

HARI (Hari's Academic Regionals(-minus) Invitational): Heat of the Harimoment

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ROUND 5

Tossups

1. **A parable illustrating the different colors that this substance can impart on a different possession involves 6 people destroying a rose-apple tree in different ways to get fruit. The generation of this substance and its subsequent binding to the *jiva* are termed *asrava* and *bandha* respectively. Four types of this substance must be destroyed to transcend past being an (*emphasize*) arihant. In Jainism, the soul is colored by this concept, which is perceived as all-pervading (*) particles. The "yoga of action" is named for this concept and de-emphasizes the *vipaka*, or "fruits," that this concept yields. In the cycle of Samsara, this concept dictates what one is reborn as. For 10 points, name this concept in which positive and negative deeds affect one's future lives.**

ANSWER: **karma** [prompt on the soul or jiva by asking "what other substance is affecting the soul?" before "jiva" is read; prompt on passions by asking "what substance do those passions generate?"] (The leadin refers to *lesya*, or the colors that karma imparts on the soul)

<Religion, Shanmugam>

2. **A song about this action that repeats "let pleasure rise, let sorrow die" opens an operatic scene in which Macbeth first sees the ghost of Banco. The repeated phrase "let the new day find us" closes a duet about this action. A fast-paced aria describes people who will dance the menuet, folia, and allemande after doing this action; at the end of that aria, the singer notes his list will have "ten new entries" tomorrow. (*) Escamillo sings about an action typically done before this one in the first line of the Toreador Song. The waltz "Libiamo ne'lieti calici" is a brindisi, a genre that concerns this action. For 10 points, name this action referenced in Don Giovanni's Champagne aria.**

ANSWER: **drinking** alcoholic beverages [accept toasting or drinking champagne; prompt on partying?]

<Fine Arts, Lei>

3. **The CIA named a plot to overthrow this country's king Project FF due to his supposed habit of eating 600 oysters per week. The British ambassador to this country, Miles Lampson, forced its king to abdicate in 1942 after troops surrounded Abdeen Palace. The exile of this country's revolutionary Saad Zaghloul to Malta sparked a 1919 revolution that led to the rise of its (*) Wafd Party. British troops under Bernard Montgomery prevented the invasion of this country at the Battle of El Alamein. The anti-monarchist Free Officers Movement formed in this country in response to the corruption of Farouk I, a descendant of Muhammad Ali Pasha. For 10 points, name this country whose monarchy was overthrown by Gamel Abdel Nasser.**

ANSWER: Kingdom of **Egypt**

<World History, Parameswaran>

4. This poet compared a bride to a village maid, while the title character is compared to a "queen," in a love triangle involving Nell and Sir Thomas. This poet, who wrote "I'll love him till he loves me best" in "Maude Clare," described several characters who "had a cat's face," "tramp'd at a rat's pace," or "crawl'd like a snail." A poem by this author ends with one character telling her children (*) "for there is no friend like a sister." That character by this poet saves her sister after she uses "a golden curl" to buy forbidden fruit from the title merchants, who repeatedly cry "come buy, come buy." For 10 points, name this poet and member of the Pre-Raphaelite Brotherhood who wrote about Laura and Lizzie in "Goblin Market."

ANSWER: Christina Rossetti

<Non-Epic Poetry, Zhang>

5. In particle physics, the pseudorapidity is often expressed in terms of the transverse and longitudinal forms of energy or this quantity. The conservation of this quantity is implied by an equation that sets the time derivative of the flow velocity proportional to the divergence of the stress tensor over the density. The time derivative is applied to values of this quantity and position on the left side of Hamilton's equations. The center of (*) mass frame generalizes a reference frame named for the center of this quantity. This quantity, whose conjugate variable is position, is conserved in both elastic and inelastic collisions, in contrast to kinetic energy. For 10 points, name this quantity equal to mass times velocity.

