

PARFAIT III Round 10

Princeton University
Mason Liang

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1 Princeton University Tossups, Round 10

1. In his one minor league season at Class-A Lynchburg, he racked up 300 strikeouts in only 191 innings, leading to a big league callup the next year. In his first full season he became the youngest All-Star in Major League history and was the NL Rookie of the Year. In his second season he piled up 24 wins, 268 strikeouts, and a 1.53 ERA on his way to a pitcher's triple crown and a Cy Young award at the age of 20, and in his third he lead his team to the 1986 World Series title. His Mets career was derailed due to alcohol, cocaine abuse, and a 1991 arm injury. For ten points, name this former Mets phenom whose dramatic rise and fall paralleled that of teammate Darryl Strawberry, but whose electric arm earned him the nickname "Doc."

***Answer:* Dwight "Doc" Gooden**

2. The formation of ethylene during this reaction drives the polymerization of alpha-omega dienes to completion. Catalysts for this reaction include organometallic tungsten, tin, and ruthenium compounds. The catalysts are needed because the obvious 2+2 mechanism is not permitted under the Woodward Hoffman Rules. Instead, an alkylidene forms, followed by cycloaddition to form a metallocyclobutane. Finally, the products of this reaction can form when that metallocyclobutane breaks up in the opposite fashion. For ten points, name this type of reaction between alkenes, during which carbon carbon double bonds are broken and reformed.

***Answer:* Olefin Metathesis or transalkylidenation or disproportionation**

3. During this war, James Touchet failed to prevent Richard Neville from linking up his armies in the Battle of Blore Heath. Later, the daughter of the King of Naples defeated the Earl of Warwick at the Second Battle of St. Albans, but failed to exploit the victory. Edward IV finally claimed the throne after his victory at Towton, and was restored to it ten years later after beating Margaret of Anjou at Tewksbury. The victory at Bosworth field secured the throne for Henry Tudor and finally brought this conflict to an end. For ten points, name this war for the throne of England between the House of Lancaster and the House of York.

***Answer:* War(s) of the Roses**

4. Its n^{th} moment is equal to the number of partitions of a set of size n when its mean is one, and when written in canonical exponential family form, its natural parameter is simply $\ln \theta$, and its conjugate prior is the Gamma distribution. The limiting case of a binomial distribution as the number of tries goes to infinity, its single parameter is both its mean and its variance. For ten points, name this discrete probability density function which models the number of events that will occur in a given interval given the average rate of occurrence.

***Answer:* Poisson Distribution**

5. James Byrnes reported that he was unaware of its granting of leases of Port Arthur and Dairen, but his notes provide the most complete account of it. It didn't give priority to the Lublin or London governments, but it did set the eastern border of Poland at the Curzon Line. At this February 1945 meeting, the Soviet Union also agreed to declare war

on Japan within 90 days of the defeat of Germany. In return, they would gain Sakhalin Island and the Kurile Chain. For ten points, name meeting attended by Churchill, Stalin and Roosevelt at a Black Sea resort.

Answer: Yalta Conference

6. Many of his works, like 1821s *Art of Packing* on the formation of juries, were published long after they were written. Others were merely culled together by friends from his disorganized notes, such as his *Book of Fallacies*, edited in English by Peregrine Bingham and even earlier, reworked in French by Etienne Dumont. As a 15 year old in 1763, he claimed to have found fallacies in the work of Sir William Blackstone, ideas which would come to light thirteen years later when he criticized Blackstones *Commentaries* in his work, *A Fragment on Government*. For ten points, name this English philosopher, probably most famous for *An Introduction to the Principles of Morals and Legislation*, where he defined the principle of utility.

