

## ACF Fall 2015

Edited by Richard Yu, Gaurav Kandlikar, Eddie Kim, Dylan Minarik, Ryan Rosenberg, Andrew Wang, and Nathan Weiser.

Packet by Vassar College (Alycia Beattie, York Chen, Logan Cooley and Brian Xing) and Amherst College A (Corry Wang and Kevin Wang)

### Tossups

1. In one novel by this author Ebenezer Caudray marries Deruchette, the beloved of a character who retrieves a steam engine for Lethierry. A character in one novel by this author consoles himself for losing the woman he is obsessed with by visiting the Field of the Lark. In a novel by this author, a priest gives a set of silver candlesticks to a man who takes the alias Monsieur Madeleine. This author, who wrote of Gilliat in *Toilers of the Sea*, also wrote a novel in which Eponine tracks down the woman that Marius is in love with, Cosette. Prisoner 24601 is pursued by Javert in that novel by this author. For 10 points, name this author who created Jean Valjean in *Les Misérables*.  
ANSWER: Victor Hugo [or Victor Marie Hugo]
2. During his 1915 visit to this country, Charles Bartlett participated in a revival of one of its major art forms. A print of three women in a triangular arrangement called *Three Beauties of the Present Day* is an example of a genre of pictures of beautiful women from this country. Van Gogh made a copy of a picture of sudden rain over a bridge from this country. A name of a major art form from this country translates as "pictures of the floating world". *The Great Wave* is the best-recognized print from an artist from this country's series *Thirty-six Views of Mount Fuji*. For 10 points name this home country of Hiroshige and Hokusai.  
ANSWER: Japan [or Nihon]
3. This man's lyric "and if I die before the album drop-" is interrupted by gunshots. The chorus of one of this man's songs offers a choice between "Halle Berry or hallelujah." This man raps "brace yourself, I'll take you on a trip down memory lane" in a song that begins "If Pirus and Crips all got along/ they'd probably gun me down by the end of this song." A girl named Sherane reappears throughout an album by this man that includes the songs "Sing About Me, I'm Dying of Thirst" and "Money Trees." His most recent album includes "The Blacker the Berry" and "King Kunta." For 10 points, name this rapper whose albums include *To Pimp A Butterfly* and *Good Kid, M.A.A.D City*.  
ANSWER: Kendrick Lamar Duckworth [accept any of the underlined portions; or K-Dot]
4. Former WWF CEO Gerald Butts advises a politician whose district is in this region, and that politician defeated Joyce Murray in an election prompted by Michael Ignatieff's resignation. Another politician from this region gave the middle finger to a group of protesters in Salmon Arm, and claimed to have mouthed the words "fuddle duddle" during a session of the House of Commons. This province is home to the current leader of the Liberal Party, and to a man who invoked the War Measures act in dealing with the kidnapping of Pierre Laporte. For 10 points, name this province which dealt with separatists in the October Crisis and is the home of Justin and Pierre Trudeau.  
ANSWER: Quebec

5. A novel from this country begins with soldiers burning down a farmer's hut, after which Demetrio goes on a journey with some rebels. The title character of a novel from this country allows a town to die of hunger, creating a ghost town that the protagonist visits, dies in, and continues wandering. In addition to *The Underdogs*, this country is the setting of a novel about Tita that has sections named for the months. The authors of *Like Water for Chocolate* and *Pedro Paramo* were from this country, which is the setting of a novel that recalls the life of a business tycoon on his deathbed. For 10 points, name this country, the setting of *The Death of Artemio Cruz* and home to Laura Esquivel and Carlos Fuentes.

ANSWER: Mexico [or United Mexican States; or Estados Unidos Mexicanos]

6. Maimonides attempted to refute kalam theology by describing how an object undergoing this process does not explode. Jean Buridan explained this phenomenon with his theory of impetus. This phenomenon is called "the reduction of something from potentiality to actuality" in the first of Aquinas' five arguments for God's existence. A treatise on this subject attempts to refute the dichotomy and arrow paradoxes that were described by Zeno of Elea. In *On the Heavens*, Aristotle writes that this phenomenon occurs from, towards, or about the center, and it is also the subject of his *Physics*. For 10 points, identify this condition in which an object is not stationary.