ANSWER: linear momentum [do not accept or prompt on "angular momentum"]

<Physics, Schwartz>

6. After Septimius Severus razed this city for supporting Pescennius Niger, he ordered a reconstruction of it which added the Baths of Zeuxippus. The Oracle of Delphi told Megarians to found this city near a "city of the blind," which they interpreted as being Chalcedon. A bronze column originally from Delphi which depicted three entwined serpents holding up a golden bowl was relocated to this city's (*) Hippodrome. Theodosius II built a series of walls to defend this city along the Golden Horn, its primary commercial waterway. Victories against his rivals Licinius and Maxentius allowed one ruler to establish this city as his capital in 330 A.D. For 10 points, name this capital of the Eastern Roman Empire which was named after the first Christian Roman emperor.

ANSWER: Constantinople [accept Byzantium]

<European History, Parameswaran>

7. A character with this profession recounts meeting UFO observers who believe he will be contacted by aliens shortly after describing a poster of Snoopy on his wall. A character inspired by people in this profession claims to found the Organization of Apocryphal Power. A reclusive Irish character with this profession, who constantly watches a woman through a spyglass in his Alpine chalet, is (*) Silas Flannery. The identity of a Cimmerian person with this profession named Ukko Ahti is debated by the scholars Galligani and Uzzi-Tuzii. The translator Ernes Marana intentionally causes chaos by switching the names of people with this profession while working for Cavedagna. For 10 points, name this profession of the character Italo Calvino in *If on a winter's night a traveller*, as well as his real-life counterpart.

ANSWER: authors [accept equivalent answers such as writers]

<Long Fiction, Strombeck>

8. The prices of two of these things are inversely proportional to the intercepts of the unit isocost line drawn on a Lerner diagram. If production lies within a "diversification cone," the prices of these things will equalize through space as a result of free trade, in a theorem proven by Paul Samuelson. Two countries are assumed to have different initial endowments of these things in the (*) Heckscher-Ohlin model. The quantities of two of these things are the inputs to the Cobb-Douglas function. Entrepreneurship is sometimes considered to be a "fourth" one of these things. Classical economists identified land, labor, and capital as these things. For 10 points, identify these things, the resources necessary for production.

ANSWER: factors of production [or factor endowments; accept answers which specify both labor and capital or all three of land, labor, and capital before "land, labor, and capital"; prompt on endowments with "endowments of what?"; prompt on land, prompt on labor, prompt on capital]

<Social Science, Chen>

9. A body of water with this name has an arm called "Turnagain" after William Bligh failed to discover a Northwest Passage there. A dolphin named Pelorus Jack guided ships through another body of water with this name that was mistaken as a bight by Abel Tasman. Anchorage, Alaska lies on the Knik Arm of an inlet of this name. A 1998 treaty with the Ngāi Tahu prepended the name (*) Aoraki to this English name of a mountain in the Southern Alps. A group of self-governing islands next to Niue; New Zealand's highest peak; and the strait that separates North and South Islands all have this name. For 10 points, give this name of an English captain who gave the name "Sandwich Islands" to Hawaii shortly before his death there.

ANSWER: James Cook [accept Cook Inlet, Cook Strait, Mount Cook, or Cook Islands]

<Geography, Zhang>

10. *Description Acceptable.* The evolution of this ability was aided by the disappearance of bones called lepidotrichia. The lack of shoulder mobility in *Acanthostega* implies that this ability may have begun evolving earlier than previously thought. Neil Shubin discovered the oldest known vertebrate species with this ability in Nunavut. Animals gained the ability to perform this action for their entire lifetime through the evolution of an allantois that facilitates gas exchange and an (*) amnion that surrounds the egg. Tetrapod vertebrates with this ability evolved during the Devonian from lobe-finned fish like *Tiktaalik*. Terrestrial animals are characterized by their ability to perform this action. For 10 points, name this action which was made possible by the evolution of legs from fins.

