

SUBMIT 2014: “sometimes referred to as Groper[citation needed]”

Editors Packet 1

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Tossups

1. In one scene of this play, two characters listen to a woman play piano with Count Zelinsky. In this play, one character writes a letter about rice pudding to be read if he dies and insults a poet who later dies of a monkey bite. In this play, Valentine does research about grouse population and a drawing of a man holding Plautus, a turtle, confirms the identity of another character. In this play’s first scene, that character admits to engaging in a (\*) “carnal embrace” in a gazebo, and it concludes with the protagonist awkwardly waltzing with the mute Gus. At the end of this play, the discovery of a letter about a dahlia reveals that Lord Byron did not kill Ezra Chater, frustrating the theories of Bernard Nightingale. For 10 points, name this play which features Hannah Jarvis’s investigations about Septimus Hodge and Thomasina Coverly, set at Sidley Park in both 1809 and the present day and written by Tom Stoppard.

ANSWER: Arcadia

2. The derivative of a certain quantity with respect to some parameter is given as the expectation value of the derivative of this operator according to the Hellmann–Feynman theorem. The interaction picture of quantum mechanics expresses this function as a sum of its free and interaction component. Observables are constants of motion if they commute with this operator, because the time derivative of an operator is proportional to the commutator of that operator with this one, according to the (\*) Heisenberg equation. The time evolution operator is the exponential of this operator times negative  $it$  over  $\hbar$ . Performing a Legendre transformation on the Lagrangian gives this function, which is potential plus kinetic energy. For 10 points, name this function that represents the total energy of a system.

ANSWER: Hamiltonian

3. This man proposed a premise of transitivity of indifference in one work. This man subtitled one work “*An Extension of Classical Welfare Economics*,” and he published *General Competitive Analysis* with Frank Hahn. This man developed one of the first theories of endogenous growth. He helped prove the existence of an equilibrium in markets as part of his work on General (\*) Equilibrium Theory with McKenzie and Debreu. Duggan–Schwartz and Gibbard–Satterthwaite are modifications of his most famous theorem. This author of *Social Choice and Individual Action* theorized that criteria like Individual Sovereignty and Unanimity cannot be reached in an ordering of more than three choices. For 10 points, name this economist with a namesake impossibility theorem.

ANSWER: Kenneth Joseph Arrow

4. This problem was addressed by arguing that most subsets of a population are representative samples in Donald Stove’s work *The Rationality of [this]*. W. V. O. Quine dismissed a famous response to this problem by stating that only predicates of a “natural kind” can be legitimately used. That response discussed two predicates dependent on an arbitrary fixed time and was termed the (\*) “New Riddle” of this by its author Nelson Goodman. Karl Popper argued this problem was irrelevant as it supposed a need for justification when in reality scientific theories are better tested by their falsifiability. An example of this problem is conjecturing that all swans are white based on only having seen white swans. For 10 points, name this problem, which in broad terms asks how we can know anything from a certain kind of reasoning often contrasted with deductive reasoning.

ANSWER: problem of induction or inductive reasoning

5. John Dunn acted as the lead scout for one side in this conflict, and in one battle during this war Otto Witt’s

mission was used for defensive fortifications. The Mtobi massacre took place during this conflict in which forces under Anthony Dunford and Henry Pulleine suffered heavy casualties in one battle. Although it didn't involve the Ottomans, one side in this war primarily utilized Martini-Henry rifles, while the other primarily used the *iklwa* (\*) and assegai spears. That side was defeated at the Battle of Khambula, but utilized their "buffalo horn" formation to massacre troops under the command of Lord Chelmsford at the Battle of Isandlwana. Also featuring the Battles of Rorke's Drift and Ulundi, for 10 points, name this war featuring an African tribe led by Cetshwayo.