ANSWER: motion [or obvious equivalents like movement; or types of motion like linear or rotational motion; or kinesis; prompt on "change" or similar answers]

7. Electronic transitions are forbidden if they do not change this property according to the Laporte selection rule. Point groups characterize this property of a molecule. In molecules with this property, modes cannot be both IR and Raman active according to the rule of mutual exclusion. Molecules with this property are not polar even if they have polar bonds. Because meso compounds have one form of this property, they are not chiral, as that form of this property results in a superimposable mirror image. For 10 points, name this property a molecule can have if its shape is the same after a transformation such as inversion, rotation, or reflection.

ANSWER: symmetry [accept specific answers such as centrossymmetry or inversion symmetry]

8. A naval blockade during this war caused a starving nation to experience the "Turnip Winter" and eat synthetic "war bread." This war included the Battle of Coronel and a naval engagement in the Falkland Islands, where Maximilian von Spee died. One side's naval strategy was masterminded by Reinhard Scheer. William Thomas Turner may have provoked a naval incident in this war by not following a zig-zag pattern. John Jellicoe commanded British dreadnoughts in a battle during this war fought off the coast of Denmark. The Battle of Jutland occurred during, for 10 points, what war that the United States entered after the sinking of the *Lusitania*.

ANSWER: World War I [or WWI; or the First World War; the Great War]

9. The J chain is found in the A and M isotypes of these proteins which are a dimer and pentamer respectively. These proteins are used with enzymes in the ELISA ["eh-LIE-suh"] assay. The diversity of these proteins is increased by mechanisms like somatic hypermutation and V-D-J recombination. These proteins are used to visualize the results of a western blot. Hybridomas, which are derived from plasma cells, produce monoclonal varieties of these proteins which in the body they are typically polyclonal. These proteins consist of two heavy chains and two light chains. For 10 points, name these Y-shaped proteins produced by B cells which bind to antigens.

ANSWER: antibody [or immunoglobulins]

10. A character in this short story collection remembers touching his date's knee during the climactic shootout of *Bonnie and Clyde*. The last story in this collection describes how the narrator's childhood girlfriend Linda died of a brain tumor. In another story in this collection, the narrator begins crying while on a boat in the Rainy River. Curt Lemon dies and Rat Kiley shoots a water buffalo in this collection's "How to Tell a True War Story". Ted Lavender is killed while the commanding officer Jimmy Cross is thinking of his girlfriend in the title story of this collection. For 10 points, name this memoir of the Vietnam War by Tim O'Brien, whose title objects include salt tablets, chewing gum, and M-16s.

ANSWER: *The Things They Carried*

11. After one ruler involved in this war fled to the Ottoman Empire, they defeated this war's victor in the Pruth ["prooth"] River Campaign. During this war, Augustus the Strong signed the Treaty of Thorn, allying his kingdom with the victorious side. The losing ruler of this conflict was shot and killed during a siege of Fredriksten. Despite being heavily outnumbered, one side in this war relieved a siege at the Battle of Narva. This war, which ended with the Treaty of Nystad, resulted in a nation led by Charles XII losing its status as the dominant Baltic power. For 10 points, name this war in which Peter the Great's Russia won at Poltava against the Swedish Empire.

ANSWER: Great Northern War

12. This religion holds that salvation is denied only to the "sons of perdition" who have perfect knowledge of the truth but willingly turn away from it; everyone else, according to this religion, will be assigned to one of the celestial, testial, or terrestrial "kingdoms of glory". Men who follow this religion may choose to join the Melchizedek priesthood, and every worthy male is considered a member of this religion's Aaronic priesthood. This religion is named after the fourth-century prophet who allegedly engraved an account of his revelations onto golden plates. For 10 points, name this religion whose eponymous "Book" is taught to have been translated by Joseph Smith.

ANSWER: Mormonism [or the Church of Jesus Christ of Latter Day Saints; or LDS]

13. In this composer's Piano Concerto No. 3, a short cadenza links the second-movement Intermezzo to a finale marked Alla breve. An A minor theme is inverted and cast into D-flat major in the eighteenth section of a piece by this composer sometimes considered to be in the same genre as his Piano Concerto No. 2 in C minor.- This composer's *Morceaux* ["mor-SOH"] *de fantaisie* includes a popular Prelude in C-sharp minor filled with big chords. A piano soloist and orchestra play a set of twenty-four variations by this composer based on the Caprice No. 24 of the title Italian virtuoso violinist. For 10 points, name this composer of *Rhapsody on a Theme of Paganini*.

