



1. Throughout this city, citizens could anonymously deposit complaints in stone plaques called Lions' Mouths. This city's non-aristocratic denizens could rise to positions of authority in the *Scuole Grandi*. The printer Aldus Manutius set up shop in this city, which was governed by the Council of Ten. It forbade its legendary glassmakers from ever going abroad. This city won the Battle of Chioggia against an encroaching navy. In a famous ritual, this city's leader would go out on the *Bucentaur* and drop a ring in the water to "wed the sea." For 10 points, name this Italian city, whose landmarks included the Doge's Palace and the Grand Canal.

ANSWER: **Venice** [or **Venezia**]

080-12-59-01102

2. Titov and Synolakis developed the MOST model for these entities. These entities are likely to be formed if there is a sharp upslope at low frequencies on an effective movement-frequency diagram. A distinctive V-shaped formation found on Madagascar indicates that a "mega" one of these entities could have been caused by an ancient meteor impact. That formation is the Fenambosy chevron. Run-up is one measure used to characterize these entities. Due to their long wavelength, they are always shallow-water waves. Drawback, a dramatic drop in sea level, can occur when the trough of these entities reaches the coast first. For 10 points, identify these large waves that can be caused by earthquakes.

ANSWER: **tsunamis** [or **seismic sea waves**; or **tidal waves**]

066-12-59-01103

3. According to Saxo Grammaticus, this god was killed by the magic sword of a rival suitor who had stolen the food that was his source of power. In a riddle contest, this deity's father asked his rival what he had once whispered in this figure's ear. This figure is the father of another deity who ruled at Glitnir. This father of Forseti met his fate when the giantess Thokk refused a request from Hermod. Based out of the beautiful hall Breidablik, this god was burned on his ship Hringhorni. This figure was married to Nanna and was ultimately slain by the blind Hoder. His mother, Frigg, made all but one object in the world vow to never harm him. For 10 points, name this Norse god who was killed by mistletoe.

ANSWER: **Balder**

052-12-59-01104

4. One character in this opera praises the attractiveness of his own feet, eyes, and nose in the aria "Non siate ritrosi" (nohn SYAH-te ri-TROH-si). In the aria "Come scoglio" (KOH-me SKOH-lyo) one character compares her resolve to a rock. Three of the characters sing "Soave sia il vento" (so-AH-ve SYA il VEN-to) as two others go off to war. In one scene in this opera, some poisoned Albanians are cured with a magnet by Despina. This opera also contains the aria "Un'aura amorosa" and sees one character accept a heart-shaped locket from a suitor. Don Alfonso wins a hundred-sequin bet in this opera, thanks to the actions of Fiordiligi and Dorabella. For 10 points, name this Mozart opera in which Ferrando and Guglielmo test their fiancées' faithfulness.

ANSWER: ***Così fan Tutte***; *ossia, La Scuola Degli Amanti* [or ***Thus Do They All***; or, *The School for Lovers*; generously accept any translations of the title, such as ***All Women Are Thus*** or ***They're All Like That***]

079-12-59-01105

5. In one poem written in this form, the speaker recalls, "Twice victorious I crossed the Acheron" and claims that his "starry lute bears the black Sun of Melancholy." That poem in this form begins, "I am the Dark One, the Widower, the Unconsoled." Another poem in this form describes stone glistening "like a wild beast's fur" and concludes, "here there is no place that does not see you. You must change your life." In addition to Rilke's "Archaic Torso of Apollo," a series of poems in this form collected in *Il Canzoniere* describe a woman named Laura. For 10 points, name this type of fourteen-line poem pioneered by Petrarch.
ANSWER: **sonnet**

