

Tossups

1. The sword that a man holds on the left of this canvas is mostly obscured by a red blotch due to damage when transporting this painting to the League of Nations headquarters for safe keeping. Blood gushes from the stabbed right foreleg of a horse in this painting; on top of that horse is a man in garish red pants who is bent over backwards in pain. A man leaning away from the viewer with a green jacket may be the same figure making a cross-like gesture in a chronologically later work. At the center of this painting is a mustachioed man holding a knife and wearing a white turban. This painting depicts the reaction to an uprising at the Puerta del Sol against French troops commanded by Joachim Murat. For 10 points, name this Francisco Goya painting that depicts a “Charge of the Mamelukes.”

ANSWER: The Second of May, 1808: *The Charge of the Mamelukes* [or *The Second of May in the Puerta del Sol* or *The Uprising at Puerta del Sol on the Second of May* or *the Battle at Puerta del Sol, May 2, 1808*]

2. This poem compares a woman’s voice to “the voice the stars had when they sang together” after that woman sees “time like a pulse shake fierce through all the worlds.” One character in this poem imagines lying in the shadow of the “living mystic tree” before meeting “Cecily, Gertrude, Magdalen, Margaret, and Rosalys,” the five handmaidens of “the lady Mary.” In this poem’s final stanza, the central character lays her face between her hands and weeps, causing the speaker, in parentheses, to respond “I heard her tears.” Its main character stands on “the rampart of God’s house” and holds “three lilies in her hand,” and thinks of reuniting with her lover in the afterlife. This poem is named for a woman who “lean’d out from the gold bar of heaven.” For 10 points, name this poem about a grieving angel by Dante Gabriel Rossetti.

ANSWER: “The Blessed Damozel”

3. For a weakly coupled ensemble, this quantity contains an interaction term proportional to the logarithm of a quantity that can be written as a series via the technique of Mayer cluster expansion. That second quantity is known as the configuration integral and is the constant of proportionality between the 1- and 2-particle partition functions, so this quantity itself is given by minus kinetic temperature times log partition function. This variable is the natural potential in the temperature, volume, particle number basis. It is the Legendre transform of the internal energy with respect to entropy. It represents the amount of useful work that can be obtained from a closed system by reducing it to the standard state. For 10 points, name this quantity given macroscopically by internal energy minus entropy times temperature.

ANSWER: Helmholtz free energy [or Helmholtz function; prompt on free energy or F or A]

4. After betraying this ruler, general Fan Wuji committed suicide so that his severed head could be used in an assassination attempt. This ruler forced one rival to execute his own son, Crown Prince Dan. One attempt to overthrow this ruler involved the fake eunuch Lao Ai, who revealed himself when he drunkenly boasted of being this ruler’s stepfather, and was orchestrated by the chancellor Lu Buwei. This ruler sided with the young Li Xin against the older Wang Jian during a dispute about the size of the military, endorsing a smaller 200,000 man army that was embarrassingly defeated. Attempted assassins of this ruler included Gao Jianli, a blind lute player, and Jing Ke, who threw a dagger and missed. This man consolidated his power by defeating the State of Chu, and was assisted by the chancellor Li Si, who promoted burying scholars and burning books. For 10 points, name this Legalist who unified China as the first emperor of the Qin Dynasty.

ANSWER: Shi Huang Di [or Qin Shi Huang; or Zhao Zheng]

5. In this book's eighth chapter, the author considers workers movements in Europe and warns of a "cheap and dangerous socialism" that results from "excess pondering." That chapter, which begins with a quote from "The Beast" by William Vaughn Moody, compares the ownership of land to Jason attaining the Golden Fleece. Its author laments the death of his infant son, only to realize that his death prevented him from growing up "choked and deformed within the Veil," in its chapter "Of the Passing of the First-Born." This book begins by discussing the unspoken question "How does it feel to be a problem?" It describes the history of the Freedmen's Bureau in its second chapter, which declares "the problem of the twentieth century is the problem of the color line." For 10 points, name this 1903 book which introduced the concept of "double consciousness," written by W. E. B. DuBois.