ANSWER: walking on land [or living on land; accept anything that suggests a transition from living in the water to dry land; accept "being terrestrial" before "terrestrial"; accept answers referring to laying eggs on land; accept answers referring to living outside of water; prompt on answers indicating being able to breathe air; do not accept or prompt on answers referring "walking on two legs" or "walking upright"]

<Biology, Chen>

11. The Urey ratio is the ratio of the rates of gain and loss of this quantity, which is equal to approximately one-third. This quantity is the input to conversion systems that are classified as either "vapor-dominated" or "liquid-dominated." This quantity is primarily accounted for by two components: a "primordial" component left over from the accretion of planetesimals, and a (*) "radiogenic" component, which originates from radioactive decay. By estimating the total value of this quantity stored in the Earth, Kelvin claimed the Earth was about 20 million years old. This quantity inside the Earth is transferred to its surface by conduction through the crust. For 10 points, name this quantity converted by geothermal plants into electricity.

ANSWER: Earth's internal heat budget [or Earth's internal thermal energy; or geothermal heat; or geothermal energy; prompt on temperature or temperature gradient or geothermal gradient]

<Other Science, Chen>

12. This color titles a 1984 Anselm Kiefer painting which depicts splotches of gold in the sky above a burnt wasteland. Geometric shapes painted this color were said to represent "bull's testicles" in a 1960s painting series. This is the first word in the title of a Guggenheim retrospective which features paintings like *The Charnel House*. Rectangles and circles of this color appear in Robert Motherwell's (*) *Elegy to the Spanish Republic* series. Motherwell's friend Franz Kline used broad strokes of this color in his "action paintings." This is the darkest color which appears in a painting that depicts a light bulb and candle next to a neighing horse. For 10 points, antiwar paintings like Pablo Picasso's *Guernica* contain what dark color?

ANSWER: black [accept Nigredo]

<Visual Fine Arts, Parameswaran>

13. In this play, a knock on the door interrupts a description of a big wheelbarrow being brought by a van. A character in this play is chastised as a bad wife for giving her husband sour milk. A man in this play denies ever being near Maidenhead or knowing Fuller's Tea Shop. In this play, a former pianist's face becomes "savage and possessed" after receiving a boy's drum. During an interrogation in this play, a character is asked why the (*) chicken crossed the road and whether the chicken or egg came first. The lights go off in a game of Blind Man's Bluff in this play, during which one character attempts to rape Lulu. That character is taken away by McCann and Goldberg at the end of this play. For 10 points, name this play about the title celebration written by Harold Pinter.

ANSWER: *The Birthday Party*

<Drama, Nageswaran>

14. This man claimed that "nothing is in the intellect that was not first in the senses" in an Axiom he named for the Peripatetic school. Duns Scotus's concept of *haecceity* is often contrasted with this philosopher's *quiddity* or "whatness." This philosopher's reputation as a "dumb ox" was refuted by his former teacher (*) Albertus Magnus. This philosopher's interpretations of Aristotle, whom he referred to as "The Philosopher," probably influenced his theory of natural law. This philosopher reintroduced the cosmological "first mover" argument as one of the five proofs of the existence of God he collected in his magnum opus. For 10 points, name this saint who wrote the *Summa Theologica*.

ANSWER: St. Thomas Aquinas

<Philosophy, Berns>

15. John Bowne was arrested for allowing members of this group to meet in his home. A member of this group plunged a sword into a Bible to splatter pokeberry juice, causing him to be formally disowned from them in 1738. John Endecott ordered the execution of members of this group known as the "Boston Martyrs." The Flushing Remonstrance criticized Peter (*) Stuyvestant's persecution of this group. John Woolman was influential in establishing this group's involvement in the abolition movement. A member of this group signed the Treaty of Shackamaxon with the Lenape fifty years before his family purchased as much land as a man could walk in a day and a half. William Penn was a member of, for 10 points, what nonviolent religious sect?