014-12-59-01106

6. One of this artist's works depicts a gust of wind that blows away a stream of papers and hats, while another shows a craftsman sitting in a wheel-like object in the process of constructing a barrel. He once won a commission by dipping a chicken's feet in red paint and chasing it across a canvas. In one work, he painted a sunrise hitting a mountain in such a way that it turns red. More notoriously, this artist painted two octopi enveloping a diver in *The Dream of the Fisherman's Wife*. He incorporated various random sketches into a book called his namesake "manga." For 10 points, name this Japanese print maker who included *The Great Wave Off Kanagawa* in his *36 Views of Mount Fuji*.
ANSWER: Katsushika **Hokusai** [do not accept "Katsushika"]

088-12-59-01107

7. A zinc selenide crystal causes total internal reflection in the attenuated total reflectance type of this technique. The two dimensional form of this technique is used to dynamically follow hydrogen bond formation. Unlike a similar technique, this technique requires a compound to have a change in its dipole moment rather than a permanent dipole. This technique can detect certain motions like rocking, wagging, and scissoring. Samples are prepared for this process using Nujol oil or a potassium bromide pellet. Carbonyl compounds have a peak of about 1700 wavenumbers, and several useful vibrations occur in the "fingerprint" region of its spectrum. For 10 points, name this type of spectroscopy that causes vibrations using wavelengths longer than visible light.
ANSWER: **infrared spectroscopy** [or **IR spectroscopy**]

079-12-59-01108

8. This thinker used the concept of "axis of castration" to analyze characters' gender roles. In another work, this man described the "construction of a highly moral image: that of the perfect bastard." In one of his works, he analyzes a cover of a magazine showing a black soldier saluting, while another text is a close examination of the Balzac short story "Sarrasine." This author of *S/Z* wrote about social value systems as exemplified through the images of red wine and professional wrestling. For 10 points, name this French author of semiotics texts like *Mythologies* and "Death of the Author."
ANSWER: Roland **Barthes**

052-12-59-01109

9. While at Oxford, this man joined the Swiss National hockey team in 1922 and was known as "Herr Zigzag." During his ministry, historian George Stanley designed an important national object. This man's party took office with a successful slogan promising "60 Days of Decision," as well as a call to accept nuclear-armed Bomarc missiles. This man said his country's people "do not need to be liberated" after Charles de Gaulle gave a speech about freedom at Expo 67. During his ministry, the Medical Care Act set up universal health care, and, despite protests from his predecessor John Diefenbaker, he introduced the Maple Leaf Flag. For 10 points, name this Canadian Prime Minister who won a Nobel Peace Prize for his role in resolving the Suez Crisis.
ANSWER: Lester Bowles **Pearson** [or Mike **Pearson**]

052-12-59-01110

10. This author wrote a story that climaxes with Sheldon offering Chinese egg rolls to his outraged superior officer. This author of "Defender of the Faith" wrote a novel whose protagonist is the son of a glove manufacturer and the husband of Dawn, a former Miss New Jersey. In one of his novels, the teenager Merry plants a bomb and becomes a fugitive, devastating her father, Seymour "The Swede" Levov. This man created the recurring character Nathan Zuckerman, and he also wrote about a "mother-addicted" bachelor delivering a massive monologue to his psychoanalyst. For 10 points, name this author of *American Pastoral* and *Portnoy's Complaint*.

ANSWER: Philip Milton **Roth**

052-12-59-01111

11. During the overthrow of this man's government, one man ran a wheel loader into the RTS building. This leader agreed to the creation of the Inter-Entity Boundary line and the creation of the Office of the High Representative when he signed one agreement. In one election, this man was defeated by Vojislav Kostunica, shortly after which this man was overthrown in the "Bulldozer Revolution." This man's country was the target of Operation Noble Anvil, which led this man to withdraw his forces from Kosovo. This signer of the Dayton Accords became the first head of state to be tried for war crimes. For 10 points, name this first President of Serbia.