ANSWER: *The Souls of Black Folk*

6. This person was first elected to Congress to replace Scott Klug. While serving in the US House of Representatives, this politician repeatedly introduced the Health Security for All Americans Act, which would have established a single-payer system. This politician also authored the amendment to the Affordable Care Act that let children stay on their parents' health insurance until age 26. In the 2012 Senate election, this Democrat defeated Libertarian Joseph Kexel, as well as a former Secretary of Health and Human Services and Governor of her home state to replace Herb Kohl, despite concerns that this native of Madison was too liberal. For 10 points, name this junior Senator from Wisconsin, the first open lesbian elected to that body.

ANSWER: Tammy Baldwin

7. In Richard Brautigan's novel *In Watermelon Sugar*, these animals help the narrator with his arithmetic after killing his parents. Sam Selvon wrote two novels about a character nicknamed for this animal and his wife Urmilla, including *A Brighter Sun*. These animals are called "Bright topaz denizens of a world of green" who "pace in sleek chivalric certainty" in a poem describing how they "prance upon a screen." That poem by Adrienne Rich describes how they are sewn onto a panel by Aunt Jennifer. One of these animals roams freely throughout a country house in Julio Cortazar's short story "Bestiary." A drunken old sailor dreams of catching these animals "in red weather" in Wallace Stevens' poem "Disillusionment of Ten O'Clock." Borges wrote a short book about the "dream" type of these animals, while Aravind Adiga wrote a novel about a white one. For 10 points, name these animals whose "fearful symmetry" is described in a poem by William Blake.

ANSWER: tigers

8. This molecule forms a part of the compounds known as Josiphos ligands, which are chiral di-phenyl-phosphines. First prepared accidentally in an attempted synthesis of fulvalene, its existence spurred the creation of hapticity nomenclature for ligands; for this molecule, eta for its ligands is 5. In the gas phase, its ligands are eclipsed, while in the solid phase, they are staggered. Analogs for this molecule exist where the central ion is nickel or cobalt. Methods for its synthesis include the metallic sodium method and the diethylamine method, both of which conclude with the addition of ferrous chloride. It is a sandwich compound with two cyclo-pentyl-dienyl ligands. For 10 points, name this first known metallocene involving an iron ion.

ANSWER: ferrocene [prompt on metallocene]

9. Early in this war, the aggressors won the Battle of Ergeme. One participant in this war appointed the Frenchman Pontus de la Gardie as its commander-in-chief. Duke Magnus of Holstein became a puppet king during this war, but lost his territory at the Battle of Wenden. One country experienced success in this war after reforming its heavy cavalry into units called *husaria*, which would develop into its famous winged hussars. This war led to the creation of the Duchy of Courland. This war was ended by the Treaties of Plussa and Jam Zapolski, signed after the cities of Narva and Pskov were captured by John III of Sweden and Stefan Batory of Poland. For 10 points, name this 1558-1583 war in which Ivan the Terrible unsuccessfully attempted to annex the namesake Baltic region.

ANSWER: Livonian War

10. The Sana'a document, discovered in 1972, is evidence that this process began earlier than previously believed. Zaid ibn Thabit was put in charge of this process, which became a priority after the Battle of Yamama resulted in the death of 700 hafizes. Shi'ites believe that Ali completed this process six months after the death of Muhammad, but his attempt was not accepted by the community. Each step in this process had to be confirmed by at least two companions of Muhammad, and it notably involved the collection of stones and palm leaves. The final product of this process was canonized by the Caliph Uthman, for whom it is sometimes named, and used the archaic Kufic script. For 10 points, name this process, important in the early history of Islam, which turned the orally recited revelations of Muhammad into a book.