ANSWER: Quakers [accept Religious Society of Friends]

<American History, Ah Now>

16. **Mark Kurlansky's history of these people notes how they argued that their language was spoken in the Garden of Eden. The Banu Qasi family allied with these people in establishing a kingdom centered at Tudela. In his defense of the U.S. Constitution, John Adams praised these people's age-old fueros, or public ordinances. These people settled Newfoundland's Red Bay, which became a lucrative (*) whaling colony. These people ambushed Charlemagne's troops at the Roncevaux Pass in retaliation for the destruction of Pamplona. These people's name likely derives from a Celtic word meaning "highlanders," but they speak a language isolate. The area near the Bay of Biscay is home to, for 10 points, what people who live in an autonomous community in northern Spain?**

ANSWER: Basques [or Euskaldunak; or Vascos]

<European History, Parameswaran>

17. **A "flux" of the oxide of this element is added to the vessel during the basic oxygen process to remove impurities. Silicates of this element called "clinkers" are the primary component of Portland cement. Another usage of this element's oxide in steelmaking is its addition to neutralize acidic aluminum and iron oxides and create a basic slag. The oxide of this element is added to (*) silicon dioxide in conjunction with sodium carbonate to produce the most common type of glass. Dolomite contains cations of this element along with magnesium. Quicklime and slaked lime refer to the respective oxide and hydroxide of this element. For 10 points, name this alkaline rare earth metal whose carbonate forms limestone.**

ANSWER: calcium [or Ca; accept calcination or calciner]

<Chemistry, Chen>

18. **Ovid told of how a less-famous Phineus threw a spear at this figure, sparking a huge brawl. This figure lends his name to Tufts University's digital classics library, which hosts many classic Greek texts. After the mother of this hero's wife boasted of being more beautiful than the Nereids, this figure had to kill (*) Cetus. This hero traded kingdoms with Megapenthes after he became king of Argos by killing Acrisius with a discus. This hero was conceived after a shower of gold impregnated his mother. This son of Danae married a woman whom he found chained to a rock, named Andromeda. This hero killed his most notable foe by using his shield as a mirror. For 10 points, name this hero who slew the gorgon Medusa.**

ANSWER: Perseus

<Mythology, Shanmugam>

19. **Obi Wali criticized a 1962 writers' conference held at Makerere ("mack-uh-RAY-ray") university that focused on writers' use of this thing. An author created a version of this thing used by Mene as he recounts why he became a child soldier from the town of Dukana. Ken Saro-Wiwa's novel *Sozaboy* uses the "rotten" form of this thing. The book (*) *Decolonising the Mind* outlines why Ngũgĩ wa Thiong'o stopped using this thing in favor of Kikuyu. A novel in this language was attacked as racist in the essay "An Image of Africa;" the author of that essay defended his use of this language to depict native places like Umuofia. For 10 points, name this primary language of postcolonial African writers like Chinua Achebe.**

ANSWER: English language [accept rotten English; accept "English and the African Writer"; the conference is the "Conference of African Writers of English Expression".]

<Short Fiction/Other, Zhang>

20. Dmitri Kabalevsky transcribed for piano and orchestra an F-minor piece for two soloists by this composer. Leopold Godowsky's *Passacaglia* is based on a theme from a symphony by this composer that begins with the notes "B, C-sharp, short D, B." Franz Liszt orchestrated a work by this composer that he claimed "the devil may play" in reference to its difficulty. Brian Newbould proposed that the entr'acte this composer wrote for (*) *Rosamunde* was the intended finale of a work that this composer may have abandoned to work on his *Wanderer Fantasy*. Robert Schumann praised the "heavenly length" of this composer's "Great" ninth symphony, while his most famous symphony has only two movements. For 10 points, name this Austrian composer of the *Unfinished Symphony*.

ANSWER: Franz Peter **Schubert**

<Auditory Fine Arts, Nageswaran>

Bonuses

1. Erwin Panofsky argued that this artist resorted to an "archaic rather than progressive" perspective in *Early Netherlandish Painting*. For 10 points each:

[10h] Name this Flemish artist, best known for an altarpiece whose central panel depicts an Annunciation scene in a dining room. Most scholars agree that this artist was the Master of Flémalle because of his workshop in Tournai.

ANSWER: Robert **Campin**

[10e] Robert Campin's Mérode Altarpiece is in this physical form composed of three panels. Other works in this form include *The Garden of Earthly Delights*.

