

1. **Alain de Botton's first non-fiction work was a self-help book called *How [this author] Can Change Your Life*. A monograph on this author arguing that he completely ignored moral considerations was written by Samuel Beckett, and discusses Beckett's own preoccupations as much as this author's. This author criticized one of his countrymen for his contradictory attitude towards Charles (*) Baudelaire in a series of essays which argued against the importance of biographical information in literary criticism. He wrote a novel beginning "For a long time, I went to bed early" whose narrator is friends with the army officer Robert de Saint-Loup and loves the deceitful Albertine. For 10 points, name this author of *Contre Sainte-Beuve* and *In Search of Lost Time*.**

ANSWER: Marcel Proust

2. **Many of this composer's works use the following rhythm, in eighth notes: note note note rest, note note rest note, rest note note rest. A work by this composer uses microphones swinging above speakers to create feedback. He used the words of the murdered reporter Daniel Pearl and text from the Book of Daniel in his *Daniel Variations*. A piece by this composer of (*) *Pendulum Music* samples a Pentecostal preacher talking about the end of the world. He wrote a work beginning and ending with movements called "Pulses," and one with movements called "America-Before the War" and "Europe-After the War." For 10 points, name this composer of *It's Gonna Rain*, *Music for 18 Musicians* and *Different Trains*.**

ANSWER: Steve Reich [or: Stephen Michael Reich]

3. **This man responded to the grief of the Queen of Hungary over the assassination of her father Albert I of Germany by writing her *The Book of Divine Consolation*. This man's lifelong project was to assemble his writings into a vast *Opus Tripartitum*. His disciple Johannes Tauler carried on his teachings with a close group called the Friends of God. He died during a heresy trial in Avignon before 28 of his propositions were condemned by Pope John XXII. This man delivered simple vernacular sermons which taught that the soul cannot be satisfied by a union with God and seeks to find a union with the distinct (*) Godhead. Karl Neumann and D.T. Suzuki compared this Dominican's teachings to Buddhist beliefs. For 10 points, name this 13th and 14th century German theologian and mystic.**

ANSWER: Meister Eckhart

4. **Charles Blair demonstrated that this theorem implies the axiom of dependent choice, a weaker version of the axiom of choice. A typical proof of this theorem constructs a nested sequence of open balls disjoint from a sequence of nowhere dense sets and uses the nested interval theorem to show the balls have a non-empty intersection. This theorem states that the countable intersection of open, (*) dense subsets of a complete metric space, X , is dense, from which it follows that X is not a countable union of nowhere dense sets. This theorem is of fundamental importance because it can be used to prove the closed graph theorem, uniform boundedness principle, and open mapping theorem. For 10 points, name this category theorem fundamental to functional analysis.**

ANSWER: Baire's category theorem [or: BCT]

5. Hasso Herschel helped over a thousand people accomplish this action. This action was accomplished twice using the same red Austin-Healey Sprite sports car, which was missing its windshield during its first use. Conflict over whether Allan Lightner could do this action to go to an opera house led to a standoff between tanks. Several members of the (*) Playboy Club were able to perform this action, since their membership cards resembled diplomatic passports. While trying to accomplish this action, Peter Fechter was shot at an area infamously known as the Death Strip. The more conventional way to accomplish this action involved stopping at Checkpoint Charlie. For 10 points, identify this Cold War-era action in which people crossed a barrier that separated the German capital.

ANSWER: crossing the Berlin Wall [or: crossing the East Berlin-West Berlin border; escaping to West Berlin, obvious equivalents; until *Checkpoint Charlie* is read, accept: crossing Checkpoint Charlie; prompt on: defecting to the West ; do not accept: answers that state West Germany , the Inner German Border , or Innerdeutsche Grenze]

6. One character on this show is unable to buy crazy straws because the ATM only gives him a negative one dollar bill with Warren G. Harding's face on it. Another of its characters assumes that the phrase Troll the respawn, Jeremy is a new way of saying goodbye. On this show, the GED teacher Mr. Lefkowitz makes his students was Major League repeatedly. It includes a character who believes in Gosh and his son Jeepers and who is undone by the (*) timestamp on his reality show audition tape. That character is the Jon Hamm played Reverence Richard Wayne Gary Wayne, who uses a mystery crank to power the man cave he builds in his Durnsville, Indiana apocalypse bunker. For 10 points, name this Tina Fey-created show in which Ellie Kemper plays a former Indiana Mole Woman who has moved to New York City to start a new life.

