

Tossups

1. **Nugent et al. developed a catalyst of this reaction that is active only in the presence of tetraethyllead. Compounds that catalyze this reaction can be created by reacting the starting compounds with either a diazomethane or a cyclopropene derivative. An early form of this reaction was carried out on large scales at Phillips Petroleum. Chauvin proposed the now-accepted mechanism of this reaction, some catalysts of which are based on (*) tungsten or molybdenum. Hoyevda has modified a catalyst of this reaction that is based on a ruthenium center. This reaction proceeds via a metallocyclobutane and a metallocarbene intermediate, and this reaction is catalyzed by the Grubbs catalyst. For 10 points, name this reaction which results in the exchange of substituent groups between two alkenes.**
ANSWER: olefin metathesis [accept ring opening metathesis polymerization; or ring closing metathesis; or cross metathesis or acronyms of those things]
2. **“Closing” this phenomenon subtitled the volume *Unfinished Business*, edited by Pedro Noguera and Jean Wing. It became less prevalent from the late 1960s until about 1988, partly because of plans such as the one at issue in *Swann v. Charlotte-Mecklenburg*. Sociological study of this phenomenon traces its origin to the 1966 publication of the Coleman Report. Economically, this phenomenon may be rooted in the middle-class practice of “concerted cultivation,” which lower-class individuals are less likely to undertake. This phenomenon, which is often observed in the results of the NAEP, may partly be a product of (*) stereotype threat. After studies found that integration narrowed this phenomenon, many areas enacted busing policies. For 10 points, name this persistent divide between minority and nonminority students in terms of educational outcomes, including dropout rates, test scores, and GPA.**
ANSWER: the racial achievement gap [accept explanatory answers, akin to the last line of the tossup, before “for 10 points”; prompt on school segregation or equivalents before “NAEP”]
3. **One of these structures near the Doge’s Palace in Venice is flanked by large statues of Mars and Neptune, which is why it’s called the “Giant’s” one. Inigo Jones designed the first centrally unsupported one of these structures in England for the Queen’s House, the so-called “Tulip” one. Gaudi placed a lizard fountain in the center of one of these structures in the (*) Park Guell. Bartolomeo Ammannati carried out plans for one of these structures, made of sandstone, which is three-pronged and sits in the vestibule below a structure’s reading room. For 10 points, name these architectural features, one of which Michelangelo designed for the Laurentian Library.**
ANSWER: staircases [accept anything involving stairs or steps]
4. **An assassination that occurred during this conflict was acknowledged by Anton Balasingham and killed a man who some feared would reinstitute a “satanic force” better known as the IPKF. During this conflict, one side enacted the Thirteenth Amendment to officially recognize the official language of the other side. One side in this conflict carried out three offensives known as Operation Unceasing Waves I through III. Low points in this conflict include the murder of over 600 policemen in 1990 and this conflict’s catalytic event, a month of pogroms called “Black July.” The Lessons Learnt and Reconciliation Commission investigated this conflict, which was split into four phases called (*) Eelam Wars. The victorious side in this conflict was led at its end by president Mahinda Rajapaksa. For 10 points, name this 1983 to 2009 war between a Sinhalese government and the Tamil Tigers.**
ANSWER: Sri Lankan Civil War [accept any answer involving strife in Sri Lanka; or Tamil-Sinhalese conflict or equivalents before mentioned; or things like Tamil Tigers conflict before “Tamil”]
5. **On this character’s deathbed, she finally delivers her husband a child after making him promise that he will not marry a Jewess. She is the first title character of a “romance upon romance” by William Makepeace Thackeray, a sequel to the novel in which she appears. After the death of the eponymous character, the narrator of Edgar Allan Poe’s story “Ligeia” marries this character but questions her identity. This character’s weeping in the torture room produces sympathy from de (*) Bracy. After the tournament at Ashby-de-la-Zouche, this character removes the helmet of the Disinherited Knight after being crowned the Queen of Love and Beauty by him. King John lusts after this character, whose marriage to Athelstane was arranged by her father Cedric of Rotherwood. Readers were unhappy that this character, not Rebecca, ended up with the protagonist of the novel in which she appears. For 10 points, name this wife of Ivanhoe in a novel by Sir Walter Scott.**
ANSWER: Lady Rowena

