

2015 George Oppen: Questions courtesy of Anne Hathaway's cow-milking fingers  
Written by Auroi Gupta, Stephen Eltinge, and Mike Cheyne  
ROUND 1

## TOSSUPS

1. This song is directly referenced in the title and the chorus of a track by Liv which disses Beyonce. This song repeatedly samples the "Bridal Chorus" from *Lohengrin*, including after the line "You see your little nosy-ass homegirls, done got your ass sent up the creek G." In the music video for this song, a man is washing the windshield of the car when a storm sets in and a lightning strike causes the radiator to explode. The artist of another of this song's verses wishes he could "become a magician to abracadabra all the sadder thoughts of me." One of this song's artists dreams "bout that crib with the (\*) Goodyear swing on the oak tree" and says "I hope we feel like this forever," before doing a double-take and asking "Forever? Forever ever? Forever ever? (say in a higher pitched voice)." This song's chorus tells its addressee "I am for real, never meant to make your daughter cry, I apologize a trillion times." For 10 points, identify this penitent song addressed to the mother of Erykah Badu, then-girlfriend of Andre 3000, the biggest hit for Outkast prior to "Hey Ya!"

ANSWER: "Ms. Jackson"

2. The envelope-tracing method can be used to plot these diagrams, though it is ill-defined when the  $x$  coordinate is close to zero. The data for these diagrams is often collected from long-slit spectroscopic measurements of edge-on systems. Horace Babcock's doctoral thesis contains the first of these diagrams to be created. The experimental data on these diagrams can be fitted to various theoretical models by specifying the Oort constants. The  $y$ -axis of these diagrams is plotted against intrinsic luminosity in the (\*) Tully-Fisher relation. Milgrom's law is used to explain the most surprising feature of these diagrams in MOND theory. Vera Rubin is primarily known for studying these plots. Instead of falling off with the square root of distance as predicted classically, they remain flat or rising at large distances, suggesting the presence of large halos of dark matter. For 10 points, name these figures that plot orbital velocity versus distance from the center of a galaxy.

ANSWER: galaxy rotation curves

3. The goddess of love in this culture lures a man to her mother's party by smearing honey on his lips. In one of this people's myths, a woman gets tricked by her romantic rival into cutting off her ears to add to a soup, leading to a quarrel in which she gets turned into a river. The mythical founder of this people died in a riot that broke out near the pyre of an iconoclast who smashed up several statues with an axe, named Braima. They believed that a despotic king hanged himself after a rebellion, became deified, and then gained the ability to unleash storms on his enemies with his (\*) double-headed axe. The son of their creator god climbed down a great chain from heaven and used a five-toed chicken to scatter dirt, creating Earth, and then planted a very large palm tree. Eshu is a psychopomp of this people, who venerate the lightning god Shango and the supreme deity Olodumare. For 10 points, name this African ethnic group whose religion blended with Catholicism, resulting in New World religions like Candomble and Santeria.

ANSWER: Yoruba people

4. The workshop of the Tickhill Psalter illuminated a psalter that this woman received as a wedding gift. Not only was this woman denied refuge at Leeds Castle, but the lady of the castle, Margaret de Clare, ordered that a volley of arrows be fired upon her retinue. While three months pregnant, this woman narrowly escaped a marauding Scottish army at Tynemouth Priory. This woman accused her sisters-in-law of committing adultery in the namesake tower in the Tour des Nesle Affair. During the Siege of Bristol, this woman managed to rescue her incarcerated daughters (\*) Joan of the Tower and Eleanor of Woodstock. This woman was buried in the habit of the Poor Clares with the heart of her husband, who was supposedly executed by a red-hot poker inserted into his anus. She was best known for ordering the execution of her mortal enemy Hugh Despenser during an invasion of England that she planned with her lover Roger Mortimer. For 10 points, name this "She-Wolf of France." the consort of Edward II.

