

PARFAIT III Round 3

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1 Princeton University Tossups, Round 3

1. They took up machine guns and almost saw combat in World War II, and one named Alois Estermann became famous around the world for an act of bravery on May 13, 1981. Allies of the French during the 15th century, the historian Guicciardini described them as the “nerve and hope of an army.” Thorvaldsen’s dying lion of Lucerne commemorates their last stand in the Tuileries Palace during the French Revolution, and one hundred forty-seven of them were killed during the sack of Rome in 1527, but forty-two survived and helped Pope Clement VII escape to the Castel Sant Angelo. Currently led by Captain Elmar Theodor Mader from St. Gallen canton, these are, for ten points, what group of loyal protectors from an otherwise pacifist country?

Answer: Swiss guards

2. A blank verse drama illuminating the effects of Immanent Will written by this author features commentary from personifications of the Spirit of the Years and the Spirit of the Pities, who comments on the epic-drama of the War with Napoleon entitled *The Dynasts*. “Drummer Hodge” and “The Souls of the Slain” are two of his *War Poems* inspired by the South African War, and the setting of his *The Trumpet-Major*, Dorchester, became the setting of another novel featuring Michael Henchard, *The Mayor of Casterbridge*. For ten points, name this poet best known for novels like *Tess of the D’Urbervilles* and *Jude the Obscure*.

Answer: Thomas Hardy

3. In the 1980s at the Karolinska Institute, cells taken from the medulla of this organ were transplanted into the striatum of people suffering from Parkinson’s disease. The cortex produces corticosteroids while chromaffin cells convert dopamine to the organ’s primary product in the medulla. Hyperfunction of these glands may result in Cushing syndrome, while hypofunction causes Addison’s. Located directly above the kidneys, these are for ten points, name what pair of glands that control the body’s fight-or-flight response.

Answer: adrenal glands

4. One key piece of this work’s chronology rests upon Ernst Sellin’s theory that its title character was murdered at Shittim (wait for giggles), a second pillar rests upon the origin of the main character’s name, and the third pillar rests upon the hero being born of noble parents. Published partly in *Imago* and *International Journal of Psycho-Analysis*, it argues that the title character was a priest of Ikhnaton and after Ikhnaton’s death, led his people out of Egypt; after his murder, the religion was replaced by cruder Yahweh worship. For ten points, name this last work of Sigmund Freud about a biblical leader and his religious import from Egypt.

Answer: Moses and Monotheism or Moses und Monotheismus

5. Technical issues related to this technique involve shimming, in which even order effects are seen in symmetric skews and odd order effects are seen in asymmetric skews, and the loss of probe Q because of eddy currents in conductive samples. Tetramethylsilane is often used as a reference, and constituents are identified based on how far their Larmor frequencies are from this reference. Richard Ernst won a Nobel prize for developing pulse

Fourier Transform version, and almost all results plot intensity versus frequency. For ten points, name this spectroscopy technique that uses the spin of protons or Carbon-13 to determine chemical composition.

Answer: Nuclear Magnetic Resonance spectroscopy (prompt on partial answers or, heaven forbid, MRI)

6. They performed a well-known version of “Waltzing Matilda” while completing a record-length stay at the Sydney Entertainment Center in 1986. A song about a rollerskating girl, “Skateaway” appears on their third album, Making Movies, named a Top 100 album of the 80’s by Rolling Stone. They reached greater success, however, only after the addition of keyboardist Guy Fletcher and the release of a 1985 album featuring such songs as “Your Latest Trick”, “So Far Away”, and “Walk of Life.” For ten points, this is what Mark Knopfler-fronted classic rock group, most famous for songs such as “Brothers in Arms,” “Money for Nothing,” and “Sultans of Swing.”

Answer: Dire Straits

7. A report by Diana Cox-Foster suggests that many of these animals have had their immune system weakened by varroa mites, making them more susceptible to Israeli acute paralysis virus, which might have come from animals imported from Australia. Cox-Foster found this by studying the output of the hypopharyngeal glands in these animals, and by extracting the RNA present from viruses. These viruses cause colony collapse disorder, in which healthy workers fly away from the hive, larvae, and the queen, hurting a segment of the U.S. economy worth about \$15 billion. For ten points, name these communal insects that construct hives out of wax and produce honey.