6. **During the negotiation of this treaty, the Marchese di Gallo delayed the proceedings by insisting on being called by a thirty-eight-word title in every document mentioning him. During the negotiations of this treaty, a spy in Trieste was found in possession of papers that implicated General Pichegru in a conspiracy. The ownership of the left bank of the Rhine was the subject of the first and longest of the fourteen secret articles in this treaty. The subsequent Treaty of (*) Luneville required the enforcement of this treaty, which was signed just a month after the Coup of 18 Fructidor. The losing party got part of Venice's territory in this treaty but was forced to recognize the Ligurian and Cisalpine Republics. For 10 points, name this treaty between Philipp von Cobenzl of Austria and the French that marked Napoleon's defeat of the First Coalition in the Italian Campaigns.**
ANSWER: Treaty/Peace of Campo Formio [or Campoformido]
7. **This piece plays as the title character rearranges his pillows so as to be able to sleep normally during the closing scene of David Lynch's film *The Elephant Man*. *New York Times* writer Olin Downes sparked controversy by praising the premiere of this piece. The members of the Ying Quartet gave the first public performance of a suppressed addendum to this piece. This piece, to which an organ was added by William (*) Strickland, was likened by its composer to a small stream that grows into a river. An arch form anchors this piece, which begins with a sustained B-flat line played by the violins. This piece was premiered by Arturo Toscanini, was broadcast over the radio after FDR's death, and was taken from the second movement of a string quartet. For 10 points, name this really sad piece by Samuel Barber.**
ANSWER: Adagio for Strings
8. **The classical differential equation used to analyze these structures can be given as "E I" times "d-to-the-fourth w" over "dx-to-the-fourth" equals q. An improved model of these structures that takes into account shear deformation was developed by Timoshenko. In the classical theory of these structures, their flexural rigidity is defined as their Young's modulus times their moment of inertia. That theory of these structures is based on the assumption that the plane normal to the neutral axis before deformation remains normal to the neutral axis after deformation and is named for (*) Euler and Bernoulli. Atomic force microscopy utilizes one of these structures with a sharp tip at one end. Instead of resisting twisting or axial effects, these elements are designed to resist bending effects. For 10 points, name these basic structural components whose lengths are much larger than their thicknesses and widths, and which come in an "I" form.**
ANSWER: cantilever beam [or fixed-free beam; or fixed-fixed beam; or guided beam; accept other reasonable equivalents that include beam, such as I-beam; prompt on partial answers that do not include beam]
9. **This artist's shadowy personage appears as the third figure from left in a painting that he removed himself from that shows his three siblings around a small table. Douglas Adams's *The Salmon of Doubt* originated the false rumor that this person "died standing up leaning against a mantelpiece, in order to prove it could be done." This inhabitant of Haworth Parsonage was dismissed from a tutoring job for having an affair with Lydia Robinson. This laudanum user and subject of a (*) Daphne du Maurier biography may not have known of the 1847 publication of *Agnes Grey* and two other novels before his death. For 10 points, name this owner of an "Infernal World," the brother of Anne, Emily, and Charlotte.**
ANSWER: [Patrick] Branwell Bronte [prompt on Bronte]
10. **Tie-head, or Afro-Barbadian, churches allocate a namesake "ground" for this practice, which is performed by a new initiate for seven to ten days after baptism by "living water." Muslims give alms in the form of *kosai* and *masa*, or bean cakes and pancakes, during this practice, for which Allah hears special prayers known as *fidan*. Thirteen days of doing this practice are followed by a *sraddha* ceremony, which involves a fire sacrifice and rice offerings, among observant Hindus, who are not permitted to shave and must definitely eat (*) vegetarian, if they do not already do so, during this practice. A single tear on an outer garment must be made during the Shiva, or seven days of this practice in Judaism, during which the Kaddish prayer is repeatedly said. Hindus doing this wear white soon after the cremation ceremony is over. For 10 points, name this practice for which women wear a black veil after a funeral.**
ANSWER: mourning [or grieving; or bereavement; or accept word forms and equivalents]
11. **This person was ceded territory after an attack on territory controlled by Bishop Joseaume. This person's grandson, Richard I, commissioned Dudo of Saint-Quentin to write a history of this ruler's kingdom. This person may have married Gisela after signing a treaty, but his son, known as "Longsword," was sired with his mistress or wife Poppa of Bayeaux. This man's son William I was excommunicated for attacking Arnulf I, the Count of Flanders. After this person's defeat at the hands of Charles the Simple in 911, he (*) converted to Christianity, signed the Treaty of Saint-Clair-sur-Epte, and was ceded the land around Rouen, which his offspring controlled as dukes. For 10 points, name this first Duke of Normandy, a Viking who was baptized as Robert I.**
ANSWER: Rollo [or Robert I of Normandy before mentioned; or Hrolfr; or Rolf; or Rou; or Rouf]