ANSWER: Slobodan **Milosevic**

149-12-59-01112

12. Due to collisions with the surface of one of these materials, an important reduction in mobility occurs in inversion layers. If a minimum does not occur at the origin of an E-k plot for these materials, phonons must participate in radiative transitions, making them indirect. These materials are degenerate when a difference of less than $3kT$ exists between the conduction band and the Fermi level. They can be compensated if there are an equal number of donors and acceptors. These materials are classified as extrinsic when doped. For 10 points, identify these materials with intermediate conductivity that include silicon and germanium.

ANSWER: **semiconductors**

066-12-59-01113

13. Phelps and Ledoux observed that a response to this action in a rat with a destroyed amygdala is preserved, but the response to a bright light is not. For Group 2 dogs, pulling on a lever did not stop this action in Seligman's learned helplessness experiment. Cerletti and Bini devised a procedure using this action that is used in the severest form of depression. For wrong answers in a word-pair test, a tape recorder played a response to this action in a 1963 Yale experiment intended to determine whether it was possible that Eichmann was just following orders. For 10 points, name this action that the teacher was told was being performed on someone in an adjacent room in the Milgram experiment.

ANSWER: administering an electric **shock**

020-12-59-01114

14. This man founded a city on Crete that was struck with a plague because he founded it in the homeland of the wrong ancestor. In another episode, he went through the ivory gate of false dreams rather than the horn gate of true dreams. This man slew both Lausus and the tyrant Mezentius in battle after obtaining support from Evander. This companion of Achates lost his first wife, Creusa; his later attempt to marry Lavinia sparked a conflict with the Rutulians. After using a golden bough to gain access to the underworld, this man encountered his former lover, the Carthaginian queen Dido. For 10 points, name this legendary founder of Rome and subject of an epic by Vergil.

ANSWER: **Aeneas**

121-12-59-01115

15. One city in this state was once a gambling mecca under the control of Mayor Leo McLaughlin's machine. Its museum of military history honors the birthplace of General Douglas MacArthur. A former tribe in this state, the Quapaw, names both a section of its capital city and a building at "Bathhouse Row." It is home to the only publicly accessible diamond-bearing site in the world, Crater of Diamonds State Park. Tyson Foods is based in this state, whose biggest private employer is located in Bentonville and operates Sam's Club. For 10 points, name this state, the location of Wal-Mart's home offices, and also the site of cities such as Hot Springs and Little Rock.

ANSWER: Arkansas

052-12-59-01116

16. Kyle Gann's analysis of this piece notes its similarities to an 1898 funeral march by Alphonse Allais. It was premiered by David Tudor during a Woodstock music festival, and it was inspired by a trip to Harvard where its composer entered an anechoic chamber. Its composer's 1962 follow-up to it included the instruction "in a situation provided with maximum amplification, perform a disciplined action." Its original performer marked the beginning of this piece by closing the lid of the piano. For 10 points, name this piece whose three movements consist of the indication "Tacet," a John Cage composition that consists only of ambient sound for the title amount of time.

ANSWER: 4'33" [or "Four minutes and thirty-three seconds"]

052-12-59-01117

17. One of this man's novels contains the quote, "The past is never dead. It's not even past." He ended one story with a doe being illegally killed by Carothers at a hunting party intended to unite the two branches of his family. Lucas Beauchamp stops searching for his ancestor's family fortune in this author's story "The Fire in the Hearth." Lion and Boon Hogganbeck work together to bring down the title figure in another story by this author. Several alderman decide to sprinkle lime on the property belonging to Homer Barron's lover in another story by this author, whose "Delta Autumn" is a sequel to his story about the hunt for Old Ben, which includes Ike McCaslin. For 10 points, name this author who wrote "The Bear" and "A Rose for Emily" along with novels like *The Sound and the Fury*.