ANSWER: Isabella of France [or She-Wolf of France; just Isabella is fine after "she-wolf" is read, but prompt on it before that]

5. In a poem by this author, the speaker spots Alexander Blok in a movie theater waiting to see a spaghetti Western. This author described a group of men "eating their islands," one of them bearing "a politician's / ignorant, sweet smile," at the end of a poem whose speaker realizes that "there are homecomings without home." This author asked "why should a man wax tears, when his wooden world fails?" in a poem set "after the hot gospeller has leveled all but the church'd sky." This author wrote a poem about the "ancient war between obsession and responsibility," the former represented by the title sour (\*) fruit, in a poem admonishing: "The classics can console. But not enough." This author's poem about Shabine, who declares that "I have Dutch, [a racial slur], and English in me, and either I'm nobody, or I'm a nation," is titled "The Schooner *Flight*." This author's best-known short poem asks "How can I face such slaughter and be cool? How can I turn from Africa and live?" For 10 points, name this author of "A Far Cry from Africa," a poet from the Caribbean island of St. Lucia.

ANSWER: Derek Walcott [or Derek Alton Walcott]

6. Composer and piece type required. Two of these pieces were unearthed by Byron Janis in 1967. One of these pieces begins with the right hand holding B flat, then playing B flat twice staccato, and so on, sounding a "trumpet call." One of these pieces begins in the right hand with a held A-flat note, followed by repeating the pattern G, A-flat, C, B-flat. They're not by Scarlatti, but a passage in one of these pieces stems from the keys pressed by the composer's (\*) cat after it jumped onto the piano. Stravinsky produced an orchestral arrangement of one of these pieces in E-flat major, known as the "Grande" [this kind of piece] "Brilliante," for the ballet *Les Sylphides*. The best-known of these pieces is in D-flat major, is the first of the composer's opus 64, is dedicated to Countess Delfina Potocka, and was inspired by the composer watching a little dog chasing its tail. For 10 points, name these pieces, such as a "Minute" one, that were written in 3/4 time by a prolific Polish composer.

ANSWER: waltzes by Frederic Chopin [or Chopin waltzes; or Frederic Francois Chopin waltzes; or Fryderyk Franciszek Chopin waltzes; prompt on partial answer]

7. In a painting by an artist with this surname, a tree vaguely shaped like Africa arises from a grey concrete slab. An artist with this surname used swirls of color to represent Ferris wheels and roller coasters in his painting *Battle of Lights*. Another artist with this surname created four different versions of each of eleven shaped canvases with names such as "Conway I" and "Chocorua IV," and embarked upon a series later in life in which each painting takes its title from a chapter of *Moby Dick*. An artist with this surname included a red glare emanating from a signal light in a subway tunnel in his best-known painting, which is criss-crossed by suspension cables. Another artist with this surname imitated the proportions of Nazi banners in his painting (\*) *Die Fahne Hoch!*, one of his paintings in which thick bands of black paint are separated by very thin pinstripes of unpainted canvas. For 10 points, give this shared surname of the American Futurist artist fond of painting Brooklyn Bridge, and the minimalist creator of the non-Goya *Black Paintings*.

ANSWER: Stella [accept Joseph Stella; accept Frank Stella]

8. When this character shushes his colleagues, they decide that the name "Shhhhhh!" is perfect for their invention. The music of Adrian Leverkühn plays during a wedding at the Port Authority Bus Terminal, in which this man's son marries into the Maxon family. A chapter named for this character begins by saying that April was the best month for him, in an obvious parody of "The Waste Land." This man tries to explain a concept by stealing a bedsheet, ripping it, then redistributing the pieces. This character coats the entire supply of (\*) Egyptian cotton in chocolate in the only failed venture of his M&M; enterprises, a far cry from when he bought eggs in Sicily for one cent, sold them in Malta for four and a half, and then bought them again for seven cents. Although he schemes with the Germans to bomb his own men at Pianosa, they like him because he keeps them well fed. For 10 points, name this war profiteer and mess officer in *Catch-22*.

ANSWER: Milo Minderbinder [or Milo Minderbinder]

9. An extremely carcinogenic by-product with one of these functional groups is produced in the Blanc chloromethylation reaction. Another compound with exactly one of these functional groups donates the formyl group in the Rieche formylation. The Quelet reaction involves one of these compounds derived from a phenol and an aliphatic aldehyde to create an alpha-chloroalkyl compound. In a variant of the Ullmann coupling reaction, a phenol and an alkyl halide react in the presence of copper to form one of these compounds. An enol and a (\*) "silyl" variety of one of these functional groups acts as a nucleophile in the Mukaiyama aldol addition. The commonly-used solvent THF is a cyclic compound of this type. In the best-known

reaction forming these compounds, an alkyl halide undergoes an SN2 reaction with an alkoxide. For 10 points, name this functional group produced in the Williamson synthesis, consisting of an alkyl group single bonded to two alkyl or aryl groups.

