Packet by Berkeley Paul (Paul Lujan, David Farris, Stephen Lee, Kenny Easwaran)
Tossups

1. The title object, created by Basil Hallward, lasts for more than eighteen years, during which time James Vane attempts to locate its owner. Vane finally does so, but his quarry is able to convince him that he is not the man he's looking for, and so Vane does not kill him in revenge for his sister Sibyl, who committed suicide after being abandoned by this man. Despite Vane's death a week later, the man still decides to destroy the title object, only to meet his own death. FTP, what is this Oscar Wilde story where the title object, not the man himself, ages?
      Answer: the **Picture of Dorian Gray**

2. Three of the workers in its COFO branch, Andrew Goodman, James Chaney, and Michael Schwerner, were murdered in 1964 while registering voters in Mississippi, a project led by Bob Moses. John Lewis headed it until his electoral defeat by Stokely Carmichael in 1966, who took it in a more radical direction. For 10 points—name this civil rights organization from whose name Carmichael's successor H. Rap Brown removed the word "nonviolent."
      Answer: **SNCC** ["snick"] or (Temporary) **Student Nonviolent** (or **National**) **Coordinating Committee**

3. An important prediction of relativity is that this effect will also occur in the transverse direction for light, while classical theory only predicts the longitudinal effect. It can be used to resolve the twin paradox, and can be viewed as a special case of time dilation. It's more familiar for sound, where the equation for it takes a different form, due to the presence of a medium which motion can be measured relative to. First experimentally measured by placing trumpeters on a rail car, FTP, what is this effect in which the frequency is changed if the source or observer is moving?
      Answer: **Doppler** effect (or shift)

4. Its last exhibit will be an Armando Revern retrospective. Among its first are the time-themed Tempo and a display of 6 classic cars. It is housed in a gallery designed by Michael Maltzen in a building that once housed a Swingline Staple factory, where its permanent collection will be until a Yoshio Taniguchi building is opened in 2005 in Midtown. For 10 points—name this non-Manhattan satellite of a prominent New York City art museum.
      Answer: **MOMA QNS** or Museum of Modern Art, **Queens**

5. He accosts the protagonist of the novel in which he appears after a lecture on Cain and Abel, and reinterprets that story for him. He last meets the protagonist in an army hospital, and tells the protagonist he can summon him forth against Franz Kromer with their kinship symbolized by the mark of Cain. For 10 points—name this title character, whose first name is Max, of the novel about Emil Sinclair's youth written by Hermann Hesse.
      Answer: Max **Demian**

6. The losing side's forces, concerned about a night attack, stayed up all night the night before this battle, despite the fact that they were on a field specially prepared to give them an advantage and vastly outnumbered the enemy. When the enemy attacked their left flank, held by the Bactrian cavalry, the chariots, for which the field had been flattened, proved ineffectual against the Macedonian phalanxes, which quickly broke through the line and caused the army to flee. For 10 points, name this 331 BCE battle, Alexander the Great's third and final defeat of Darius.
      Answer: **Gaugamela** (or **Arbela**)

7. His book *Political Liberalism* argued that a just state should secure certain basic liberties for its citizens, and beyond that merely remain value-neutral as to which "theories of the good" its citizens might pursue. However, he is much more well-known for a book published two decades earlier, in which he suggested that we could understand such a just society by imagining what society people would design if their actual roles in this society were to be concealed behind a "veil of ignorance." FTP, name this Harvard professor, author of *A Theory of Justice*.
      Answer: John **Rawls**

8. After being drafted #51 overall in the 1984 entry draft, he played only one game in 1984-85, but was 23-18-3 in the 1985-86 season and made the NHL All-Rookie Team. In the postseason, he became the youngest player to win the Conn Smythe trophy at the age of 20 by leading the Canadiens to the Stanley Cup championship, the first of

three Conn Smythes he would capture in his career. Traded in 1995 to Colorado, he's shown no signs of decline, although he hasn't added to his three Vezina trophies there. For ten points, who is this Canadian goaltender, who recently surpassed Terry Sawchuk as the all-time wins leader?