ANSWER: William Cuthbert Faulkner

020-12-59-01118

18. This ruler's downfall was chronicled by Garcilaso de la Vega. One of his generals legendarily hid a treasure in the Llangatis Mountains. This ruler conquered the Cañari city of Tumbamba. He allegedly threw a Bible in the face of Friar Vicente de Valverde. His generals included Quizquiz and Rumiñahui, who lost the Battle of Mount Chimborazo. After this man was captured, Rumiñahui agreed to ransom him for a room full of gold and silver. For years, this son of Huayna Capac was embroiled in a civil war with his half-brother Huascar. He was defeated at the Battle of Cajamarca. For 10 points, name this Incan emperor who was executed by Francisco Pizarro.

ANSWER: Atahualpa

079-12-59-01119

19. This poem asks, "Shall that alone which knows be as a sword consumed before the sheath by sightless lightning?" This poem's speaker recognizes the "Lost Angel of a ruined Paradise." Four stanzas in this poem are spoken by Urania, who questions a Stranger with a brow "which was like Cain's or Christ's." The speaker of this poem instructs, "Go thou to Rome, at once the Paradise, the grave, the city, and the wilderness," and earlier declares, "Peace, peace! He is not dead, he doth not sleep, he hath awakened from the dream of life." This poem concludes with the speaker watching the soul of the title character burning like a star "through the inmost veil of Heaven." For 10 points, name this pastoral elegy written for John Keats by Percy Bysshe Shelley.

ANSWER: "Adonais: An Elegy on the Death of John Keats"

052-12-59-01120

20. One organism of this genus contains the CTX phi prophage in its genome. One species in this genus exhibits the Kanagawa phenomenon on blood agar; that species also expresses the thermostable direct hemolysin and is known as the parahemolytic species. The LuxI/R quorum sensor was discovered in another organism of this genus, with species name *fischeri*. The *vulnificus* species can cause a fatal blistering infection when exposed to a wound, and a more well-known species in this genus produces a toxin which activates G-proteins by ribosylation. That species has O1 and O139 pathogenic strains that cause watery diarrhea. For 10 points, name this genus of comma-shaped bacteria, which includes the causative agent of cholera.

ANSWER: **Vibrio**

048-12-59-01121

21. This man is the subject of a historical poem by the Chandos Herald. This man and his younger brother won the Battle of Najera in support of Peter the Cruel in the Castilian Civil War. A revolt against this man resulted in him sacking Limoges. One legend states that this man gained his crest and motto after the death of John of Bohemia in one battle. Jean de Clermont died at a battle won by Jean III de Grailly and this man. He captured the French king John II at that battle, after which he served as the first and only Prince of Aquitaine. Earlier, this man helped his father win the Battle of Crecy. For 10 points, name this son of Edward III who won the Battle of Poitiers and was possibly nicknamed for the color of his armor.

ANSWER: **Edward the Black Prince** [or **Edward of Woodstock**; prompt on **Edward**]

014-12-59-01122

22. The speaker of this poem notes that he has visited Ludlow and “left my necktie God knows where,” and questions, “Why was Burton built on Trent?” The last stanza of this poem discusses a man who, though others put “arsenic in his meat” and “strychnine in his cup,” outlived all his attempted poisoners. The third stanza of this poem notes that “Luck’s a chance, but trouble’s sure,” and that one should “train for ill and not for good.” The speaker of this poem exhorts the addressee to “pipe a tune to dance to,” claiming, “Malt does more than Milton can to justify God’s ways to man.” The title figure of this poem is told, “you eat your victuals fast enough.” For 10 points, name this poem by A. E. Housman.

ANSWER: **“Terence, This is Stupid Stuff”**

003-12-59-01123

23. This man’s namesake function is equal to zero when the number of distinct primes dividing a number n is less than the total number of prime factors of n . This man’s transformation in the complex plane is equal to $az + b$ over $cz + d$, where a , b , c , and d are all complex numbers. That earlier transformation is a bijective conformal map of the Riemann sphere onto itself. In cylindrical polar coordinates, this man’s namesake surface is represented by \log of r times sine of one-half theta equals z times cosine of one-half theta. When one object named for this man is cut and twisted it creates paradiromic rings. He names an object can be created by half-twisting a piece of paper and connecting its edges together. For 10 points, name this mathematician whose namesake strip only has one side.