ANSWER: ether

**10. Terracotta artifacts from this empire include a series of literal boar-shaped piggy banks. A minister to this empire took a vow to eat only bland food until he conquered the entire region, and destroyed an entire opposing royal family at the Battle of Bubat. This empire abandoned the usage of gold and silver coinage in favor of *pisis*, cheap copper coins imported *en masse* from China. A minor member of this empire's royalty named Raden Patah established the Demak Sultanate. The Ming court levied a massive fine against this empire for killing several of Zheng He's envoys during its civil war, which pitted the eastern court at Blambagan against the western court at (\*) Trowulan. This empire reached its peak under the queen Tribhuwana, her son Hayam Wuruk, and their prime minister Gajah Mada, during which it absorbed much of Borneo, Bali, Malaysia, the Philippines, and East Timor, outdoing the hegemony of the earlier Srivijaya Empire. For 10 points, name this last major pre-Islamic empire in Indonesia, also the largest empire ever in Southeast Asia.**

ANSWER: Majapahit Empire [or Kerajaan Majapahit]

**11. John Bickle's "ruthless" approach to this phenomenon is a prime example of a so-called "new wave" approach to it. John Kemeny and Paul Oppenheim equated this phenomenon with explanation. In his essay "Testability and Meaning," Rudolf Carnap revised his criteria for how this phenomenon applies to language, which he had put forth in *The Logical Structure of the World*. Ernest Nagel defined a "homogeneous" instance of this phenomenon as one that does not require bridge laws. Eliminative materialism stands in (\*) opposition to this type of materialism. Along with the analytic-synthetic distinction, this theory was attacked by Quine in his "Two Dogmas of Empiricism." This phenomenon is often invoked in a derogatory sense, because the end-result does not reflect the complexity of the start; an example is treating the sensation of love as a series of chemical reactions in the brain. For 10 points, name this philosophical phenomenon in which a complex theory or process is boiled down to something simpler.**

ANSWER: reductionism [or word forms]

**12. This man cut the tails off the horses of Chief Justice Daniel Horsmanden in a drunken rage after William Tryon was appointed to replace him in his first post. For a time, this man had to conduct business from his hunting lodge at Porto Bello. After William Woodford held off an attack he ordered across the Great Bridge, this man crammed his troops onto ships so squalid that 500 of 800 soldiers in one of his divisions died of smallpox. This man sparked a crisis when he ordered the captain of the HMS *Magdalene* to remove gunpowder from a magazine in response to (\*) Patrick Henry's "Give me liberty or give me death!" speech. This man issued a proclamation promising freedom to any slave who joined the loyalist cause, and filled his namesake Ethiopian Regiment with the enlistees. The Battle of Point Pleasant was the only major action of a war in present-day Kentucky against the Mingo and Shawnee that this man pressured the House of Burgesses to declare. For 10 points, name this British colonial governor of Virginia for whom that 1774 war is named.**

ANSWER: Lord Dunmore [or John Murray, 4th Earl of Dunmore]

**13. A writer with this surname employed the everyman farmer Iago in many early poems, but remained obscure until his 1955 collection, introduced by John Betjeman, titled *Song at the Year's Turning*. A war poet with this surname wrote of "the flowers left thick at nightfall in the wood," and the men "who should have gathered them and will do never again," in his poem "In Memoriam." Another poet with this surname praised writers working "not for ambition or bread... but for the common wages of their most secret heart," and described how "faith in their hands shall snap in two," claiming that "though (\*) lovers be lost, love shall not," in a poem with the title defiant refrain. That author with this last name wrote "In my Craft or Sullen Art" and stated that "blind eyes could gaze like meteors and be gay," observing that "their words had forked no lightning," in a poem urging "rage, rage against the dying of the light." For 10 points, give the coincidental surname shared by unrelated poets Edward, R.S., and Dylan, all of whom were Welsh.**