Answer: Patrick **Roy** (pron. "rwah")

9. 47 Tucanae, one of the brightest and nearest of these objects, lies 5000 parsecs away and as a diameter of about 60 parsecs. There are about 100 known in the Milky Way, most of them far outside the galactic plane in a roughly spherical distribution. They tend to be very old, as old as 13 to 15 billion years; in fact, some measurements have problematically estimated their age as greater than the age of the universe. Best exemplified by M13, the Hercules Cluster, for ten points, what are these spherical agglomerations of stars?

Answer: **globular cluster**s (prompt on just "cluster")

10. Among the books he never wrote are *Confessions of a Thug*, *A Vindication of the Cabala*, *Les problèms d'un problème*, *The Secret Mirror*, *Kristus och Judas*, *The God of the Labyrinths*, *The Conversation with the Man Called Al-Mu'tasim*, and *A First Encyclopedia of Tlön*. These works do, however, appear in stories that he did write, in which he often invents lengthy fictional histories for them. For ten points, name this author, whose works he did write include *El Aleph* and *Ficciones*, which includes "The Garden of Forking Paths."

Answer: Jorge Luis **Borges**

11. A recent BBC report revealed that this film was played to Nationalist prisoners in the Spanish Civil War as a means of torture, along with jail cells designed along Surrealist themes. Beginning with a "prologue" on a balcony at night, and remembered today for its still-shocking image of a razor blade slicing open a human eyeball, for ten points, what is this Surrealist film produced by Luis Buñuel and Salvador Dalí and named for an Iberian animal?

Answer: An **Andalusian Dog** or Un **Chien andalou**

12. This class of plant hormones promotes the enlargment of certain fruits, including apples and peaches. It was originally isolated in the 1930s from a fungus that infects rice plants. The fungus causes what is nicknamed by Japanese farmers as "foolish seedling disease," causing plants to grow to be abnormally tall and spindly, and thus susceptible to being knocked down by wind or the weight of the rice. It promotes *both* an increase in the size of individual cells and an increase in the rate of cell division. FTP, identify this class of plant hormones which are neither auxins nor cytokinins.

Answer: **gibberellin**s

13. They are compared to "girls on hands and knees that throw their hair/Before them over their heads to dry in the sun," after having endured winter storms that "bend them down to stay," not springing back upright after having stayed down so long. The narrator would much rather a boy "too far from town to learn baseball" bend them, as he once did, and digresses about love and human resilience before concluding that "one could do worse than be a swinger of" these objects. For ten points, name these titular trees, subject of a poem by Robert Frost.

Answer: **Birches**

14. His fourth symphony opens with a loud brass fanfare motif that recurs many times, said to represent fate coming after him. He was accused of being "too Germanic" a composer, but this did not stop him from gaining his greatest supporter, a wealthy widow, whom he never met in person, but who paid him a stipend for the rest of his life. This support, and several successful operas and ballets, including *Sleeping Beauty* and *The Queen of Spades*, did not help him emotionally, however, as evidenced by his sixth symphony. FTP, whose "Pathetique" symphony is said to be a response to societal difficulties with his homosexuality?

Answer: Pyotr Ilyich **Tchaikovsky**

15. Some parts of this series of computer games are technically illegal in the United Kingdom because of their depiction of violence against children. The originator of the games was once famed for his extravagant Halloween parties in which his entire mansion was filled with monsters, traps and treasure; today his chief involvement in gaming is with his online RPG in Asia. The middle games in this series are heavily influenced by the Wizard of Oz, with the Scarecrow, Tin Man, and Lion represented by the principles of Truth, Love, and Courage, respectively. FTP, identify this series of games which features such elements as the Eight Virtues, the Fellowship, Lord British, and the adventures of the Avatar.

Answer: **Ultima**

16. On a manifold, a structure of this type has a vanishing Nijenhuis tensor; this is automatically true for 2-manifolds, which are all Riemann surfaces. When the plane is given such a structure, the natural objects of study are the analytic, or holomorphic, functions. For 10 points—what name is given to mathematical systems incorporating both real and imaginary numbers?