Answer: honey bee or apis

8. The third act’s prelude, usually omitted, is based on a Persian theme and calls for a female chorus to sing “Night Lies Heavy Upon the Fields.” The third act begins with a recitative by Gorislava, who was abandoned in favor of one of the title characters. Finn tries to woo Naina by changing into a shepherd, a fisherman, a warrior, and a wizard, but is now too old to love. Farlaf and Ratmir accompany a title character in his attempt to free his love from Chernomor, in for ten points, what opera by Mikhail Glinka?

Answer: Ruslan and Lyudmila

9. This book’s sixth chapter says that we shouldn’t worry about wearing clothes, because even those who neither toil nor spin, the lilies of the field, are arrayed better than Solomon in all of his glory. It also tells us to stay in our closets, at least when praying, and not on the street corner. That instruction is followed by a recipe that concludes “for thine is the power and the glory, for ever” that has come to be called the lord’s prayer. The sixth chapter is just a part of this book, which launches right into beatitudes and the sermon on the mount and is slightly more complete than Luke’s account. For ten points, name this first gospel of the New Testament.

Answer: Matthew

10. His wife died in 1936 in Switzerland, forcing him to avoid Mussolini at the Rome airport because Il Duce wanted to offer him sympathy. He visited Vietnam with his daughter in October 1954 and was met with mobs in Saigon because of his friendliness with the

North. This policy changed, however, after having to ask the U.S. to send an aircraft carrier to the Bay of Bengal to help push Chinese forces behind the McMahon Line in a 1962 skirmish. He died shortly thereafter, ending a life that had secured his nation's independence from Britain in 1947. For ten points, name this first Prime Minister of India.

Answer: Jawaharlal Nehru, prompt on “Panditji”

11. In the hundred and twenty ninth chapter of this book, a character says that he'll stay true even if “oysters come to join [him]” while his master walks above him. Pip's master is described as having a “slouched hat” in the chapter entitled “the Pipe” and twice in “the Hat,” which could be a referencing a man with a “slouched hat and guilty eye” in a sermon concerning Jonah given by father Mapple. Peleg and Bildad stay behind in New Bedford instead of joining Flask, Stubb, and Starbuck on the Pequod. For ten points, name this work by Herman Melville narrated by Ishmael about Captain Ahab's search for a giant white whale.

Answer: Moby Dick

12. One of the defendant's lawyers asked whether the law “extended to lands to which the Indian title has not yet been extinguished.” This doubt probably came from Justice William Johnson, and not the alcoholic prosecution lawyer Luther Martin, who was paid to lose against an all-star team of John Quincy Adams, Joseph Story, and Robert Goodloe Harper. The plaintiff argued that because Georgia nullified a 1795 sale of the Yazoo land, it wasn't Peck's to sell. For ten points, name this 1810 court case that said the rescinding law was an unconstitutional infringement on a legal contract.

Answer: Fletcher v. Peck

13. An 1857 hunting accident in Sweden and the wrong plaster applied by a St. Petersburg doctor left his left leg weak, and his right hand was impaired by a Catholic named Kullmann after an 1874 assassination attempt. He allied with Austria and split the spoils in the Convention of Gastein, but shortly thereafter went to war with Austria, which quickly capitulated after Sadowa. Becoming chancellor of a new nation in 1871 until removed by Wilhelm II, for ten points, name this “Iron Chancellor” of the German Empire and Prime Minister of Prussia.