ANSWER: Thomas

**14. The extreme nephrotoxicity of one of these drugs is mitigated somewhat by its two FDA-approved liposomal delivery systems. Tubulin is the target of a drug of this type named griseofulvin. One of these drugs**

uses a non-human cytosine deaminase enzyme to transform the inactive form, flucytosine, into the active 5-fluorouracil. Glucan synthesis is inhibited by a class of these drugs called echinocandins. Squalene epoxidase is targeted by some of these drugs, such as naftifine and butenafine. One class of these medications inhibits the enzyme lanosterol 14-alpha demethylase, preventing the production of (\*) ergosterol. Multiple double bonds are present in the polyene class of these drugs, including amphotericin B, and other classes of them include imidazoles and triazoles. A drug of this type named clotrimazole is often topically applied to treat *Candida albicans*-caused vulvovaginitis. For 10 points, name this class of medications which can be used against oral thrush, athlete's foot, and other diseases caused by a non-bacterial kingdom of organisms.

ANSWER: antifungals [accept triazoles, polyols, echinocandins, alkylamines before they are mentioned; accept antimycotics; accept fungicides]

15. Whenever clients came to see this architect, his assistant would sound a gong, and this man would appear wearing the habit of a monk. This architect alternated double-decked judges' rooms with high, wide courtrooms in his design of a courthouse, which he linked to a prison via the Bridge of Sighs. This man designed a desolate step pyramid in Wyoming to mark the point of highest elevation in the Transcontinental Railroad. Robert Venturi's favorite building in America is a red-brick structure this architect designed for Harvard University, known as (\*) Sever Hall. He looked to Italian palazzos for the design of his now-destroyed seven story Marshall Field's Wholesale Store. John La Farge, William Morris, and Edward Burne-Jones collaborated on the stained glass windows of this man's most famous building, which has a Greek Cross plan, sits in Copley Square near the Hancock Tower, and exemplifies this man's namesake "Romanesque." For 10 points, name this 19th century American architect of Boston's Trinity Church.

ANSWER: Henry Hobson Richardson

16. In December 2014, a paper on the arXiv ("archive") claimed that hydrogen sulfide behaved as one of these substances in a diamond anvil at 150 gigapascals. Albert Einstein proposed an incorrect model in which these materials were made of "molecular chains." Bernd Matthias proposed an early set of rules to predict these substances, which were violated by the ones discovered by Matthias' student Paul Chu. A particle impinging on one of these materials can produce a retroreflected hole and a (\*) charge transfer of  $2e$ , a process called Andreev reflection. Magnesium diboride has the highest known critical temperature among the conventional type of these materials, while the cuprate YBCO was the first one discovered above the boiling point of liquid nitrogen. These materials contain Cooper pairs according to BCS theory. For 10 points, name these materials that exhibit the Meissner effect and have zero electrical resistance.

ANSWER: superconductors

17. This portion of a larger text divides all living creatures into those that move on their bellies, and those that walk on two or four legs, claiming that all were made from water. It proclaims that victims of slander are automatically innocent, because evil words are of evil people, and good words are of good people. This segment claims that disbelievers are like thirsty people who stumble upon a mirage expecting to find water, but only find an unamused Allah staring back at them. According to this sura, men who are the sole witnesses of their wives' adultery will have four times as much weight be given to their testimonies. Alongside al-Azhab, the clearest scriptural mandate that women should wear the hijab is found in this sura, which is best known for a verse comparing Allah to a glass-enclosed (\*) lamp spreading the title substance across the heavens and earth. For 10 points, name this twenty-fourth sura of the Qu'ran which describes the radiance of Allah.