Answer: **complex**

17. Among the locations that he visits includes one where he breaks some branches from a bush in preparation for a sacrifice, only to find the bush is a murdered kinsman of his, and an island which used to be floating until it was anchored to the seabed by adamantine chains. On the final leg of his journey, only one person, the helmsman Palinurus, perishes, but many more die in his succeeding wars with Turnus after they complete their journey from Carthage. For ten points, name this son of Aphrodite and Anchises, the hero of a Virgil epic.

Answer: **Aeneas**

18. One of the three original most important gods in the Vedas, he is praised in hymns as "divine minister of sacrifice, Invoker, greatest bestower of wealth." He and Indra seem to be derived from proto-Indo-European gods, although Soma, the third member of their "trinity" does not. Later, some of his aspects were adopted by the destructive powers of Shiva, although his destructive potential is always connected with the powers of communication with the gods and sacrifices. FTP, name this Vedic god of sun and fire.

Answer: **Agni**

19. After receiving a degree in chemical engineering from MIT in 1913, he became an engineer for the Hartford Fire Insurance Company. On this job, he noticed that misleading terminology often caused disasters, as when flipping a cigarette butt into an 'empty gasoline canister' that was really filled with flammable gases caused an explosion. His interest in this phenomenon led him to study linguistics at Yale starting in 1931, to attempt to understand this connection between language and culture. FTP, name this student of Edward Sapir, whose study of the Hopi vocabulary for time led him to make his famous hypothesis of linguistic determinism.

Answer: Benjamin Lee **Whorf**

20. Its practice among the Kikuyu was connected with the anticolonial movement due to British attempts to ban it. The three types are the sunna, excision, and pharonic, aka infibulation; the last leaves the vulva sealed up and requires surgery before childbirth and intercourse. FTP, in which practices are women's genitals modified?

Answer: **female circumcision** or **female genital mutilation** or **FGM**

21. This chemical is part of a family of compounds that the chemical industry introduced in the 1960s as an environmentally-sound replacement for similar chemicals that were not readily biodegradable. It has many uses, being found in toothpaste, shampoo, and many consumer products. There is an urban legend that mades a wildly exaggerated claim about its toxicity. These claims are not entirely false, however, as it can harm or kill living cells by disrupting their cell membranes. It is also used by biochemists in the gel electrophoresis of proteins. FTP, identify this detergent whose acronym is shared by a Vietnam-era radical group.

Answer: **sodium laureth sulfate** or **sodium dodecylsulfate** or **SDS**

22. Its greatest fame has derived from being the site of Muhammad Ali's 1965 defeat of Sonny Liston, as well as the home of Bates College. It's a former mill town, most of whose residents descend from French Canadians, but it gained notoriety in 2002 when Laurier Raymond, its mayor, asked an immigrant community there to stay away. For 10 points—name this Maine town of 36,000 whose 1100-strong Somali population has caused racial strife.

Answer: **Lewiston**, Maine

23. It was plundered in 614 by Chosroes II of Persia, and regained by Heraclius of Eastern Roman Empire upon defeating him in 627, and returned to Jerusalem. Found in 326 by Constantine's mother Helena, it was lost either in 638 when taken by the Arabs or when taken in the third crusade by Saladin. For 10 points—many people claim to have pieces of what Christian relic, on which Jesus was crucified?

Answer: the **True Cross**

Cardinal Classic 13
Packet by Berkeley Paul (Paul Lujan, David Farris, Stephen Lee, Kenny Easwaran)
Bonuses

1) Answer the following questions about the Spanish Armada FTSNOP.
1. (5 points) What Spanish king launched the Armada?
        Answer: **Philip II**
2. (5 points) What English sailor, a vice admiral in the fleet, severely delayed the Armada with his raid at Cadiz where he "singed the king's beard"?
        Answer: Sir Francis **Drake**
3. (10 points) What Spaniard commanded the Armada?
        Answer: the Duke of **Medina Sidonia**
4. (10 points) The main battle was fought August 8, 1588 at this location off Calais.
        Answer: **Gravelines**