ANSWER: *The* Unbreakable Kimmy Schmidt

7. The protagonist of one of this author's short stories rants to his friends about operating a Browning automatic rifle in the army, although he had only fired that gun twice. In one of his novels, the matriarch Pookie raises two daughters: one becomes a depressed Long Island housewife and the other becomes a depressed career woman in the advertising field. This creator of Sarah and Emily Grimes wrote a novel in which the mentally ill math professor John Givings condemns the (*) suburban life of his caretaker mother and his neighbors. That novel ends with Frank's empty despair when his wife April Wheeler dies from blood loss after trying to perform a self-induced abortion. For 10 points, name this author of the short story *The B.A.R. Man* and the novels *The Easter Parade* and *Revolutionary Road*.

ANSWER: Richard Yates

8. This element is the central atom of the product of the Michaelis-Arbuzov reaction, which is used to prepare esters of this element. Knowles won the 2001 Chemistry Nobel for designing the asymmetric, chiral hydrogenation catalyst DIPAMP, whose two central atoms are of this element. This element is the central atom of a reagent that deaminates arenediazonium salts. Replacing hydroxyl groups with halogens often uses (*) trihalides of this element. The most common organic reagent that uses this element is its triphenyl type, which is a reactant in the Wittig reaction. For 10 points, name this nonmetal that lies below nitrogen on the periodic table.

ANSWER: phosphorus [or: phosphine, since many of the reagents are phosphines]

9. During the Teapot Dome hearings, this man admitted that he had received oil bonds from Harry Sinclair in his capacity as Chairman of the Republican National Committee. After successfully running Warren G. Harding's presidential campaign, he was appointed Postmaster General. He resigned as Postmaster General to serve as the first president of an organization which was created after the alleged rape and murder of Virginia Rappe by (*) Fatty Arbuckle. This man, who was succeeded by Eric Johnston and Jack Valenti, created loose non-binding policies like The Formula and The Don'ts and Be Carefuls before a more lasting effort in 1930. For 10 points, name this first president of the Motion Picture Association of America, whose namesake Production Code required films to adhere to strict moral guidelines.

ANSWER: Will Hays

10. A bishop in this film walks by a dilapidated church and notes that the churches belong to God, but he doesn't seem to care about them. Its opening sequence ends with a match cut between a woman's scream and the sound of a drill. This film's male protagonist thinks he sees his wife in a boat with two sisters, a scene which actually occurs at the very end, when they attend his (*) funeral. In its opening sequence, water spilled on a photographic slide causes it to turn red. This film begins with the drowning of a child in a red raincoat, which haunts her parents on their trip to Venice. Scenes of a couple getting dressed for dinner are intercut with this film's controversial sex scene between Julie Christie and Donald Sutherland. For 10 points, name this 1973 Nicolas Roeg thriller.

ANSWER: Don't Look Now

11. Arthur Pigou proposed a measurement defined as this value plus the amount of government bonds, all divided by the price levels, and hypothesized that an increase in that measurement would increase consumption. The product of this value and the velocity of money equals the product of the price level and the amount of real expenditure according to the equation of exchange. Milton Friedman suggested that this value should be (*) increased by a fixed percentage each year. The increase in this value is slowed or sped up, respectively, in expansionary and contractionary monetary policy. For 10 points, name this measurement of the amount of monetary assets in an economy at a given time.

ANSWER: money supply [or: money stock; prompt on: M]

12. This woman published an expose in *The Link* revealing the phossy jaw frequently contracted by workers at the Bryant and May Factory. This woman first gained notoriety by publishing a pamphlet on birth control with famous atheist Charles Bradlaugh. This woman kicked off the New Unionism by leading the London Matchgirls' Strike of 1888. This woman groomed Jiddu Krishnamurti to be the world teacher, claiming he was the new Messiah, contrary to the claims of one Jiddu Krishnamurti. Helena (*) Blavatsky converted this woman to the Theosophical Society, of which she became the second president. For 10 points, name this activist for women's rights in 19th and 20th century Britain.