ANSWER: Surat an-Nur [or Light Sura; accept Sura 24 before it is read]

18. This ruler came to power in a coup organized by French physician/soldier of fortune Jean Armand de Lestocq. The so-called second "Miracle of the House of Brandenburg" was the sudden death of this ruler after a series of untreated dizzy spells. This monarch's grand chancellor Alexei Bestuzhev nearly acquired Finland in the Treaty of Abo. During this monarch's reign, Ivan Shuvalov established the Imperial Academy of Arts and Mikhail Lomonosov founded Moscow State University. This ruler ordered the flogging with birch rods of (\*) her erstwhile nemesis Natalia Lopukhina, but did not execute her, because she had taken a vow never to sign a death warrant. Most of the War of the Austrian Succession and the Seven Years War' was fought during the reign of this childless empress, who arranged for her idiot nephew Peter of Holstein-Gottorp, later Peter III, to marry his second cousin Sophia Augusta Frederica, later Catherine the Great. For 10 points, name this empress of Russia from 1741 to 1761.

ANSWER: Empress Elizabeth [or Elizaveta Petrovna; or Yelisavet]

**19. A character in this book delivers to the speaker the blistering insult, "I am like the center of a circle, equidistant from all points on the circumference; you, however, are not." The speaker of a poem in this collection closes his eyes and pictures the floating faces of women crying "You will die! You will die!" Yeats titled his poem "Ego Dominus Tuus" after words spoken to this book's speaker in a dream. The personification of Love literally feeds a lady the speaker's burning heart in a sonnet in this collection addressed "to every captive soul and gentle heart." This book describes how the narrator was nine when he met a girl who was eight, and is unable to complete the final (\*) *canzone* when that woman suddenly dies. This book begins by describing the narrator's "book of memory," which contains a heading reading "here begins the [title thing]." This book, which consists of poems sandwiched by prose autobiographical glosses, helped establish the Tuscan dialect as the standard for the Italian language. For 10 points, name this collection by Dante inspired by his love for Beatrice.**

ANSWER: *La Vita Nuova* [or *The New Life*]

**20. In the Ramsay-Cass-Koopmans model, this activity does not increase at a constant rate, like it does in the Solow-Swan model. Building on the work of John von Neumann and Maurice Allais, Edmund Phelps defined the amount of this activity that maximizes the growth in consumption as the "Golden Rule." This phenomenon happens more in earlier stages of Albert Ando and Franco Modigliani's life-cycle model, and its opposite, prefixed with a "dis-," happens more in later stages. Ben Bernanke stated that the deficit during the Great Recession was funded by a "glut" of this activity in countries other than the United States. The marginal (\*) propensity to perform this activity is equal to 1 minus the MPC. In order to guarantee "smoothing," individuals perform the "precautionary" type of this activity during periods of uncertainty. During the 1980s and 90s, a large number of institutions where one could take out loans or perform this other activity were shut down. For 10 points, name this economic activity, the opposite of spending.**

ANSWER: saving [accept word forms]

**TB. The Richard Dimbleby lecture "Home Thoughts From Abroad" provides a postmortem analysis of this election. The winner of this election gave an address paraphrasing "Make Me An Instrument of Your Peace," beginning "Where there is discord, may we bring harmony. "Where there is error, may we bring truth." Jeremy Thorpe put off his trial for conspiracy to murder his alleged gay lover because of this election, in which he lost his seat as MP of North Devon. In the run-up to this election, one side ran an ad displaying a snaking line to the unemployment office, underneath the words "Labour (\*) Isn't Working." The losing side of this election was crippled by the "Crisis? What Crisis?" headline, which happened in the midst of a series of strikes by lorry drivers and gravediggers, known as the Winter of Discontent. By one vote, James Callaghan lost a motion of no confidence in the run-up to this election, which brought a former research chemist to power. For 10 points, name these elections in which Margaret Thatcher became Prime Minister.**

ANSWER: United Kingdom general election of 1979 [prompt on '79 or similar answers]

## BONUSES

1. This solo instrument plays over strings in the "Dance of the Blessed Spirits" from Gluck's *Orfeo ed Euridice*. For 10 points each:

[10] Name this instrument which joins the piano in Faure's E minor *Fantaisie*, and represents the flow of two tributaries at the start of Smetana's *Moldau*. Theobald Boehm invented a system of keywork for this instrument.

ANSWER: flute

[10] Though the majority of her output consisted of salon songs, this Frenchwoman composed an oft-played *Flute Concertino in D major*.

ANSWER: Cecile Chaminade [or Cecile Louise Stephanie Chaminade]

[10] This composer breathed new life into the genre of solo flute music with his short piece *Syrinx*, and included an opening flute solo with a chromatic descent in his *Prelude to the Afternoon of a Faun*.

