



NSC 2018 - Round 23 - Tossups

1. The title object of this short story is said to be like "a horse leaping over a high fence." A character in this short story says that for luck he wants to punch a man who keeps swinging his coat over his head. Characters in this short story repeat the line "strange they don't see us" when looking at abandoned houses. When characters in this short story think of death, the line "why was I allowed to come this far and see (*) sand and trees" is repeated. The correspondent briefly gets caught in a current, but makes it to shore with the cook and the captain after escaping this story's title vessel. For 10 points, name this Stephen Crane story in which four men are lost at sea in the title vessel.

ANSWER: "The **Open Boat**"

<Games, Literature - American>

2. Spence's function is the second-order case of the "poly" version of this operation, which appears in the integrals of several quantum particle systems. A version of this operation generalized to any group is important in cryptography due to the difficulty of calculating it by computer; that is the "discrete" form of this operation. As n goes to infinity, the difference between this operation of n and the harmonic series of n terms approaches the (*) Euler–Mascheroni (OY-ler mask-uh-ROH-nee) constant. A commonly used version of this operation has a derivative equal to one-over- x . An operation of this name invented by John Napier can often be simplified by using the change of base formula. For 10 points, name this operation, the inverse of exponentiation.

ANSWER: **logarithm** [accept poly**logarithm**, poly**log**, discrete **logarithm**, discrete **log**, natural **log**, etc.]

<Minarik, Science - Math>

3. Many early users of these things were photographed by Ashley Franklin Van Order. A *Nation* article on the "Losers and Outsiders" who owned these things was adapted into a book on a "Strange and Terrible Saga" by Hunter S. Thompson. Some users of these things wear patches reading "1%," a reference to an apocryphal quote about the 1947 Hollister riot. A club named for these devices headed by Sonny Barger provided security at the (*) Altamont Free Concert for the Rolling Stones. One of these objects decorated in red, white, and blue is used to store drug money in Dennis Hopper's *Easy Rider*. One of these objects is used on a trip from Minnesota to California in a Robert M. Pirsig book on the "Zen" of maintaining them. For 10 points, name these vehicles used by the Hell's Angels.

ANSWER: **motorcycles** [or motor**bikes**; or **Harley** Davidson; accept ***Zen and the Art of Motorcycle Maintenance***; prompt on **bikes**; prompt on **Hell's Angels** by asking "what devices do they use?"; do NOT accept "bicycles"]

<Bentley, Mixed/Other/General Knowledge>

4. In the 1960s, fifty white-painted bicycles were left around this city for public use as part of one of the White Plans developed by the counterculture Provo movement. The Southern Church in this capital city served as a morgue during the "hunger winter" famine that struck its country in 1944. Protests erupted in this city during the wedding of former Hitler Youth member Claus von Amsberg to the daughter of the monarch (*) Juliana. In this city, women nicknamed "Miep" and "Bep" aided the residents of the Secret Annex. The first of this city's cannabis-selling "coffee shops" opened in 1972. A resident of this city wrote about the time she spent in hiding with her sister Margot until her deportation to Bergen-Belsen. For 10 points, Anne Frank lived in what canal-ringed Dutch capital?

ANSWER: **Amsterdam**

<Brownstein, History - European>

5. Maria Goeppert-Meyer names a unit for the cross-section for absorption of two of these particles at once. Transition-edge sensors were used to close these particles' "detection loophole," which arose when using these particles to test Bell's theorem. The rates of processes which produce or emit these particles are measured by the Einstein coefficients. In quantum electrodynamics, the exchange of (*) "virtual" examples of these particles mediates the electromagnetic force. A population inversion of electrons inside a gain medium inside a cavity resonator enables the stimulated emission of these particles at a single frequency by a laser. For 10 points, name these quanta of light.

ANSWER: **photons**

<Mukherjee, Science - Physics>

13. The most commonly read English version of this book was translated by A. V. Miller and has a foreword written by J. N. Findlay. The preface to this book puts forth the author's goal to "bring philosophy closer to the form of Science." The Jean Hyppolite reading of this book frames it as a *bildungsroman*. A different portion of this work argues that two figures enter into a relationship to avoid (*) "abstract negation." That key portion of this work identifies the struggle for recognition between the lord and bondsman. Abstract-negative-concrete is generally considered a more accurate version of the thesis-antithesis-synthesis triad often attributed to this book. For 10 points, name this important development of dialectics, an 1807 work by G. W. F. Hegel.