2) Identify the following NP-complete problems FTPE.
1. The classic NP-complete problem is this, which seeks to minimize the distance of a path through a graph that visits all vertices.
        Answer: the **traveling salesman** problem
2. This classic Windows game, where the player uses logic to find hidden objects, was recently shown to be NP-complete.
        Answer: **Minesweeper** [accept also "Mindsweeper," since that's a more descriptive title]
3. This first-identified NP-complete problem requires assigning true/false values to a set of Boolean variables such that a given expression is true.
        Answer: the **satisfiability** problem

3) Identify the Shakespearean character from their first lines FTPE.
1. "Three thousand ducats. Well."
        Answer: **Shylock**
2. "Thou art so fat-witted with drinking of old sack, and unbuttoning thee after supper, and sleeping upon benches after noon, that thou hast forgotten to demand that truly which thou wouldst truly know."
        Answer: Prince **Hal** (or **Harry**; accept also **Henry V**) (to Falstaff, of course)
3. "A little more than kin and less than kind."
        Answer: **Hamlet**

4) Answer these questions about the physics of baseball FTPE.
1. When the bat stings your hands, it's because of standing waves set up in the bat by the impact of the ball. The stinging will be greatest if your hands are located at this kind of point.
        Answer: **antinode**
2. A big factor in the "juiced ball" debate is this number, which is defined by the ratio of the final relative velocity to the initial relative velocity.
        Answer: coefficient of **restitution** (accept also "elasticity", though reluctantly)
3. A curveball curves because of this effect, where a rotating body moving through a fluid is deflected laterally.
        Answer: **Magnus** effect

5) Identify these ballets with rocky histories FTPE:
1. This 1913 ballet famously induced violent rioting at its premiere.
        Answer: the **Rite of Spring** (or Le **Sacre du printemps**)
2. This 1938 Prokofiev ballet was initially rejected by the Kirov Theatre, since they feared that the ending would be problematic because "living people can dance, the dying cannot."
        Answer: **Romeo** and **Juliet**
3. This Ravel ballet was commissioned for Sergei Diaghilev's Ballet Russe, and was a failure upon its 1912 premiere, possibly because Ravel ignored the conventions of ballet in creating his "choreographic symphony."
        Answer: **Daphnis** et (and) **Chloë**

6) For ten points each, identify the following linguists from clues.

1. This Montreal-born colleague of Noam Chomsky at MIT is most famous for his 1994 book *The Language Instinct*, which made Chomsky's ideas of an innate knowledge of language widely accessible to the public.
    Answer: Steven **Pinker**
2. This man, more well-known for his literary work, was the first to develop a theory of formalized sound change in a law which now bears his name.
    Answer: Jacob **Grimm**
3. This University of Pennsylvania socio-linguist is one of the most prominent in the field. He got his start describing the dialect spoken on Martha's Vineyard, and has done important work on the growing differences between vernaculars in inner cities, particularly those of black people in Harlem and Philadelphia.
    Answer: William **Labov**

7) You would think that after coming within six outs of winning the World Series, the Giants wouldn't want to change much, but you'd be wrong. Answer the following about new faces in San Francisco FTSNOP:
1. (5 points) The changes started at the top, where manager Dusty Baker was replaced by this former Expo manager.
    Answer: Felipe **Alou**
2. (5 points) To fill the void left by Jeff Kent, the Giants grabbed this second baseman from across the bay in Oakland, where he had played the second half of 2002 after being traded from the White Sox.
    Answer: Ray **Durham**
3. (10 points) Bringing back a familiar face, the Giants signed this first baseman to a minor-league contract. He played for them in 2000 after coming over in a trade.
    Answer: Andres **Galarraga** (prompt on "the Big Cat")
4. (10 points) As part of their outfield makeover, the Giants signed this low-average slugger who hit 34 homers for Toronto in 2001 but only 18 last year.
    Answer: Jose **Cruz** Jr.