ANSWER: Anglo-Zulu War

6. Mcm6 inhibits recruitment of one of these protein, MCM2-7, by ORC/Ccd6, but Cdt1 can overcome that inhibitory activity. They aren't CDCs, but Meier-Gorlin syndrome results from disorders in one complex that these proteins bind to. A human disease that causes premature aging arises from mutations of WRNp, which is one of these proteins. That protein is similar to the recQ variety of these in *E. coli* and causes Werner syndrome. DEAD box proteins are types of these that act on RNA. In prokaryotes, DNAa recruits (\*) dnaB, one of these, when it attaches to DNA at AT rich ori sites. These enzymes break hydrogen bonds in nucleic acids, and are used in the beginning of replication or transcription. For 10 points, name these enzymes that unzip DNA.

ANSWER: helicase

7. In one work by this composer, a flute solo addresses various members of the choir before a previously unseen member sings, "Sing God a Secret Song." In that piece by this composer, the Celebrant angrily hurls the communion but is later calmed with an *Agnus Dei* called "Things Get Broken." In one of his symphonies, a solo piano opens a section called "The Dirge," before which a clarinet duet opens "The Seven (\*) Ages" and "The Seven Stages." Besides his second symphony, *The Age of Anxiety*, this man used a boys' choir that sings in Aramaic for his work commemorating the death of John F. Kennedy, *Kaddish*. For 10 points, name this longtime music director of the New York Philharmonic, known for composing the music to *West Side Story*.

ANSWER: Leonard Bernstein

8. One poem by this author features a preacher who imagines that God is lonely because no one will buy him a Coca-Cola, while another asks "who really gave two figs?" after describing soldiers who have orders to "devise... a type of hooded gaze." In one of this author's poems, the speaker claims to have "stole your births and your names" and says "Believe me, I loved you all." In that poem, this writer wrote "abortions will not let you forget," and she described (\*) "two who are Mostly Good" in another work. In addition to writing about an "old yellow pair" eating dinner, this poet of "The Mother" also described patrons of the Golden Shovel who "sing sin," "jazz june," and "die soon." For 10 points, name this poet of "The Bean-Eaters" and "We Real Cool."

ANSWER: Gwendolyn Brooks

9. During this period, one general prepared for battle by screaming "Victory!" at his Zen master Bukko. One ruler during this period was ambushed and decapitated by his cross-dressing nephew Kugyo. Former emperor Go-Toba led the Jōkyū Revolt against the government of this period, which was controlled by regents called *shikken*. During this period Hōjō Tokimune lead forces against the (\*) Mongol invasions of Japan. This shogunate seized power after the boy emperor Antoku drowned at Dannoura. This shogunate was overthrown in the Genko war by Go-Daigo, who then ruled during the Kemmu restoration until he was forced to flee by the forces of the Ashikaga shogunate. For 10 points, name this medieval shogunate that followed the Heian period and was begun by the Minamoto clan.

ANSWER: Kamakura Shogunate

10. One current player for this NBA team famously dunked on Greg Paulus, leading Maryland fans to prank call Paulus and ask him how that UNC player's balls tasted. In the first round of the 2008 NBA Draft, this

**team drafted a Summit League player of the year who had played for IUPUI, though they traded him in 2011. Current players on this team's roster include one who was drafted by the Hawks in 2003 and won the Most Improved Player award in 2006, and another (\*) Frenchman, Nando de Colo. This former home of George Hill and current home of Boris Diaw only threw one alley-oop in the 2013 season, which was half-heartedly thrown down by Tiago Splitter. This team also features future stars like Danny Green and Kawhi Leonard. For 10 points, name this NBA team coached by Gregg Popovich and featuring aging superstars like Tony Parker and Tim Duncan.**  
ANSWER: San Antonio Spurs (accept either)

**11. When three men drunkenly spill this character's wine, this character claims that they are wasting away his health. The narrator first encounters this character tossing around a green ball with several boys and peeing into a silver container. This character encourages his dog Scylax to fight the dog of a young boy, resulting in a lamp being broken and hot oil being flung on several people. He tells a story about a man from Cappadocia who is beaten by witches and turned into straw after Niceros relates an episode in which his friend (\*) urinated in a circle around his clothes and turned into a wolf. This character commissions Habinnas to create a detailed tomb for him during an elaborate event in which he serves dishes based on the signs of the zodiac. For 10 points, name this husband of Fortunata, a character that hosts a notable feast in the *Satyricon*.**  
ANSWER: Trimalchio

