to give them souls. FTP, name this factory, which also forms the title of a 1920 drama by Karel Capek (CHA-pek).

ANSWER: Rossum's Universal Robots Factory

OT 1. Barnard's Loop, M78, the Witch Head Nebula, Mintaka, M43, the Horsehead Nebula, and Bellatrix are all found here. The namesake nebula, M42, is a major stellar nursery containing many protoplanetary disks. FTP, name this winter constellation which also includes the seventh and tenth brightest stars in the night sky, Rigel and Betelgeuse.

ANSWER: Orion

OT 2. This phenomenon was not discovered until 1928 because of its low intensity. A useful tool in chemical analysis, it creates a characteristic spectrum for a material when monochromatic light passes through the material and undergoes scattering. Not only does this type of scattering produce a change in frequency and phase of light, but it may be inelastic or superelastic. FTP, identify this effect named for the Indian physicist who won the 1930 Nobel Prize for Physics.

ANSWER: Raman effect or scattering

OT 3. She never appears onstage, but she is probably the most distinctive character in Thomas Morton's 1798 play Speed the Plough. In the play, Mrs. Ashfield is always concerned about what this character will say. In modern usage, the name has come to represent the censorship of public opinion which is at work in everyday life. FTP, name this character.

ANSWER: Mrs. Grundy

Bonuses

1. Identify the following concerning special relativity, FTSNOP.

A. 15 – One famous problem in relativity is this one, developed by Taylor and Wheeler, which addresses the possibility of fitting a 10-meter object into a 5-meter space by moving the object at high velocity.

ANSWER: Pole-and-Barn or Barn-and-Ladder Paradox or Problem (accept variants)

B. 5 – In the pole-and-barn paradox, the 10-meter pole can fit into the 5-meter barn because of this phenomenon, in which the pole's dimensions appear physically distorted at high velocity when viewed from a fixed frame.

ANSWER: Length contraction or Lorentz-Fitzgerald contraction

C. 10 – This is the standard term for a trajectory in spacetime, plotted on a *ct* versus *x* graph.

ANSWER: worldline

2. Identify these significant ships in American history, FTPE.

The ship which John Paul Jones captained to victory against the *Serapis*.

ANSWER: Bonhomme Richard

On June 10, 1772, this British ship was burned by rebellious Rhode Islanders.

ANSWER: Gaspee

C. The ship on which Confederate ambassadors Mason and Slidell were traveling when it was stopped by the Union *San Jacinto* in November 1861.

ANSWER: Trent

3. Name these island nations from a list some of their islands FTP, or from capitals F5P.

A. 10 – Nukulailai and Nanumea

5 – Funafuti or Fongafale

ANSWER: Tuvalu

B. 10 – Anjouan and Moheli

5 – Moroni

ANSWER: Comoros

C. 10 – Kadavu, Taveuni, Vanua Levu, and Vita Levu

5 – Suva

ANSWER: Fiji

4. Several Republican-held senate seats went to the Democrats in the 2000 elections. Given a state, name the Democratic newcomers and the defeated Republican incumbents; 5 points per correct answer.

Washington

ANSWER: Maria Cantwell and Slate Gordon

Michigan

ANSWER: Debbie Stabenow and Spencer Abraham

Minnesota

ANSWER: Mark Dayton and Rod Grams

5. Name these British figures from World War I, for 15 points each.

A. This man was British Foreign Secretary from 1905-16, and he did his utmost to keep Britain from being dragged into a continental war. He may be most famous for the quote, "The lamps are going out all over Europe; we shall not see them lit

again in our lifetime.”

ANSWER: Sir Edward Grey (Do not accept “Earl Grey”)

B. He commanded the British Expeditionary Force from the outbreak of war until December 1915. His battles at Loos and Festubert are famous for their needlessly high casualty rates, and his follies were chronicled in the stage production “Oh, What a Lovely War” in the 1960s.

ANSWER: Sir John French, 1st Earl of Ypres

6. Name these works of Nietzsche from brief description, 15 point each.

A. Originally to be titled “A Psychologist’s Leisure,” this 100-page summary of Nietzsche’s philosophy includes the subtitle “How to Philosophize with a Hammer.” Among other things, it addresses the moral goals of Germans and the four errors of Christianity.