8) Identify the Japanese author from works FTPE.
1. A Thousand Cranes; Snow Country
    Answer: Yasunari **Kawabata**
2. Nip the Buds, Shoot the Kids; The Silent Cry
    Answer: Kenzaburo **Oe**
3. Secret Rendezvous; Woman in the Dunes
    Answer: Kobo **Abe**

9) Identify the sculptors from works FTPE.
1. St. Peter's Cathedral, Ecstasy of St. Teresa
    Answer: Giovanni **Bernini**
2. Nymph of Fontainebleau, Perseus with the Head of Medusa
    Answer: Benvenuto **Cellini**
3. Town Hall of Toulon, Milo of Crotona
    Answer: Pierre **Puget**

10) Identify these proteins found in cells FTPE.
1. These enzymes can join or repair DNA molecules by forming phosphodiester bonds.
    Answer: **ligases**
2. These strongly basic proteins bind to DNA and help to package and stabilize it.
    Answer: **histones**
3. This protein known for its triskelion shape forms molecular cages on the exterior of coated vesicles.
    Answer: **clathrin**

11) Name these works that blur the boundaries of writing, reading, and criticism for the stated number of points.
1. (10 points) This critical work work includes and dissects the Balzac novella "Sarrasine".
    Answer: **S/Z**
2. (10 points) This is an analogue of *S/Z* for a fictional work. It includes the text of the title poem, supposedly written by John Shade, and analyzes it from the perspective of the Zemblan critic Charles Kinbote.
    Answer: **Pale Fire**
3. For 5 points each, name the authors of *S/Z* and *Pale Fire*.

Answer: Roland **Barthes** and Vladimir **Nabokov**

12) Name the following about the formation of West Germany for 10 points each.
1. What was the name of its constitution, ratified by the country's 11 *Länder* in 1949?
    Answer: **Basic Law** (or **Grundgesetz**)
2. What North Rhine-Westphalia university town and birthplace of Beethoven became the capital of West Germany?
    Answer: **Bonn**
3. What first chancellor of West Germany served until 1963?
    Answer: Konrad **Adenauer**

13) Answer the following questions about number theory useful in primality testing for 10 points each.
1. This theorem states that if p is prime, then a to the (p-1) power is congruent to 1 mod p. It is a starting point for primality testing.
    Answer: **Fermat's little** theorem
2. While Fermat's little theorem is necessary for primality, it is not sufficient. This is a composite number which satisfies Fermat's little thorem for some base a.
    Answer: Fermat **pseudoprime**
3. Even worse, there are numbers which satisfy Fermat's little theorem for *any* relatively prime choice of a yet are composite. Name them for a final 10 points.
    Answer: **Carmichael** numbers

14) For 10 points each, given a city, name the nearest world capital (excluding the capital of its own country). You'll get 5 if you need the country.
1. (10) Guantanamo Bay, United States
(5) Jamaica
    Answer: **Kingston**
2. (10) Cadiz, Spain
(5) Morocco
    Answer: **Rabat**
3. (10) Campeche, Mexico
(5) Belize
    Answer: **Belmopan**

15) Name these groups from *The Simpsons* for 10 points each.
1. When they were 12, Moe, Lenny, Carl, and Homer agreed around a campfire to call themselves this.
    Answer: The **Moe Syzslak Experience Featuring Homer**
2. Homer briefly leads this Masonic group, famously responsible for holding back the electric car and making Steve Gutenberg a star.
    Answer: **Stonecutters**
3. The family is brainwashed into joining this generically-named cult, led by the generically-titled "The Leader." Homer flees when he discovers that drinking beer isn't allowed.
    Answer: **Movementarians**

16) Identify the poem from lines, 30-20-10.
1. (30 points) "My vegetable love should grow / Vaster than empires, and more slow"
2. (20 points) "The grave's a fine and private place / But none, I think, do there embrace"
3. (10 points) "But at my back I always hear / Time's wingèd chariot hurrying near"
    Answer: **To His Coy Mistress** (Andrew Marvell)

17) Identify these Hall of Fame football players FTPE.
1. This running back nicknamed "Sweetness" finally earned a Super Bowl ring in 1986 near the end of his career with the Chicago Bears.
    Answer: Walter **Payton**
2. This center who played for the Pittsburgh Steelers throughout the 1980s fell on hard times after leaving football and was homeless for a while despite his earlier stardom.
    Answer: Mike **Webster**