ANSWER: Sergei Rachmaninoff [or Sergei Vasilievich Rachmaninoff]

14. Matter distribution around these objects is accounted for by the Navarro-Frenk-White profile. De Vaucouleurs' ["voh-koo-LURES"] law relates the surface brightness and apparent distance of these objects. MOND theory was created to account for the unexpected observations in these objects made by Vera Rubin, who measured their orbital speed against radius. Intrinsic luminosity and emission line width for these objects were related by Tully and Fisher, and Seyfert names some of these that have active nuclei. The one nicknamed "Cartwheel" is a lenticular one. For 10 points, name these collections of stars that come in elliptical and spiral varieties, like our Milky Way.

ANSWER: galaxies [accept specific galaxies, like spiral or elliptical, until mention]

15. This practice was protested against by the Catonsville Nine. A jacket with a vulgar statement referencing this practice written on it was declared protected free speech in the Supreme Court case *Cohen v. California*. Soldiers led by John Wool put down a riot against this practice that burned down an African-

American orphanage. Partially because wealthy Americans could avoid it by paying \$300, an 1863 riot occurred against this practice in New York City. Jimmy Carter controversially pardoned people who “dodged” this practice by living in Canada. For 10 points, name this practice that provided most of the American army’s personnel during the Vietnam War.

ANSWER: the military draft [or conscription; or the Selective Service System]

16. This instrument plays the very opening notes of Miles Davis’s “So What.” It is played by a musician who reworked “Watermelon Man” and placed it next to “Chameleon” in the album *Head Hunters*. On *Kind of Blue*, the tracks “Blue in Green” and “Flamenco Sketches” were written by both Davis and a performer of this instrument named Bill Evans. This instrument was played by the composer of the jazz standards “Straight, No Chaser” and “Round Midnight.” A standard jazz trio comprises a double bass, drums, and this instrument played by Herbie Hancock, Thelonious Monk, and Dave Brubeck. For 10 points, name this jazz instrument with eighty-eight keys.

ANSWER: piano

17. In Japanese mythology, the movement of one of these places can be controlled by two jewels given to Hoori. Vishnu’s second avatar keeps a mountain from entering another of these places, which emits the poisonous Hala-hala during an effort to retrieve amrita via this place’s namesake “churning.” Laocoon is strangled to death by some monsters from this realm home to the neighboring beasts Scylla and Charybdis. Aegeus commits suicide by entering one of these places named for him, and Icarus falls into this place and dies when his wings melt from flying too close to the sun. For 10 points, name this realm ruled by Poseidon.

ANSWER: ocean [or sea; or ocean of milk]

18. In a story from this collection, a scrivener scrounges for money to buy a “g.p.” and later beats his son at home. The sound of an organ reminds the protagonist of her mother in this collection’s story that ends with the title character refusing to accompany Frank to Buenos Aires. Canvassers for Richard Tierney celebrate Charles Parnell’s life in its story “Ivy Day in the Committee Room.” Greta reminisces about Michael Furey after hearing “The Lass of Aughrim” sung at a party that is attended by Gabriel Conroy and held by the Morkan sisters in this collection’s story “The Dead.” For 10 points, name this collection by James Joyce named for the inhabitants of an Irish city.

ANSWER: Dubliners

19. Imelda Marcos tried to impress the leader of this organization by building him a mansion made out of coconuts. In Mexico, a government crackdown on this institution led to the Cristero War. A terrorist cell based in the Philippines tried to assassinate the leader of this institution in the Bojinka plot. A hit squad dispatched by “Blowtorch Bob” killed a high-ranking member of this organization in Honduras, Oscar Romero. Latin American revolutionaries combined this institution’s teachings with Marxism to create Liberation Theology. For 10 points, name this religious institution that opposed communism under the leadership of Pope John Paul II.

ANSWER: the Roman Catholic Church [or Catholicism; or the Papacy; prompt on non-specific answers like “Christianity” or “the Church”]

20. One form of this quantity is equal to the negative trace of the product of the density matrix with its natural log. A different form of this quantity used in information theory is the expected value of the information obtainable from a message. This quantity's differential is multiplied with temperature in the fundamental thermodynamic relation since this quantity is conjugate to temperature. This quantity, which has a variety named for Shannon, is defined as Boltzmann's constant times the natural log of the number of microstates. In an isolated system this value never decreases according to the second law of thermodynamics. For 10 points, name this measure of disorder in a system.