ANSWER: August **Mobius**

149-12-59-01124



1. This man became angry that Alexander Gorsky tried to take over his work in 1902. For 10 points each:
[10] Name this celebrated ballet master at the St. Petersburg Imperial Theatre from 1871 to 1903. He choreographed such classic ballets as *Don Quixote* and Tchaikovsky's *The Sleeping Beauty*.

ANSWER: Victor Marius Alphonse **Petipa**

[10] Along with Lev Ivanov, Petipa choreographed this Tchaikovsky ballet about Clara, the title toy, and the villainous Mouse King. It contains the "Dance of the Sugar Plum Fairy."

ANSWER: *The Nutcracker* [or *Shchelkunchik*]

[10] Petipa revived this ballet, which featured music by Adolphe Adam. Set in the Middle Ages, its plot involves the title peasant girl who loves the disguised Duke Albrecht but dies after learning his true identity.

ANSWER: *Giselle, ou les Wilis*

052-12-59-01201

2. China claims that Gyancaïn Norbu, not Gedhun Choekyi Nyima, currently fills this role. For 10 points each:

[10] Name this religious leader who sits at Tashilhunpo Monastery and is revered as the second-highest figure among followers of the Yellow Hat sect.

ANSWER: **Panchen Lama** [prompt on **lama**]

[10] The Panchen Lama and the Dalai Lama are revered by this region's namesake branch of Buddhism. Its namesake *Book of the Dead* describes an intermediate state called *bardo*.

ANSWER: **Tibet**

[10] Tibetan Buddhism is an approach to this form of Buddhism, whose name means "diamond vehicle." Physical rituals, as well as symbols such as the bell, *dojre*, and *yab-yum* are central to it.

ANSWER: **Vajrayana** Buddhism [or **Tantric** Buddhism]

079-12-59-01202

3. This poem was based on an unfinished work of Chretien de Troyes. For 10 points each:

[10] Name this medieval romance by Wolfram von Eschenbach about the son of Gamuret's quest for the Holy Grail.

ANSWER: *Parzival*

[10] Another work of Middle High German literature is this epic in which Hagen treacherously shoots Siegfried in the back after Kriemhild reveals his weakness.

ANSWER: the *Nibelungenlied* [or the *Song of the Nibelungs*]

[10] Hans Jakob Christoffel von Grimmelshausen, the first major German novelist, wrote a picaresque novel about this character, whose farm is raided during the Thirty Years War by soldiers he initially mistakes for foxes.

ANSWER: Simplicius **Simplicissimus** [or **Simplicius** Simplicissimus]

014-12-59-01203

4. Answer the following about a certain constellation, for 10 points each:

[10] This constellation contains the Pleiades star cluster, and a complex spanning it an Auriga is a star-forming region.

ANSWER: **Taurus**

[10] This pulsar wind nebula with Messier number 1 located within Taurus is the remnant of a supernova observed by astronomers in 1054 AD.

ANSWER: **Crab** Nebula

[10] This star, sometimes referred to as alpha-Tauri, is the brightest star in Taurus and has an Arabic name meaning "follower."

ANSWER: **Aldebaran**

126-12-59-01204

5. In 1991 this city was replaced as its country's capital by Abuja. For 10 points each:

[10] Name this most populous city in Nigeria. Many gangs composed of "area boys" demand bribes from molue drivers in this city, in which Ikoyi is located.

ANSWER: **Lagos**

[10] These commercial motorcycles can be found throughout Lagos. These vehicles for hire are named for a now defunct Nigerian airline.

ANSWER: **okada** [or **achaba**; or **going**; or **inaga**]

[10] This suburb of Lagos, located in between Lagos Island and the Lekki Penninsula, is the site of Bar Beach. It shares its name with the southern portion of Vancouver Island.