Answer: Otto Eduard Leopold, Fürst von Bismarck, Graf von Bismarck-Schnhausen, Herzog von Lauenburg

14. Feje Tóth's problem is to place n points on one to maximize the minimum distance between two points. Minkusinski's problem, solved by Conway and Croft, is to cover its surface with half-open arcs. The Riemann one is an extension of the complex plane with a point at infinity. If you accept the axiom of choice, it can be divided into six pieces which can be reassembled by rigid motions to form two of them with the same size in the Banach-Tarski paradox. It's surface area is given by $4\pi R^2$, and it's volume is given by $\frac{4}{3}\pi R^3$. For ten points, identify this three-dimensional surface where all points are a constant radius from the center.

Answer: unit sphere, prompt on “ball”

15. Comissioned for Queen Caroline Murat, the subject's left leg appears too high on her body, but is cloaked in shadow, while her right leg is obscured by a fan. Blue curtains and sheets are balanced by a splash of gold in the bottom left, which could be her discarded robe. Wearing a turban, the central figure turns her neck to look at the viewer, craning her abnormally long neck. For ten points, name this painting by Ingres of a Turkish harem girl.

Answer: La Grande Odalisque

16. It was phrased to measure spin instead of position and momentum by David Bohm, whose name is sometimes attached to it. The 1935 paper formulating it starts very generally by defining the completeness of a physical system. Bell's inequalities provided a grounds for testing its truth, helping confirm quantum mechanics. Starting with the idea of measuring the properties of two particles emitted, entangled, from the same source, this is, for ten points, what thought experiment which sought to expose a paradox in quantum mechanics?

Answer: Einstein-Podolsky-Rosen Paradox

17. Magnus III Barelegs brought them under Norwegian control in 1098, but a part closer to the mainland split off under Somerled in the next century, creating a political division which is still observed today. By 1266, all of the archipelago was nominally under the Kingdom of Scotland, though throughout most of its history it was controlled by the largely independent MacDonald Lords of the Isles. Currently, the majority of native Scottish Gaelic speakers come from these islands. For ten points, name this Scottish archipelago, which includes the Isles of Lewis, Mull, and Skye, and is divided into Inner and Outer regions.

Answer: the Hebrides

18. This work calls its subject dearer than Hyacinth to Phoebus, or Narcissus to himself. Addressing the subject, the poem later declares that "Albion wails for thee" and calls for "the curse of Cain / Light on his head who pierc'd thy innocent breast". The author speaks of those "whose sails were never to the tempest given", in its closing 55th stanza, while the soul of the title person is described as "beacon(ing) from the abode where the Eternal are". For ten points, name this elegiac poem by Percy Bysshe Shelley, written to commemorate the death of John Keats.

Answer: Adonais

19. Late in his life, he unwittingly created the first partridge when he pushed his nephew off a cliff, jealous of Perdix's ingenuity in inventing the compass and the handsaw. He was drawn out of hiding when King Cocalus gave him a riddle requiring the threading of a string through a seashell, though Cocalus did not then give him up to his pursuer, Minos. His most famous creation was compared to the Phrygian river Meander. For ten points, name this Greek mythological character, most famous for building the Labyrinth on Crete and for being the father of the drowned Icarus.

Answer: Daedalus

20. He is invited to the Aran Isles after being called an "innocent Amy" after implicitly denying he was the Daily Express's literary reviewer. Although Miss Ivors liked his

review of Browning, he thinks something from “Shakespeare or from the Melodies” would be better for Aunt Julie and Aunt Kate, who asked him to give a speech and carve the turkey. His wife, however, yearns not for him, but a boy who worked in the gas works and is now a member of the group that serves as the title of the story in which he appears. For ten points, give this husband of Gretta from Joyce’s “The Dead,” the final story from *Dubliners*.

Answer: Gabriel Conroy (accept either)

21. The end of this novel depicts a fraudulent theater job scheme which lures people to Oklahoma, while early on the novel’s protagonist meets the drifters Robinson and Delamarche. He then acquires, though later loses, a job as an elevator operator at the Hotel Occidental. That protagonist is the teenager Karl Rossman, who is seduced by a maid and forced to flee his native land, and the novel’s first chapter depicts Karl discovering his rich senator uncle and aiding a hapless ship’s stoker. Subtitled “The Man who Disappeared,” for ten points, this is what unfinished novel of Franz Kafka that shares its name with the nation you’re in?