ANSWER: **The Phenomenology of Spirit** [or **The Phenomenology of Mind**, or **Phänomenologie des Geistes**]

<Boyd, RMP - Philosophy>

7. The successor to this company, COC & PPE (C-O-C and P-P-E), earned the nickname "Clean Out of Cash & Poor Pay." Johnny Fry was greeted by celebratory bonfires after he spent ten and a half days working for this company. Alexander Majors bought Bibles for new employees of this company. William Hepburn Russell co-founded this company after a previous venture was disrupted by Mormons. Its successor was sold to Wells Fargo in 1866. Robert Haslam (*) covered 360 miles in one stint for this company, ignoring dangers from Native Americans. This company had a terminus in St. Joseph, Missouri and was made obsolete by the completion of the Transcontinental Telegraph. For 10 points, name this company whose employees would change horses at each station to deliver mail quickly.

ANSWER: **Pony Express** [or **Leavenworth and Pike's Peak Express** Company]

<Bentley, History - American>

8. A Sikh ceremony centered on these things ends by saying "Jo Bole So Nihal! Sat Siri Akal!" A Buddhist monk commonly consults an astrological chart and then cuts off a strand of hair in a ceremony regarding these things. An aunt is sometimes given responsibility over these things in a Hindu ceremony that takes place 10 or 12 days after the Jātakarman, called the Nāmakarana. The Adi Granth is consulted at random in a Sikh ceremony for (*) choosing these things, and many Sikh women share one of these things, Kaur, which means "princess." Jewish fathers in the U.S. often read a Torah passage on the first sabbath after birth and announce an English and a Hebrew one of these things. For 10 points, a "Christian" type of what identifiers are assigned to infants at a Catholic baptism?

ANSWER: names [accept first names or last names or family names or surnames]

<Bentley, RMP - Other Religion>

9. Anthony Parton's catalogue of the "Art and Design" of a female artist from this country was accused of containing 150 forgeries; that female artist used this country's folk-art tradition to paint peacocks and set an auction record for *Picking Apples*. This country is where the Rayonism movement developed. Another artist working in this country wrote *The Non-objective World* and held that art could move beyond religion through "the (*) supremacy of pure emotion." That same artist working in this country largely eliminated color in his 1918 *White on White* series. The poster *Beat the Whites with the Red Wedge* was made during a revolutionary period in this country. For 10 points, name this country home to Natalia Goncharova and Kazimir Malevich.

ANSWER: Russia [or Soviet Union; or USSR; accept Ukraine]

<Bentley, Arts - Painting>

10. This character whispers "Open-ey'd conspiracy his time doth take" into a sleeping character's ear to save him from a murder plot. This character reports that another character, with hair standing up "like reeds," shouted "Hell is empty, and all the devils are here!" While helping another character dress, this character sings "Where the bee sucks, there suck I." This character's groans are said to have tormented (*) wolves and bears while he was imprisoned for 12 years in a cloven pine by the witch Sycorax (SICK-uh-rax). This character sings "Full fathom five thy father lies" to taunt Ferdinand, who was on a ship that this character sunk in a storm. For 10 points, name this spirit who serves the magician Prospero in *The Tempest*.

ANSWER: Ariel

<Bollinger, Literature - British>

11. Dual oxidase proteins were first discovered to produce hydrogen peroxide to help an enzyme oxidize ions of this element. A post-translational modification that adds this element to tyrosine rings initiates a process blocked by drugs such as propylthiouracil (propyl-thio-uracil) and methimazole (meth-imazole). Organification refers to the process of incorporating this element into the body. A solution containing lots of this element traps crystal (*) violet inside cells during Gram staining. TPO adds atoms of this element to thyroglobulin (thy-ro-globulin) in the process of producing T3 and T4. A deficiency of this element can be treated by Lugol's solution and can lead to an enlargement of the thyroid gland. For 10 points, name this halogen whose deficiency can lead to goiter.