ANSWER: Claude Debussy [or Achille-Claude Debussy]

2. After his retreating troops were cut down along the "Bloody Meadow," a commander at this battle rode to the man in charge of his center, Baron Wenlock, demanding to know why he provided such weak support; without waiting for an answer, he took a battle-axe and split Wenlock's brains open. For 10 points each:

[10] Name this 1471 rout of the Lancastrians under the Duke of Somerset at a site in Gloucestershire. (GLOS ter sher).

ANSWER: Battle of **Tewkesbury**

[10] Shortly after the Battle of Tewkesbury, the Lancastrian king Henry VI died in this prison, where two infant "princes" under the supervision of Richard III went missing.

ANSWER: **Tower of London** [or **Her Majesty's Royal Palace and Fortress**]

[10] This popular Yorkist captain served with distinction in forces loyal to Edward IV at the battles of Mortimer's Cross, Barnet, and Tewkesbury, and extended similar loyalty to Edward's brother Richard III, and was rewarded for his long service by being beheaded in 1483 by the latter king for conspiring with the Woodvilles.

ANSWER: William **Hastings** [or 1st Baron **Hastings**]

3. A woman in this play smashes her father's prized recording of Enrico Caruso performing "O Paradiso," and sends him out to walk the dog, giving him the opportunity to commit suicide by leaping off the apartment building roof. For 10 points each:

[10] Name this Clifford Odets play about the idealism of the Depression-era Jewish Berger family, whose matriarch Bessie arranges a shotgun wedding for her daughter Hennie.

ANSWER: **Awake and Sing!**

[10] Successful productions of Odets's plays *Awake and Sing!* and *Golden Boy* were staged by this New York City collective, founded by Lee Strasberg, Cheryl Crawford, and Harold Clurman, which brought Stanislavsky's acting principles to American drama.

ANSWER: **Group Theatre**

[10] Odets's play *Waiting for Lefty* ends with a clamor for this type of action, which is carried out by fruit pickers in Steinbeck's novel *In Dubious Battle* and by coal miners in Emile Zola's *Germinal*.

ANSWER: **strikes**

4. In response to low levels of glutamine, enhancer-bound phosphorylated NtrC activates one of these proteins, the main one of which in *E. coli* weighs 70 kDa. For 10 points each:

[10] Name these bacterial proteins which are needed by RNA polymerase to bind to promoters.

ANSWER: **sigma** factors

[10] Sigma factors help initiate this process, which takes place in approximately 10,000 factories in a given HeLa cell. Nuclear run-on assays identify genes undergoing this process, which in its most basic form involves the creation of a mRNA strand from DNA.

ANSWER: **transcription** [or word forms, like being **transcribed**]

[10] In this process, studied in T3 and T7 bacteriophage RNA polymerases, short mRNA transcripts are synthesized and the polymerase re-initiates while still attached to the promoter. During this process, DNA "scrunches" so that RNA polymerase can read it.

ANSWER: **abortive initiation** [or **abortive** transcription]

5. Name these non-rabbi religious occupations in Judaism, for 10 points each.

[10] These officials use a knife to perform the *bris*, on male infants, and then use either a suction device or their mouths to draw blood from the wound.

ANSWER: **mohel** [or **mohalim**; or **mohalot**]

[10] This is the name for Jewish comedians who entertain wedding guests with erudite Talmudic jokes, and transition to being deathly serious immediately before the ceremony.

ANSWER: **badchen** [or **badkhn**; or **badchonim**]

[10] These people sing and lead congregations in prayer and were required, in medieval times, to have a huge, flowing beard.

ANSWER: **cantor** [or **chazzan**; or **chasn**; or **hassan**]

6. This film ends with a shot of a character raising his fist on a football field as "Don't You Forget About Me" plays. For 10 points each:

[10] Name this 1985 coming-of-age film, one of the best known films starring the Brat Pack. Characters played by Emilio Estevez, Molly Ringwald, and others bond during Saturday detention, despite being from different social circles.