12. **One character in this play asks his horsemen to trim their horses' manes and outlaws the music of flutes and lyres for twelve months. That character evasively replies "of her I might make a double meaning" when a friend comes to visit and reproaches Pheres for being a shitty father in this play, whose title character is mute for three days after reappearing at the end, wearing a veil. A black-clad swordsman converses with Apollo at the beginning of this play, in which Heracles sobers up after hearing the truth about the title character and runs off to fight (*) Thanatos as sacrifices are made at the title character's tomb. In backstory of this play, as penance for avenging the death of Asclepius, Apollo spent a year at the court of the protagonist's husband, whose life he convinced the Fates to grant an extension at the cost of someone else's corpse as a substitute. For 10 points, name this Euripides play in which the title character, Admetus's wife, offers her life to save his.**
ANSWER: Alcestis
13. **This hero cut off several of his enemies' tongues with a magic sword that ensured great success in all hunts, winning a contest after Cretheis accused this figure of rape. He married Polymela at the court of King Actor during his exile from Aegina for killing his half-brother Phocas. This man was squirted with ink from a cuttlefish during a wrestling match in which he won his wife, who changed forms many times to escape his embrace. On his namesake mountain, this man took part in a ceremony in which he received an ashen spear and the immortal (*) horses Balius and Xanthus. This brother of Telamon was allowed to court his wife after Zeus was disillusioned by the prophecy that any son born to her would be greater than the father. In some accounts, he was deserted by his wife after interrupting her attempt to burn away the mortality of their son. The apple of discord was tossed by Eris at this man's wedding. For 10 points, name this hero, the husband of Thetis.**
ANSWER: Peleus
14. **A set of these points that are characterized by the birth of closed invariant curves and can lead to the formation of a torus in limit-cycle maps is named for Neimark and Sacker. For systems generated by a set of autonomous ordinary differential equations, one of these points occurs when critical equilibrium has exactly one zero eigenvalue. If several branches have an equilibrium point at which the Jacobian is zero, the equilibrium point is classified as one of these points. These points are defined to be "supercritical" if they lead to the development of (*) stabilizing cycles. These occurrences come in a "pitchfork" type and one sometimes co-named for Poincare and Andronov. For 10 points, give this term that denotes points representing the sudden appearance of qualitatively different solutions, one of which is named for Hopf.**
ANSWER: bifurcations
15. **Networks of these entities are the subject of Dyer and Singh's "relational view." Under one theory, expounded by Birger Wernerfelt, these entities control movable resources and non-movable capabilities. Exchanges are more likely to occur within the boundaries of these entities when assets become more relationship-specific according to the incomplete-contract approach of Oliver Williamson. The (*) resource-based and knowledge-based views are two models of these entities, which can take classical, procedural, evolutionary, or systemic approaches to strategic management. In one theory, these entities arise to avoid the costs of creating a price mechanism. For 10 points, name these entities that, according to Ronald Coase, arise to minimize transactions costs in a paper about their "nature."**
ANSWER: business firms [accept companies or corporations or businesses and equivalents or word forms thereof]
16. **One painting by this artist shows a woman spilling water out of a container as a crippled child crawls on a ring around the woman. The center shows a horribly mutilated corpse set against a window in one of this artist's paintings, which was inspired by the poem "Sweeny Agonistes." Many of this artist's paintings depicted Henrietta Moraes, and this artist's relationship with George (*) Dyer served as the basis for several of his works. The seated subject of one of this artist's paintings dons a purple robe and is screaming toward the viewer. That painting by this artist was based on a painting made by the artist of *Las Meninas*. For 10 points, name this Irish painter of *Three Studies of Figures at the Base of a Crucifixion* and *Study After Velazques's Portrait of Pope Innocent X*.**
ANSWER: Francis Bacon
17. **This parameter was the subject of Zuk et al.'s Limiting Pathway model, which sought to explain the fact that this parameter has been "missing" in human genetics. In selection experiments, this parameter is often calculated as the ratio between the response value and the initial differential. The symbol for this quantity is a letter raised to the second power, even though it is not a squared quantity. Twin studies are useful in measuring this quantity, one form of which ignores the effect of (*) dominant/recessive patterns and epistasis and only focuses on the effect of additive alleles, which is symbolized V sub A. For 10 points, name this parameter that is reported in its "narrow" and "broad" senses, describes the extent to which variation in phenotype is due to variation in genotype, and is denoted h-squared.**
ANSWER: heritability [accept narrow sense heritability or broad sense heritability]