ANSWER: iodine [or I; accept iodide or I- or I-minus]

<Ramaswami, Science - Biology>

12. This man sent a composer to a Peace Council who was goaded by a sign to "jump thru the window." Maria Yudina was awoken in the middle of the night to record Mozart's Piano Concerto No. 23 after this man heard her performing it live on the radio. Reinhold Glière (GLEE-air) and Emil Gilels (eh-MEEL GHEE-ls) have won a yearly prize named for this man, who loved folk songs like "Suliko." Testimony claims that a composer's Tenth Symphony portrays this man, who may have written the anonymous article (*) "Chaos Instead of Music." This man and Zhdanov disparaged modern music as "formalism," such as the opera *Lady Macbeth of Mtsensk* (mut-SENSK). This man was cautiously praised in Prokofiev's cantatas. For 10 points, name this man who antagonized composers like Shostakovich as the head of the Soviet Union.
ANSWER: Joseph **Stalin** [or Joseph Vissarionovich **Stalin**; or Ioseb Besarionis dze **Jughashvili**] ("Suliko" is a Georgian folk song.)

<Magin, Arts - Music>

13. This author promises to walk "where the wild wind blows on the mountain side" in a poem that begins "Often rebuked, yet always back returning." In a novel by this author, an alcoholic attaches a spring-knife to the barrel of his pistol to kill the man who continually loans him money to feed his gambling addiction. This author wrote a notebook of poems set in the invented land of Gondal. A character created by this author humiliates his (*) adoptive brother Hindley and forcibly marries the heir to Thrushcross Grange to his son Linton. This author's only published novel is framed as a narrative told to Mr. Lockwood by Nelly, who recalls the romance between Catherine and Heathcliff. For 10 points, name this author of *Wuthering Heights*.

ANSWER: **Emily Brontë** [prompt on **Brontë**]

<Bollinger, Literature - British>

14. One organization of this name executed ten Englishmen as part of the 1623 Amboyna massacre. A Huguenot leader of one of these organizations was lured back to direct the French organization of this name founded by Jean-Baptiste Colbert. An organization of this name implemented a policy called *extirpatie* (ex-tir-PAH-tsee) which forced Tidore and Ternate to destroy their clove trees. That same organization of this name used the artificial island of Dejima through an exclusive agreement with the (*) Tokugawa Shogunate. The Batavian Republic nationalized one of these organizations with headquarters in present-day Jakarta. The British company of this name had a monopoly on tea. For 10 points, give this name for companies that controlled trade in much of Southeast Asia.

ANSWER: **East India** Company [accept Dutch **East India** Company or British **East India** Company or French **East India** Company or **United East India** Company or **Vereenigde Oostindische** Compagnie or **VOC** or Dutch **East Indies** Company or Compagnie française pour le commerce des **Indes orientales**]

<Kothari, History - World>

15. A novel set in this country in 2022 depicts a literature professor who repeatedly visits the statue of the Black Virgin while in hiding, after an election in this country is won by Mohammed Ben-Abbes, the Muslim Brotherhood candidate. A novelist from this country, the setting of *Submission*, wrote about a man who abandons his wife after falling for the Arab boy Mektir while on a trip to Biskra. A former (*) colony of this country is the setting of a novel in which an actor collapses during a performance of *Orpheus and Eurydice*, after which Father Paneloux tries to explain, and Bernard Rieux tries to fight, the title epidemic in Oran, Algeria. *The Plague* was first published in, for 10 points, what home country of Michel Houellebecq (mee-SHELL well-BECK), André Gide (zheed), and Albert Camus (al-BAIR kah-MOO)?

ANSWER: **France** [or the **French** Republic; or République **française**]

<Kothari, Literature - European>

16. This chemist opened his Nobel lecture by citing Wilhelm Pfeffer's (FEFF-er's) studies into tree sap as a key motivation. Plotting the natural log of a reaction's equilibrium constant vs. one over temperature yields a line according to this scientist's equation. A quantity named for this scientist will always be a positive integer for strong acids, strong bases, and salts, but not (*) weak acids and weak bases. That quantity, for potassium chloride and calcium chloride, equals two and three respectively, because they dissociate (diss-OH-see-ate) into two and three ions. For 10 points, identify this Dutch scientist, the namesake of a factor used to describe colligative properties and the first Nobel laureate in chemistry.

ANSWER: Jacobus Henricus van 't Hoff [or van 't Hoff equation; or van 't Hoff factor]

<Prieto, Science - Chemistry>

17. The town of Great Harbor was founded on this island by the publisher of the *Bay Psalm Book*, Thomas Mayhew. In 1972, an artist tried to throw Robert McNamara off of a ferry headed to this island. In the '90s, a town on this island was given a new Wampanoag name of Aquinnah. The world's largest factory for making candles from sperm oil was once located in Edgartown, the county seat of Dukes County on this island. In 1692, New York ceded its title to this island. In 1854, 1 in 4 children in (*) Squibnocket were deaf, and used this island's namesake sign language. This island is usually connected to a peninsula named Chappaquiddick and it is located south of Cape Cod. For 10 points, name this island in Massachusetts named for the wild grapes that grew there.