ANSWER: The **Breakfast Club**

[10] Judd Nelson plays this rebellious character, who has an antagonistic relationship with assistant principal Dick Vernon. At the film's end, the popular Claire Standish gives him a diamond earring and kisses him.

ANSWER: **John Bender** [accept either name]

[10] While crawling through an air duct, Bender tells the setup, but not the punchline, to a joke about a naked blonde woman who walks into a bar holding two objects under her arms. Name either.

ANSWER: a **poodle** or a **6-foot salami** [prompt on less-specific answers]

7. This book includes a parable about a man who bribes funeral-goers to look sad, but only elicits more happiness the more money he gives to them. For 10 points each:

[10] Name this 1790 book that claims that poetry is more moral than either music or painting, asserts that aesthetic purposiveness is teleological in nature, and uses the example of an erupting volcano to illustrate the notion of the sublime.

ANSWER: **Critique of Judgment** [or **Kritik der Urteilskraft**; or **Critique of the Power of Judgment**; or **Third Critique**]

[10] This German philosopher's three critiques are about judgment, practical reason, and pure reason. He also advised acting as if your actions were universal law in *Groundwork of the Metaphysics of Morals*.

ANSWER: Immanuel **Kant**

[10] According to Kant, true judgments of beauty are purposive, universal, necessary, and have this other quality, which might be difficult to come to terms with given his vivid depictions about experiencing the beautiful and sublime. Kant used this term to mean "free from desire."

ANSWER: **disinterestedness** [or **interesse**; accept synonyms]

8. With Andrew Aydin, this man co-wrote a graphic novel biography titled *March*, and he appeared on camera, visibly wounded from a night stick attack on his skull, begging Lyndon Johnson to intervene in Alabama after "Bloody Sunday" during the Selma to Montgomery marches. For 10 points each:

[10] Name this still-living civil rights leader and current Georgia congressman whose question "Which side is the federal government on?" was removed from his address before the March on Washington, where he was the youngest speaker.

ANSWER: John **Lewis** [or John Robert **Lewis**]

[10] This civil rights organization chaired by John Lewis took an increasingly separatist and militant posture, despite its name, under the chairmen Stokely Carmichael and H. Rap Brown.

ANSWER: **SNCC** [or **Student Nonviolent Coordinating Committee**]

[10] This hymn singer was instrumental in organizing the SNCC's participation in Freedom Summer, but achieved more fame on her own as the vice-chair of the Mississippi Freedom Democratic Party, in which capacity she delivered a tear-jerking 1964 address at the Democratic National Convention, recounting her experience being severely beaten in jail and crippled.

ANSWER: Fannie Lou **Hamer** [or Fannie Lou **Townsend**]

9. The collection that launched this movement contains a prose poem in which four artists seek validation from Queen Mab, who throws a veil of divine inspiration over them. For 10 points each:

[10] Identify this pan-Latin American literary movement influenced by contemporary European movements like Symbolism and Parnassianism, that was kick-started by Ruben Dario with his 1888 collection *Azul*.

ANSWER: **modernismo** [or **modernista**; or **modernism**]

[10] The other leading *modernismo* poet, Jose Marti, lived in this country and wrote the lyrics to its patriotic song "Guantanamera."

ANSWER: **Cuba** [or Republic of **Cuba**; or Republica de **Cuba**]

[10] According to Dario, the Teresa of Avila of the *modernismo* movement was this Italian-born Uruguayan woman, who dedicated her collection *Empty Chalice* to Eros, and was murdered at age 27 by the husband she divorced.

ANSWER: Delmira **Agustini**

10. The Shvo catalyst is used for the "transfer" variety of this reaction paradigm. For 10 points each:

[10] Name this reaction type in which a molecule of the lightest element reacts across a double or triple bond to reduce it.

ANSWER: hydrogenation [accept word forms]

[10] Whereas Lindlar's catalyst selectively hydrogenates an alkyne into a cis-alkene, these two chemicals together selectively yield the trans alkene. These two substances, one the second element in its group and the other a compound, react with an alcohol to transform benzene into cyclohexadiene in the Birch reduction.

ANSWER: sodium and ammonia [or Na and NH3; prompt on partial answer]

[10] William Knowles shared in the 2001 Nobel Prize in Chemistry for his development, while working at Monsanto, of an asymmetric hydrogenation step using the DIPAMP ligand for the synthesis of this drug.