Answer: Jeremy Bentham

7. This man's first assignment out of West Point was in 1844 as a second lieutenant with the 6th US Infantry regiment as a recruiter. He eventually rejoined his regiment in Puebla, Mexico but was unable to participate in the breakthrough of Mexico City due to a fever. Later in life, he was assigned to supervise the execution of Lincoln's assassins, and he ran for president as a Democrat in 1880. He commanded the 2nd Corps at the Battle of Gettysburg, and the corps' central position caused them to take the brunt of Pickett's Charge, during which his old friend, Confederate Brig. Gen. Lewis Armistead, was wounded and died. For ten points, name this Union Major General, nicknamed "Old Fuss and Feathers."

Answer: Winfield Scott Hancock

8. It allows the violation of Earnshaws Theorem, and so allows the growing of better protein crystals. It was first observed in bismuth and antimony in 1778, and given its name by Faraday. It is caused by Lenzs Law, as electrons are accelerated in such a way as to oppose the action of an external magnetic field. Bismuth and prylitic carbon are the strongest examples known, while superconductors can be considered ones because of the Meissner Effect, giving them a negative susceptibility. For ten points, name this class of materials which are repelled from magnetic fields.

Answer: Diamagnetism or Diamagnets

9. After subduing a slave revolt in Haiti, the protagonist buys land from a Chickasaw chief named Ikkemotubbe. That protagonist is later killed when he says "too bad you're not a mare. Then I could give you a decent stall in my stable" to Milly, the squatter Wash Jones's daughter. Told through flashbacks, Quentin Compson finally figures out that Henry killed his University of Mississippi classmate, Charles Bon, to prevent Charles from marrying his sister after learning that Charles is half black. For ten points, name this Faulkner novel about the rise and fall of Thomas Sutpen, whose title alludes to the biblical son of David.

Answer: Absalom, Absalom!

10. She is visited after the Urim and Thummin fail to respond. According to traditional rabbinical interpretations, her surprise at the vision of gods ascending out of the earth indicates that the appearance of Samuel was actually the work of God. After a promise of immunity, she uses her talisman to summon the recently deceased prophet, who prophesies that the king and his sons will die at the Battle of Gilboa. For ten points, name this necromancer whom Saul consults to learn how he may defeat the approaching Philistines.

Answer: Witch of Endor

11. During his time at the Paris Conservatoire, he composed *Jeux d'eau* and *String Quartet in F Major*, the first of which was premiered by Ricardo Viñes in 1902 with *Pavane for a Dead Princess*. As a result of the protests over his failure to win the Prix de Rome, Theodore Dubois was replaced by Gabriel Faure as the director of the Conservatoire. Other works of this composer include the incredibly difficult *Gaspard de la Nuit*, *Le Tombeau de Couperin*, which was dedicated to the memory of friends lost in the First World War, and Basque inspired works like *Rapsodie espagnole*. Diaghilev commissioned his ballet *Daphnis et Chloe* in which Nijinsky danced the title role. For ten points, name this arranger of Mussorgskys *Pictures at an Exhibition* and composer of *Boléro*.

Answer: Maurice Ravel

12. Feng et. al. at the University of Michigan showed that when they lack transient receptor potential canonical channels, those channels can be replaced by human ones, thus mimicking human responses to nicotine. Sydney Brenner won the 2002 Nobel prize for pioneering their use in biology, and in 1998, the elucidation of 19,000 genes over a 97-megabase sequence made it the first multicellular organism to be completely sequenced. For ten points, name this hermaphroditic nematode, often used as a model organism in studying cellular differentiation.

Answer: caenorhabditis elegans

13. One of his first works was about the story of Lucius Catilinas choice between his wife, Aurelia, and the Vestal virgin Furia. In another one of this authors works, disaster is averted when the ship the Indian Girl is recalled at the last minute, saving the life of the protagonists son. In that work, *The Pillars of Society*, Karsten Bernick is ship builder whose marriage may be saved by his confession that he married his wife for her money. Perhaps even better known is his play about Dr. Stockmann, who is denounced by the community for announcing that the town baths are contaminated, *An Enemy of the People*. For ten points, name this Norwegian author of *A Dolls House*.