ANSWER: **entropy**

**Extra**

A character in this poem feels the souls of two hundred of his companions fly by, like the whizz of a crossbow, after they are killed by a woman with skin "as white as leprosy". That character is the only survivor of a dice game in which he is won by Life-in-Death. In this poem, the title character is left "as idle as a painted ship upon a painted ocean" after the loss of a good south wind, and tells of "water, water, everywhere, nor any drop to drink". The Wedding Guest is told how the title character of this poem was forced to wear the albatross he killed around his neck. For 10 points, name this poem by Samuel Taylor Coleridge about the title seafaring man.

ANSWER: "The **Rime of the Ancient Mariner**"

## Bonuses

1. The speaker calls the title figure “not God but a swastika/ so black no sky could squeak through” before claiming “every woman adores a fascist.” For 10 points each:  
[10] Name this poem, published along with “Lady Lazarus” in the collection *Ariel*, that frequently uses Holocaust imagery. It calls the title figure “A man in black with a Meinkampf look.”  
ANSWER: **“Daddy”**  
[10] “Daddy” was written by this confessional poet. She fictionalized her struggle with depression in a novel about Esther Greenwood, *The Bell Jar*.  
ANSWER: Sylvia **Plath**  
[10] This other confessional poet and friend of Sylvia Plath wrote the collections *Live or Die* and *The Awful Rowing Toward God* before committing suicide by carbon monoxide poisoning in 1974.  
ANSWER: Anne **Sexton**
2. Answer the following about writing in historical China, for 10 points each.  
[10] This general during the Spring and Autumn period advised “appear weak when you are strong and strong when you are weak” in his tome *The Art of War*.  
ANSWER: **Sun** Tzu  
[10] This first emperor of China burned many Confucian texts at the end of his reign. This founder of the Qin dynasty was buried with an “army” of terracotta soldiers.  
ANSWER: Qin **Shi Huangdi** [or **Ying** Zheng; or **Zhao** Zheng]  
[10] This Han dynasty official chronicled the history China up to Empress Wu in his *Records of the Grand Historian*.  
ANSWER: **Sima** Qian [or **Szu-Ma** Chien]
3. Answer the following about the Titans in Greek mythology, for 10 points each.  
[10] After usurping his father Uranus, this Titan attempts to prevent his own usurpation by swallowing each of his children, but is deceived into swallowing a stone instead of his youngest son Zeus.  
ANSWER: **Cronus**  
[10] When this Titan gives gifts to all animals but forgets to reserve one for humans, his brother Prometheus is forced to steal fire from the gods to give as a gift.  
ANSWER: **Epimetheus**  
[10] Offspring of the maritime Titans Oceanus and Tethys include this horned river god who feuds with Heracles for the hand of Deianira in marriage.  
ANSWER: **Achelous**

4. This species used Acheulean stone tools like hand axes, and it has been questioned whether this species is a distinct species from *ergaster*. For 10 points each:

[10] Name this hominid species of which the Peking Man is a representative. The name of this species literally means “upright man”.

ANSWER: Homo erectus [or H. erectus]

[10] The ancestor to the *Homo* genus was this genus of “southern apes” with species such as *afarensis* and *africanus*.

ANSWER: Australopithecus [or Australopithecus afarensis; or Australopithecus africanus]

[10] This South African paleoanthropologist recently announced the discovery of *Homo naledi*. He has posited that scratch marks in the Taung Child’s eye sockets were caused by birds reaching for brain tissue.

ANSWER: Lee Berger [or Lee Rogers Berger]

5. Answer the following about the geography of wine, for 10 points each.

[10] Sherry is made from grapes grown in this country’s town of Jerez la Frontera in the autonomous community of Andalusia. The Prado Museum is located in this country’s capital, Madrid.

ANSWER: Spain [or España]

[10] Nebbiolo grapes are indigenous to this region, which produces the sparkling wine Asti Spumante. This region of Italy has its capital at Turin, and the name of this region is derived from its location near the Alps.

ANSWER: Piedmont [or Piemonte]

[10] The sweet wine Tokaji [“toh-ko-yee”] is made with fungus-afflicted grapes from this country. The wine gets its name from the Tokay region, which this country lost in the Treaty of Trianon.