18. In a not-entirely-terrible essay, Judith Butler examined the commodification of this author in the context of a Tel Aviv trial to settle the question of “who owns” him. This author runs out of a brothel and throws up in the street in a short story in which Jacques Kohn reminisces about meeting him. Elias Canetti demonstrated how one of this author’s novels had its genesis in the personal turmoil that this author himself revealed in his *Letters to Felice*, his fiancée. Isaac Bashevis Singer wrote about a (*) “friend of” this author, who shares his name with a character who reads Burton’s translation of *One Thousand and One Nights* while staying with Miss Saeki. The majority of this author’s works survive today because Max Brod ignored his order to have the manuscripts destroyed. Along with Mr. Nakata, a person with this first name is the main character of a Murakami novel about him *on the Shore*. For 10 points, name this existential author of *The Trial* and *The Metamorphosis*.
ANSWER: Franz Kafka
19. The heroes of this battle included Mordecai Gist, who commanded the “Maryland 400” in a desperate stand at the Old Stone House. During this battle, the winning commander said “stick to your country, or stick to your principles” to William Howard, who was forced to guide the victorious troops along the Rockaway footpath. Troops under Clinton and (*) Cornwallis landed unopposed at Gravesend Bay at the beginning of this battle, where the near-geriatric Israel Putnam assumed command of a retreating Continental Army that further withdrew at the subsequent battles of Kip’s Bay and White Plains. For 10 points, name this largest battle of the Revolutionary War that ended when George Washington successfully escaped the namesake feature to nearby Manhattan.
ANSWER: the Battle of Long Island [or Battle of Brooklyn Heights]
20. This thinker advocated the use of laissez-faire policies and limiting the government to providing a level of security and non-interference he dubbed the “individualistic minimum.” As a member of the Society for Psychical Research, this person investigated the supposedly paranormal communications surrounding the “Palm Sunday case.” This person’s main work is composed of four sections, two of which consider the “egoistic hedonist” and “intuitionist” or “dogmatic” approaches. This thinker’s moral philosophy greatly influenced his student, who railed against the (*) naturalistic fallacy in *Principia Ethica*. This person wrote a work that outlines three types of ethical theories, including his preferred Bentham-derived approach. For 10 points, name this teacher of G.E. Moore, a utilitarian Brit who penned *The Methods of Ethics*.
ANSWER: Henry Sidgwick
21. In one scene of this novel, a body is surrounded by candles and is covered by two strips of silk from a Chinese tapestry arranged in the shape of St. Andrew’s cross. One character in this novel looks at a chessboard and concludes that “knights had no meaning in this game. It wasn’t a game for knights,” recalling his observation of a stained-glass image of a knight failing to save a damsel. In this novel, a crucial camera plate-holder is not found during the stakeout of a rare bookshop serving as a front for a (*) pornography racket headed by the gay character Geiger. The protagonist gives the nickname “Silver Wig” to Mona Mars after learning of the murder of bootlegger Rusty Regan by Vivian and Carmen. For 10 points, name this detective novel in which General Sternwood enlists the aid of Philip Marlowe, a Raymond Chandler work whose title is a euphemism for death.
ANSWER: *The* Big Sleep

Minnesota Open V

Packet by the editors (2): Auroni Gupta, Andrew Hart, Gaurav Kandlikar, and Cody Voight

Bonuses

- The Free Darko *Macrophenomenal Pro Basketball Almanac* equates Rasheed Wallace's 1998 to '99 strike-shortened season, when he was "never able to really get on track," with this philosopher's failed attempt to meld his thoughts about a certain religion with Stoicism. For 10 points each:

[10] Name this philosopher from Alexandria who tied the concept of *logos* to his religious faith, which he synthesized with Hellenistic philosophy.

ANSWER: **Philo** of Alexandria [or **Yedidia**; or **Philon**]

[10] Philo was a member of this religion and wrote important early exegeses of its texts, including the Decalogue and the Books of Moses, contained in its *Tanakh*.

ANSWER: **Judaism** [accept all word forms of **Jew**]

[10] Philo was influenced by this Hellenistic school of philosophy, whose major proponents, Moderatus of Gades and Apollonius of Tyana, were more mystical than their Neoplatonist and Stoic counterparts.

ANSWER: **Neopythagoreanism** [accept word forms; prompt on **Pythagoreanism** or word forms]
- This quantity is generally expressed as a product of a constant and the energy difference between the e-sub-g and the t-sub-2-sub-g configurations, which is symbolized delta-oct. For 10 points each:

[10] Name this quantity that describes the difference in energy between the "d" electrons in octahedral and spherical fields. Plotting this quantity against electron number yields a characteristic double humped shape.

