COAST Packet 3

<u>Written by</u>: Rohan Ganeshan, Lukas Koutsoukos, Aadit Juneja, Darryl Wang, Jacob Hardin-Bernhardt, Owen Farra, Andrew Zeng, Elan Pan, Arjun Panickssery, Bo Chi, Moxie Strom, Yuti Das, Vihan Jayawardhane, Joshua Wang, and Simon Emmanuel

Contributions by: Aalok Bhattacharya, Charles Young, Danny Peelen, and Aditya Pavan

TOSSUPS

- 1. An album by this man begins with an adapted version of an adagio melody played by the English Horn and was inspired by Alan Lomax recordings. This man's most famous piece switches between intervals on a D and E flat Dorian Scale, and he collaborated with Chick Corea on albums such as *Nefertiti*. This man took recordings from (*) Joaquin Rodrigo's Concierto de Aranjuez in one album, and included the tracks "Move" and "Boplicity" in another. This creator of *Sketches of Spain* included the tracks "Blue in Green" and "Freddie Freeloader" in a five track album pioneering modal jazz. For 10 points, name this trumpeter on *Kind of Blue*. ANSWER: Miles **Davis** <Ganeshan, Fine Arts Other>
- 2. This battle was chronicled in the Bulletin and the Poem, both of which included propaganda supporting one side. Prior to this battle, two Shasu nomads gave incorrect information to one participant by claiming that the enemy was near Tunip. The Amurru fought for another participant in this battle, but the newly-created Ptah (*) division was successful in pushing them towards the Orontes River. Years after this battle, King Muwatalli II of the Hittites signed the world's oldest surviving peace treaty with the Egyptians. The world's largest chariot battle ever was, for 10 points, what 1274 BC battle in which Ramesses II boastfully claimed victory?

 ANSWER: Battle of Kadesh < Koutsoukos, History Ancient>
- 3. The second act of this play opens with one woman exclaiming her delight of playing the mandolin, which turns out to be a guitar. A character in this play has a very awkward inability and is appropriately nicknamed "Twenty-two and troubles," while another character in this play complains that an "eternal (*) student" has been twice expelled from a university. That character, Trofimov, is loved by Anya, who is the daughter of the protagonist of this play. At the end of this play, Firs is locked in a house while he hears axes being used on the title estate. Loaphkin and Ravenaskaya appear in, For 10 points, name this Anton Chekhov play.

 ANSWER: The Cherry Orchard <Ganeshan, Literature Theater>
- 4. 2,4-Dinitrophenol decreases synthesis of this molecule. A class of proteins named for this molecule includes MDR proteins and the CFTR protein and is called the ABC transporter family. Uncouplers decrease the synthesis of this molecule, which is converted by adenylyl cyclase to the secondary messenger (*) cAMP. 28 of this molecule are produced using a proton gradient established by the electron transport chain. For 10 points, what molecule often used to power active transport has a function similar to a charged battery?

 ANSWER: ATP [or adenosine triphosphate] < Chi/D. Wang, Science Biology>
- 5. The figure of Hope reaches out to receive a crown from a cherub while pointing to a large version of this scene in the Arena Chapel. Minos, who is shown with donkey ears and a snake coiling around him, appears next to a man striking people with an oar in another depiction of this scene. That version of this scene was the subject of the "fig leaf" campaign by Daniel da Volterra and displays (*) St. Bartholomew holding up his flayed skin. At the right of that fresco titled for this scene, a commanding Christ raises a finger to cast sinners down to Hell. For 10 points, the Sistine Chapel's altar wall contains Michaelangelo's depiction of what scene, portraying the fate of human souls?

ANSWER: The <u>Last Judgment</u> [Accept <u>Judgment Day</u> or equivalents because the question is asking for a scene] <Ganeshan, Fine Arts - Visual>