ANSWER: Annie Besant

13. The world's first wave farm, which only operated for two months in 2008, was established in this country. A legend in this country tells how a crowing rooster and a faulty knot saved a pilgrim from execution in Barcelos. This country, whose flag includes a yellow armillary sphere, lends its name to the Arabic word for orange. Montados in this country are the source of over half the world's supply of (*) cork. The pottery-producing town of Porches is on the southern coast of this country's Algarve region. A namesake wine is produced in this country's Douro River valley. The Belém Tower sits at the mouth of the Tagus River in this country's capital. For 10 points, name this country that was once united with its only neighbor, Spain.

ANSWER: Portugal [or: Portuguese Republic]

14. One character in this novel responds to a tragedy by musing Poor man. Poor mankind. That character is forced to resign from one post after his wife falls out of a window and dies while cheating on him in a Memphis hotel. One character in this novel is adopted by the stern and religious Simon McEachern, who beats him frequently. Two of the central characters of this novel never meet, but one witnesses the column of yellow smoke that emerges from a house fire set by the other. One of its characters is pursued in a lengthy manhunt after murdering (*) Joanna Burden. This novel is largely narrated by the millworker Byron Bunch, who aids a pregnant teenager who has arrived in the town of Jefferson. For 10 point, name this William Faulkner novel about Lena Grove and Joe Christmas.

ANSWER: Light in August

15. These things can be expanded as: sum from l equals zero to infinity of, i to the l , times two l plus one, times the order l Legendre polynomial of cosine theta, times a order l spherical Bessel function. Using just the reflection coefficients and these things, one can prove the Ewald-Oseen extinction theorem. A series expansion of these things is used in the angular spectrum method, which is identical to Fourier optics when the paraxial approximation applies. These things are termed inhomogeneous when their (*) equiamplitude surfaces don't coincide with their equiphase surfaces. In the limit of large distances, these things are an approximation of spherical waves and have uniform electromagnetic fields on every surface perpendicular to the direction of propagation. For 10 points, name these simplest waves, which are named for the fact that their wavefronts are infinite, flat, 2-dimensional surfaces.

ANSWER: time-harmonic plane wave [or: planar wave]

16. Several hundred tons of blackened but otherwise completely preserved grain were discovered at a buried storage room in this city. Reliefs at this city's Chamber A show a procession of sixty-four deities, including Shaushka, who, despite being female, is shown alongside many male deities. Those reliefs can be found at this city's sanctuary of Yazilikaya. The discovery of this city caused an increase in tourists visiting the nearby village of (*) Bogazkale. Hugo Winckler's excavation of this city led to the discovery of a clay tablet written in Akkadian that served as one copy of the world's oldest peace treaty. This city, where the Kadesh tablet was found, was the seat of power for kings like Suppiluliuma I. For 10 points, name this capital of the Hittite Empire.

ANSWER: Hattusha [or: Hattusa; until Bogazkale is read, prompt on: Bogazkale or Bogazkoy; until it is read, anti-prompt on: Yazilikaya]

17. Based on their response to this condition, J. S. Rowe divided plants into invaders, evaders, avoiders, resisters, and endurers. The go-to example of an obligate seeder is manzanita, *Arctostaphylos glauca*, whose seeds only break dormancy in response to this condition. The pattern, frequency, and intensity of this condition determines its namesake regime. The Ponderosa, longleaf, and slash (*) pines have adapted to survive this condition. These events play a large role in the evolution and maintenance of many ecosystems by doing things like creating gaps in the canopy, which allows shade-intolerant species to grow, and clearing underbrush. Herbivory promoted by this condition is known as pyric (PIE-rick) herbivory. For 10 points, name these events that puny humans have attempted to replace with controlled burns .