**12. One depiction of this type of figure depicts the figure sitting in a graveyard and is part of the artist's series of "Joiners." Along with that work by David Hockney, another depiction of one of these figures has that figure with rounded features, mitt-like hands and was based on a photo taken three years before the Armenian Genocide. That work is by Arshile Gorky. Albrecht Durer depicted this figure gaunt and (\*) wrinkled "at the age of 63." The most famous depiction of one of these figures was followed by a sequel featuring Thomas Carlyle sitting in an identical pose, has a grey curtain on the left side of the canvas and a black dress-wearing central figure. For 10 points, name this figure most famously depicted by James Whistler in his *Arrangement in Grey and Black*.**  
ANSWER: mother (accept the artist's mother; accept paintings by people of their mother; accept equivalents for mother like mom or mum or the person who birthed the artist; accept portrait of the artist's mother; prompt on "parent")

**13. Shifts in the location of the first peak in the angular power spectrum of the CMB correspond to a quantity with this name becoming more negative. One parameter partially named for this quantity is calculated as a sum of the partial derivatives of the Christoffel symbols and vanishes if parallel transport is path-independent. It is not lambda, but it appears in the Friedmann equations as a constant multiplied by *c* squared. Cosmic inflation theory solved the problem of apparent fine-tuning universe due the universe having a (\*) non-zero amount of this quantity. The product of the two principal values of this is equal to the Gaussian type, and whether it is negative, zero, or positive corresponds to a hyperbolic, flat, or spherical universe. For 10 points, the Riemann and Ricci tensors describe what parameter that measures how not-flat something is.**  
ANSWER: curvature (of the universe, or Riemann curvature tensor; prompt on "density" until Christoffel)

**14. One sect of this religion derives its teachings from the Saheb-e-Dilan, who are believed to reside near Mount Damavand. The Ahuna Vairya is a sacred hymn of this religion that should be recited upon entering a house, according to the Denkard. Members of this religion are initiated through the navjote ceremony, after which they must wear the Sedreh and Kushti. This religion's Book of Arda Viraf describes the journey of Viraf, who is guided through the afterlife by the angel (\*) Adar after crossing the Chinvat bridge. An important text of this religion is the Qissa-i Sanjan, which ends with refugees settling in Gujarat and establishing a Fire Temple. This religion's teachings describe the conflict between Ahura Mazda and Angra Mainyu, and its primary sacred texts are collected in the Avesta. For 10 points, name this Persian religion founded by a namesake prophet.**

ANSWER: Zoroastrianism (accept Zarathustraism, Mazdaism, or Magianism)

15. This act was amended by a bill partially named after a man nicknamed “The Conscience of the Senate.” That bill, the Hart-Scott-Rodino Act, requires thirty days for certain transactions to be made. The Supreme Court’s ruling in *Texaco Inc v. Hasbrouck* found that Texaco violated another amendment to this bill, the Robinson-Patman Act. Another bill that strengthened this act was co-sponsored by the Democratic vice-presidential (\*) candidate in the election of 1956. That bill is the Celler–Kefauver Act. This bill outlawed interlocking directorates and price discrimination and modified a similar bill passed in 1890. For 10 points, name this bill passed during Woodrow Wilson’s presidency that succeeded the Sherman Act, an antitrust bill.

ANSWER: Clayton Antitrust Act

16. A daughter of Achelous named Eurymedousa was seduced by Zeus in the form of this animal, and the gold-mining Indikoi were said to be this type of creature. A monster spawned in the Libyan desert from the Medusa’s blood was known as the Mother of these animals. An Aesop’s fable relates how Zeus once turned a greedy farmer into one of these animals. After Hera’s jealousy of Aegina led her to send a (\*) plague on her namesake island, Aeacus prayed to Zeus to transform these animals into people. Daedalus was discovered by Minos after solving a riddle involving one of these animals and a seashell, and a king who later assisted the drunken satyr Silenus was fed by a procession of these creatures as a child. A multitude of these animals also helped Psyche sort a mix of grains into separate heaps. For 10 points, name these insects which were transformed into the Myrmidons.