ANSWER: Martha's Vineyard [or Noepe; prompt on the Vineyard]

<Bentley, Geography - United States>

18. Four deep brass F octaves open this opera's "Dance of the Nubian Slaves." A character in this opera dips his hand in holy water to break a curse that causes flowers he touches to wither. In this opera, a sword shatters after striking a character who sings "Le veau d'or" (luh voh dor). This first opera to ever be performed at the Metropolitan Opera was premiered in Paris 12 years after a "dramatic legend" on the same subject by Hector (*) Berlioz. After this opera's title character woos his love interest with an exquisite jewelry box and a mirror, she sings the "Jewel Song." It ends with a chorus of angels singing an Easter hymn as Marguerite is declared "Saved!" and ascends into heaven. For 10 points, name this grand opera by Charles Gounod (goo-NOH) about a philosopher who sells his soul to Mephistopheles.

ANSWER: Faust

<Kothari, Arts - Opera>

19. Priestesses of this deity could supposedly control the weather by braiding their hair. This deity is the protector, but not a parent, of the god who serves as the guardian of the South and the liver. A poor fisher-girl offers this deity shelter when a rude rich woman refuses it, after which the rich woman's son is poisoned by this deity's companions. This deity uses a golden signet-ring to trick (*) Nemty into ferrying her to an island in a story in which she also tricks another god into consuming lettuce containing her son's semen. This goddess engages in a long search, assisted by her sister Nephthys, for the scattered parts of her husband's body after that husband is murdered by Set. For 10 points, name this mother of Horus and wife of Osiris.

ANSWER: Isis [or Aset, Ast, Iset, or Uset]

<Grames, RMP - Other Myth>

20. To prepare for the anniversary of this event, children went around town with a wheelbarrow asking for pennies. It doesn't have to do with martyrs, but this event is commemorated by seven different societies each year in Lewes. Catherine Wheels are sometimes nailed to trees during commemorations of this event, some of which use contemporary politicians instead of the traditional (*) straw effigy. In North America, this event was remembered on the anti-Catholic Pope's Night. This event was orchestrated by Robert Catesby during the reign of James I. A common rhyme about this event begins "Remember, remember, the 5th of November." For 10 points, name this plot to blow up Parliament that is commemorated on Guy Fawkes Day.
ANSWER: **Gunpowder** Plot [or **Gunpowder** Treason; or **Jesuit** Treason; accept **Guy Fawkes** Treason or **Guy Fawkes** Plot or **Guy Fawkes** Night before "Guy" is read]
<Bentley, History - European>

21. This artist created 53 studies of the face of a former geisha named Hanako. Rachel Corbett's dual biography *You Must Change Your Life* discusses this artist's friendship with Rainer Maria Rilke (RILL-kuh). This artist used a handyman named Bibi as the model for a piece whose head froze and broke in the studio, giving it the title *Man With a Broken Nose*. The head that rises from an unfinished block in his sculpture *Thought* is based on that of his student (*) Camille Claudel (kuh-MEE klo-DELL). In one of this man's sculptures, six men wear nooses around their necks as they surrender to Edward III. A sculpture group by this artist includes a depiction of Paolo and Francesca titled *The Kiss*. For 10 points, name this French sculptor of *The Burghers of Calais* who included *The Thinker* in his *Gates of Hell*.
ANSWER: Auguste **Rodin** [or Francois Auguste Rene **Rodin**]
<Bentley, Arts - Sculpture>



NSC 2018 - Round 23 - Bonuses

1. The Ras superfamily is a subset of these proteins, and these proteins can be activated by GAP proteins. For 10 points each:

[10] Name these proteins, which hydrolyze a gamma phosphate from their substrate. The G-alpha subunit of a G protein is an example of the "small" type of these proteins.

ANSWER: **GTPases** (**G-T-P-aces**)

[10] A GTPase known as Ran works with importins and exportins to control transport into and out of this organelle. During prophase, a Ran gradient helps chromosomes to form the spindle apparatus in this organelle.