ANSWER: **triptych**

[10m] In *Early Netherlandish Painting*, Erwin Panofsky also argued that this other painting was a legal certificate due to a signature stating "[its artist] was here."

ANSWER: The **Arnolfini Wedding** [accept *The Arnolfini Portrait* and equivalents]

<Visual Fine Arts, Martin>

2. In a 2013 novel named for these things, an artist nicknamed Reno meets the heir of the Valera motorcycle company. For 10 points each:

[10h] Name these objects that title a novel by Rachel Kushner. The main character of a different book is told "When you're quite finished, you're under arrest" after being ordered to use one of these objects on his house.

ANSWER: **flamethrowers** [accept *The Flamethrowers*]

[10m] This character from the aforementioned book orders Guy Montag to burn his own house. This character "twisted in on himself like a charred wax doll" after he was burned by Montag's flamethrower.

ANSWER: Captain **Beatty**

[10e] The firemen Beatty and Guy Montag use flamethrowers to burn books in this novel by Ray Bradbury.

ANSWER: **Fahrenheit 451**

<Long Fiction, Zhang>

3. The conductor of an experiment involving this activity also performed one involving children racing to wind a spool of thread quickly. For 10 points each:

[10h] Name this activity which Norman Triplett discovered was performed quicker in the presence of others in an example of social facilitation.

ANSWER: **biking** [accept **cycling**; accept "riding a bicycle"]

[10e] Another important discovery of social psychology is this effect, in which people in a large group are less likely to respond to emergencies due to diffusion of responsibility. The murder of Kitty Genovese is often used as an example for this effect.

ANSWER: **bystander** effect

[10m] Robert Zajonc suggested that social facilitation was not limited to humans using the example of cockroaches in one of these apparatuses. Harvey Carr helped conduct an experiment using one of these apparatuses.

ANSWER: **mazes**

<Social Science, Nageswaran>

4. This type of data can be additively or multiplicatively decomposed into trend, seasonal, and residual components. For 10 points each:

[10h] Name this type of data. ARIMA models use this type of data to make forecasts.

ANSWER: **time series**

[10m] This procedure is done on future variables using past variables in ARIMA models. A type of this procedure is the best linear unbiased estimator according to the Gauss-Markov theorem.

ANSWER: autore**gression** [accept ordinary least squares **regression**]

[10e] Either autoregression or moving average terms in ARIMA can be used to correct the "auto" form of this measure, which is plotted on an ACF plot. A common phrase warns that this measure "does not imply causation."

ANSWER: auto**correlation**

<Math, Zhang>

5. General Samuel Curtis fought off a numerically-superior Confederate force at this state's Battle of Pea Ridge. For 10 points each:

[10h] Name this state. Following the Civil War, conflict over this state's governorship led to the formation of a new state constitution and involved competing claims by the Brindletail and Minstrel factions.

ANSWER: **Arkansas**

[10m] The Brindletails were supported by these politicians, who were Southerners who switched allegiance for personal gain. The most prominent of these politicians was James L. Alcorn of Mississippi.

ANSWER: **scalawags** [or **scallywags**]

[10e] The Brooks-Baxter War took place in this period following the Civil War. This period was ended by the Compromise of 1877.

ANSWER: **Reconstruction**

<American History, Nageswaran>

6. In the 2000s, thousands of these objects were decommissioned and sunk in the mid-Atlantic to be used as artificial reefs. For 10 points each:

[10e] Name these vehicles known as "Redbirds" that transport passengers under New York City.

ANSWER: New York City **subway cars** [accept **train cars** or **rolling stock**]

[10m] The 1980s Clean Train Movement erased graffiti from NYC subway cars as part of this sociological theory. This theory states that signs of minor disturbances like vandalism lead to more serious crimes.

ANSWER: **broken windows** theory

[10h] This company produces much of the rolling stock on the NYC subway as well as the Washington Metro. Along with Suzuki, Yamaha, and Honda, this company is one of the Japanese Big Four motorcycle producers.