ANSWER: ants (prompt on things like “bugs” or “insects” if that’s what ants are)

17. In one work by this author, a character disguised as Abbe Dalla Piccola strangles Diana Vaughan to death after impregnating her at a Satanist orgy. In another of his novels, a prostitute is accused of witchcraft by Bernard Gui. This author who wrote about the anti-semitic forger Captain Simonelli also included the allegedly immortal Count Aglee in another novel. Another character of this author deduces the whereabouts of a horse named Brunellus and solves a mystery involving a lost book on comedy by Aristotle. In one novel by this author of (\*) *The Prague Cemetery*, random sentences connected by the computer Abulafia are constructed into The Plan by Belbo and Casaubon. For 10 points, name this author who depicted the creators of a fictional conspiracy theory in *Foucault’s Pendulum* and wrote about Adso of Melk and William of Baskerville in his *Name of the Rose*.

ANSWER: Umberto Eco

18. The grid of this city was laid out by Robert Hoddle, and a wildfire scorched this city’s lands on Black Thursday. The ownership of this city’s territory was disputed by an organization led by John Wedge and the captain of the *Enterprise*. The treaty which allegedly bought the territory of this city from six elders of the Kulin people was quickly nullified by a governor’s proclamation. This city was settled by John Pascoe Fawcner and the Port Phillip Association on the banks of the (\*) Yarra River and was named by Richard Bourke in 1837, sadly depriving this city of the name Batmania after the man whose namesake treaty established it. For 10 points, name this city named for a British prime minister, the capital of the state of Victoria in Australia.

ANSWER: Melbourne

19. In one aria in this opera, a man claims that snow and rain do not matter to him because his wife “waits for him at home.” At the beginning of this opera, a group of villagers sing “Gli aranci olezzano” after one character says that his love is “lovely as the spring’s bright blooms.” That character later sings “Hail to the bubbling wine!” at the wine shop of his mother Lucia, who had earlier been informed of an (\*) affair in the aria “Voi lo sapete.” After biting another character’s ear, the protagonist of this opera begs “one kiss, Mother!” before being killed by a man who learned from Santuzza of his wife’s infidelity, Alfio. For 10 points, name this opera which ends with Turiddu’s death in a duel over Lola, a verismo work of Pietro Mascagni which is often paired

with Leoncavallo's *Pagliacci*.

ANSWER: *Cavalleria rusticana* (or *Rustic Chivalry*)

20. Reactions that form these can use iniferters with dithiocarbamate groups to catalyze and ends the reaction. O-rings are made of a type of these materials that have a low Young's modulus and high failure strain above their glass transition temperature. One theory of them considers their layout on a lattice and calculates the entropy and change in Gibbs free energy of mixing them with a solvent; that theory is due to (\*) Flory and Huggins. A model of them that assumes all bond lengths are the same and bond angles are random is the freely jointed chain model, and when all of their substituents are on the same side, they are called isotactic. For 10 points, name these large molecules made up of chains or networks of smaller molecules.

ANSWER: polymers

21. George Miller Beard reported on people of this profession who would uncontrollably jump and shout when startled. A member of this profession named Joseph Montferrand was legendary for his opposition to the Irish "Shiner" gangs. Three people of this profession were unexpectedly attacked by a black bear while trespassing on the estate of William Eaton's family. During one incident, a posse of people of this profession captured Hastings Strickland and Rufus McIntire, agents of Governor John Fairfield. That (\*) conflict saw clashes between these people such as the Battle of Caribou and was ultimately ended by the Webster–Ashburton treaty. For 10 points, name this job of the New Brunswick workers whose presence in Maine triggered the bloodless Aroostook War.

ANSWER: lumberjacks (accept loggers, lumbermen, or basically anything indicating a tree-cutting related profession)

## Bonuses

1. Kansas City Chiefs safety Eric Berry is terrified of horses. Answer some questions about how some psychologists might deal with him. For 10 points each:

[10] This psychologist would probably say that Berry's fear of horses comes from a fear of his own father, as he diagnosed the similarly horse-fearing Little Hans. This Austrian creator of the "talking cure" also wrote *The Interpretation of Dreams*.