ANSWER: **crystal field stabilization energy** [or **ligand field stabilization energy**; or **CFSE**; or **LFSE**; prompt on **stabilization energy** or **SE**]

[10] This theorem states that degenerate non-linear systems will undergo distortions to form a lower symmetry, lower energy system to remove the degeneracy. It is often applied to octahedral complexes of d9 and high spin d4 ions.

ANSWER: **Jahn Teller** theorem/distortion/whatever

[10] This type of arrangement of ligands arises when the ligands lying along the z axis of a previously octahedral arrangement are removed. All complexes with this structure, including cisplatin, are diamagnetic.

ANSWER: square **planar**
- The death knell for this dynasty was spelled when the soldier Badr al-Jamali seized power and put a large number of generals and officials to death. For 10 points each:

[10] Name this caliphate that was established in 909 CE and ruled Egypt until 1171 CE. Its first caliph, al-Mahdi, traced his lineage through the daughter of Muhammad.

ANSWER: **Fatimid** Caliphate/Dynasty/Empire [or al-**Fatimiyun**; or **Fadamids**]

[10] A mass murder of dogs ordered after the capture of Fustat was one of the many eccentric actions of this Fatimid caliph who ruled from 996 until 1021, when he mysteriously disappeared during a walk. He is venerated by the Druze.

ANSWER: al-**Hakim** Bi-amr Allah [or al-**Hakim** Bi-amrih; or **Abu ali Al-Mansur**; or the "**Mad Caliph**"; do not accept or prompt on "al-Mansur" alone, since that is the common name for several completely different figures]

[10] In 971, the Fatimids briefly lost control of Damascus when their army was defeated by the Qarmatians, who ruled this island. In modern times, this island nation has been rocked by Arab Spring protests looking to overthrow King Hamad.

ANSWER: Kingdom of **Bahrain** [or Mamlakat al-**Bahravn**]
- Name some authors who wrote about their experiences in Auschwitz, for 10 points each.

[10] Some critics claimed that this man's 1987 death from falling over a railing after taking antidepressants was suicide caused by the trauma of internment at Auschwitz. He is best known for the short-story collection *The Periodic Table*.

ANSWER: Primo [Michele] **Levi**

[10] This Auschwitz inmate described a frightened child yelling "Mama! Mama! Don't leave me!" in vain as her mother pretends not to notice in one of the harrowing stories of his collection *This Way for the Gas, Ladies and Gentlemen*.

ANSWER: Tadeusz **Borowski**

[10] While living in Buenos Aires, this man heavily condensed an eight-hundred-page autobiography of his time spent in Auschwitz, which he titled *And the World Remained Silent*, into the book we now know as *Night*.