3. He was not an assassin or a coach, but rather a cornerback for the San Francisco 49ers from 1961 to 1976.
>   Answer: James Earl (Jimmy) **Johnson**

18) Name the end product of the indicated chemical reactions FTSNOP.
1. (5 points) The complete hydrogenation of butadiene with a palladium catalyst yields this gas.
>   Answer: **butane**
2. (5 points) The reaction of ethyl alcohol with concentrated hydrochloric acid yields this organic compound.
>   Answer: **ethyl chloride** or **chloroethane**
3. (10 points) The oxidation of toluene with potassium permanganate yields this organic compound.
>   Answer: **benzoic acid**
4. (10 points) The reaction of acetone with amalgamated zinc and hydrochloric acid yields this organic compound.
>   Answer: **propane**

19) Name the following about a twentieth century art form for 10 points each.
1. First, name the medium with which artists Nam June Paik, William Wegman, and Bruce Nauman are most associated for creating works like Paik's "Global Groove" and Nauman's "Stamping in the Studio".
>   Answer: **video**
2. This artist made an important use of video in 1965's "Outer and Inner Space", and ceased making films entirely by 1970 in order to focus on making videos like 1971's "Water", as well as commercials and music videos.
>   Answer: Andy **Warhol**
3. "Water" was part of the 1971 "This is Not Here" exhibition in Syracuse organized by this Fluxus colleague of Nam Jun Paik; though she worked in video, her most famous piece of visual art may be the 1966 celebration of famous asses, "Bottoms", aka "No. 4".
>   Answer: Yoko **Ono**

20) Identify the dialogues of Plato FTPE.
1. This most well-known Platonic dialogue begins with Socrates shooting down all attempts to define justice, and later includes the allegory of the cave.
>   Answer: **Republic**
2. This middle dialogue waxes poetically about the path of love towards beautiful and good while devolving into a drunken party at the house of Agathon.
>   Answer: **Symposium**
3. This early dialogue shows Socrates refuting several attempts by his hapless opponent to define piety or holiness.
>   Answer: **Euthyphro**

21) Name these sources of Norse and Germanic legend, for 10 points each.
1. The title Swedish king learns a brief outline of the Norse cosmogony by questioning the High One, Just as High, and Third, but they're just jerking him around.
>   Answer: the **Beguiling** (or **Deluding** or equivalents) **of Gylfi** or the
>   **Gylfaggining**
2. The Gylfaggining and two treatises on poetry, the Httatal and Skldskaparml, compose what 13th century work?
>   answer: **Prose** or **Younger Edda** (prompt on Edda; do not accept Elder
>   or Poetic Edda)
3. Which Icelandic scholar wrote the Prose Edda?
>   answer: **Snorri Sturluson**

22) FTPE, identify the following related terms from philosophy:
1. The branch of philosophy concerned with what objects exist, and understanding the necessary conditions on actual reality, as opposed to the perceptions dealt with in epistemology, and mental judgments discussed in ethics and aesthetics.
>   Answer: **Metaphysics**
2. The branch of ethics concerned with the meaning of moral propositions, what grounds are available for justifying ethical claims, and the connections between "is"-statements and "ought"-statements.
>   Answer: **Metaethics**
3. Alfred Tarski, in showing that no language can contain its own truth-predicate, argued that we should distinguish languages based on which ones can refer to which other ones. The relevant distinction creates a chain of these.

Answer: **Metalanguages**

23) 30-20-10, name the rabbi:

1. (30 points): A prominent Jewish theologian, he was once challenged to either refute the arguments of the Pietist theologian Charles Bonnet, or accept them and convert to Christianity. He responded with a series of arguments for religious tolerance.

2. (20 points): In 1763, his essay "On Evidence in Metaphysical Sciences", arguing that metaphysics uses the same methods as mathematics, but deals with less clear subject matter, won the first prize in a contest sponsored by the Royal Prussian Academy of Sciences.

3. (10 points): He is perhaps best known today to non-Jews as the grandfather of the composer who would later write a symphony in honor of the 300th anniversary of the Christian Reformation.

Answer: **Moses Mendelssohn**