ANSWER: wildfires

18. In a preparatory sketch for a painting depicting this object, it says **You know, I don't give a damn.** Andy Warhol contributed a drawing of a penis to a tiny museum named after this object. This object is in the foreground of a drawing by Auschwitz victim Petr Ginz which was destroyed on what would have been his 75th birthday. This object appears above a floating ladder in a (*) Georgia O'Keeffe painting. Three of these objects appear along with three men in bowler hats in Magritte's *Mysteries of the Horizon*. This object unusually has colored blotches on it in a painting in which it appears to the right of a ladder and above an animal. It can be seen in the very top left of Altdorfer's *Battle of Issus*. For 10 points, name this object, which Joan Miró painted a dog barking at.
ANSWER: the Earth's Moon [or: Luna]

19. In a poem named after these things, an oracle referred to as **Old Rocky Face** speaks the word **Rejoice!** That poem ends by saying that all things run on an unfashionable one of these. In another work, the intersection of the primary and antithetical examples of these things represents the mingling of opposites in every individual. Another poem refers to a spinning wheel as a (*) *perne* in one of these things. History is conceived of as an intersecting series of these things in the book *A Vision*. The opening of *The Second Coming* describes a falcon turning and turning in the widening one of these. For 10 points, name these spirals which are a recurring symbol in the works of W. B. Yeats.
ANSWER: gyres

20. This man marries a daughter of the giant Hrimnir who transformed into a crow to help with his conception. Nine of this man's sons are eaten by a woman who shapeshifts into a wolf, before his tenth son uses honey to slay it. This man stays for six years in his mother's womb, where he was conceived with the help of an apple sent by Odin and Frigg. This son of (*) Rerir builds a giant hall whose center contained the tree Barnstokk, where a mysterious one-eyed visitor places the sword Gram. This man marries his daughter off to the Geatish king Siggeir, who murders him and all his sons except Sigmund. For 10 points, name this character from Norse myth, the patriarch of the clan of Sigurd and Sigmund.
ANSWER: Volsung

1. This problem is a common introductory problem to dynamic programming. For 10 points each:

[10] Name this problem that uses the associativity property to find the most efficient way to multiply a sequence of matrices.

ANSWER: **matrix-chain multiplication** [or: **matrix-chain ordering problem**, **MCOP**]

[10] Dynamic programming often takes advantage of this optimization technique, in which the solutions to problems are stored in an array for future use. It basically trades space for time.

ANSWER: **memoization** [or: **memoize**, word forms]

[10] Memoization is commonly introduced in the context of calculating the this set of numbers, which are defined by the recurrence relation $x_{n-1} = x_{n-2} + x_{n-3}$.

ANSWER: **Fibonacci** numbers [or: **Fibonacci** sequence]

2. Name some animals represented by bronze sculptures in Italy, for 10 points each.

[10] A bronze of one of these animals was created in Islamic Spain in the eleventh century. It graced a column above Pisa Cathedral until it was replaced with a replica in the 19th century.

ANSWER: Pisa **griffin**

[10] A winged bronze sculpture of one of these animals was likely sculpted over two thousand years ago and rests on the eastern column of St. Mark's square in Venice.

ANSWER: winged **lion**

[10] The Peggy Guggenheim Collection in Venice contains one of Constantin Brancusi's many bronze depictions of this animal in space.

ANSWER: **bird** in space

3. This kingdom's rule was dominated by the Wadiyar Dynasty. For 10 points each:

[10] Name this kingdom that was once located in present-day Karnataka. Its ruler Tipu Sultan used rockets with attached blades at the Battle of Pollilur.

ANSWER: **Mysore**

[10] The Mysorean ruler Hyder Ali reprimanded his admiral, Ali Raja, for blinding the sultan of this place. Operation Cactus intervened in a much later coup attempt in this territory.

ANSWER: the **Maldives**

[10] Tipu Sultan tried to forge an alliance with this colonial power by visiting their base at Pondicherry. Robert Clive often feuded with Joseph François Dupleix, a governor-general of this country's East India Company.

ANSWER: **France**

4. Along with *Spring* and *Autumn*, this novel makes up the Torrents Trilogy. For 10 points each:

[10] Name this novel by Ba Jin about the three Gao brothers.

ANSWER: *The* **Family** [or: **Jia**]

[10] *The Family* is also compared to this classic novel by Cao Xueqin. Coincidentally, the Chinese title of *The Family*, *Jia*, is spelled the same in English as the family name of Jia Baoyu, this novel's main character.