ANSWER: [Eliezer] Elie **Wiesel**

5. Answer the following about the intrigues of that most lusty of nineteenth-century Spanish-French mezzo-sopranos, Pauline Viardot, for 10 points each.
 [10] Viardot bought the original score to this great Mozart opera and built a shrine to it in her home. This opera contains the Catalogue Aria and ends with its title character dragged to hell.
 ANSWER: **Don Giovanni**
 [10] Viardot was the teacher of Desiree Artot, whom she likely convinced not to marry this composer, who wrote his *Orchestral Suite No. 4, Mozartiana* after seeing the *Don Giovanni* score in Viardot's shrine.
 ANSWER: Pyotr Ilich **Tchaikovsky**
 [10] Ivan Turgenev's long-term extramarital relationship with Viardot led him to write *The Song of Love Triumphant*, which inspired this French composer's *Poeme for Violin and Orchestra*. This composer of the opera *King Arthur* may have been the first to score music for the celesta before his bizarre death.
 ANSWER: [Amédée-]Ernest **Chausson** [of riding-his-bike-into-a-brick-wall fame]
6. An equation used to calculate the efficiency of this technique includes a term describing the distance between two molecules raised to the sixth power. For 10 points each:
 [10] Name this technique that can detect protein-protein interactions. Some variants of this technique detect the sensitized emission of the acceptor molecules, and it is often done in conjunction with FLIM.
 ANSWER: **FRET** [or **froster resonance energy transfer**; or fluorescence **resonance energy transfer**; or **electronic energy transfer**; or **RET**; or **EET**]
 [10] Commonly used chromophores in FRET are color variants of this protein, which was first isolated from *Aequorea victoria*. This protein emits light of its namesake color when exposed to blue light.
 ANSWER: **green fluorescent protein** [or **GFP**]
 [10] Chromophores lose their ability to fluoresce in this process. SHRIMP detects distances between molecules based on it, and a technique often used to study membranes measures the recovery of fluorescence after this process.
 ANSWER: **bleaching** [or **photobleaching**; prompt on **fading**; prompt on **FRAP**]
7. One writer's approach to performing this activity involved "mashing," excising mentions of a "field of Heaven" and a "Sultan's Turret," and leaving behind the lines "Wake! for the Sun before him into the Night / A Signal flung that put the Stars to flight." For 10 points each:
 [10] Name this literary activity performed in collaboration by Peter Avery and John Heath-Stubbs. Those who undertake it must deal with the lack of firsthand manuscripts before the year 1460 or so.
 ANSWER: **translating** the **Rubaiyat** of Omar Khayyam into English [accept reasonable equivalents; prompt on partial answers; accept **translating** Omar **Khayyam** into English]
 [10] The authoritative translator of *Rubaiyat* was Edward, an author with this surname, which was adopted by Zelda Sayre after she married the author of *This Side of Paradise*.
 ANSWER: **Fitzgerald** [Edward, Zelda, or Francis Scott Key/F. Scott]
 [10] The scholar Vladimir Zhukovsky questioned the authenticity of eighty-two stanzas from the *Rubaiyat*, which have since been given this colloquial term, suggesting that they have migrated from the works of other Persian poets.
 ANSWER: "**wandering quatrains**" [this seems to be an English-language term, so don't offer leeway here]
8. This politician got his start when Martin Van Buren named him Collector of Customs for the Port of Boston. For 10 points each:
 [10] Name this politician who made one of the original manuscripts of the Gettysburg Address, won an arbitration case over boundaries in the San Juan Islands, negotiated a series of treaties on dual citizenship, and served in the cabinet of James K. Polk.
 ANSWER: George **Bancroft**
 [10] Bancroft ordered the occupation of California and sent Zachary Taylor to disputed Mexican territory in his time serving in this cabinet post. Bancroft's signature achievement in this post was the establishment of an academy in Annapolis.
 ANSWER: Secretary of the **Navy** [accept **Naval** Secretary; or **SECNAV**]
 [10] As a scholar, Bancroft cemented his legacy by authoring the most comprehensive nineteenth-century one of these works.
 ANSWER: **History of the United States**, from the *Discovery of the American Continent* [accept equivalents for "United States"]

9. These events are often administered using a dripping device or a Very pistol. For 10 points each:
 [10] Name this type of wilderness-management strategy, which has a “broadcast” variety, and is sometimes required to maintain the habitat of red-cockaded woodpeckers and to break open the pinecones of sequoias.
 ANSWER: **controlled burns** [or **prescribed burns**; or **hazard-reduction burns**; or **swailing**; accept anything that indicates an **on-purpose fire**; prompt on **fire** or equivalents]
 [10] A derecho caused a massive 1999 blowdown in this “canoe area” between Northern Minnesota and Canada that has required the use of many controlled burns to keep the whole area from going up in flames.
 ANSWER: the **Boundary Waters** Canoe Area Wilderness [or **BWCA**]
 [10] One tool for combating an out-of-control fire is this device, the most common type of which is dubbed the “Bambi,” which can be suspended from a vehicle’s cargo hook.
 ANSWER: helicopter **bucket** [or **helibucket**; or monsoon **bucket**]
10. Heracles won the right to impregnate the fifty daughters of Thespeus by slaying a lion named for this place. For 10 points each:
 [10] Name this mountain where Pentheus and Actaeon met untimely deaths and a herdsman exposed an infant who was rescued by the shepherds of the Corinthian king Polybus.
 ANSWER: Mount **Cithaeron**
 [10] The Cithaeron-exposed infant was this guy, who fulfilled a prophecy by killing his father Laius and marrying his mother Jocasta.
 ANSWER: **Oedipus**
 [10] Mount Cithaeron was the death place of this evil aunt of Antiope, who was killed by being tied to the horns of a bull after the twins Amphion and Zethus recognized Antiope as their mother.
 ANSWER: **Dirce**
11. One character in this novel is an autistic recluse who spends his days listening to gramophone recordings of songs like “White Christmas.” For 10 points each:
 [10] Name this novel that begins with Tara Das’s return to her family’s decaying suburban mansion outside Old Delhi, where she reunites with her siblings Bim and Baba. It proceeds reverse-chronologically to the events surrounding the Partition.
 ANSWER: **Clear Light of Day**
 [10] *Clear Light of Day* was written by this half-Indian, half-German author of *Fire on the Mountain*, *In Custody*, and *Fasting, Feasting*. She has been shortlisted for the Booker three times.
 ANSWER: **Anita** [Mazumdar] **Desai** [prompt on **Desai**]
 [10] The trauma of the Partition is absurdly represented by the battle between the superheroes Shiva-of-the-Knees and Saleem Sinai in this novel by Salman Rushdie.
 ANSWER: **Midnight’s Children**
12. One group of children gets to wear *obi* instead of simple cords on their kimono on this day. For 10 points each:
 [10] Name this day on which certain boys get to start growing out their hair for the first time, a Japanese holiday that celebrates children who have attained three particular ages.
 ANSWER: **Shichi-Go-San** [or **Seven-Five-Three**; accept in any order]
 [10] *Shichi-Go-San* is a yearly festival in this *kami*-revering Japanese religion.
 ANSWER: **Shintoism**
 [10] This is the Japanese word for “festival.” The *Aoi*, *Jidai*, and *Gion* are the three major ones in Kyoto, and the Yuki one celebrates the snow in Sapporo.
 ANSWER: **matsuri**
13. The worship of this figure involves the singing of the children’s song “May There Always Be Sunshine.” For 10 points each:
 [10] Name this religious figure who is equated with St. Paul and Vladimir the Great by the all-female Chapel of Russia’s Resurrection sect.
 ANSWER: Vladimir [Vladimirovich] **Putin**
 [10] Chief Jack Naiva of the Yaohnanen tribe of Vanuatu was the custodian of a sacred picture of this religious figure holding a pig-killing nal-nal club. The Yaohnanen worship this pale-skinned royal as a son of a mountain spirit.
 ANSWER: Prince **Philip** [accept Duke of **Edinburgh**]
 [10] Prince Philip is worshiped as the brother of John Frum, a central figure to many of these alliteratively named Pacific-island religious movements.
 ANSWER: **cargo cults**