- 6. In one work, this man argues the role of nutrition and "domestication" on a man's "mentality" and later states "languages were moulded by thought, not by languages." This man stated "alternating sounds" do not actually exist in certain languages in a text written for a response to Daniel Brinton. This man discussed the differences between physical and historical sciences in one work and later traveled to study migration patterns on (*) Baffin Island. This author of The Study of Geography famously observed gift giving ceremonies conducted by Kawkiutl Indians known as the Potlatch. For 10 points, name this father of American Anthropology. ANSWER: Franz Uri <u>Boas</u> [accept Franz <u>Boas</u>] <Ganeshan, RMPSS/Misc. Philosophy/Social Science>
- 7. This man's dismissal of Dinmukhamed Kunaev resulted in the Jeltoqsan student riots. One advisor of this man, Gennadi Gerasimov, stated that "every country decides on its own which road to take", which eventually became known as the Sinatra Doctrine for the Frank Sinatra song "My Way". This leader was overthrown by a man who was photographed on top of a tank in front of Parliament in the (*) August Coup. That man was Boris Yeltsin. This leader created the policies of glasnost and perestroika to promote openness and government transparency in his nation. For 10 points, name this final General Secretary of the Soviet Union. ANSWER: Mikhail Sergeyevich Gorbachev < Juneja, History European>
- 8. In a novel, one of these people awkwardly desires many colors on her deathbed before another receives the message "definitions belonged to the definers." One of these people who remarks about a protagonist's "chokecherry tree" possesses a heart like that of a tobacco tin. Sixo, who is burned by Schoolteacher, is one of these people in a novel where one of them is ferried across a river by (*) Stamp Paid. In that novel, a spiteful location home to Paul D is inhabited by a mysterious ghost who haunts one of them named Sethe Suggs. For 10 points, Toni Morrison's novel *Beloved* centers on what people who ran away from harsh life on plantations? ANSWER: Slaves [Accept Plantation Workers or anything referring to being a slave] < Ganeshan, Literature Long Fiction>
- 9. During one siege of this city, the perpetrator's wife Doquz convinced him to murder everyone but the Christians. Tughril Beg captured this city for the Buyid dynasty, which saw the reversal of the *Mihna* religious persecution policy by Al-Mutawakkil. The creator of algebra, al-Khwarizmi, worked in this city that was founded by(*) al-Mansur. During a siege led by Hulagu Khan, the scholar Tusi saved multiple books from this city's House of Wisdom. For 10 points, name this former capital of Abbasid caliphate that currently serves as the capital of Iraq.

ANSWER: Baghdad < Juneja, History - World>

10. Description acceptable. Equipment belonging to this force was marked with a Z symbol to prevent friendly fire. The Wagner Group serves as auxiliaries to this force. Before being killed, a member of this force reportedly asked about a parcel before stating, "Mama, this is so hard" in a text message. This force bombed a maternity ward in (*) Mariupol after taking control of Pripyat and Chernobyl. Valery Gerasimov is the de facto leader of this force, which has invaded a neighboring country due to an alleged genocide in Crimea. For 10 points, name this force currently engaged in armed conflict with the Ukrainian military.

ANSWER: Russian military [accept Russian army or Russian armed forces] <Zeng, GCT - Current Events>

11. Malmquist bias favors objects with higher values for this quantity. It's not related to thickness, but this quantity decreases along the horizontal branch. Different type Ia supernovae have a consistent value for this quantity, which enables their use as standard candles. For the main sequence, this quantity is positively correlated with (*) surface temperature and this quantity is on the y-axis of an HR diagram. Dividing this quantity

by four pi distance squared gives apparent brightness. For 10 points, give this measure of energy radiated by a star per unit time, denoted L.

ANSWER: <u>luminosity</u> [accept absolute <u>brightness</u> or <u>magnitude</u> until "HR," accept apparent brightness/magnitude until "branch" and reject afterwards] <D. Wang, Science - Physics>

12. One book by Roger Stone is subtitled *The Case Against* [this man]. That book, *The Man Who Killed Kennedy*, claims that this man used blackmail to force one president to select him for a position over Stuart Symington, though that belief is contested by other biographers of this man such as Robert Caro. Earlier, this man may have used fraudulent ballots to defeat (*) Coke Stevenson in a Senate election. During the 1960 election, in which he served as running mate, he would help deliver his home state of Texas by a very narrow margin. For 10 points, name this vice president of Kennedy, who took over as president following Kennedy's assassination.

ANSWER: <u>Lyndon Baines <u>Johnson</u> [accept <u>LBJ</u>, prompt on <u>Johnson</u>, do not accept or prompt on Andrew Johnson] <Hardin-Bernhardt, History - American></u>