ANSWER: *The* **Dream of the Red Chamber** [or: *The* **Story of the Stone**, **Hong lou meng**, **Shitou ji**, **Red Chamber Dream**, **A Dream of Red Mansions**]

[10] Though Jia Baoyu marries his cousin Xue Baochai, his true love is this sickly cousin of his.

ANSWER: **Lin Daiyu** [accept either name; or Lin **Tai-Yu**]

5. Jerry Fodor's cleverly-titled paper "Fodor's Guide to Mental Representation" was published in this journal. For 10 points each:

[10] Name this analytic philosophy journal founded by Alexander Bain, which has been edited by such luminaries as G. E. Moore, Gilbert Ryle and Simon Blackburn.

ANSWER: Mind

[10] A G. E. Moore paper attempting to refute this position was published in *Mind*. George Berkeley advocated this position, which states that reality does not exist independently of our mental construction of it.

ANSWER: idealism

[10] The idealist J. M. E. McTaggart published this paper in *Mind*. It argues that the title concept must be defined in terms of the A-series, but that the A-series is incoherent.

ANSWER: The Unreality of Time

6. One poem in this collection ends by noting "somehow a dog has taken itself & its tail considerably away into mountains or sea or sky, leaving behind: me, wag." For 10 points each:

[10] Name this collection which also includes the opening line "Life, friends, is boring. We must not say so."

ANSWER: Dream Songs [or: 77 Dream Songs]

[10] The *Dream Songs* were written by this American Confessional poet.

ANSWER: John Berryman

[10] This other poet wrote "I used to want to live to avoid your elegy" in "For John Berryman." He wrote "For the Union Dead" and "Skunk Hour."

ANSWER: Robert Lowell

7. This ruler invited architect Ridolfo Fioravanti, who was nicknamed "Aristotle," to build the Orthodox Dormition Cathedral. For 10 points each:

[10] Name this ruler who won the Battle of the Shelon River and emerged victorious out of a "Great Stand" on the Ugra River.

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

[10] Ivan III was able to free Moscow from the "Tatar Yoke" imposed by this state, which was united by Tokhtamysh. This state, named for the color of their tents, was established after Batu Khan sacked Kiev.

ANSWER: Golden Horde [or: Kipchak Khanate, Ulus of Jochi]

[10] A century before Ivan III's victory at the Ugra River, Dmitry Donskoy gained his nickname after he defeated the Golden Horde at this battle.

ANSWER: Battle of Kulikovo

8. In these diagrams, antiparticles are represented as moving from right to left, that is, backwards in time. For 10 points each:

[10] Name these diagrams used to analyze scattering problems in physics. Lines on them are particles, while vertices are where particles are created or annihilated.

ANSWER: Feynman diagrams

[10] Technically, calculation of the amplitude using Feynman diagram requires one to draw and calculate an infinite number of them. In practice, it's common to work at the lowest or leading order and just sum the simplest diagrams, those that contain no closed loops, which is called working at this level.

ANSWER: tree level

[10] Virtual particles on Feynman diagrams, and in general, are said to be this term because they do not obey Einstein's relativistic energy-momentum relation.

ANSWER: off the mass shell

9. Answer the following about classical myth and religion as it appears in Horace, for 10 points each.

[10] Horace's 10th epode, about the lousy poet Mevius, treats Mevius as this type of ritual scapegoat from Greek religion. During the Thargelia festival for Apollo, two of these men were exiled from the city to expiate it.

ANSWER: a **pharmakos** [or: **pharmakoi**]

[10] In the eighth poem in Horace's first book of Satires, a wooden statue of this god expels the witch Canidia trespassing on the Equiline. This fertility god once attempted to rape Hestia.

ANSWER: **Priapus**

[10] The third epode curses Maecenas for feeding Horace garlic by claiming that Medea coated this hero in garlic before he faced fire-breathing bulls to retrieve the Golden Fleece.

ANSWER: **Jason**

10. One of these people depicted another of them holding a geranium in a painting which is of much interest to ophthalmologists because of the glasses worn by the latter. For 10 points each:

[10] Identify this group of people, two of whom are shown the trompe l'oeil painting *The Staircase Group*, and most of whom are named after famous painters.