Answer: Amerika

2 Princeton University Bonuses, Round 3

1. They were first developed for computers with rotating drum memories, because the memory element sequentially next had already passed. For ten points each. . .
 - 10 Name these data structures discussed by John Mauchly as “one-plus-one addressing” but that are now known for the pointers to the next element in the data structure.
Answer: linked list
 - 10 In 2000, Donald Knuth published a paper on explaining how awesome it is to be able to undelete an element from a doubly linked list; he got there from Hitotumatu and Noshita’s analysis of Dijkstra’s implementation of the solution of placing N of these chess pieces on a board without them attacking each other.
Answer: queen or dame
 - 10 The N -queens problem is an instance of this general problem of for some elements X and sets S , finding a subset of the sets in S such that every element in X is represented.
Answer: exact cover
2. For ten points each, name these members of the Medici family that ruled Florence, Italy
 - 10 He ruled Florence from the death of his father in 1469, and his status was enhanced when he foiled the Pazzi Conspiracy to assassinate him in 1478.
Answer: Lorenzo de Medici or Lorenzo the Magnificent
 - 10 The second son of Lorenzo the Magnificent, he was born Giovanni de Medici. This second of the four Medici popes is best remembered today for issuing a papal bull against Martin Luther.
Answer: Leo X
 - 10 She was the second wife of Henry IV, and after he was killed, regent for her son, Louis XIII.
Answer: Marie/Maria de Medici
3. Identify the following works where strange things happen after characters sleep.
 - 10 After an insurrection in Turkey, the English ambassador sleeps for a long time and wakes up a woman in this Virginia Woolf book.
Answer: Orlando
 - 10 The title character of this story in *The Sketch Book of Geoffrey Crayon* takes a nap to get away from his nagging wife and sleeps through the revolutionary war.
Answer: Rip Van Winkle
 - 10 Julian West is hypnotized and falls asleep even as his house falls down around him; he wakes up in Boston in 2000, and has to navigate a socialist utopia in this Edward Bellamy work.
Answer: Looking Backward

4. You may know the Norse end times, but do you know your Christian eschatology? For ten points each, answer the following about the Book of Revelations.
- 10 For ten points, this is the author of the Book of Revelations, from the island of Patmos
Answer: John (any John will do, even the evangelist or apostle)
- 10 The book of Revelations opens with letters to churches in Ephesus, Smyrna, Pergamum and four other cities in what modern day nation?
Answer: Turkey
- 10 As the world is ending, angels will blow trumpets. When the third trumpet is sounded, this star will crash into the earth, falling into bodies of water and making them bitter.
Answer: Wormwood
5. Answer the following about a polymer important in forming the outside of bacteria.
- 10 Most cell envelopes are composed of this meshwork of glycan strands cross linked by peptides that balances the osmolarity inside.
Answer: peptidoglycan or murein
- 10 The amount of peptidoglycan distinguishes whether a bacteria stains or not in this procedure named after a Dutch scientist.
Answer: Gram staining
- 10 This general class of antibiotics, defined by having a four-membered ring that is both an amide and an ester, inhibit the synthesis of peptidoglycan.
Answer: β -lactam antibiotic
6. The larger of its two branches is called Lake Chucuito in Bolivia and Lake Grande in Peru. For ten points each ...
- 10 Name this large lake.
Answer: Lago Titicaca
- 10 The two branches are separated by this strait.
Answer: Tiquina
- 10 Lake Poopo, Lake Titicaca, and the Uyuni salt flats occupy this high plateau of southeastern Peru and western Bolivia.
Answer: Altiplano or Puna
7. It begins as “the curfew tolls the knell of parting day”. For ten points each...
- 10 What is this poetic meditation on death, published in 1751?
Answer: An Elegy Written in a Country Churchyard
- 10 What British poet wrote “An Elegy Written in a Country Churchyard”?
Answer: Thomas Gray

10 Gray is also known for this 1742 poem inspired by a British school, which contains the famous line “where ignorance is bliss, / ’Tis folly to be wise.”