Answer: Henrik Ibsen

14. The Etruscans knew him as a winged, vulture-nosed, hammer-wielding demon, and Aristophanes depicts him making fat jokes and rejecting Xanthias, instructing him to “fetch a circuit round about the lake.” His parents are the deities of darkness and night, Erebus and Nyx, respectively, and in *The Inferno*, he is the first named character Dante meets in the underworld. Aeneas, directed by the Cumaean Sibyl, appeases him with a golden bough in order to speak with Anchises. For ten points, the river Acheron is traversed by what ferryman of the dead in Greek mythology?

Answer: Charon

15. Inspired by the example of Jean-Jacques Dessalines, the Male Revolt in this country occurred during when slaves were urged to rebel by their Muslim teachers. The efforts led by Nabuco de Araújo resulted in the Rio Branco Law, which freed children born to slave parents. Later, while Isabel the Redeemer was regent, the Lei Aurea would completely abolish the institution. This elimination of slavery eventually led to the coup of 1889, which saw Field Marshal Fonseca depose Emperor Pedro II and install a republican form of government. For ten points, name this former colony of Portugal in South America.

Answer: Brazil

16. The Stokes diapir model of its movement was replaced by the theory of fracture propagation when it was realized that the upper crust is too brittle and cool to be easily melted. Its I types contain high amounts of sodium oxide, and smaller amounts of aluminum oxide, while the reverse is true with its S type. The Yellowstone caldera is composed of the A type of material. They can also be classified by the ratio of plagioclase to alkali feldspars. For ten points, name this coarse grained, intrusive igneous rock, the most common in the continental crust.

Answer: Granite

17. The major altar is surrounded by seven chapels dedicated to the seven pains and seven sins of St. Joseph. The nativity facade contains Christ's complete genealogy while the passion facade was sculpted by Josep Suribachs. The four towers above both of these are decorated with the words "Hosanna", "Excelsis", and "Sanctus". The hyperboloid structures of the the building presented unique fabrication challenges, but Jordi Bonet's introduction of computer aided design techniques allowed for faster construction. Its construction began in 1882, but after its original architect died, Domenech Sugranyes directed the construction until the Spanish Civil War began in 1935. Catalan anarchists destroyed many original models and the architects' workshop during the war, but construction continued in 1940. For ten points, name still this unfinished cathedral in Barcelona, a masterpiece of Antoni Gaudi.

Answer: Sagrada Familia

18. The Cargill Corporation sold the salt marshes in its south end for \$100 million. The Don Edwards National Wildlife Refuge hopes to restore this land to tidal marsh. Islands in it include Angel Island, which is separated from the city of Tiburon by the Raccoon Straits, Treasure Island, and Yerba Buena Island. Rivers entering this body of water include the San Joaquin, the Guadalupe, as well as the Sacramento. For ten points, name this bay which Vallejo, Sausalito, Oakland, and its namesake city are on.

Answer: San Francisco Bay

19. Upon the protagonist's return from England, he reports that "the wisest man in England is mad for an hour daily; he is visited by the demon of suicide, who is the national deity." Right before his execution, the protagonist's father demands repayment for rearing the later protégé of Monsieur de la Mole, who refuses to agree to the protagonist's planned marriage to Mathilde. Conviction for the murder of Madame de Rênal completes the fall of Julian Sorel in, for ten points, what Stendhal novel with a colorful title?

Answer: The Red and the Black

or Le Rouge et Noir or The Crimson and the Black

20. Exposure to this chemical can lead to hypocalcemia. As such, calcium gluconate gels are often available in labs which use this to prevent damage to the bones and kidneys in the case of an accident. Despite its toxicity, it is useful for many industrial uses, including catalyzing the alyklation of isobutane and butene, pickling titanium, and cleaning silicon. It is also critical in the production of Teflon, and is itself produced from the reaction of sulfuric acid and fluorspar. For ten points, name this weak acid used to etch glass, whose conjugate base is the ion of lightest halogen.