ANSWER: the **sons** of Charles Willson **Peale** [or: the **children** of Charles Willson **Peale**; prompt on: Charles Willson **Peale's family** , similar answers]

[10] C. W. Peale's slave Moses Williams became a maker of this kind of portrait, named after a French finance minister, which shows the shadow of the subject's profile. Kara Walker is famous for using this technique in her art.

ANSWER: **silhouettes**

[10] Rembrandt Peale painted a portrait of this person in an oval window made of stone. This person sits in the heavens in a painting by Constantino Brumidi.

ANSWER: George **Washington**

11. One issuance of this policy led to trucking strikes in 1973 and 1979. For 10 points each:

[10] Name this policy which in 1979 was enacted in the United States through an odd/even system based on the last digit of license plates.

ANSWER: **gasoline rationing** [or: **fuel rationing**]

[10] Another reaction to the energy crisis of the 1970s involved an emergency act that required this system to be observed year round. This clock-adjusting practice was first instituted during World War I.

ANSWER: **daylight saving time**

[10] Most of the responses to the energy crises were formulated by this man, who served as Nixon's Secretary of the Treasury after being named Energy Czar, a title that has brought the term czar back into American politics.

ANSWER: William E. **Simon**

12. MacMurrough saves both of the main characters of this novel from drowning. For 10 points each:

[10] Name this Jamie O'Neill novel about the love between Jim Mack and Doyler Doyle.

ANSWER: **At Swim, Two Boys**

[10] The title of *At Swim, Two Boys* is a reference to *At Swim-Two-Birds*, a novel by this author of *The Third Policeman*.

ANSWER: Flann **O'Brien** [or: Brian **O Nolan**]

[10] The Dalkey Archive Press, which is also named after an O'Brien novel, has published this author's novel *Concluding*. His similarly-titled novels include *Living* and one about the servants in the Tennant household.

ANSWER: Henry **Green**

13. Answer the following about Mallory Ortberg's Texts from {insert real life figure here} series on *The Toast*, for 10 points each.

[10] This painter texts do you think dozens of terrified nudes have to flee inside of an egg to escape the fanged mermaids, a scene depicted at the top of his painting *The Garden of Earthly Delights*.

ANSWER: Hieronymous **Bosch**

[10] This poet texts Bring me my Bow of burning gold; / Bring me my Arrows of desire: / Bring me my Spear: O clouds unfold! / Bring me my Chariot of fire! , lines from a poem of his that closes In England's green and pleasant Land .

ANSWER: William **Blake**

[10] Mallory Ortberg's book is about this literary character, who refuses to marry someone with TWO TICKETS TO INDIA and tells him to marry Rosamond instead.

ANSWER: **Jane Eyre**

14. This family illegally sealed off their beachfront property in Vallauris on the French Riviera. For 10 points each:

[10] Name this ruling family, whose King Abdullah died in January 2015.

ANSWER: House of **Saud** [or: the **Saudi royal family**, Al **Saud**]

[10] This man, Abdullah's half-brother, is the current king of Saudi Arabia.

ANSWER: **Salman** bin Abdulaziz Al Saud

[10] This is the name of Salman's son. This name is shared by both a previous Saudi king and his nephew, who assassinated him in 1975 over the installation of television in Saudi Arabia.

ANSWER: **Faisal**

15. This drug gained popularity with university health services as a postcoital contraceptive, after a 1971 study published by the New England Journal of Medicine. For 10 points each:

[10] Name this synthetic estrogen that was used to help prevent miscarriages between the 40s and 70s. Problem is, exposure to it *in utero* results in an increased incidence of vaginal clear-cell adenocarcinoma.

ANSWER: **DES** [or: **diethylstilbestrol**, **stilboestrol**]

[10] One good thing you can say about DES is that it wasn't a disaster on the scale of this sedative, used to alleviate morning sickness in pregnant women. However, this drug often induces severe phocomelia, or shortening of the limbs, in fetuses.