ANSWER: compiling the Koran [or writing down the Koran; accept anything involving turning the Koran from an oral document into a written document or standardizing it]

11. Peter Maxwell-Davies composed *Eight Songs For a Mad King* for an ensemble of instruments commonly named for this work, which inspired the second and third of Stravinsky's *Three Japanese Songs*. This work includes a passacaglia that describes giant black butterflies which blot out the sun. Its main character imagines smoking tobacco from the trepanned head of Cassander in its movement "Gemeinheit," and is introduced in its first movement, "Mondestrunken." Scored for violin, flute, clarinet, cello, and piano, it was commissioned by Albertine Zehme, who sang the narration during its 1912 premiere. This melodrama consists of twenty-one movements set to the poems of Albert Giraud, which are performed using Sprechstimme. For 10 points, name this composition about a commedia dell'arte character, written by Arnold Schoenberg

ANSWER: Pierrot Lunaire

12. At the end of this novel, its main characters are rescued by troops led by Captain Warley. Several characters in this novel open a chest and discover an ivory chess set, allowing them to use rooks carved like elephants as ransom for hostages. Its protagonist repeatedly refuses the offer to marry Sumach, and is briefly saved from torture by the intervention of Hist. This novel begins with its main character and Hurry Harry encountering Glimmerglass Lake, where they meet the feeble-minded Hetty and her worldly sister Judith aboard the ark of Thomas Hutter. Mark Twain lampooned this novel's violations of the rules "governing literary art" in an essay about its author's "literary offenses." This novel was the last written, but the first chronologically, of its author's Leatherstocking Tales. For 10 points, name this novel by James Fenimore Cooper in which a young Natty Bumppo gets the title nickname by killing for the first time.

ANSWER: The Deerslayer

13. A value closely related to this one but accounting for indirect effects is known as the kerma. The F-factor gives the proportionality between the exposure and this parameter. Multiplying this quantity by the appropriate RBE produces another closely related quantity known as the weighted or effective form of this, which gives a better measure of risk. This quantity has the SI unit Gray, whereas its effective form has the SI unit Sievert, but the respective cgs units or rad and rem are still used as well. For 10 points, name this quantity that gives the energy per unit mass deposited by radiation.

ANSWER: absorbed dose [accept dose equivalent or effective dose or weighted dose; prompt on D]

14. A namesake grandfather of this man won the Battle of Sentinum versus the Samnites, and this man dedicated a temple of Honos after he celebrated a triumph over the Ligurians. This man gained his highest office after the death of Gaius Flaminius. To consolidate his power, this man forced Gnaeus Servilius Geminus to resign as consul, and broke with tradition by riding a horse, which was prohibited for holders of his office. This man passed a law requiring all mourning to be done indoors, and quarreled with Minucius Rufus, a rival who had been appointed his Master of the Horse. As a commander, this man lost the Battle of Ager Falernus, but recaptured Tarentum and trapped an opposing army in Bruttium. This man was responsible for welcoming Varro back amiably after the double envelopment-related disaster at Cannae, and, in the senate, opposed Publius Cornelius Scipio's plan of invading Africa. For 10 points, name this Roman general credited with helping win the Second Punic War via an eponymous delaying strategy.

ANSWER: Quintus **Fabius** Maximus Cunctator [accept **Fabius** the Delayer]

15. A 1973 paper by Paul Benacerraf argued that a causal account of knowledge presents a problem for “platonistic” interpretations of these kinds of truths. A “fictionalist” account of this concept was formulated by Hartry Field, who also attempted a nominalist account of this concept in response to Quine’s naturalistic account. A philosophical approach that held that this concept’s core was fundamentally constructive was formulated by Brouwer and was known as intuitionism. A thesis according to which we ought to be ontologically committed to the existence of entities within this field of study because of this field’s “indispensability” was formulated by Quine and Putnam. For 10 points, identify this field of human activity, which according to the Quine-Putnam thesis is indispensable to science, and which includes sub-fields such as set theory and functional analysis.