ANSWER: Götzendämmerung or Twilight of the Idols

B. Nietzsche’s first book, this 1872 work discusses the Apollonian and Dionysian in its first 15 sections, while the final 10 sections focus on Wagner.

ANSWER: The Birth of Tragedy from the Spirit of Music, or Die Geburt der Tragödie aus dem Geist der Musik

7. . Identify these characters from the myth of Cadmus, FTSNOP.

A. FTP, name the king of Tyre and father of Cadmus, who sent Cadmus to find his kidnapped sister.

ANSWER: Agenor

B. F5P, name that sister, whom Zeus had carried away while in the form of a bull.

ANSWER: Europa

C. F5P, name the daughter of Ares and Aphrodite who became the wife of Cadmus.

ANSWER: Harmonia

FTP, name the king of Phocis in whose herds Cadmus found the cow he was to follow.

ANSWER: Pelagon

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

30 – His poem “Falling” renders the consciousness of a 29-year-old stewardess as she fell to her death after an emergency door sprang open.

20 – He began using “split lines” in *Buckdancer’s Choice* in 1965, and earlier collections include *Helmet* and *Into the Stone*. He regarded poetry as the center of his career, though it may not be his best-known genre.

10 – This Georgia-born author wrote *Deliverance*.

ANSWER: James Dickey

9. Identify these slave revolts, none of which are Nat Turner’s. FTP each.

A. In 1800, this slave plotted with Jack Bowler to seize the arsenal at Richmond. However, a torrential thunderstorm washed out a key bridge, foiling his plans.

ANSWER: Gabriel Prosser

B. After purchasing his freedom, this ex-slave began plotting a rebellion against the slaveowners of Charleston in 1821. However, he was hanged after the plot was leaked to authorities.

ANSWER: Denmark Vesey

C. In 1841, a group of slaves bound for New Orleans from Virginia took control of the ship and sailed for Nassau, where they became free under British law. The incident is named for the ship on which it occurred.

ANSWER: Creole incident or case

10. Answer these questions about the geography of Nova Scotia, FTSNOP.

F5P, identify its capital.

ANSWER: Halifax

FTP, name the largest island in Nova Scotia.

ANSWER: Cape Breton Island

C. FTP, name either of the two large bays on either side of the strait of Canso, which separates Cape Breton Island from the rest of Nova Scotia.

ANSWER: George Bay or Chedabucto Bay

D. F5P, name either of the two large bays which separate western Nova Scotia from New Brunswick.

ANSWER: Bay of Fundy or Chignecto Bay

11. Name the Paleozoic Periods characterized by the following events, FTP each.

A. Earliest terrestrial plants and animals appear, and scorpion-like eurypterids are their peak of development.

ANSWER: Silurian

B. Earliest fishes appear; and coelenterates, mollusks, and echinoderms expand in variety.

ANSWER: Ordovician

C. Sharks and amphibians are abundant, earliest reptiles appear, scale trees and seed ferns are numerous, and great coal-forming forests thrive.

ANSWER: Carboniferous (Prompt on "Pennsylvanian" or "Mississippian.")

12. Name these ancient naval battles, FTP each.

A. This was the first major encounter in 480 BCE between the Greek and Persian navies, as Themistocles led the Greeks to a small victory; it would be followed by the much greater victory at Salamis.

ANSWER: Artemesium

B. In this devastating 405BCE victory, the Spartans definitively crushed the Athenian navy.

ANSWER: Aegospotami

C. In 31BCE, Octavian defeated Mark Antony's navy, effectively ending the power struggle among the Second Triumvirate.

ANSWER: Actium

13. Name these effects from psychology, for 15 points each.

A. Named for a 1914 play, this refers to the phenomenon whereby people come to behave in ways that correspond to others' expectations of them. It is often used synonymously with the term "self-fulfilling prophecy."

ANSWER: Pvgmalion effect

B. Named for the industrial plant where it was first observed by Homuns, this effect refers to short-term improvement brought about by any change, as in the improved productivity of the plant during a research study.

ANSWER: Hawthorne effect

14. Identify the Euripedean plays from brief description, FTP each.

A. In his earliest extant play, the title character voluntarily descends to Hades to save Admetus; she is summarily rescued by a drunken Heracles.

ANSWER: Alcestis

B. In this 413 BC play, the title character gains revenge against her mother, Clytemnestra, by goading Orestes into committing the murder.