ANSWER: **thalidomide** [or: **Contergan**, **Immunoprin**, **Talidex**, **Talizer**, **Thalomid**]

[10] Due to the fact that this anti-acne drug contains retinoic acid, a known teratogen that causes birth defects, it's intensely regulated by the FDA. Women taking it have to get a pregnancy test before starting it and before every refill.

ANSWER: **acutane** [or: **isotretinoin**, **13-cis retinoic acid**, **Roaccutane**, **Amnesteem**, **Claravis**, **Absorica**, **Isotroin**, **Epuris**]

16. One story relates that two men unsuccessfully wagered that they could make this man angry by insulting him. For 10 points each:

[10] Name this rabbi who started out as a woodcutter and who frequently debated his great rival Shammai.

ANSWER: **Hillel** the Elder

[10] When a man said he would convert to Judaism only if Hillel taught this entire text while the man stood on one foot, Hillel simply stated "What is hateful to you, do not do to your neighbor." This first five books of the Tanakh forms the core of Jewish custom.

ANSWER: **Torah**

[10] Hillel's teachings are often distilled into this many rules. This is the number of days that close relatives sit in mourning for a dead person in Judaism.

ANSWER: **seven**

17. Held and Hou's model of this circulation is symmetric about the equator and uses absolute angular momentum conservation and thermal wind balance for analysis. For 10 points each:

[10] Name this wind cell that transports heat away from the equator, to thirty degrees latitude.

ANSWER: **Hadley** cell [or: **Hadley** circulation]

[10] As opposed to the north-south circulations of the Hadley, Ferrel, and polar cells, this circulation is east-west. El Niño results from a reversal of this circulation.

ANSWER: **Walker** circulation

[10] The Walker circulation was given its name by a scientist with this surname, who explicated the link between the Southern Oscillation and El Niño. That scientist's father, also of this surname, applied his namesake circulation theorem for nonhomogeneous fluids to weather forecasting.

ANSWER: **Bjerknes** [or: Jacob Aall Bonnevie **Bjerknes**, Vilhelm Friman Koren **Bjerknes**]

18. Name some books which made *Le Monde*'s list of the 100 Books of the Century, for 10 points each.

[10] Number 3 on the list is this Kafka novel in which Josef K. is arrested for no apparent reason.

ANSWER: *The **Trial*** [or: *Der **Prozess***]

[10] This Heinrich Böll novel, subtitled "How Violence Develops and Where It Can Lead," is about a woman who kills the nosy journalist Werner Tötges.

ANSWER: *The **Lost Honour of Katharina Blum*** [or: *Die **verlorene Ehre der Katharina Blum***]

[10] In this French novel, which ends by saying "Beauty will be CONVULSIVE or not be at all," the narrator reflects on his ten-day affair with the title woman, who does not appear until a third of the way through the book.

ANSWER: **Nadja** (by Andr   Breton)

19. After this battle, the victorious Roman commander attended the Isthmian Games and declared freedom for all the Greek city states. For 10 points each:

[10] Name this battle site where, in 197 B.C., Titus Quinctius Flamininus' legions defeated Philip V's Macedonian phalanx.

ANSWER: Battle of **Cynoscephalae** [or: the Battle of the **Dogs' Heads**]

[10] The Isthmian Games, where Flamininus made his declaration, were held by this Greek city-state. This city sits on the strategic isthmus between Attica and the Peloponnese.

ANSWER: **Corinth**

[10] At the Battle of Cynoscephalae, Rome was assisted by forces from this Greek confederation, which included Thessaly and Locris. Polybius claimed that it was a state supporter of piracy.

ANSWER: the **Aetolian League**

20. Answer the following about compositions with a narrator, for 10 points each.

[10] Neil Armstrong and Margaret Thatcher have both narrated this Aaron Copland piece, which includes excerpts from the speeches of a certain historical personage.

ANSWER: A **Lincoln Portrait**

[10] The narrator of this Prokofiev work for children tells the story of characters such as the duck, which is represented by the oboe, and the grandfather, who is represented by the bassoon.

ANSWER: **Peter and the Wolf** [or: **Petya i volk**]

[10] This Krzysztof Penderecki work, initially conceived as an oratorio, celebrates the third millennium of Jerusalem, and is sometimes called Seven Gates of Jerusalem.

ANSWER: **Symphony** No. 7