ANSWER: Hungary [or Magyarország]

6. Andrey Kolmogorov’s theory of this phenomenon proposes that it is composed of various eddies. For 10 points each:

[10] Name this sort of chaotic flow contrasted with laminar flow. The presence of this phenomenon in the atmosphere can lead to a bumpy and unpleasant airplane ride.

ANSWER: turbulence [accept word forms]

[10] Turbulence occurs at high values of this dimensionless number used in fluid mechanics. It is defined as the ratio of inertial forces to viscous forces.

ANSWER: Reynolds number

[10] In a Moody diagram, the Reynolds number is plotted against the friction factor for different values of this value of a pipe, which is represented as epsilon.

ANSWER: pipe roughness

7. Answer the following about a northern European “Brave Little Democracy’s” effort against Soviet Aggression in World War II, for 10 points each.  
 [10] The Soviet Union invaded this nation after the signing of a non-aggression pact with the Nazis. The Shelling at Mainila gave the Soviets *casus belli* to bomb this nation’s capital of Helsinki.  
 ANSWER: **Finland**  
 [10] The Soviets’ poor performance during the first stages of the Winter War was largely caused by this array of fortifications named after the Finnish commander-in-chief.  
 ANSWER: **Mannerheim Line**  
 [10] As a result of the Winter War, Finland surrendered a large amount of this area to the USSR. Finland briefly regained it while fighting the Continuation War in the early 1940’s.  
 ANSWER: **Karelia**
8. This agreement caused an uprising of Zapatistas in Chiapas. For 10 points each:  
 [10] Name this free trade agreement between the United States, Canada and Mexico that came into effect in 1994.  
 ANSWER: **NAFTA** [or **North American Free Trade Agreement**]  
 [10] Mexico entered NAFTA under President Carlos Salinas, a member of this political party. It dominated Mexican politics until it was defeated by PAN in the 2000 presidential elections.  
 ANSWER: **PRI** [or **Partido Revolucionario Institucional**; or **IRP**; or **Institutional Revolutionary Party**]  
 [10] After NAFTA went into effect, the number of these Mexican sweatshops in existence increased exponentially. Many are located near the border with the United States, and they mostly employ young women.  
 ANSWER: **maquiladoras** [or **maquilas**]
9. After seeing this artist’s *Nude Descending a Staircase* at the Armory Show, a critic derided it as resembling an “explosion in a shingle factory.” For 10 points each:  
 [10] Name this Dada artist whose readymade *L.H.O.O.Q* [“ell-aash-oh-oh-KOO”] is a postcard of the *Mona Lisa* with a moustache drawn over it.  
 ANSWER: Marcel **Duchamp**  
 [10] This Duchamp readymade is simply a urinal signed with the name “R. Mutt.”  
 ANSWER: **Fountain** [or **Fontaine**]  
 [10] This artist took photographs of Duchamp dressed in drag as the character Rose [“rose”] Selavy. This artist’s *Violin of Ingres* shows the back of a nude woman with violin f holes.  
 ANSWER: **Man Ray** [or Emmanuel **Radnitzky**]
10. In the *Ramayana*, this god’s domain is repeatedly struck with arrows by Rama, who ultimately threatens to destroy it altogether with the *brahmastra*. For 10 points each:  
 [10] Name this Vedic god of the seas.  
 ANSWER: **Varuna** [or **Varun**]  
 [10] This thunderbolt-wielding Vedic storm god inebriates himself with soma before battling the dragon Vritra.  
 ANSWER: **Indra**  
 [10] Later Hindu tradition replaced worship of the Vedic gods with the Trimurti, which is a trinity consisting of Vishnu, Shiva, and this creator god.  
 ANSWER: **Brahma**