ANSWER: cell **nucleus** [or **nuclei**]

[10] The large GTPase dynamin is important for this process in eukaryotic cells. The receptor-mediated form of this process involves budding of the plasma membrane to form clathrin-coated vesicles.

ANSWER: **endocytosis** [accept **phagocytosis**; accept **pinocytosis**]

<Ramaswami, Science - Biology>

2. Answer the following about Béla Bartók's chamber music. For 10 points each:

[10] Bartók wrote this many string quartets, the last of which opens each of its movements with a *Mesto* section. Mendelssohn published this many string quartets, and Mozart dedicated a group of this many string quartets, including "Dissonance" and "Hunt," to Haydn.

ANSWER: **six** [or **6**; accept **Six** "Haydn" Quartets]

[10] The fourth movement of Bartók's Fourth String Quartet is written entirely using this technique. Bartók names a snapping variant of this technique of plucking a stringed instrument.

ANSWER: **pizzicato** [accept snap **pizzicato** or Bartók **pizzicato**]

[10] Benny Goodman commissioned Bartók's *Contrasts* for this ensemble. Adding a cello to these three instruments yields the ensemble of *Quartet for the End of Time*.

ANSWER: **violin**, **clarinet**, and **piano** [accept in any order; prompt on **trio** by asking for the names of the instruments]

<Kothari, Arts - Music>

3. This man's great-grandfather, Marcus Sergius Silus, was supposedly the first Roman soldier to do battle with a prosthetic hand. For 10 points each:

[10] Identify this man who advocated the cancellation of debt as part a 63 BCE campaign. This man was killed fighting at Pistoria after launching a namesake conspiracy that was exposed by Cicero.

ANSWER: **Catiline** [or Lucius Sergius **Catilina**]

[10] Cicero persuaded this body, of which he was a member, to issue an "Ultimate Decree" against Catiline. Consuls were drawn from this longstanding Roman institution, and its members could also appoint dictators.

ANSWER: Roman **Senate** [or **Senatus** Romanus]

[10] Before launching his conspiracy, Catiline had participated in this conflict. The assassination of Marcus Livius Drusus kicked off this conflict, in which Rome fought the Marsi and Samnites.

ANSWER: **Social** War [or **Italic** War; or **Italian** War; or War of the **Allies**]

<Bentley, History - European>

4. In the *Postscript* to this novel, its author writes that a novel's title "must muddle the reader's ideas, not regiment them," which is reflected in the many possible referents of this novel's title. For 10 points each:
[10] Name this 1980 novel. Its publisher vetoed its author's desire to name it after the narrator, William of Baskerville's apprentice Adso of Melk.

ANSWER: *The **Name of the Rose*** [or *Il **nome della rosa***]

[10] *The Name of the Rose* is the debut novel of this Italian author of *Foucault's Pendulum*.

ANSWER: Umberto **Eco**

[10] Eco's *Postscript to the Name of the Rose* also discusses the naming of this villainous character, noting of the real-life figure who inspired this character's name that "library plus blind man can only equal" one person.

ANSWER: **Jorge** of **Burgos** [prompt on partial answers; do not accept or prompt on "(Jorge Luis) Borges"]

<Jose, Literature - European>

5. This son of Nauplius (**NAW-plee-uss**) the Wrecker is credited with the invention of dice and eleven of the consonants in the Greek alphabet. For 10 points each:

[10] Name this Greek warrior who was framed as a traitor, then either stoned to death or drowned, in revenge for having previously foiled Odysseus's attempt to stay out of the Trojan War by pretending to be insane.

ANSWER: **Palamedes** (**pal-ah-MEE-deez**)

[10] Odysseus's plan involved plowing his fields and sowing them with salt; to stop it, Palamedes placed this infant son of Odysseus in the way of the plow.

ANSWER: **Telemachus**

[10] Odysseus was assisted in killing Palamedes by this other Greek warrior who, during his *aristeia* (**ar-iss-TEE-ah**) in Book V (**five**) of the *Iliad*, managed to wound both Ares and Aphrodite.

ANSWER: **Diomedes**

<Carson, RMP - Greco-Roman Myth>

6. In an interview, this scientist mentioned that the "most immediate benefit" from his Nobel Prize-winning work is "doing experiments that teach us things." For 10 points each:

[10] Name this scientist at Stanford University. He shared that Nobel Prize in Physiology or Medicine in 2006 with Craig Mello for his work on RNA interference.