ANSWER: **Kawasaki** Heavy Industries

<Other, Zhang>

7. In the 1990s, Jordi Puig-Suari and Bob Twiggs proposed a design for these objects partially-inspired by Beanie Babies. For 10 points each:

[10h] Name these miniature satellites, which have a volume of 1,000 cubic centimeters and are designed to carry small payloads for a low cost. They come in sizes of 1U, 2U, 3U, and 6U.

ANSWER: CubeSats

[10e] In 2018, the first cubesats to leave Earth's orbit headed for this planet as part of the InSight probe, used to measure seismic and thermal activity. This planet was previously explored by the Spirit and Curiosity rovers.

ANSWER: Mars

[10m] NASA's proposed NEA Scout mission would use a cubesat propelled via these devices to explore asteroids. These devices capture radiation pressure using a diamond-shaped reflective array.

ANSWER: solar sail [or light sail; or photon sail]

<Other Science, Parameswaran>

8. At a (**emphasize**) 36 B.C. battle on the Talas River, the Chinese may have fought an army from this empire. For 10 points each:

[10e] Despite both ruling vast territories, the Han dynasty and what empire failed to establish lasting contact with each other? This empire referred to China as Seres, the Latin word for "silk."

ANSWER: Roman Empire [or Imperial Rome]

[10m] The emissary Gan Ying was dissuaded to explore Rome by this empire's soldiers, who told him that a vast ocean prevented him from travelling there. Crassus was killed fighting this empire at the Battle of Carrhae.

ANSWER: Parthian Empire [or Arsacid Empire]

[10h] After escaping slavery by the Xiongnu in 125 B.C., this Han diplomat returned with news of Rome's glory. Wu Di sent this diplomat to broker a treaty with the Yuezhi.

ANSWER: Zhang Qian [accept Explorer Zhang]

<Ancient/Other History, Parameswaran>

9. A series of novels that depicts 14th century life in this country follows a medieval woman's affair and marriage with Erlend, who fails to overthrow the king and loses all his property. For 10 points each:

[10m] The trilogy *Kristin Lavransdatter* is by Sigrid Undset, a Nobel laureate from what European country?

ANSWER: Norway

[10h] Undset's other series about medieval Norway, *The Master of Hestviken*, contains this many novels. Norwegian Nobel laureate Bjørnstjerne Bjørnson is a member of this many "greats" of Norwegian writers.

ANSWER: 4

[10e] After Erlend's death, Kristin Lavransdatter becomes a nun and dies in this event. Characters in Boccaccio's *Decameron* tell stories while escaping from this event.

ANSWER: the Black Death [or Bubonic Plague or Black Plague; prompt on plague]

<Long Fiction, Zhang>

10. A problem commonly encountered by musicians is figuring out how to obtain these things. For 10 points each:

[10m] Musicians often visit IMSLP to obtain these things for playing music. Those more comfortable spending money might purchase these things from J.W. Pepper.

ANSWER: sheet music [accept musical scores]

[10h] Along with BMI, this organization collects licensing fees to be distributed as royalties in America. This organization has gained notoriety for cracking down on public performance rights.

ANSWER: ASCAP [accept American Society of Composers, Authors and Publishers]

[10e] Recordings of classical music trouble this website's Content ID system. Tan Dun composed *Internet Symphony No. 1* for a symphony orchestra named after this Google-owned video-sharing website.

ANSWER: YouTube

<Auditory Fine Arts, Zhang>

11. This man's rise to power was dubbed the "Robinocracy" by his opponents. For 10 points each:

[10e] Name this Whig politician who is considered to be the first prime minister of Great Britain.

ANSWER: Robert **Walpole**

[10h] Through the 1720s, Walpole gained power over this other Whig politician, his brother in law. Late in life, this man gained the nickname "Turnip" after advocating for use of turnips in crop rotation in England.

ANSWER: Charles **Townshend** [accept 2nd Viscount **Townshend** or "Turnip" **Townshend**]

[10m] As Prince of Wales, this future king held meetings attended by Walpole and Townshend at the Leicester House. This monarch was the last British monarch to lead troops in battle, doing so at Dettingen during the War of Austrian Succession.