ANSWER: Sigmund **Freud**

[10] This psychologist would probably tell Eric Berry that his fear of horses is natural and makes him human, as he put forth in his "The Meaning of Anxiety." This existential psychologist also wrote *The Courage to Create*.

ANSWER: Rollo Reece **May**

[10] Eric Berry says his fear of horses comes from a traumatic experience with a horse as a child. Most modern psychologists would recommend this kind of therapy, where treatments might involve drawing pictures of horses or watching horses from afar.

ANSWER: systematic **desensitization** or graduated **exposure** therapy

2. This figure was killed when his brothers told him to go boar-hunting and threw a burning boulder at him. For 10 points each:

[10] Name this earth god and "Great Land Master" who cured the flayed white rabbit of Inaba and became ruler of Izumo.

ANSWER: **Ōkuninushi** (or **Ōnamuji**)

[10] Ōkuninushi tied this god's hair to some rafters so that he could elope with his daughter Suseri-Hime. This storm god wielded the sword Kusanagi, slew the eight-headed Orochi after getting it drunk, and threw a dead horse at his sister Amaterasu.

ANSWER: **Susanoo**-no-Mikoto

[10] Susanoo is one of the kami of this religion that is widely practiced in Japan.

ANSWER: **Shintō**ism (accept **kami-no-michi**)

3. The Chou–Fasman method for determining this uses data on which amino acids most commonly form which structures, and circular dichroism spectroscopy is often used to investigate it. For 10 points each:

[10] Name this level of protein structure that describes local three-dimensional form into common motifs like alpha-helices and beta-sheets.

ANSWER: **secondary** structure

[10] These structures are formed from sheets that wrap all the way around and are commonly found in transmembrane proteins.

ANSWER: **beta barrel** (prompt on "beta sheet")

[10] An improvement on the Chou–Fasman method, this method of predicting secondary structure also takes into account the conditional probabilities that a protein will be in a certain structure given that its neighbors are in some given structure.

ANSWER: **GOR** or **Garnier–Osguthorpe–Robson** method

4. In one novel by this author, Polana helps her lover murder her husband, the naive title character. For 10 points each:

[10] Name this author of *Hordubal* who wrote about a hack plagiarist in the *Life and Work of the Composer Foltyn* and a free energy source in *The Absolute at Large*.

ANSWER: Karel **Čapek**

[10] This play by Čapek ends with Alquist realizing that Primus and Helena, two of the title figures, have become

the new Adam and Eve.

ANSWER: **R.U.R.** (accept **Rossum's Universal Robots**, I guess)

[10] At the beginning of this Čapek novel, Captain van Toch discovers that Sumatran natives won't go to Devil Bay because of the title creatures. He does the noble thing and exploits them as pearl farmers, but they invent *lebensraum* and basically destroy humanity by the end of this novel.

ANSWER: **War with the Newts** (or **War with the Salamanders**, or **Valka s mloky**)

5. Answer the following about beef carcasses in fine arts. For 10 points each:

[10] This baroque artist produced several paintings entitled *Butcher's Shop*, but he is probably better known for the scenes of classical mythology he painted for the Farnese Gallery in his *The Loves of the Gods* frescoes.

ANSWER: Annibale **Carracci**

[10] Pieter Aertsen was also drawn to the universal imagery of cow corpses but outdid Carracci by including this Biblical scene in the background of his *Butcher's Stall*. Correggio depicted St. Francis inexplicably appearing from behind a tree in his version of the "rest" during this event.

ANSWER: The **Flight to Egypt** (accept The **Rest** on the **Flight to Egypt**)

[10] The painter of *Carcass of Beef*, Chaim Soutine, is associated with this early 20th century artistic movement, whose other adherents include Edvard Munch and Oskar Kokoschka.

ANSWER: **Expressionism**

6. The SOL was a militia associated with this government that fled to Sigmaringen after it was overthrown. For 10 points each:

[10] Name this government that was opposed by the Maquis and took power after the failure of the Dyle Plan.