ANSWER: **Victoria** Island

149-12-59-01205

6. This ruler annexed Yaroslavl and Rostov, and he took Novgorod in 1478 after a series of campaigns. For 10 points each:

[10] Name this Russian ruler who married Zoe Paleologus and successfully ended the tributary status of his people.

ANSWER: **Ivan III** [or **Ivan the Great**; or **Ivan Veliky**; prompt on **Ivan** Vasilyevich]

[10] Ivan III was the Grand Prince of this city, which houses the Kremlin.

ANSWER: **Moscow** [or **Moskva**]

[10] Ivan started out as a tributary to this empire, which was ruled at the time by Ahmed Khan and founded by Batu Khan.

ANSWER: **Golden Horde** [or **Kipchuk** Khanate; or Ulus **Juchi**]

014-12-59-01206

7. Name these painters of battle scenes for 10 points each:

[10] This artist designed his mural *The Battle of Anghiari* to rival a Michelangelo piece. He is better known for *The Vitruvian Man* and *Mona Lisa*.

ANSWER: **Leonardo da Vinci** [accept either]

[10] This German painted a giant banner in the sky of his depiction of the Battle of Issus.

ANSWER: Albrecht **Aldorfer**

[10] This artist of a fresco commemorating Sir John Hawkwood painted a set of three works depicting Niccolo da Tolentino leading Florentine forces to victory.

ANSWER: Paolo **Uccello**

015-12-59-01207

8. In molecular orbital theory, the *d* orbitals either bond weakly or not at all in complexes assuming this molecular geometry, examples of which include complexes of palladium (II), iridium (I), and platinum (II). For 10 points each:

[10] Name this four-ligand molecular geometry exhibited by the platinum atom in Zeise's salt which results from removing two of the ligands from an octahedral complex.

ANSWER: **square planar**

[10] Molecular geometries are predicted by this theory that treats the lone pairs of electrons on the central atom of a molecule's Lewis structure in a manner similar to ligands. It predicts other shapes like linear and trigonal bipyramidal.

ANSWER: **VSEPR** (often pronounced "VESPER") theory [or **Valence Shell Electron Pair Repulsion** theory]

[10] Applying orbital hybridization to VSEPR theory, the central atom in a square planar configuration has this hybridization which also characterizes an octahedral geometry.

ANSWER: **sp³d²**

014-12-59-01208

9. The first meeting of this institution took place in a church choir in 1621. For 10 points each:

[10] Name this first assembly of elected representatives of English colonists in North America. Established by the Virginia Company, it eventually became the Virginia House of Delegates.

ANSWER: **House of Burgesses**

[10] The House of Burgesses originally met at Jamestown, but, in 1699, it was moved to this Virginia city. This city's "Colonial" area is a tourist destination that simulates life in early America.

ANSWER: **Williamsburg**

[10] This man was the last royal governor of the Colony of Virginia. He dissolved the House of Burgesses in 1773 and, in 1775, made a proclamation offering freedom to slaves who joined the British cause.

ANSWER: Lord **Dunmore** [or John **Murray**; or Fourth Earl of **Dunmore**]

052-12-59-01209

10. This analogy leads to a distinction between *eikasia*, *pistis*, *dianoia*, and the highest level of knowledge, *noesis*. For 10 points each:

[10] Name this analogy, which geometrically explains the four different levels of knowledge, particularly focusing on the distinction between mathematical reasoning and immediate apprehension.

ANSWER: the analogy of the **divided line**

[10] The analogy of the divided line is immediately followed by this better-known passage of the Republic. It describes a group of chained prisoners who only perceive the shadows cast on the wall by a fire behind them.

ANSWER: the **Allegory of the Cave**

[10] Another section of the *Republic* describes this object, which makes its possessor evil by granting invisibility.