ANSWER: Andrew Zachary **Fire**

[10] The RNA interference pathway begins with one of these enzymes named Dicer. These enzymes cleave the backbone of DNA or RNA from the middle of the nucleotide chain, unlike exonucleases.

ANSWER: **endonucleases** [or **endoribonucleases**; do not accept or prompt on "exonuclease"]

[10] Dicer can cleave RNA to form a type of RNA with this many strands. The most common biological conformation of DNA is a helix made of this number of strands.

ANSWER: **two** [or **2**; accept **double**-stranded]

<Ramaswami, Science - Biology>

7. Classic examples of this curve show tradeoffs between consumer and military goods, or "guns" and "butter," for a national economy. For 10 points each:

[10] Name this curve that illustrates the possible combinations of outputs for two or more goods.

ANSWER: **production possibilities** frontier [or **production-possibility** frontier; or **production possibilities** curve; accept **PPF** or **PPC**]

[10] The production possibilities frontier is typically curved outward, illustrating a so-called "law" of this kind of "returns," as increasing input by a unit amount will result in less output as more units are added.

ANSWER: **diminishing** [accept law of **diminishing** returns]

[10] The production possibilities frontier consists of all efficient points on the contract curve, which consists of all Pareto-optimal outcomes inside one of these constructs that are used to illustrate division of resources between two actors.

ANSWER: **Edgeworth boxes** [or **Edgeworth–Bowley** boxes; prompt on **Edgeworth** or **boxes**]

<Alston, Social Science - Economics>

8. This author's early novels *The Late Bourgeois World* and *A World of Strangers* were each the subject of government bans that lasted for more than a decade. For 10 points each:

[10] Name this author who examined the banning of another novel in the title essay of a 1980 collection subtitled "How South African Censorship Works."

ANSWER: Nadine **Gordimer**

[10] Gordimer's essay was about the banning of this novel, whose title character, Rosa, is forced to come to terms with her father Lionel's anti-apartheid and communist activism.

ANSWER: ***Burger's Daughter***

[10] This other Gordimer novel, in which the Smales family takes shelter in the home village of their former servant during a fictional South African civil war, was also banned under the apartheid government.

ANSWER: ***July's People***

<Carson, Literature - World>

9. The Guanahatabey (**GWAH-na-HA-ta-bay**) Culture on this island appears to have subsisted on only seafood and vegetables. For 10 points each:

[10] Name this island which was occupied by the Ciboney (**see-bo-NAY**) peoples before Spanish colonization. After moving here, a cacique (**ka-SEE-kay**) named Hatuey organized one of the first anti-Spanish resistances.

ANSWER: **Cuba** [or Republic of **Cuba**]

[10] The Ciboney peoples are a subgroup of this culture, which are a subgroup of the Arawak. They cultivated the cassava (**ka-SAH-va**) plant and feared the evil god Huracan, who gives his name to the word "hurricane."

ANSWER: **Taíno** (**tah-EE-no**) [or Island **Taíno**]

[10] This Genoese explorer, who traded with the Taíno, was unable to speak with the Guanahatabey since their language was vastly different. He reached the New World in 1492.

ANSWER: Christopher **Columbus** [or Cristóbal **Colón**; or Cristoforo **Colombo**; or Cristòffa **Cónbo**]

<Jose, History - World>

10. Areas beneath these architectural structures may have "whispering galleries," which allow faint sounds made at one point to be heard at many other points. For 10 points each:

[10] Name these parts of buildings which often sit on top of structures called drums. In the 15th century, Brunelleschi added one of these structures to Florence Cathedral.

ANSWER: **domes**

[10] St. Basil's Cathedral in Moscow contains many of this type of dome, which often extends in diameter beyond the drum on which it sits.

ANSWER: **onion** domes [or **lúk**ovichnaya glavá]

[10] A dome may let light into the underlying building through one of these circular openings.

ANSWER: **oculus** [or **oculi**]

<Jose, Arts - Architecture>

11. According to a poem, it is at this location where the speaker's friend "drinks the tea of the breasts of the spinsters of Utica." For 10 points each:

[10] Name this insane asylum that is repeatedly mentioned in the third and final part of a 1956 poem. The final lines of that poem describes a dream in this place where the speaker sees his friend "walk dripping from a sea-journey on the highway across America."

ANSWER: **Rockland**

[10] Carl Solomon is told "I'm with you in Rockland" in this Allen Ginsberg poem.