- 13. The exterior of one of these buildings supposedly contains an unusual 4x4 magic square that has every column and row summing to 33 instead of 34. Another building of this type across Latimer street was meant to revive a city after a 2011 Earthquake. Tadeo Ando designed one of these buildings "of the light," and one of these structures in (*) Christchurch is constructed completely out of cardboard. One of these places containing a Whispering Gallery was built on Ludgate Hill after a 1666 event, and another of these buildings designed by Antonio Gaudi is scheduled for completion in 2026. For 10 points, name these places of Christian worship. ANSWER: Church (Accept Cathedral but NOT Basilica; Accept Church of the Light or Cardboard Cathedral or St. Paul's Cathedral, if Sagrada Familia is said ANTI PROMPT by asking "What type of building?") < Ganeshan, Fine Arts Other>
- 14. In a poem by this author, he describes a time where a man "lonely as a tunnel" forges a woman like a weapon. This author repeats the refrain, "Ah, you who are silent!" in a poem describing an animal who "[buzzes] in my soul, drunk with honey." This author claims "I want to do to you what spring does with cherry trees" in a poem titled (*) "Every Day you Play," which alongside "Body of a Woman" make up one collection by him. In that work, this man claims "In you everything sank!" after a poem beginning "Tonight I can write the saddest lines." For 10 points, name this Chilean poet of *Twenty Love Poems and a Song of Despair*. ANSWER: Pablo Neruda <Ganeshan, Literature Poetry>
- 15. These people lost to Dmitri Ivanovich at the battle of Kulikovo, causing him to take the name 'Donskoy'. One leader of these people was later killed following the Great Stand on the Ugra River, where these people were defeated. Previously, at the battle of the Kalka River, these people used the tactic of (*) feigned retreat to achieve victory while led by Subutai. One group of these people were named for the color of their tents, the Golden Horde. For 10 points, name these people that conquered significant portions of Eastern Europe and Russia under the leadership of Genghis Khan.

ANSWER: <u>Mongols</u> [accept <u>Mongolia</u>, anti prompt on <u>Golden Horde</u> before read] <Hardin-Bernhardt, History - Europe>

16. The rotating restaurant atop the Perlan Observatory provides magnificent views of this country, while the Puffin Island of the coast of this nation is a popular nesting site for the namesake bird. The Kerid Crater Lake can be accessed via the Gold Circle route in this country, and it also contains a waterfall known as Dettifoss. A cured shark (*) meat is the national dish of this nation which also contains Thingvellir National Park. This nation, where the earliest parliament in history known as the Althing was created, contains a site near its capital known as the "Blue Lagoon." For 10 points, name this tiny island nation with capital at Reykjavik. ANSWER: Iceland <Ganeshan, GCT - Geography>

17. This author is eulogized in a Stephen Mallarme sonnet that states "They, like an upstart hydra hearing the angel once, purify the meaning of tribal words", titled for the "Tomb of [this author]". One work by this author describes how the title character holds "illimitable dominion over all" in a short story where a plague kills everyone at (*) Prince Prospero's ball. This author also described a sound similar to "a watch enveloped in cotton" in a short story in which the narrator murders his vulture-eyed landlord and buries him under the floorboards. For 10 points, name this American horror author of "The Masque of the Red Death" and "The Tell-Tale Heart".

ANSWER: Edgar Allan Poe < Juneja, Literature - Long Fiction>

- 18. This island's indigenous people have elongated craniums as a result of wood planks being tied around the head of their infants to toughen their skulls. An event, whose most bloody period was known as "the cutting", saw citizens of this island murdered by troops if they were unable to roll the r in(*) perejil during the Parsley Massacre. A man who ordered the assassination of the Mirabal sisters led a country on this island, while its neighbor was established by the only successful slave revolt in history under Jean Jacques Dessalines and Toussaint L'overture. For 10 points, name this Caribbean island home to Haiti and the Dominican Republic. ANSWER: Hispaniola <Juneja, History World>
- 19. At the beginning of the Unfinished Symphony, this instrument opens the first melody by introducing a half, quarter, eighth, eighth, eighth note pattern. In another piece whose main melody starts with this instrument it chromatically descends and ascends from C sharp to G, and this instrument begins the main theme played throughout the repetitive piece (*) Bolero. This instrument plays rapid sixteenth notes to open the Moldau section of Biedrich Smetana's Ma Vlast, while it is featured in Debbusy's Syrinx and opens his work, Prelude to the Afternoon of a Faun. James Galway famously plays, for 10 points, what diminutive relative of the piccolo?

ANSWER: Flute < Ganeshan, Fine Arts - Auditory.>

20. For a prime number p, this operation on p minus one is congruent to negative one mod p according to Wilson's theorem. The natural log of this function of n is approximately equal to n times the natural log of n minus n. This function can be defined for complex numbers using the gamma function, and it can be approximated by (*) Stirling's formula. In a Taylor series, these functions are found in the denominator of each term. The number of permutations of n elements is given by this operation on n. For 10 points, name this function that returns the product of the first n positive integers.

ANSWER: Factorial function < J. Wang, Science - Other>