Answer: Ode on a Distant Prospect of Eton College

8. Before Mitt Romney, who unlike McCain or Guliani has only been married to one woman, gets himself elected president, let’s review the history of polygamy and U.S. law. For ten points each. . .

10 This Vermont senator wrote a law explicitly banning polygamy and limiting church ownership of property in territories in the same year as his bill establishing universities “related to agriculture and the mechanic arts,” 1862.

Answer: Justin Smith Morrill

10 In a 1878 Supreme Court case, he argued that it was okay to practice polygamy because it was part of his religious beliefs. There were no dissenting opinions when he lost.

Answer: George Reynolds

10 In 1903, the senate debated whether to give him a seat because of his association with Mormonism; almost thirty years later he cowrote a tariff bill with Willis Hawley.

Answer: Reed Smoot

9. A man named Agate tells the men to stop performing the title action and strike already. For ten points each. . .

10 Name this 1935 play about labor unrest among taxi drivers and nepotism in doctors.

Answer: Waiting for Lefty

10 This communist American author wrote *Waiting for Lefty*.

Answer: Clifford Odets

10 Clifford Odets also wrote a play about a couple losing their handbag business, which has obvious parallels to Satan getting kicked out of heaven, as recounted by John Milton.

Answer: Paradise Lost

10. In statistics, the score is defined to be the variance of it. For ten points each. . .

10 Name this term for a conditional probability density function of the form $f(x|\theta)$ where the observations are held fixed that tells you how to weight the parameter setting θ .

Answer: likelihood

10 The variance in the score is named after this man, who developed an “exact test” for contingency tables in addition to explicating maximum likelihood methods, sufficiency, and analysis of variance.

Answer: Ronald Fisher

10 The score test for a parameter of a distribution is, by the Neyman-Pearson lemma, the test that has the highest value of this, defined as the probability the test will reject a false null hypothesis. It's not measured in Watts.

***Answer:* power**

11. How well do you know your talking heads ... from the business channels? Identify these well-known financial commentators from clues for ten points each.

10 This father of financial commentary who died in 2006 was the long time host of Wall Street Week on PBS.

***Answer:* Louis Rukeyser**

10 This CNBC "money honey" caused markets to dive when she made public an informal conversation with Fed Chairman Bernanke at an official Washington dinner.

***Answer:* Maria Bartiromo**

10 This raving lunatic who once ran a hedge fund and cofounded TheStreet.com is now the host of Mad Money.

***Answer:* Jim Cramer**

12. For thirteen years, a composer corresponded with a rich widow, who stopped patronizing the Russian in 1890 after allegedly finding out he was gay. For ten points each. . .

10,10 Name the composer **and** his patron.

***Answer:* Peter I. Tchaikovsky and Nadezhda von Meck**

10 Tchaikovsky dedicated this symphony written between the Polish and the Manfred symphonies to von Meck; it uses the Russian folk song "In the field stood a birch" as a leitmotif.

***Answer:* Symphony No. 4 in F Minor, Opus 36**

13. Answer the following about noted sculptors and sculptures of classical times, for ten points each.

10 A contemporary of Phidias, this Athenian sculptor utilized a namesake curve, as seen in his Hermes and Dionysus and Apollo Sauroktonos.

***Answer:* Praxiteles**

10 This sculpture is attributed by Pliny the Elder to either Polydorus, Athenodorus, or Agesander and it depicts Antiphantes and Thymbraeus, along with the title figure, being strangled by sea serpents.

***Answer:* Laocoon and his Sons**

10 It guards the Daru staircase of the Louvre and it may have originally been constructed at the command of Macedonian General Demetrius I Poliorcetes after a naval victory.

***Answer:* Winged Victory of Samothrace**

or Nike of Samothrace / Samothraki (prompt on partial answer)

14. For ten points each, answer the following about an aspect of Judaism.

10 Though its root is the Hebrew word for “justice” this important obligation in Judaism is often translated as simply “charity.”