ANSWER: **Vichy** France (accept **Vichy** Regime)

[10] The Vichy regime was headed for most of its existence by this asshole who led French troops at the Battle of Verdun.

ANSWER: Philippe **Pétain**

[10] This admiral was also part of the Vichy regime, but switched sides to the Allies after he was captured in Algiers. The switch enabled the Allies to quickly capture French possessions in North Africa, but this man was assassinated soon after the switch.

ANSWER: François **Darlan**

7. Let's see how much you really know about the Navier–Stokes equations. For 10 points each:

[10] The time derivative and covariant derivative on the left-hand side can generally be written as this derivative. In general, it measures rate of change of a fluid parcel moving with velocity  $v$ .

ANSWER: **material derivative** (accept convective, substantial, substantive, particle, hydrodynamic, or total in place of material)

[10] Conservation of mass directly leads to this equation that is sometimes considered one of the Navier–Stokes equations. It says that the time derivative plus the gradient equals 0, and applies to any conserved quantity.

ANSWER: **continuity** equation

[10] The Navier–Stokes equations extend the Euler equations to the case where this quantity is non-zero. It is measured in poise, and describes a material's resistance to flow.

ANSWER: **viscosity**

8. Edgar Allan Poe characters always have some dumb reason for their murderous escapades. For 10 points each:

[10] The narrator of this story claims that he is basically a good person and only murdered someone with a poisonous candle because the title entity forced him to. Later in this story, he is executed after that same entity makes him confess the crime.

ANSWER: "The **Imp of the Perverse**"

[10] Despite apparently having put up with the thousand injuries he has received from Fortunato, this character walls his friend up in an ancient crypt because of some alleged insult. He is the narrator of Poe's "The Cask of Amontillado."

ANSWER: Montresor

[10] If you ask the narrator of this story, "over-acuteness of the senses" is totally a good excuse for murdering your roommate and burying him under the floor-boards, particularly if the old man has a weird-looking "vulture eye."

ANSWER: "The Tell-Tale Heart"

9. Name some things about special elections in the U.S. in 2013. For 10 points each:

[10] This South Carolinian defeated Elizabeth Colbert Busch in a special election to win a seat in the House of Representatives. While governor, he is perhaps better known for taking a vacation to the "Appalachian Trail" when he was really boning his mistress.

ANSWER: Mark Sanford

[10] Robin Kelly won the special election to replace this man who resigned in 2012. This man had previously worked with his father in Operation PUSH and was recently sentenced to prison for taking campaign money for personal use.

ANSWER: Jesse Jackson Jr.

[10] Jason Smith defeated Steve Hodges in a special election in this state. Governor Jay Nixon vetoed this state's redistricting plan in 2012 only to have that veto be overridden by this state's legislature.

ANSWER: Missouri

10. Answer the following about the angriest man in the USSR, Andrei Vyshinsky. For 10 points each:

[10] As Prosecutor General, Vyshinsky got the chance to orchestrate the Trial of the Sixteen, where he undoubtedly enjoyed calling this man a "mad dog" and a "contemptible pygmy." This Old Bolshevik was executed along with his ally Lev Kamenev.

ANSWER: Grigory Yevseevich Zinoviev (or Ovsei-Gershon Aronovich Radomyslsky Apfelbaum)

[10] Two years later, Vyshinsky got another chance to shout a lot when he accused Genrikh Yagoda of poisoning his predecessor at the Trial of the Twenty One. Yagoda had served as the head of this non-KGB agency which handled stuff like fire fighting and political murder until it was dissolved in 1946.

ANSWER: NKVD (accept People's Commissariat for Internal Affairs, or Narodnyy Komissariat Vnutrennikh Del)

[10] Vyshinsky maybe never got a chance to call this man a "stinking pile of human refuse," but he did succeed him as Minister of Foreign Affairs in 1949. This diplomat's non-Vyshinsky-related accomplishments include signing of a certain non-aggression pact with Joachim von Ribbentrop.

ANSWER: Vyacheslav Mikhailovich Molotov

11. Greek philosophers had weird shit to say about the start of the universe. For 10 points each:

[10] According to Anaxagoras, the mixture of the universe was set in motion by this concept. This also inhabits all things that have a soul and ordered everything in the universe.