ANSWER: **mathematics** [prompt on “logic”]

16. This man included his drawings *Railroad Station in the Form of a Wristwatch* and *Bat Spinning at the Speed of Light* in an exhibition of plans for never-built sculptures called *Colossal Monuments*. A latticework column by this artist stands on Madison Street in Chicago and divides the town’s baseball allegiances; that sculpture is titled *Batcolumn*. This man’s “Ray Gun Manufacturing Company” operated a New York establishment where painted plaster items like *Cube Pastries* and *Bride Mannikin* were sold to customers. One of his best known works contains hand grips around a central column and is supported by tank-like treads. This artist of *The Store* used black steel to create his *Clothespin* for Philadelphia. For 10 points, name this Swedish-American pop sculptor of *Lipstick (Ascending) on Caterpillar Tracks*.

ANSWER: Claes Thure **Oldenburg**

17. This author wrote a play in which Hedwig is slowly driven insane by auditory hallucinations of crowds cheering “Sieg Heil” after her husband, Professor Schuster, jumps to his death in the title square. One of this author’s novels consists of an extended conversation between Atzbacher and Reger, a critic who spends every day staring at Tintoretto’s *Portrait of a White-bearded Man*--that novel includes a passage attacking Heidegger as “that ridiculous Nazi philistine in plus-fours.” He also wrote novels about Roithamer, who kills his sister by building her an isolated house shaped like a perfect cone, and Wertheimer, a pianist who commits suicide because he’ll never be as good as Glenn Gould. The uproar over his play *Heldenplatz* helped inspire a clause in his will which banned publication of his unfinished works in his native Austria. Known for his narrators’ obsessive monologues, for 10 points, name this author of *Old Masters*, *Correction*, and *The Loser*.

ANSWER: Thomas **Bernhard**

18. Woronin bodies are specialized types of this structure in fungal hyphae, while versions of this structure in plants and fungi are equipped with the enzymes needed to carry out the glyoxylate cycle. This structure is the site of beta-oxidation of very long chain fatty acids; as a result, mutations in ABCD1, a protein that transports fatty acids to this site, can cause X-linked adrenoleukodystrophy. Oxidation in this site is not coupled to ATP synthesis, but instead high energy electrons are passed to oxygen, generating reactive species. These organelles also contain an enzyme with one of the highest turnover numbers known catalase. For 10 points, name these cellular organelles that both make and break down reactive oxygen compounds;

ANSWER: peroxisomes

19. In the *Song of Harbaror*, Thor recounts being assailed by bewitched women near this being's home. This figure has the alternate name Hlér in a story that describes him as a skilled magician who attends a festival and listens to the tales of Thiazi's abduction of Idun and the creation of the Mead of Poetry. In the *Poetic Edda*, this deity commissions Thor and Tyr's expedition to obtain the Kettle of Hymir, but his servant Fimafeng is murdered and his guests insulted by Loki. His home is floored with gold, which is known as this god's fire, because it increases the light when he has his fellow Æsir over for his yearly mead parties. For 10 points, name this husband of Rán and father of the nine wave maidens who is, like Njord, a Norse sea god.

ANSWER: Ægir [accept Hlér or Hlésey before Hlér's mentioned; prompt on Gymir]

20. This colony rejected an application for citizenship from the Jewish merchant Aaron Lopez. Founders of this colony, such as William Coddington and John Clarke, established an early form of democratic government by signing the Portsmouth Compact. In the years before the American Revolution, this colony was divided into factions led by Stephen Hopkins and Samuel Ward. This colony was the location of the Great Swamp Fight, although it initially attempted to stay neutral during King Philip's War. The initial land that became this colony was provided by the Indian chief Canonicus. This colony's Touro Synagogue is the oldest in the United States. This colony's founder wrote the *Bloody Tenent of Persecution* and allied with the Narragansett Indians. The For 10 points, name this New England colony founded by Roger Williams.