Answer: tzedakah (accept pronunciation variants, though not “zakat”, which is the equivalent in Islam)

10 This 12th century Jewish scholar defined 8 levels of tzedakah, the highest of which is helping a person find work, while the lowest is giving charity unwillingly.

Answer: Maimonides (accept Moshe Ben Maimon or the Rambam)

10 One of the obligations surrounding the holiday of Purim is to give tzedakah to at least two people, in order to increase general happiness during this month of the Hebrew calendar.

Answer: Adar

15. Edward III appointed him as rector of Lutterworth, and he was one of the first to translate the bible into English. For ten points each. . .

10 Name this forerunner of the protestant movement.

Answer: John Wycliffe

10 John Wycliffe made an alliance with this son of Edward III who tried to become King of Castille and whose son Henry became Henry IV.

Answer: John of Gaunt (accept “Ghent”), earl of Richmond, duc d’Aquitaine

10 John Wycliffe was condemned by this pope in 1377 who moved the papacy back to Rome shortly afterward but died immediately thereafter, precipitating the Great Schism.

Answer: Gregory XI, prompt on Pierre Roger de Beaufort

16. Consider the Arrhenius equation, $K = e^{-\frac{\Delta G^\circ}{RT}}$. For ten points each. . .

10 K represents the ratio of the activities of the products over the inputs in a chemical reaction and is thus given this name.

Answer: equilibrium constant

10 ΔG° represents the change in this, defined as enthalpy minus temperature times entropy.

Answer: Gibbs free energy

10 R represents this, which has the units of Joule per mole Kelvin.

Answer: ideal gas constant, prompt on “Boltzmann”

17. The last ruler of this dynasty to have any power was Tu Duc, whose repression of missionaries caused a French invasion in 1858. For ten points each. . .

10 Name this Asian dynasty.

Answer: Nguyen dynasty

- 10 The Nguyen dynasty ruled this nation.
Answer: Vietnam or Dainam
- 10 This man was the last nominal member of the Nguyen dynasty until deposed by Ngo Dinh Diem.
Answer: Bao Dai, prompt on “Nguyen Phuc Thien”
18. For ten points each, answer these questions on a theme.
- 10 According to Norse mythology, the first two humans, whose names are remarkably similar to those of the first humans in the Book of Genesis, were made by Odin, Vili, and Ve from these two kinds of trees. Give both, all or nothing.
Answer: ash and elm (either order)
- 10 Aluminates of this element were discovered by Louis-Jacques Thenard in the early 1800s, and soon they would be suggested as a replacement for the costly ultramarine as a pigment for painting.
Answer: cobalt
- 10 This ceramics technique sometimes uses the ashes of burnt plants and trees to encourage the formation of silicon dioxide, while the striking blue finish often obtained in this technique comes from cobalt aluminates.
Answer: ceramic glazing (accept obvious equivalents, i.e., things that mention glaze)
19. Answer the following from basic wave mechanics for ten points each.
- 10 Schrodinger’s wave equation uses this mathematical operator, which, when applied to a system, yields the observable energy of that system.
Answer: Hamiltonian
- 10 This notation is named for its left and right halves, which, when put together, denote the inner product of the two vectors which each part represents.
Answer: Dirac bra-ket notation (accept either)
- 10 This class of particles has wave functions which are symmetric under permutation. Oh yeah, they also have integral spin.
Answer: bosons
20. Name some stuff about Proto-Indo-European, for the stated number of points:
- 15 The existence of Proto-Indo-European was first hypothesized in 1782, when a philologist remarked that no one could study these three languages without believing them to have sprung from a common source. For five each, name them.
Answer: Sanskrit, Greek, and Latin
- 5 One hypothesis claims that Proto-Indo-European was spoken in the 3rd century BC in the highlands of this Eurasian country with capital at Yerevan.
Answer: Armenia

10 For ten, it is sometimes controversially proposed that Proto-Indo-European is a member of this linguistic superfamily, from the Latin word for “ours.”

Answer: Nostratic

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