ANSWER: "**Howl**"

[10] The first line of "Howl" begins with the speaker proclaiming "I saw the best minds of my generation destroyed by madness," then lists three other qualities. Give at least two of those next three words.

ANSWER: **starving**, **hysterical**, and/or **naked** [do not prompt on fewer than two given answers]

<Jose, Literature - American>

12. The relativistic form of this effect is given by a factor of square root of one plus beta over one minus beta. For 10 points each:

[10] Name this effect in which relative motion between the observer and the source changes the measured frequency of a wave.

ANSWER: **Doppler** effect

[10] When a laser aimed at a collection of atoms is tuned slightly below the transition frequency, the Doppler effect will cause this process to occur. This process occurs when a gas expands adiabatically.

ANSWER: **cooling** [accept Doppler **cooling** or adiabatic **cooling**; accept answers indicating a **decrease in temperature**]

[10] Doppler cooling is frequently combined with a "slower" named for this effect, which produces a difference in energy levels equal to the product of the Bohr magneton, the g-factor, the z-component of total angular momentum, and the external B-field.

ANSWER: **Zeeman** effect

<Mitchell, Science - Physics>

13. Cape Town's mayor Patricia de Lille gives daily radio messages about conserving this rapidly dwindling resource. For 10 points each:

[10] Identify this resource. China is building pipelines to deliver this resource to cities such as Beijing, about 100 gallons of which are used every day by US citizens.

ANSWER: drinking **water**

[10] This water-rich country has a growing bottled water export industry. In 2016, the Prime Minister of this country resigned following revelations that he used Mossack Fonseca to stash money in the British Virgin Islands.

ANSWER: **Iceland**

[10] In 2015, officials in this city had to give police escorts to water trucks to prevent looting. The B3 stock exchange based in this city is the largest in South America.

ANSWER: **São Paulo**

<Bentley, Current Events - Foreign>

14. The word for these events comes from the Hebrew word for a ram's horn, which Jewish officials blew to pronounce one of these things. For 10 points each:

[10] Identify these events, held every 100 years according to the papal bull *Antiquorum habet fidem* promulgated by Pope Boniface VIII.

ANSWER: **Jubilee**

[10] Jubilee pilgrims had to visit this city's Saint Peter's Basilica and Saint Paul's thirty times in order to receive absolution.

ANSWER: **Rome** [or **Roma**]

[10] Foreigners might establish hospices for pilgrims on the Jubilee, such as the hospice founded by Englishman and named for this saint. An apocryphal book on his Acts posits this apostle to be the twin brother of Jesus and describes him preaching in India.

ANSWER: Saint **Thomas** the Apostle [or **Didymus**]

<Bentley, RMP - Bible/Christianity>

15. The name for this practice stems from maps drawn by the Federal Housing Administration distinguishing between white "A" neighborhoods and loan-ineligible "D" neighborhoods. For 10 points each:

[10] Identify this discriminatory practice that made it almost impossible to finance a home in minority neighborhoods.

ANSWER: **redlining** [do not accept "reverse redlining"]

[10] Redlining made it very difficult for minorities to obtain one of these loans, crucial to buying a house. Subprime ones caused the 2008 financial crisis.

ANSWER: subprime **mortgage** loan

[10] In this other practice, real estate speculators would hire African Americans to walk into white neighborhoods to scare white homeowners into dumping their homes at below-market rates.

ANSWER: **blockbusting**

<Bentley, History - American>

16. One artist from this country adapted his signature style of inflated people to sculpture with works produced in the 1980s such as *Maternity* and *Roman Soldier*. For 10 points each:

[10] Identify this Latin American country home to Fernando Botero, whose painting *The Presidential Family* showcases his trademark cartoonishly fat figures.

ANSWER: **Colombia** [or Republic of **Colombia**]

[10] *The Presidential Family* is a riff on *The Family of Carlos IV*, a painting by this Spanish artist of *The Third of May, 1808*.

ANSWER: Francisco **Goya** [or Francisco José de **Goya** y Lucientes]

[10] While studying in Spain, Botero made many copies of the Goya paintings in this Madrid museum, which houses Velázquez's *Las Meninas* as well as *The Third of May, 1808*.