ANSWER: **George II** [prompt on **George**]

<European History, Zhang>

12. In 2020, this country announced plans to create a national digital ledger using blockchain and cryptocurrency.

For 10 points each:

[10h] Name this island country. About one-twelfth of this country's gross national income comes from the sale of a certain lucrative Internet domain.

ANSWER: **Tuvalu** (The domain is the .tv domain.)

[10m] This country's June 2021 "Bitcoin Law" made it the first country to accept Bitcoin as legal tender. This Central American country is led by the half-Palestinian "millennial president" Nayib Bukele.

ANSWER: **El Salvador**

[10e] A central bank digital currency called the Sand Dollar was released in October 2020 as an alternative to cash by this country, whose capital is Nassau.

ANSWER: The **Bahamas**

<Current Events, Zhang>

13. The Apocryphal Infancy Gospel of Pseudo-Matthew popularized the non-canonical inclusion of an ox and a donkey in artistic depictions of this event. For 10 points each:

[10e] Name or describe this event depicted in Nativity scenes. Christmas celebrates this event.

ANSWER: **birth** of **Jesus** Christ [accept any reasonable equivalents, like **birth in the manger**; accept **Nativity** before it is read]

[10m] Pseudo-Matthew claims that Mary was entrusted to Joseph when one of these animals emerged from Joseph's robe. The Holy Spirit is often symbolized by one of these animals, as in a namesake sign that descended upon Jesus's baptism.

ANSWER: turtle-**doves** [accept Sign of the **Dove**; prompt on **birds**]

[10h] Pseudo-Matthew drew heavily on the Infancy Gospel of Thomas and this other apocryphal Gospel. This was the first known document to claim Mary was a virgin, and its author claimed to be a son of Joseph from a previous marriage.

ANSWER: Infancy Gospel of **James** [or the Infancy Narrative of **James**; or the Protevangelium of **James**; do not accept or prompt on "Epistle of James"]

<Religion, Shanmugam>

14. A poem dedicated to this figure dictates how a "goddess" "[pours] her armies through a thousand gates." For 10 points each:

[10m] Name this "excellency" "fam'd for [his] valour, for [his] virtues more" who is told to "proceed ... with virtue on thy side" in a poem which invokes a "celestial choir."

ANSWER: George **Washington** [accept "To His Excellency General **Washington**"]

[10h] This author wrote a poem dedicated to Phillis Wheatley, the author of "To His Excellency General Washington." His poem "An Evening Thought" was written the year before Wheatley arrived in America.

ANSWER: Jupiter **Hammon**

[10e] Hammon wrote about holding to Christian values while in this condition in his "Address to the Negroes in the State of New-York." Hammon was born into this condition, as opposed to Wheatley's being captured in Africa.

ANSWER: **enslaved** [accept word forms]

<Non-Epic Poetry, Schwartz>

15. Models used in this field generally group populations into "susceptible," "infected," and "recovered" subcategories. For 10 points each:

[10e] Name this field which aims to model outbreaks of disease. It was pioneered by John Snow's investigations of a cholera-infected water pump on Broad Street, London.

ANSWER: **epidemiology**

[10h] This type of epidemic occurs when an infected individual becomes a vector and spreads disease to other members of the population, who then also become vectors. They are contrasted with common-source epidemics.

ANSWER: **propagated** epidemic

[10m] This value, which describes the number of new individuals infected from a single infected individual, must be driven below 1 for a propagated epidemic to decline. This value is especially high for airborne diseases like measles and chickenpox.

ANSWER: **basic reproduction number** [accept **R-naught** or **R-zero**; prompt on capital **R**]

<Biology, Schwartz>

16. Luce Irigaray's *An Ethics of Sexual Difference* includes reading of this thinker's posthumously published paper "The Intertwining—The Chiasm." For 10 points each:

[10h] Name this philosopher who developed the "ontology of flesh" in *The Visible and the Invisible*. He drew on the Gestalt school in a 1945 book about perception.