ANSWER: nous

[10] This guy put forth the theory of the unmoved mover in his *Metaphysics*. He was also a student of Plato and wrote *Poetics*.

ANSWER: Aristotle

[10] This guy proposed that Love and Strife would move the mixture and separate the elements. He outlined many of his beliefs, such as that the universe was made up of four different elements, in *On Nature* and *Purifications*.

ANSWER: Empedocles

12. The title character of this novel is given his nickname by his neighbor after falling asleep when that neighbor



reads him poems. For 10 points each:

[10] Name this novel in which Bentinho's son Ezekiel is possibly the result of an affair between Capitu and Escobar.

ANSWER: **Dom Casmurro**

[10] *Dom Casmurro* was written by Machado de Assis, a writer from this country. Other authors from this country include the author of *Gabriela, Clove and Cinnamon*, Jorge Amado and Mario de Andrade.

ANSWER: Federative Republic of **Brazil**

[10] In this other work by Machado de Assis, the title character is thrown out of the parliament after a speech on reducing the size of the shako. The novel begins with the main character dying after trying to find an elixir that will save humanity from melancholy.

ANSWER: *The **Posthumous Memoirs of Bras Cubas*** (accept **Epitaph of A Small Winner**)

13. Van Kampen's theorem gives a way to calculate the first of these groups, which is the fundamental group. For 10 points each:

[10] Name this type of group of all the continuous transformations between functions with the same domain and codomain.

ANSWER: **homotopy** group (accept **isotopy**)

[10] This number is invariant under homotopy and for cell complexes with finitely many cells, is the number of even cells minus the number of odd cells. More generally, it's two minus the twice the genus.

ANSWER: **Euler characteristic** (accept **Euler**–Poincaré **characteristic** or **chi**)

[10] The fundamental group of this object is isomorphic to the integers. We calculate curvature with the “osculating” variety of this, and its area is equal to  $\pi r^2$ .

ANSWER: **circle** or **1-sphere**

14. Chapter 13 verse 8 of this book states that “Love never fails” and more love talk in this book is in 13:2 with the statement “If I... do not have love, I am nothing” For 10 points each:

[10] Name this book of the Bible, a Pauline epistle that also includes famous quotes like “through a glass darkly” and “I have become all things to all people.”

ANSWER: **First Corinthians** (prompt on “Corinthians”)

[10] Paul addressed this issue of the early church in Romans 2:25–29. He states that this is “of the heart” and that if you break the law it as though you have not done this. Not having this practice done differentiated many early Christians from Jews.

ANSWER: **circumcision** (accept word forms)

[10] Paul showed his misogynistic side in this epistle addressed to a mentee of his. It states that women should “be in silence” and is frequently used in arguments over whether women are allowed to become priests.

ANSWER: **First** Epistle to **Timothy**

15. The Sheepeater War was fought by the United States against members of this tribe that was part of the coalition that fought the Snake War. For 10 points each:

[10] Name this tribe from the Great Basin of the western U.S., that was split into Eastern, Northern and Western groups. Sacagawea was a member of this tribe.

ANSWER: **Shoshone** (or **Shoshoni**)

[10] Chief Sagwitch survived this brutal attack on the Shoshone by forces under Patrick Connor in present day Idaho in which over 90 Shoshone women and children were killed.

ANSWER: **Bear River** Massacre (accept Battle of **Bear River**)

[10] Patrick Connor also led the Powder River Expedition that partially targeted these people led by their chief Red Cloud. This ethnic group includes the Oglala and Lakota and this group defeated troops led by George Custer at the Battle of Little Bighorn as part of their namesake Great War.

ANSWER: **Sioux** (accept Great **Sioux** Nation)

16. This piece opens with an Intermezzo that depicts men from the title region going off to pay taxes with a march in 2/4 time. For 10 points each:

[10] Name this collection of orchestral pieces that concludes with an Alla Marcia call to battle.