Answer: hydrofluoric Acid or fuoric acid or fuohydric acid

21. Gordon Tullock asserted that rent seeking behavior was associated with it. William Baumol argued that if barriers to entry and exit were low, these need not be regulated. A natural variety arises when marginal costs of production are decreasing. If price discrimination is not possible, the firm will produce a quantity where marginal cost equals marginal revenue. For ten points, name this type of market in which there is only one seller.

Answer: Monopoly

2 Princeton University Bonuses, Round 10

1. For ten points each, name these things related to the theory of continental drift

10 This is the name of the supercontinent that existed during the Paleozoic and Mesozoic eras.

Answer: Pangaea

10 This is the name of the ocean which surrounded Pangaea. Its name comes from the greek meaning all seas.

Answer: Panthalassa

10 He came up with the theory of continental drift and theorized of the existence of Pangaea after noticing patterns in fossil distribution. It wasn't until after his death that geologists accepted his idea.

Answer: Wegener

2. For ten points each, name these things from signal processing

10 This is the process of taking a continuous value signal and approximating it with a set of discrete values.

Answer: quantization

10 This theorem states that a bandlimited signal may be perfectly reconstructed if it is sampled at a frequency greater than twice the signal bandwidth.

Answer: WhittakerNyquistKotelnikovShannon Theorem

10 Interpolation with this function allows the reconstruction of the original signal. In other words, it is the impulse response of an ideal low pass filter.

Answer: sinc function or $\sin(x)/x$ ("sine x over x")

3. For ten points each, name these waterfalls.

10 It lies on its namesake river between the Brazilian state of Parana and the Argentine province of Misiones. Because it flows over basalt, it only recedes 3mm per year.

Answer: Iguazu Falls

10 Located in its namesake national park, this waterfall consists of the Upper and Lower Falls, which are joined by the cascades. Its water eventually finds its way to the Merced River.

Answer: Yosemite Falls

10 This waterfall in South America feeds into the Churun River and is the tallest waterfall in the world.

Answer: Angel Falls or Parekupa-meru

Answer: Reichenbach Falls

4. For ten points each, name the author and his works:

10 Raised in Ogidi, some of his more obscure works include *A Man of the People* and *Civil Peace*.

Answer: Chinua Achebe

10 This is Achebe's novel set in Umuofia about Okonkwo, who eventually kills himself when his tribe will not go to war against the whites.

Answer: Things Fall Apart

10 In the first of his children's books, Achebe write about the title character's journey to the city Onitsha, where he would no longer have to worry about falling into the title feature and breaking his water-pot in the village of Umofia.

Answer: Chike and the River

5. For ten points each, name these related art questions.

10 In this oil painting, St. John is on the left, while naked souls receive white robes in the background. It is a reference to a scene in the Book of Revelations where matyrs have revenge on their persecutors.

Answer: The Opening of the Fifth Seal or Vision of the Apocalypse or Vision of St. John

or Visión del Apocalipsis or Apetura del Quinto Sello or la Visión de San Juan

10 The opening of the 5th Seal is by this painter, who may be better known for works like *The Adoration of the Shepherds*, and *The Burial of the Count of Orgaz*.

Answer: El Greco or Domenicos Theotokopoulos

10 The cathedral has been moved from the left of the Alcázar palace in this only surviving El Greco landscape which shows the titular city overlooking green hills and a river underneath a stormy sky.

Answer: View of Toledo or Vista de Toledo

6. For ten points each, answer the following about phase diagrams.

10 A solid solution at this composition has the lowest possible melting point. In this type of phase transformation, a liquid solidifies into two different solid phases.

Answer: eutectic

10 In this type of phase transformation, a solid and liquid combine to form a third solid phase.

Answer: peritectic

10 Because of the existence of three phases, this rule dictates that the eutectic and peritectic reactions occur at a constant temperature. In general, is says in equilibrium, the sum of the number of phases and the number of degrees of freedom is equal to the number of chemical components plus 2.