ANSWER: Museo del **Prado** [or the **Prado** Museum]

<Bentley, Arts - Painting>

17. Answer the following about the relationship between French philosophers Michel Foucault (**foo-KOH**) and Gilles Deleuze (**ZHEEL duh-LOOZ**). For 10 points each:

[10] In his introduction to Deleuze and Félix Guattari's *Anti-Oedipus*, Foucault describes it as a manual for living counter to this ideology by avoiding the love of power. Deleuze was concerned with the "micro" form of this ideology.

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

[10] A Deleuze monograph discusses the analysis of "assemblages of power" from this Foucault book, which illustrates the kind of institution that produced "docile bodies" with Bentham's Panopticon.

ANSWER: ***Discipline and Punish: The Birth of the Prison*** [or ***Surveiller et punir: Naissance de la prison***]

[10] Both of those books are critical of the theories of desire created by this founder of psychoanalysis and author of *The Interpretation of Dreams*.

ANSWER: Sigmund **Freud**

<Kothari, RMP - Philosophy>

18. The speaker of this poem claims to "sit in one of the dives on Fifty-second Street" at the close of "a low, dishonest decade." For 10 points each:

[10] Name this poem set at the opening of World War II, which asserts that "there is no such thing as the State" and "We must love one another or die."

ANSWER: "**September 1, 1939**"

[10] "September 1, 1939" was written by this English poet while he was living in New York City. He wrote "stop all the clocks, cut off the telephone" in his poem "Funeral Blues."

ANSWER: Wystan Hugh **Auden**

[10] In this Auden poem in rhyming quatrains, the speaker hears someone promise to love their partner "till China and Africa meet," to which "all the clocks in the city" respond "you cannot conquer time."

ANSWER: "**As I Walked Out One Evening**"

<Bollinger, Literature - British>

19. The Archbishop of Pisa was hanged by a mob from the Palazzo Vecchio following this conspiracy. For 10 points each:

[10] Identify this 1478 plot. Jacopo, a member of this plot's namesake family, was defenestrated and thrown into the Arno for his role in it.

ANSWER: **Pazzi** conspiracy

[10] Giuliano, a member of this family, was stabbed to death in the Pazzi Conspiracy. Lorenzo the Magnificent, another member of this prominent Florentine banking family, was able to escape.

ANSWER: **Medici**

[10] This man watched the execution of Bernardo di Bandino Baroncelli following the Pazzi conspiracy. Lorenzo de Medici sent him bearing a silver lyre in the form of a horse's head to make peace with Ludovico Sforza, a ruler who would become his long-term patron.

ANSWER: Leonardo **da Vinci** [or **Leonardo** da Vinci]

<Bentley, History - European>

20. A test named for this statistic and Student's *t*-test are often used to determine if a collection of data points is drawn from some distribution. For 10 points each:

[10] Name this quantity that is calculated by taking a data point, subtracting the mean, and dividing the result by the standard deviation.

ANSWER: **z**-score [or **standard** score; accept but DO NOT REVEAL **normal** score]

[10] The central limit theorem implies that a distribution of *z*-scores will converge to this other distribution. This bell-shaped distribution has a strong central peak.

ANSWER: **normal** distribution [or **Gaussian** distribution]

[10] In a normal distribution, this decimal is the percentage of values that lie within three standard deviations from the mean. It is the third number in a "rule" for finding those percentages, following 68 and 95.

ANSWER: **99.7** [or the 68–95–**99.7** rule]

<Jose, Science - Math>

21. At age 11, Elizabeth I completed a translation of *Mirror of the Sinful Soul*, a mystical poem by a woman with this first name who was the wife of Henry II of Navarre. For 10 points each:

[10] Give this first name of the sister of Francis II, who patronized authors such as François Rabelais and wrote *The Heptameron*. A woman of this name from the House of Anjou was the wife of Henry VI of England.

ANSWER: **Marguerite** [or **Margaret**]

[10] In her essay "Marguerite of Navarre," Marilynne Robinson argues that Marguerite's mystical poetry influenced the theology this reformer presented in his *Institutes of the Christian Religion*.

ANSWER: John **Calvin** [or Jean **Calvin**; or Jehan **Cauvin**]

[10] Marguerite encouraged and protected the proto-Protestant reformer Jacques Lefèvre d'Étaples (**zhock luh-FEV day-TOP**), a friend of this Dutch humanist. This man wrote *In Praise of Folly* while living with Thomas More.

ANSWER: Desiderius **Erasmus** [or **Erasmus** of Rotterdam]

<Brownstein, History - European>