ANSWER: the **Ring of Gyges**

080-12-59-01210

11. The Cobb-Douglas function takes as inputs this entity and capital. For 10 points each:

[10] Name this entity. According to Karl Marx, profit is the surplus value taken from this entity.

ANSWER: **labor**

[10] Labor and capital are both examples of these inputs of production. Land is another example of these, which sometimes also include more intangible inputs such as entrepreneurship or human capital.

ANSWER: **factors** of production

[10] Cobb-Douglas is a power function where the exponents of labor and capital will add to one given this assumption. This assumption states that magnifying the amount of labor and capital will magnify total output by the same amount.

ANSWER: **constant returns to scale**

121-12-59-01211

12. This building was secularized by Kemal Ataturk almost five hundred years after Mehmed II converted it into a mosque. For 10 points each:

[10] Name this building completed in 537 under Justinian I in Constantinople. Its giant dome is supported by four pendentives and two semidomes.

ANSWER: **Hagia Sophia** [or **Asasofya**; or **Sancta Sophia**]

[10] The Hagia Sophia was designed by Anthemius of Tralles and this other Byzantine architect.

ANSWER: **Isidore of Miletus** [or **Isidorus of Miletus**]

[10] Another important piece of architecture in Istanbul is the Blue Mosque, which was designed by this man, a student of Sinan.

ANSWER: Sedefkar **Mehmed Agha**

014-12-59-01212

13. Name these female Hindu deities, for 10 points each.

[10] Sita and Rukmini are aspects of this owl-riding goddess, who came to her husband Vishnu after emerging from the churning of the milk ocean.

ANSWER: **Lakshmi**

[10] This goddess of knowledge rides a *hamsa*, which is a goose or swan that is said to be able to separate the milk out of a mixture of water and milk.

ANSWER: **Saraswati**

[10] This goddess rode a tiger into her battle with the demon Mahishasura, who could take the form of a water buffalo.

ANSWER: **Durga**

079-12-59-01213

14. The protagonist of this play eventually declares that "the strongest man in the world is the man who stands alone." For 10 points each:

[10] Name this play in which Doctor Thomas Stockmann becomes a pariah after discovering that his town's baths are contaminated.

ANSWER: *An **Enemy of the People*** [or *En **Folkefiende***]

[10] This playwright of *An Enemy of the People* also wrote about Nora Helmer walking out on her husband Torvald in *A Doll House*.

ANSWER: Henrik **Ibsen**

[10] The title character of this Ibsen play is a preacher who follows a rigid policy of "naught or all" towards devotion to God, losing his wife and son in the process.

ANSWER: **Brand**

105-12-59-01214

15. This effect governs the behavior of thermocouples. For 10 points each:

[10] Name this phenomenon, part of the thermoelectric effect, in which a temperature gradient produces a voltage.

ANSWER: **Seebeck** effect

[10] The heating that occurs when a current runs through a resistive element is named for this person. He also names the SI unit of energy.

ANSWER: James Prescott **Joule**

[10] The Seebeck effect occurs due to the collision of these particles and electrons in a phenomenon known as their namesake “drag.” According to BCS Theory, their interaction with electrons causes electrons to be attracted to each other in superconductors.

ANSWER: **phonons**

079-12-59-01215

16. The documentary *Beyond Citizen Kane* showcased the influence of Globo TV over this country's politics. For 10 points each:

[10] Name this country in which Globo TV's biased edit of a debate helped lead to Fernando Collor's victory in the 1989 presidential election, the first under its 1988 Constitution.

ANSWER: Federative Republic of **Brazil** [or Republica Federativa do **Brasil**]

[10] This man finished second in the first-round election but lost to Collor in the runoff. He lost in the 1994 and 1998 presidential elections before finally winning, on his fourth attempt, in 2002.

ANSWER: Luiz Inacio **Lula** da Silva

[10] Lula was a founding member of this party, which still holds the Brazilian presidency under Dilma Rousseff.