ANSWER: Maurice **Merleau-Ponty**

[10e] Maurice Merleau-Ponty ("**muhr-LOH pahn-TEE**") was a member of this school that studies individual experience. Edmund Husserl is regarded as the founder of this school.

ANSWER: **phenomenology**

[10m] Merleau-Ponty defended this philosophical view in a book examining the "Communist Problem" titled for [this view] "and Terror." An essay by Jean-Paul Sartre categorizes existentialism as part of this view.

ANSWER: **humanism** [accept **Humanism** and Terror; accept *Existentialism is a **Humanism***]

<Philosophy, Zhang>

17. Henri Huet photographed the death of Dickey Chapelle, a member of this profession. For 10 points each:
[10m] Name this profession, members of which included Larry Burrows. The death of Nick Ut's brother, a member of this profession, led Ut to follow his footsteps.

ANSWER: war **photographer** [accept **photojournalist**; prompt on war journalist or war reporter]

[10e] Henri Huet himself was killed during this conflict, which was when Nick Ut took the "Napalm Girl" photo. Eddie Adams captured a prisoner being executed point-blank during this conflict.

ANSWER: **Vietnam** War

[10h] A photographer from this country depicted a Vietnamese family swimming across a river in *Flee to Safety*. Another photographer from this country won the first Pulitzer Prize for Feature Photography for a photo of a soldier sleeping during a storm.

ANSWER: **Japan** (The photographers are Kyōichi Sawada and Toshio Sakai.)

<Other Fine Arts, Zhang>

18. This word names a displacement that consists of a rotation and a translation along a namesake axis. For 10 points each:

[10h] Name this word. Chasles' theorem relates Euclidean transformations to a theory of this name, which works with calculations of pairs of 3D vectors.

ANSWER: **screw**

[10m] Screw theory is often used to study these objects. This two-word term describes objects whose particles do not deform when force is applied, and are exemplified by spinning tops.

ANSWER: **rigid body**

[10e] Euler introduced three of these values to describe the rotation of rigid bodies that can be changed via precession, nutation, or intrinsic rotation. These general values are measured using protractors.

ANSWER: Euler **angles**

<Physics, Zhang>

19. These people's Pallava script was adapted into one of the earliest Javanese scripts, Kawi. For 10 points each:

[10m] Name these people, whose king Rajendra I invaded the Srivijaya empire and Malaysia in the 11th century. At their height, these people were ruled by three kingdoms: the Cholas, Cheras, and Pandyas.

ANSWER: **Tamils**

[10e] Earlier, the Chola king Rajaraja I led a conquest of this island's Anuradhapura kingdom. In the 20th century, this island was the site of a civil war between Tamils and the native Sinhalese.

ANSWER: **Sri Lanka**

[10h] The Chola prince Sri Lumay died in battle against these people while leading the Rajahnate of Cebu. People of this ethnicity were notorious for piracy in the Sulu Sea.

ANSWER: **Moros** [prompt on Filipinos]

<World History, Zhang>

20. The narrator's growing fear of the villagers in the Wolf Cub Village is exacerbated after seeing these two words. For 10 points each:

[10h] Name these two words, which the narrator of that short story wishes to "save the children" from following. "Virtue and morality" is scribbled all over a book where these two words appear in between the lines.

ANSWER: **"eat people"** [accept **"chi ren"**]

[10m] The narrator sees the words "eat people" appear in "Diary of a Madman," a short story by this Chinese author. This author wrote about a man who calls his failures "spiritual victories" in "The True Story of Ah Q."

ANSWER: **Lu** Xun [or **Lu** Sun; or **Lu** Hsun; accept **Zhou** Suren]

[10e] "Diary of a Madman" takes its title from a short story of the same name by this Russian author. Lu Xun admired this author of "The Nose" and translated his novel "Dead Souls" into Chinese.

ANSWER: Nikolai Vasilievich **Gogol**

<Short Fiction/Other, Nageswaran>