14. Matthew Prior's "Ode, Humbly Inscrib'd to the Queen," written on the occasion of victory in this battle, introduced ten-line "Prior Stanzas" to the world of British literature. For 10 points each:
 [10] Name this battle that, along with the Battle of Turin, marked 1706 as an important tide-turning year in the War of the Spanish Succession. After this Wallonia-sited battle, Brussels, Bruges, and Antwerp fell to the Grand Alliance.
 ANSWER: Battle of **Ramillies**
 [10] This English Duke, later the victor at Blenheim, won at Ramillies while his French counterpart, Eugene of Savoy, triumphed at Turin.
 ANSWER: John **Churchill**, First Duke of **Marlborough** [accept either underlined part]
 [10] This ambitious Wittelsbach Elector of Bavaria was a losing commander at Ramillies whose designs on Wittelsbach control of the Holy Roman Emperorship perished in the defeat. He served as governor of the Spanish Netherlands and married the daughter of John III Sobieski.
 ANSWER: **Maximilian Emanuel** [or **Max Emanuel**; or **Maximilian II Emanuel**; prompt on **Maximilian**]
15. Two muscular men transfer a large pink crate into a small boat in the central foreground of this painting, and buildings with classical pillars line the left and right of this work. For 10 points each:
 [10] Name this painting in which the title figure is shown conversing with a group of servants as she waits to be transported to her ship, which is to take her to Jerusalem.
 ANSWER: *Seaport with the **Embarkation of the Queen of Sheba***
 [10] This French landscape artist painted *Embarkation of the Queen of Sheba*. This artist spent much of his life in Rome and was a close friend of Nicolas Poussin.
 ANSWER: **Claude Lorrain** [accept either; or Claude **Gellée**; or Claude le **Lorrain**]
 [10] Nicolas Poussin made two versions of a painting that shows Romulus ordering his men to rape this group of women. Jacques Louis David made a painting showing the "intervention" of this group.
 ANSWER: the **Sabine** women [accept *The **Rape of the Sabine Women*** or *The **Intervention of the Sabine Women***]
16. While studying pions produced in proton-antiproton collisions, Goldhaber, Goldhaber, Lee, and Pais discovered an unexpected angular correlation, which is a high-energy counterpart to the effect named for these two scientists. For 10 points each:
 [10] Name these two scientists who showed that anyone, even Chris Ray, could measure the sizes of astronomical radio sources by correlation of signal intensities in independent detectors, thus forming the basis of intensity interferometry.
 ANSWER: Robert **Hanbury Brown** and Richard Q. **Twiss** [accept **HBT** effect]
 [10] In a tabletop experiment using a mercury vapor lamp and a half-silvered mirror, Hanbury Brown and Twiss observed the tendency of these quanta of light to be distributed in "bunches."
 ANSWER: **photons**
 [10] Before intensity interferometry, this kind of interferometry was the standard technique for determining the size of radio sources. Its namesake measured the diameter of Jupiter's moons with it.
 ANSWER: **Michelson** interferometry
17. Sir Thomas Beecham produced a popular recording of the third, fifth, and sixth of these compositions, whose fourth was inspired by "The Representation of Chaos" from Haydn's *The Creation*. For 10 points each:
 [10] Name these nine compositions, including one which repeats the note E twenty-four times and contains other such "heavenly lengths." That is the ninth from this set of compositions, the *Great C-Major* one.
 ANSWER: **symphonies** of Franz Peter **Schubert**
 [10] Only a scherzo and two movements survive of this Schubert symphony, which many theorize to have contained a finale that became the B-minor *entr'acte* for Schubert's incidental music to *Rosamunde*.
 ANSWER: **Unfinished Symphony** [or *Symphony No. **8** in B minor*; or **Unvollendete**]
 [10] Fragments from Schubert's tenth symphony were completed by this experimental Italian composer in his work *Rendering*. He also composed a set of eighteen pieces for solo instruments known as *Sequenza*.
 ANSWER: Luciano **Berio**
18. Before the fifth century BCE, this assembly's membership was limited to Archons. For 10 points each:
 [10] Name this pre-classical council in Athens, which handed over its power to Solon during his reforms, and was convened on a hill that is named for the fact that the Greek god of war was allegedly put on trial there.
 ANSWER: the **Areopagus**
 [10] Solon partially supplanted the Areopagus with this institution, which was originally a Council of Four Hundred. Cleisthenes expanded it to five hundred, and it eventually took over most of the Areopagus's functions except murder trials.
 ANSWER: the **Boule**
 [10] Twenty-eight elders and two hereditary kings made up this Spartan senate, which Lycurgus instituted in his *Great Rhetra*. In the convoluted scheme of Spartan government, this body consulted with the ephors and prepared motions for the Apella to vote on and could also veto motions passed by the Apella.
 ANSWER: the **Gerousia** [prompt on **Council of Elders**]