11. This piece's Allegro molto appassionato first movement ends with a solo bassoon sustaining a B to continue directly into the second movement Andante. For 10 points each:
- [10] Name this E minor composition for string soloist and orchestra, written about a decade after the composer's *Italian Symphony*.  
ANSWER: Felix Mendelssohn's violin concerto [or clear knowledge equivalents]
- [10] Mendelssohn included a recessional "Wedding March" in his incidental music to this play by William Shakespeare.  
ANSWER: A Midsummer Night's Dream
- [10] Inspired by the same voyage that produced his *Scottish Symphony*, this concert overture by Mendelssohn depicts the undulating waves of the ocean at the title location.  
ANSWER: The Hebrides [or Fingal's Cave; or Die Hebriden; or Die Fingalshöhle]
12. Answer the following about Roman poetry, for 10 points each.
- [10] This Roman poet first used the term *in medias res* in his collection *Ars Poetica*. He is also famous for having written numerous *Odes* and the early lyric poem "Carmen Saeculare" ["sigh-koo-LAH-ray"].  
ANSWER: Horace [or Quintus Horatius Flaccus]
- [10] This author is known for his collection of *Satires* aimed at whatever irked him, including the third one titled "Quid Romae faciam" ["fah-key-UM"], or "What will I do at Rome?"  
ANSWER: Juvenal [or Decimus Iunius Juvenalis]
- [10] A common theme in Roman and Greek poetry is the invocation of one of these mythological figures that governed poetry and the arts. Catullus invokes one of them in the first of his *carmina*.  
ANSWER: the Muses
13. Answer the following about legends of the Wild West, for 10 points each.
- [10] This was the stage name of the Pony Express rider and US Army scout who brought Sitting Bull and Annie Oakley along in his travelling Wild West show. His real name was William Cody.  
ANSWER: Buffalo Bill
- [10] The oft-romanticized 1881 gunfight between Wyatt Earp's posse and a group of villainous cowboys is usually named for this building in Tombstone, even though the fight actually took place in a lot adjacent to it.  
ANSWER: the O.K. Corral
- [10] This saloon owner declared himself "The Law West of the Pecos," and apocryphally ordered many men to hang in the Texas town of Langtry.  
ANSWER: Judge Roy Bean [or Phantly Roy Bean, Jr.]
14. In this novel, a club-footed man boasts of being able to seduce women because they feel sorry for him. For 10 points each:
- [10] Kashiwagi is a friend of the protagonist Mizoguchi in this novel. A Buddhist monk, Mizoguchi recites the Zen koan "When ye meet the Buddha, kill the Buddha!" before burning down the title structure of this novel.  
ANSWER: The Temple of the Golden Pavilion [or Kinkaku-ji]
- [10] This Japanese author wrote *The Temple of the Golden Pavilion*, as well as *Confessions of a Mask*. This author committed ritual suicide following a failed attempt at a coup to restore the emperor to power.  
ANSWER: Yukio Mishima [or Mishima Yukio]
- [10] Mishima's last completed work was the final book of this tetralogy. Kiyoaki dies holding Shigekuni ["shee-gay-KOO-nee"] Honda's hand in the first book of this tetralogy, *Spring Snow*.  
ANSWER: Sea of Fertility tetralogy [or Hojo no Umi]

15. The namesake of this law also researched color blindness, which is why color blindness is sometimes named for him. For 10 points each:
- [10] Name this law that states that the amount of pressure components of a mixture of gases contributes to the overall pressure is proportional to the mole pressure.
- ANSWER: **Dalton's** law of partial pressures
- [10] This law states the partial vapor pressure of an ideal mixture is the mole fraction of that gas multiplied by the vapor pressure of the pure component. This law and Dalton's law are used to model ideal mixtures for distillation.
- ANSWER: **Raoult's** law
- [10] In distillation, this term refers to an equilibrium stage. The number of these needed for a distillation can be determined with the McCabe-Thiele method. In chromatography, the van Deemter equation determines the "height" of these things.
- ANSWER: theoretical **plates** [or theoretical **trays**; or **ideal stages**]
16. The exterior of a triptych by this artist shows the Earth on the third day after its creation, and the "hell" panel of that painting shows a large bird seated on a chair and devouring humans. For 10 points each:
- [10] Name this early Flemish artist of *Garden of Earthly Delights*.
- ANSWER: Hieronymus **Bosch** [or Jheronimus **van Aken**]
- [10] This early Flemish polyptych is sometimes named after its bottom center panel, which shows a fountain of life just below a depiction of the Adoration of the Lamb. It was painted by a pair of brothers.
- ANSWER: **Ghent** Altarpiece
- [10] Another early Flemish painter was this artist who showed an army of skeletons razing a desolate landscape in *Triumph of Death*. He also painted *The Fight Between Carnival and Lent*.
- ANSWER: Pieter **Brueghel** ["BRO-hull"] the Elder
17. One method to perform this task uses ddNTPs ["d-d-n-t-p's"] to cause chain-termination, and was developed by Frederick Sanger. For 10 points each:
- [10] Name this process of determining the order of nucleotides in a genome.
- ANSWER: **DNA sequencing** [prompt on "Sanger sequencing"]
- [10] Bisulfite sequencing is used to locate this DNA modification. This modification typically impedes transcription and restriction enzymes can only act on DNA that do not have this modification.
- ANSWER: **methylation**
- [10] In eukaryotes, this pyrimidine is the only nucleotide that gets methylated. This base pairs with guanine in DNA.
- ANSWER: **cytosine** [prompt on "C"]
18. This philosophical discipline is the study of the structure of human consciousness and experiences. For 10 points each:
- [10] Name this philosophical movement, a major figure in which developed the related methodological technique of *epoché*, which involves a suspension of our judgements about the world.
- ANSWER: **phenomenology**
- [10] This German author of *Cartesian Meditations* and *Logical Investigations* popularized the method of phenomenological *epoché*, or bracketing.
- ANSWER: Edmund **Husserl** [or Edmund Gustav Albrecht **Husserl**]
- [10] Phenomenology is a branch of this broad philosophical tradition of mainland Europe, whose name contrasts it with Great Britain's analytic tradition.
- ANSWER: **Continental** philosophy