ANSWER: Karelia Suite, Op. 11

[10] The *Karelia Suite* depicts part of this composer's homeland. He used scenes from the *Kalevala* in *The Swan of Tuonela*.

ANSWER: Jean Sibelius

[10] Sibelius arranged two of his piano suites to create incidental music to this play, which includes the pieces "Ariel Flies In" and "Caliban's Song."

ANSWER: *The* Tempest

17. This poem features an anecdote about a king who sat "easy, smiling, seasoned sound" when "healths went round" and concludes "Mithridates, he died old." For 10 points each:

[10] Name this poem in which a character who is asked to "pipe a tune to dance to" explains that poetry helps the reader "train for ill and not for good."

ANSWER: "Terence, this is stupid stuff"

[10] This poet included several poems about Terence Hearsay in *A Shropshire Lad*, which also contains "To an Athlete Dying Young."

ANSWER: Alfred Edward Housman

[10] In this Housman poem, a dead man asks his best friend a series of questions such as "is football playing along the river shore?" and learns that his "girl is well contented," probably because she is being "cheer[ed]" by that same friend.

ANSWER: "Is my team ploughing?"

18. Romulo Betancourt is considered the father of democracy in this nation that until recently was led by a crazy man who enforced price ceilings on many essential goods. For 10 points each:

[10] Name this country that until very recently was led by Hugo Chavez.

ANSWER: Bolivarian Republic of Venezuela

[10] Under Chavez, Venezuela's relationship with this country grew markedly. Chavez hosted then-president Mohammad Khatami and threatened to sell U.S.-made F-16 fighter planes to this nation.

ANSWER: Islamic Republic of Iran

[10] Chavez attempted a 1992 coup against this Venezuelan president that ordered brutal crackdowns on the Caracazo protests. He was later thrown out of office for embezzling funds.

ANSWER: Carlos Andres Perez (accept CAP)

19. Phosphorus has five electrons, two of which are used in a lone pair, and C-H fragments have five electrons, two of which are used in the C-H bond. For 10 points each:

[10] Name this relation describing molecules like P<sub>4</sub> and C<sub>4</sub>H<sub>4</sub> that have frontier orbitals with similar symmetry, energy, shape, and number of electrons.

ANSWER: isolobal analogy (or isolobal principle)

[10] Frontier orbitals include this orbital and the LUMO. This is the most energetic orbital inhabited by electrons.

ANSWER: HOMO (or Highest Occupied Molecular Orbital)

[10] The formulator of the the isolobal analogy was this American chemist who is also the second namesake of a set of rules describing the stereochemistry of pericyclic reactions.

ANSWER: Roald Hoffmann

20. Paul Schrader wrote the seminal article entitled "Notes on" this film genre that is characterized by low key

lighting and the presence of a femme fatale. For 10 points each:

[10] Name this film genre that is exemplified by films like *Mildred Pierce* and *The Big Combo*.

ANSWER: **film noir** (prompt on “noir,” I guess)

[10] This film is widely considered one of the earliest and best examples of film noir. Directed by Billy Wilder, insurance salesman Walter Neff falls for the Barbara Stanwyck portrayed Phyllis Dietrichson in this film.

ANSWER: **Double Indemnity**

[10] Jacques Tournier directed this other film noir. In it, the Robert Mitchum-portrayed Jeff Bailey is tracked down by Kathie Moffat and Whit Sterling. Spoiler alert: He dies in the end.

ANSWER: **Out of the Past**

21. Answer the following about anti-abolitionism violence in antebellum America. For 10 points each:

[10] Preston Brooks brutally caned this man on the House floor after he compared slavery to a harlot in his polemical “Crime Against Kansas” speech.

ANSWER: Charles **Sumner**

[10] This man became an anti-slavery martyr when he was shot by a mob at his printing press in Alton, Ohio.

ANSWER: Elijah **Lovejoy**

[10] This abolitionist badass protected his house with a cannon, drove a sixty person mob from his newspaper office, and murdered several would-be assassins with his trusty Bowie knife. This cousin of a more famous Kentuckian also served as minister to Russia.

ANSWER: **Cassius Marcellus Clay** (prompt on “Clay”)