ANSWER: Electra

C. This late play deals with the tragic punishment of Pentheus, king of Thebes, who imprisons Dionysus and is subsequently torn to pieces by his own mother, Agave.

ANSWER: The Bacchae or Bacchantes

15. Given a mammal, provide its taxonomic order, FTSNOP.

5: Dolphin

ANSWER: Cetacea

10: Tapir

ANSWER: Perissodactyla

10: Aardvark

ANSWER: Tubulidentata

5: Gavin Macleod

ANSWER: Primates

16. Provide the terms from condensed matter physics, given a brief description.

A. 5: In band theory, this is an empty state in an otherwise filled band, and can be treated as if it were an electron but with charge of +e.

ANSWER: hole

B. 10: All quantum states whose wave vectors lie inside this type of surface are occupied by electrons, while all states outside are empty. The surface has uniform energy, and it is named for a Nobel Prize winner.

ANSWER: Fermi surface

C. 15: Named for another Nobel Laureate, this is a wave of an electron in a crystal. Its overall amplitude resembles that of an electron moving freely in space, but a graph of it more resembles something seen on a heart monitor than it resembles a sine wave.

ANSWER: Bloch wave

17. Given a Shakespearean play, name the character who speaks the greatest number of lines in that play, FTSNOP. Hint – it's not the title character.

F5P, *The Taming of the Shrew*

ANSWER: Petruchio

F5P, *Henry IV Part I or Part II*

ANSWER: Falstaff

FTP, *Othello*

ANSWER: Iago

FTP, *Love's Labours Lost*

ANSWER: Berowne

18. Hope you followed the rash of upsets in the opening round of the 2001 NCAA men's basketball tournament! For 5 points each, with a bonus of 5 for all correct, given a high-ranked team and their seeding, name the underdog who knocked them out.

Ohio State, a 5 seed

ANSWER: Utah State

Indiana University, a 4 seed

ANSWER: Kent State

University of Wisconsin, a 6 seed

ANSWER: Georgia State

Iowa State, a 2 seed

ANSWER: Hampton

University of Virginia, a 5 seed

ANSWER: Gonzaga

19. Name the jazz artist from brief description, FTP each.

A. The dominant bassist of the late 50s and early 60s, famous compositions include "Goodbye Pork Pie Hat."

ANSWER: Charlie Mingus

B. This Belgian-born guitarist was a master of improvisation, featuring his famous kick-ass runs of sixteenth notes; his best-known works include 1934's "Tiger Rag," and he was part of the "Hot Club" with Stephane Grappelli.

ANSWER: Jean-Baptiste "Django" Reinhardt

C. She became popular while singing with Billy Eckstine's band in the mid-1940s, and in 1945 recorded "Lover Man" with Charlie Parker and Dizzy Gillespie. She often sang with the bands of Duke Ellington and Count Basie.

ANSWER: Sarah Vaughan

20. Identify these anthropologists, 5-10-15.

A. A longtime professor at Columbia, he pioneered the scientific approach to anthropology and made many trips to study the Kwakiutl.

ANSWER: Franz Boas

B. He and his workers found over 400 hominid fossils at Koobi Fora. The co-author of *Origins* and author of *The Making of Mankind*, he argued that *Homo erectus* evolved from *Homo habilis*.

ANSWER: Richard Leakey

C. This Swiss-born anthropologist made many studies of southwestern and Mexican cultures, and uncovered valuable information on pre-Columbian cultures in Peru and Bolivia from 1892-1903. A national monument in New Mexico is named for him.

ANSWER: Adolph Bandelier

OT 1. Identify these American artists, FTP each.

A. Working in both Neoclassical and Romantic styles, this Pennsylvanian's most famous works include *Death on a Pale Horse* and *The Death of General Wolfe*.

ANSWER: Benjamin West

B. A painter and theorist of abstract expressionism, his works are characterized by amorphous shapes in austere colours. He edited the *Documents of Modern Art* series and painted the *Elegies to the Spanish Republic* series.

ANSWER: Robert Motherwell

C. In the mid-1930s, this New Yorker evolved his characteristic work – a glass-fronted box containing found objects, such as photographs, printed material, and film fragments, one example of which is *Medici Slot Machine*.

ANSWER: Joseph Cornell