19. One work by this author opens "What mighty contests rise from trivial things". For 10 points each:
- [10] Name this British poet who used heroic couplets in the mock epic *The Rape of the Lock*. This author mocked various people by making them the kings of Dulness' followers in several versions of *The Dunciad*. ["DUNCE-ee-ad"].
- ANSWER: Alexander **Pope**
- [10] The heroic couplet was perfected by this other author, who mocked Thomas Shadwell in a poem that opens "All human things are subject to decay" and is titled *Mac Flecknoe*. He also wrote *Absalom and Achitophel* ["uh-KIT-uh-fell"].
- ANSWER: John **Dryden**
- [10] This author used heroic couplets in his "The Vanity of Human Wishes". He compiled biographies of many authors in *Lives of the Most Eminent English Poets*.
- ANSWER: Samuel **Johnson**
20. This man put the Ten Commandments at the beginning of a code of laws he wrote known as the Doom Book. For 10 points each:
- [10] Name this only English King with the epithet "The Great." This man, who resettled the city of London, was the first to call himself the King of the Anglo-Saxons.
- ANSWER: **Alfred** the Great
- [10] Alfred the Great ruled this kingdom, whose history is prominently featured in the *Anglo-Saxon Chronicle*. This kingdom fought several battles with the neighboring Kingdom of Mercia.
- ANSWER: Kingdom of **Wessex**
- [10] Wessex and Mercia were members of this set of Anglo-Saxon kingdoms. The Kingdom of England was formed by their unification.
- ANSWER: **heptarchy**

## Extras

Methods for doing this without actually using calculus include the trapezoidal rule, which approximates regions underneath a curve as trapezoids. For 10 points each:

[10] Name this mathematical technique. Its “definite” variety involves finding the area under a curve between two points, and its “numerical” form uses a variety of techniques to generate approximate solutions.

ANSWER: integration [or word forms like integrating or integral]

[10] A simple but not very powerful method of numerical integration is this mathematician’s “sum,” which involves partitioning the region under a curve into several smaller rectangles.

ANSWER: Bernhard Riemann [or Georg Friedrich Bernhard Riemann]

[10] The trapezoid rule is the first order version of the numerical integration methods named after Cotes and this man. He also names a useful method for approximating the zeroes of functions.

ANSWER: Isaac Newton

In one of this author’s short stories, a bible salesman steals Hulga Hopewell’s prosthetic leg. For 10 points each:

[10] Name this author of “Good Country People.” Julian’s racist mother has a stroke after riding on an integrated bus in this author’s short story “Everything That Rises Must Converge.”

ANSWER: Flannery O’Connor [or Mary Flannery O’Connor]

[10] Flannery O’Connor’s style of fiction is often described as this region’s namesake “Gothic.” This geopolitical region’s struggle against the Union is glorified in *Gone with the Wind*.

ANSWER: the American South [or the former Confederate States of America; or the former CSA; or the former Confederacy; or Dixieland]

[10] This Southern poet romanticized his home state of Georgia in poems like “The Marshes of Glynn” and “The Song of the Chattahoochee.”

ANSWER: Sidney Lanier [or Sidney Clopton Lanier]