ANSWER: Rhode Island

## Bonuses

1. We last see this character riding away on a black ship along with the mysterious Queens of Northgales and of the Wastelands. For 10 points each:

[10] Name this lover of Sir Accolon of Gaul and mother of Mordred.

ANSWER: Morgan Le Fay [accept either underlined part]

[10] In a story included in *Le Morte D'Arthur*, the opposite of hilarity ensues at a tournament after Morgan beguiles this knight into using a magical golden shield with a pictographic message reading something like "Hey Arthur, everyone knows Lancelot is boning Guinevere!"

ANSWER: Sir Tristan

[10] Sir Tristan had earlier offed this ruffian who was shaking down Tristan's liege, King Mark of Cornwall. In some versions of the story, this champion of Ireland is a Knight of the Round Table and the uncle of Isolde.

ANSWER: Sir Morholt [or The Morholt; accept Sir Marhaus]

2. [EDITOR'S NOTE: Please do not read alternative answers to the first part as they may spoil the second part.] One of these applying to complex-valued objects is named for Schur and gives the desired result as the so-called Schur form under the adjoint by a unitary operator. For 10 points each:

[10] Name these procedures whereby a given matrix can be re-written as the product of other matrices with useful properties. For example, the Schur form has zeroes below its main diagonal.

ANSWER: matrix decompositions [or matrix factorizations or matrix triangularizations]

[10] The QR decomposition writes any matrix as the product of an orthogonal matrix Q and a matrix R with this property, which the Schur form also has. It is particularly easy to write the determinant for a square matrix with this property.

ANSWER: upper triangular

[10] Given a matrix M and two vectors u and v, these are scalars sigma such that  $Mv = \sigma u$  and  $M^*u = \sigma v$ . Finding these allows you to decompose M into the matrix of vectors u, times a matrix with these values on the diagonal, times the conjugate of the matrix of vectors v.

ANSWER: singular values [EDITOR'S NOTE: The singular value decomposition is thus described.]

3. For 10 points each, answer the following about American war poetry.

[10] This Georgian wrote about a pilot remembering a World War II air raid on Japan in his poem "Buckdancer's Choice." He read his poem "The Strength of Fields" at Jimmy Carter's inauguration, but may be better known for his novel *Deliverance*.

ANSWER: James Dickey

[10] This author of the collection *The Avenue Bearing the Initial of Christ into the New World* attacked the Vietnam War in his long poem *The Book of Nightmares*. His shorter poems include "After Making Love We Hear Footsteps" and "St. Francis and the Sow."

ANSWER: Galway Kinnell

[10] This long poem by Ezra Pound laments that millions died in World War I "for an old bitch gone in the teeth / for a botched civilization." It declares "the age demanded an image / of its accelerated grimace," and focuses on an author who "strove to resuscitate the dead art of poetry."

ANSWER: "Hugh Selwyn Mauberley"

4. During this event, the monk Gregory of Huntington purchased a collection of holy texts so that he could translate them, saving them from certain destruction. For 10 points each:

[10] Name this 1290 event where a certain group associated with the death of Saint William of Norwich was told to leave cities such as York and London.

ANSWER: expulsion of the Jews from England [accept equivalents]

[10] The Jews were expelled from England by this ruler, who also did some invading of Scotland and Wales.

ANSWER: Edward I [or Edward Longshanks; prompt on Edward]

[10] Edward I issued this law, which banned subinfeudation. It led to the end of feudalism in England and is considered a landmark moment in property law.

ANSWER: Quia Emptores

5. Members of this religion reject the existence of physical reality, arguing that only the mind exists. For 10 points each:

[10] Name this Christian denomination, founded in the late 19th century, which argues that the Bible was allegorical, and whose written works include a list of the true meaning of common words found in the Old and New Testament.