ANSWER: **Workers'** Party [or Partido do **Trabalhadores**; or **PT**]

003-12-59-01216

17. This character tries to prove his story by showing his friend strange flowers he saved from his adventure. For 10 points each:

[10] Name this character who disappears at the end of the novel he appears in, even though he claims he will return in half an hour. He previously saved the life of Weena, a member of a childlike race called the Eloi.

ANSWER: **Time Traveler** [or the **protagonist of *The Time Machine***; or obvious equivalents]

[10] The Time Traveler was created by this author of *The Time Machine* and such other science fiction novels as *The War of the Worlds*.

ANSWER: Herbert George **Wells**

[10] In this Wells short story, a mountaineer named Nunez enters the title land in Ecuador, and falls in love with Medina-Sarote, the daughter of Yacob. The houses in the title location are all windowless.

ANSWER: “The **Country of the Blind**”

052-12-59-01217

18. These organisms were first bred by Charles Woodworth. For 10 points each:

[10] Name these organisms, a species of Diptera. They are a frequently used model organism within biology and have been used to study principles of heredity, among others.

ANSWER: ***Drosophila melanogaster*** [or **fruit fly**; or **vinegar fly**]

[10] This scientist used *drosophila* in his Fly Room at Columbia. He showed that genes are carried on chromosomes and copped the 1933 Nobel Prize for his findings.

ANSWER: Thomas Hunt **Morgan**

[10] The fly analog of albinism is a mutation causing the body of the fly to appear this color.

ANSWER: **yellow**

052-12-59-01218

19. This organization was founded by Hughes de Payens, who became its first Grand Master. For 10 points each:

[10] Name this order of knights which was started to protect pilgrims going to the Holy Land.

ANSWER: Knights **Templar** [or Poor Knights of Christ and the **Temple** of Solomon]

[10] This final Grand Master of the Knights Templar was slowly burned alive by Philip IV of France.

ANSWER: Jacques de **Molay**

[10] This pope gave the order to dissolve the Knights Templar. He also moved the Church from Rome to Avignon.

ANSWER: **Clement V** [or Bertrand **De Got**; prompt on **Clement**]

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20. Key leaders in this town include coal-dealer Vergil Gunch and poet “Chum” Frink. For 10 points each:

[10] Name this town, which is located in the state of Winnemac. One notable resident is the realtor George, who begins a novel as a proud member of the Booster’s club but briefly adopts a bohemian lifestyle and admires the radical politics of Seneca Doane.

ANSWER: **Zenith**

[10] The town of Zenith appears in the novel *Babbitt*, a satirical work by this American author of *Main Street*.

ANSWER: Harry Sinclair **Lewis**

[10] Babbitt’s disillusionment with middle-class society comes shortly after his friend, Paul Riesling, is put in prison for doing this, stunning the community.

ANSWER: **shooting his wife** [or **shooting Zilla** Riesling; prompt on **attacking his wife** or obvious equivalents; do not accept "murdering his wife"]

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21. In this battle, an unauthorized charge initiated by Pappenheim instantly routed the Saxons under Elector John George I. For 10 points each:

[10] Name this pivotal 1631 battle in which more mobile Swedish troops outflanked and crushed the traditionally arranged imperials under Tilly.

ANSWER: Battle of **Breitenfeld**

[10] The Battle of Breitenfeld was a victory for this Swedish king during the Thirty Years War.

ANSWER: **Gustavus Adolphus** [or **Gustav II Adolf**; prompt on **Gustavus**; prompt on **Gustav**]

[10] This 1634 battle crushed the momentum of Protestant forces under Swedish leadership. In this battle, Habsburg forces under Ferdinand III and the Cardinal-Infante Ferdinand defeated the League of Heilbronn and captured Gustav Horn.

ANSWER: Battle of **Nordlingen**

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