Answer: Gibbs' phase Rule

7. For ten points each, name these things from anthropology.

10 This author used structuralism in an attempt to understand culture. Works of his include *The Raw and the Cooked*, *Totemism*, and *The Origin of Table Manners*.

Answer: Claude Lévi-Strauss

10 In this Levi-Strauss work, he sees similarities between the goatsucker and anal retention in the myths of the Jivaro Indians.

Answer: The Jealous Potter or La Potière jalouse

10 Levi-Strauss observed close links between consanguinity and affinity in this work. He argues that the incest taboo is largely responsible for exogamy.

Answer: Elementary Structures of Kinship or Les reqstructures élémentaires de la parenté

8. For ten points each, name these unequal treaties signed by China.

10 Signed at the end of the First Opium War, this treaty ceded Hong Kong to the British in perpetuity, and opened the ports of Canton, Amoy, Foochow, Ningpo, and Shanghai for trade.

Answer: Treaty of Nanking or Nanjing tiao yue

10 These were issued by the Japanese government under Shigenobu in 1915. Further negotiations led to a treaty which allowed the Chinese being to maintain their own police force, but expanded Japanese control over Shandong.

Answer: 21 Demands or Taika Nijyuichikkajo Yokyu or er shi yi tiao

10 This treaty ceded part of Kowloon Peninsula to the British and Ussuri Krai to the Russians. Because it was to be signed in the Forbidden City, Lord Elgin decided to burn the Summer Palace instead.

Answer: First Peking Convention or Beijing tiao yue

9. For ten points each, name these Shinto gods.

10 She is lured out of the cave she was hiding in by the striptease of Ame no Uzume, and a mirror. She is honored in the shrine at Ise, where that mirror is reportedly kept.

Answer: Amaterasu

10 This brother of Amaterasu was the reason she was hiding in a cave. He flung a flayed horse at her and destroyed her rice fields.

Answer: Susanoo

10 This mother of Amaterasu and Susanoo also had a leech child when she transgressed on some marriage ritual.

Answer: Izanami

10. More obscure games from this company have included *The Lost Vikings* and *Blackthorne*, while they may be better know for games such as *Diablo*. For ten points each. . .

10 Name this part of Vivendi Games, formerly part of Sierra On-Line.

Answer: Blizzard

- 10 Blizzard is currently working on a sequel to this 1998 game with three races, which featured such characters as Jim Raynor, Sarah Kerrigan, and Zeratul.
Answer: Starcraft
- 10 This Protoss unit, which holds interceptors, is the most expensive in terms crystals and, after Arbiter, in terms of gas,
Answer: Carrier
11. For ten points each, answer the following about a group of organic compounds.
- 10 This type of organic compound has a carbonyl group bonded to two other carbons.
Answer: Ketone
- 10 Ketones actually exist in equilibrium with this isomer, which have a hydroxyl group attached to a double bonded carbon in an alkene.
Answer: Enol
- 10 This vitamin, beloved by Linus Pauling, is a sugar with an enol bond.
Answer: Vitamin C or ascorbic acid or L-ascorbate
12. For ten points each, name these types of baroque dances which are in Corelli's 10th Violin Sonata:
- 10 From the French word for German, this type of dance is in 4/4 time and lacks syncopation.
Answer: allemande
- 10 This slow dance originated in the Spanish colonies and was brought to Spain. It is in triple time with the second and third beats of many measures tied to each other.
Answer: sarabande
- 10 Phrases begin in the middle of the bar in this dance which originated in Dauphine.
Answer: gavotte
13. Its sections include "A Game of Chess," "The Fire Sermon," and "What the Thunder Said." For ten points each. . .
- 10 Name this T.S. Eliot poem.
Answer: The Waste Land
- 10 This first section of *The Waste Land* begins, "April is the cruellest month, breeding Lilacs out of the dead land,"
Answer: The Burial of the Dead
- 10 The narrator, not mincing his words, utters what line when "Lil's husband got demobbed?"
Answer: HURRY UP PLEASE IT'S TIME
14. For ten points each, name these panics in the United States.