ANSWER: Christian Science

[10] That so-called “Key to the Scriptures”, along with “Science and Health” are major sections of an 1875 book by this woman, the founder of Christian Science.

ANSWER: Mary Baker Eddy

[10] Christian Scientists believe that the mind can be used to harm others, a practice they call by this name, which they borrowed from Mesmerism. The so-called “Second Salem Witch Trials” of 1878 came about when an early Christian Scientist accused a rival of this practice.

ANSWER: Malicious Animal Magnetism [or MAM]

6. For 10 points each, name these composers of choral music.

-[10] In 2012, this contemporary American composer premiered the most recent of his “virtual choirs,” *Water Night*, following in the footsteps of his earlier pieces *Lux Aurumque* and *Sleep*.

ANSWER: Eric Whitacre

[10] This composer set Middle English poems such as “Wolcum Yole!” in his choral work *A Ceremony of Carols*. He also composed the cantata *Rejoice in the Lamb* and the song cycle *Serenade for Tenor, Horn, and Strings*.

ANSWER: Benjamin Britten

[10] This composer’s choral works include his *Coronation* mass. His unfinished requiem was completed by Franz Süssmayr.

ANSWER: Wolfgang Amadeus Mozart

7. This man’s second number is the inverse square of the Alfvén number. For 10 points each:

[10] Name this astronomer who proved that dynamo action cannot maintain an axisymmetric magnetic field.

ANSWER: Thomas George Cowling

[10] The first Cowling number is the ratio of the electromagnetic force to this type of force. Its ratio to viscous forces is the Reynolds number.

ANSWER: inertial forces

[10] The Cowling approximation in linear pulsation theory consists of ignoring perturbations in this quantity. Poisson’s equation for it states that its Laplacian is four pi times the gravitational constant times the mass density.

ANSWER: gravitational potential [don't accept “potential energy”]

8. Nikolai Dobrolyubov's essay "The Realm of Darkness" praises this author for exposing the unthinking tyranny of Russian provincial life. For 10 points each:

[10] Name this nineteenth century Russian playwright, who wrote about Katerina, a woman who commits suicide after domestic tyrants prevent her from pursuing a relationship with Boris, in his play *The Storm*.

ANSWER: Aleksandr **Ostrovsky**

[10] Ostrovsky's emphasis on dramatic realism helped inspire this Russian director's quest for psychological realism onstage. He co-founded the Moscow Art Theatre and developed exercises to help actors access the emotional lives of their characters, which became known as his "system."

ANSWER: Constantin **Stanislavski**

[10] This play by Anton Chekhov was the first landmark production of Stanislavski's Moscow Art Theatre. It ends with the budding playwright Treplev shooting himself after learning that Nina is still in love with the older writer Trigorin.

ANSWER: *The* **Seagull**

9. Cheryl Mills served as the chief defense counsel during this event. For 10 points each:

[10] Name this 1998 event, the second of its kind, where a certain Democrat was acquitted of charges of perjury and obstruction of justice in trying to cover up an affair.

ANSWER: **Impeachment** Trial of William Jefferson **Clinton**

[10] The prosecution in the Clinton impeachment was led by this powerful Illinois Republican, the Chairman of the House Judiciary Committee. During the trial, it was revealed that this man had an extramarital affair of his own during the 1960's.

ANSWER: Henry **Hyde**

[10] Hyde had previously defended this former naval officer and National Security Advisor to Ronald Reagan, who was convicted of perjury and obstruction of justice after the Iran-Contra scandal.

ANSWER: John **Poindexter**

10. Consonants articulated at this part of the mouth include the semi-vowel sound usually written in English as "y," as well as the infamous Hungarian consonant stops "ty" and "gy." For 10 points each:

[10] Name this bony plate at the roof of the mouth, which in a common birth defect can be cleft.