19. The opening to this novel is an email from Jerome to his father Harold, a professor of Rembrandt studies. For 10 points each:
 [10] Name this novel about the intertwined relationships between the Anglo-African-American Belsey family and the Trinidadian Kipps family. It takes its title from an Elaine Scarry book pairing the title quality with “being just.”
 ANSWER: **On Beauty**
 [10] *On Beauty* was the second hit for this young British novelist, who wrote the forgettable book *The Autograph Man*. Groups with the acronyms FATE and KEVIN oppose the evil FutureMouse in her best-known novel, *White Teeth*.
 ANSWER: Zadie **Smith**
 [10] The opening emails in *On Beauty* mirror Helen’s letters to her sister at the beginning of *Howards End*, penned by this British writer of *A Room with a View*.
 ANSWER: E.M. **Forster** [or [Edward Morgan **Forster**]
20. This student of Max Weber originated moderation theory, whereby a party smooths out its radical policies over time, in his magnum opus. For 10 points each:
 [10] Name this German sociologist who claimed, “Who says organization, says oligarchy” in his *Political Parties*.
 ANSWER: Robert **Michels**
 [10] Robert Michels’s *Political Parties* is the basis for this kind of law for oligarchies. David Ricardo postulated that real wages tend toward a minimum life-sustaining rate in a law of this kind for wages.
 ANSWER: **iron** law [of oligarchies or wages]
 [10] Max Weber claimed that the advantage of this system was its “purely technical superiority over any other form of organization,” but warned that it might lead to a “polar night of icy darkness” in which people were trapped in the “iron cage of rationality.”
 ANSWER: **bureaucracy** [accept **Weberian bureaucracy**; or die **Bürokratie**]
21. Identify the following about major science news from 2012, for 10 points each.
 [10] Scientists at CERN reported that they had found this particle in July. This particle is hypothesized to give mass to matter.
 ANSWER: **Higgs** boson
 [10] In May, this Elon Musk-founded company’s Dragon spacecraft become the first commercial spacecraft to dock to the International Space Station. It probably doesn’t help you, but will certainly delight and mystify Rob Carson, to learn that Matt Petty works at this company as an aerospace engineer.
 ANSWER: **SpaceX** Exploration Technologies Corporation
 [10] Thirty papers worth of data from this project were published in various journals on September fifth. Those data from this project suggest that a very high percentage of human genomic DNA is actually functional.
 ANSWER: **ENCODE** [or **Encyclopedia of DNA Elements**]