10 This panic started five weeks after Martin Van Buren succeeded Andrew Jackson to the presidency. The specie circular and the refusal to renew the charter of the 2nd bank of the United States were blamed.

Answer: Panic of 1837

10 Coxey's Army marched from Ohio to Washington DC during this panic. President Cleveland took much of the blame for the disaster and the democrats were destroyed in the midterm elections the next year.

Answer: Panic of 1893

10 This panic was caused by the collapse of the Knickerbocker Trust. Only the intervention of JP Morgan helped stave off a complete collapse of the banking system.

Answer: Panic of 1907

15. Answer the following about mythological hunters, for ten points each.

10 In Greek mythology, this hunter made the mistake of seeing Artemis bathing. As punishment, he was turned into a stag and devoured by his own hounds.

Answer: Actaeon

10 Bran and Sceolang, his dogs, found him his wife Sadbh, who had earlier been turned into a deer, on a hunting trip. This was after he assisted the angler Finneas in catching the Salmon of knowledge.

Answer: Fionn mac Cumhaill or Finn McCool

10 He chose Atlanta to take the hide of the Caledonean boar since she had drawn the first blood, even though it was he who killed it.

Answer: Meleager

16. For ten points each, answers these questions about scandals involving politicians and sex:

10 The Secretary of State for War had a relationship with a showgirl named Christine Keeler and lied about it to the House of Commons, damaging the reputation of the MacMillan government.

Answer: Profumo Affair

10 This US senator from Louisiana admitted to having an affair with a prostitute in July 2007. His phone number was found by Hustler magazine in the records released by the D.C. madam.

Answer: David Vitter

10 During the 1884 campaign, this future president of the United States admitted to paying child support for an illegitimate child possibly fathered to Maria Crofts Halpin.

Answer: Grover Cleveland

17. For ten points each, answer the following about Greek history.

10 This war started over disputes between Athens and Corinth over the colony of Corcyra and later over the colony of Potidaea.

Answer: Peloponnesian War

10 Another cause of the war was this decree, which banned the the eponymous city from trading with the Athenian empire.

Answer: Megarian Decree or Megara Decree

10 The war went downhill for the Athenians after their attempt to conquer this Italian island ended in their army being killed or enslaved.

Answer: Sicily

18. For ten points each, name these battles of the Napoleonic Wars.

10 This battle of the three emperors resulted in an utter defeat for the Russians and Austrians, leading to the collapse of the Third Coalition.

Answer: Austerlitz

10 The Austrians under Archduke Charles were defeated in this battle which saw Bernadotte being dismissed for retreating without orders.

Answer: Wagram

10 Kutuzov's decision to retreat at the end of this battle allowed Napoleon to take Moscow, but preserved the Russian army, eventually leading to the disastrous French withdrawal.

Answer: Borodino

19. This story of Georgiana and her scientist husband Aylmer ends in tragedy when Georgiana dies after drinking a potion from her husband, who is able to experience her one moment of perfection. For ten points each...

10 What is this story?

Answer: The Birthmark

10 This American was the author of "The Birthmark". He also wrote other works like *The Marble Faun* and *The Blithedale Romance*.

Answer: Nathaniel Hawthorne

10 In this short story by Hawthorne, eight people, including Lord de Vere and Ichabod Pigsnot, gather to seek the title treasure, "a mystery of the white mountains?"

Answer: The Great Carbuncle

20. For ten points each, name these cell organelles.

10 Its walls are composed of nine triplets of microtubules. They come in pairs perpendicular to each other and are used in cell division.

Answer: centriole

10 Composed of cisternae, organelle is responsible for processing and packaging proteins produced by the cell.

Answer: Golgi body/apparatus

10 Derived from a Golgi body, this thin layer around the head of a spermatazoa helps sperm cells attach and penetrate an egg.

Answer: acrosome

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