ANSWER: hard **palate** [do not accept "soft palate"]

[10] The tip of the tongue also touches the hard palate when this kind of consonant is produced. Making one of these consonants requires curling the tongue back, and they are common in Indian languages, having possibly been borrowed into Sanskrit from a Dravidian substratum.

ANSWER: **retroflex** consonants

[10] This term is used to describe consonants that are articulated in the same place, such as t and n, which are both alveolar, and k and g, which are both velar.

ANSWER: **homorganic**

11. Near the end of this ballet's first act, Franz dances a czardas with Rosika in an effort to make Swanhilda jealous. For 10 points each:

[10] Name this ballet, in which Franz falls in love with a mechanical doll.

ANSWER: **Coppelia**

[10] *Coppelia* was written by this French composer, who included the "Flower Duet" in his opera *Lakme*.

ANSWER: Leo **Delibes**

[10] In 1952, this British choreographer revived Delibes' ballet *Sylvia*. He was the principal choreographer of the Royal Ballet from 1933 to 1970, and incorporated traditional English folk dances into his version of *La fille mal gardee*.

ANSWER: Sir Frederick **Ashton**



12. Most of the members of this class have an associated protein such as slingshot that modulate their activity. For 10 points each:

[10] Give the name of this class of enzymes that transfer a phosphate group using an amino acid whose side chain is a phenol.

ANSWER: tyrosine kinases [or TK; prompt on protein kinase or PK]

[10] This tyrosine kinase family named for having a pair of nearly identical domains form a signalling pathway with the transcription factors known as STATs.

ANSWER: JAK [or Janus kinase; or just another kinase]

[10] The receptor for this hormone has two tyrosine kinase domains in its beta-chains. These phosphorylate its intracellular target, IRS-1.

ANSWER: insulin receptor

13. This character declares that in dramatic literature, the artist remains “refined out of existence, indifferent, paring his fingernails.” For 10 points each:

[10] Name this character, who calls history “a nightmare from which I am trying to awake.” At the end of the first novel he appears in, he resolves “to forge in the smithy of my soul the uncreated conscience of my race.”

ANSWER: Stephen Dedalus [or Stephen Dedalus]

[10] Stephen Dedalus hallucinates the ghost of his dead mother in Nighttown in this novel, which follows a day in the life of Leopold Bloom.

ANSWER: Ulysses

[10] This thirteenth episode of *Ulysses* takes place at Sandymount Strand, where Leopold Bloom masturbates while watching Gerty MacDowell’s exposed legs. It comes between the episodes “Cyclops” and “Oxen of the Sun.”

ANSWER: “Nausicaa”

14. This religion was adopted by the Kurdish Buyid dynasty and the Idrisid Dynasty of North Africa. For 10 points each:

[10] Name this religion which Ismail I popularized in the Safavid Empire.

ANSWER: (Twelver) Shi’a Islam [or Shi’ism; or Shi’ite Islam; or Shi’i Islam; prompt on “Islam”]

[10] Ismail I took power in Persia with the help of this militant Shi’a group, named for their distinctive colorful headgear. This group’s attempts to convert Turks to Shi’ism sparked the Battle of Chaldiran.

ANSWER: Qizilbash [or Red-Heads; do not accept Red Turbans]

[10] Ismail established the Safavid capital at this city in far northwestern Iran, though his successors would move it. Under Ghazan Khan, this city was also the capital of the Ilkhanate.

ANSWER: Tabriz

15. In one episode in this work, a man named Cook Ding carves an ox for his lord so skillfully that the lord learns how to nurture life from that performance. For 10 points each:

[10] Identify this philosophical work whose notable “Inner Chapters” contain a “Discourse on Making All Things Equal,” which argues that all things may be looked at from two points of view.

ANSWER: Zhuangzhi [or Chuang-Tzu]

[10] The *Zhuangzhi* is a foundational text of this philosophical school, which is focused on an ambiguous concept called “the way.”

ANSWER: Daoism [or Taoism]

[10] Hui Shi, a common interlocutor in the Inner Chapters of the *Zhuangzhi*, was a real historical thinker who was a member of a loose school of sophistic thought concerned with a theory of, and named after, these linguistic concepts.

ANSWER: names

16. One of the figures in this work wears a laurel wreath, while the other has his back to the viewer and wears a black beret. For 10 points each:

[10] Identify this composition where a woman in a blue dress holds a book and a trumpet.

ANSWER: *The Allegory of the Art of Painting* [or the *Allegory of Painting*; or the *Artist in his Studio*; or the *Painter in his Studio*]

[10] *The Allegory of the Art of Painting* is a work by this artist of *The Milkmaid* and the *View of Delft*.

ANSWER: Jan Vermeer [or Johannes Vermeer or Johan Vermeer]

[10] This contemporary of Vermeer may have been a student of Nicolaes Berchem. His genre scenes include *Card Players in an Opulent Interior*, and he also painted *A Dutch Courtyard*.

ANSWER: Pieter de Hooch [or Pieter de Hoogh; or Pieter de Hooghe]

17. In this process seen in solutions and colloids, small crystals or particles dissolve, then coalesce to form larger particles. For 10 points each:

[10] Name this process that can destabilize emulsions and colloids through the growth of large particles or droplets

ANSWER: Ostwald ripening

[10] This process occurs when colloid particles coalesce out of suspension, seen as flakes in the solvent. In contrast to Ostwald ripening, it usually occurs in the suspension of oil particles in an aqueous system.

ANSWER: flocculation

[10] Rates of coagulation of particles can be described by this equation, named for an Austrian scientist who also has a diffusion relation with Einstein.

ANSWER: Smoluchowski coagulation equation

18. For 10 points each, name these Latin American authors.

[10] This Chilean author followed her novel *Daughter of Fortune* with a sequel narrated by Aurora del Valle, *Portrait in Sepia*. She may be more famous for *Eva Luna* and *The House of the Spirits*.

ANSWER: Isabel Allende

[10] Allende wrote the prologue to this Uruguayan author's history of the exploitation of the New World, *Open Veins of Latin America*. He also wrote the trilogy *Memory of Fire*.

ANSWER: Eduardo Galeano

[10] This Puerto Rican author included characters like Hamlet, Zarathustra, and the Statue of Liberty in her 2011 satire *The United States of Banana*. She also wrote one of the first novels in Spanglish, *Yo-Yo Boing!*

ANSWER: Giannina Braschi

19. This conflict was sparked by the death of a king at the Battle of Alcacér Quibir, and the losing side was led by Antonio, Prior of Crato. For 10 points each:

[10] Name this 1580-83 war between two neighboring nations.

ANSWER: War of the Portuguese Succession or Spanish Invasion of Portugal [accept any answer that has to do with Spain, Philip II, or the Habsburgs invading Portugal]

[10] To conquer Portugal, Philip II brought this "Iron Duke" out of retirement. He is more famous as a cruel governor of the Netherlands.

ANSWER: Duke of Alba [or Duke of Alva; or Fernando Alvarez de Toledo]

[10] The decisive battle of the War of the Portuguese Succession was this 1582 naval engagement off the Azores, where Spain crushed a joint Portuguese-French navy. The invasion of the Azores followed.

ANSWER: Battle of Ponta Delgada

20. This state is directly west of the Palk Strait and contains the Indian side of Rama's Bridge. For 10 points each:  
[10] Name this southern-most state of India, which is named in part after a major Dravidian language spoken by the locals.

ANSWER: **Tamil Nadu**

[10] This city, formerly a major center of British colonial power, is the capital of Tamil Nadu.

ANSWER: **Chennai** or **Madras**

[10] This other major city of Tamil Nadu, located south of Chennai, was formerly the main French possession in southern India. Today it is a popular tourist destination for its beaches.

ANSWER: **Pondicherry** or **Puducherry**