ANSWER: L-DOPA [or L-3,4-dihydroxyphenylalanine; or levodopa]

11. This author described "Death in the cup of sin you hand me, smiling" in one of his "Peregrina" poems, and included the solemn lyric "O Soul Remember" in his lighthearted novel *Mozart on the Way to Prague*. For 10 points each:

[10] Name this German poet of the "Swabian School," who wrote an oft-read set of love sonnets to his fiancée Luisa Rau.

ANSWER: Eduard Moerike [or Eduard Friedrich Moerike]

[10] Moerike's lyric poems were heavily influenced by those of this other German Romantic author, such as "The King in Thule" and "The Elf-King." This author is best-known for a two-part drama about a scholar who lets a poodle into his study, where it transforms into Mephistopheles.

ANSWER: Johann Wolfgang von Goethe

[10] Hugo Wolf set to music a Moerike poem in which this object leans "up against the ivy wall / of this old terrace," and sounds out a "melodious lament." An English Romantic poet described one of these instruments "placed length-ways in the clasping casement" in a poem that begins "My pensive Sara!"

ANSWER: aeolian harp [prompt on partial answer; accept "The Eolian Harp" and "To an Aeolian Harp" and "An eine Aolsharfe"]

12. This man collaborated with Christian Wolff on the first modern dance performed to an electronic score in his *Suite by Chance*, one of many of his works in which the order of the movements was assigned by flipping a coin. For 10 points each:

[10] Name this abstract modern dancer and collaborator best-known for collaborating with John Cage.

ANSWER: Merce Cunningham [or Mercier Philip Cunningham]

[10] Cunningham was a forebear of this style of dance, spearheaded by Robert Dunn and other members of the Judson Dance Theater, which broke completely with the rigid choreography structures of prior movements, although not as radically under Twyla Tharp.

ANSWER: postmodern dance

[10] Cunningham himself studied under this choreographer, who collaborated with Carlos Chavez on the ballet *Dark Meadow*, and with Isamu Noguchi and Aaron Copland on *Appalachian Spring*.

ANSWER: Martha Graham

13. Biker gang insignia is forbidden in this neighborhood, whose unofficial anthem is the 1976 song "You cannot kill us" by noted flower power rock group Bifrost. For 10 points each:

[10] Identify this large autonomous neighborhood within a European capital city, in which hard drugs such as heroin are forbidden, but marijuana can be bought and sold openly.

ANSWER: Freetown Christiania [or Fristaden Christiania]

[10] Freetown Christiania is located at the heart of a former military area within this city on the eastern coast of Zealand, the capital city of Denmark.

ANSWER: Copenhagen [or Kobenhavn]

[10] The Dyrehavsbakken in Copenhagen, also known as the Deer Park Hill, is one of the oldest places of this kind in the world. Other major places of this kind in Europe include Efteling in the Netherlands and Alton Towers in the United Kingdom.

ANSWER: amusement parks [or theme parks; or water parks; or anything along those lines]

14. Identify the following tools that you might use if you were interested in representation theory, for 10 points each.



[10] Since rep theory concerns itself with matrices of different dimensions, you would use this matrix operation a lot. It equals the sum of the diagonal elements of a matrix, and it also equals the sum of its eigenvalues.

ANSWER: **trace**

[10] This function assigns to each element of a group the trace of its matrix in a given representation. Its values are often compiled in tables, with one row corresponding to each irreducible representation.

ANSWER: **character** [do not accept "characteristic"]

[10] This theorem asserts that every representation of a finite group over a finite-dimensional vector space is a direct sum of irreducible representations.

ANSWER: **Maschke's** theorem

15. Name these Europeans proponents of education reform, for 10 points each.

[10] This Italian physician and founder of the Casa dei Bambini developed a system for education tailored to the needs of each individual child.

ANSWER: Maria **Montessori** [or Maria Tecla Artemesia **Montessori**]

[10] This French prime minister destroyed his political career by demanding lots of money to fund the completion of the conquest of Tonkin, but he is better remembered for enacting a namesake law making public education free, non-clerical, and mandatory.

ANSWER: Jules **Ferry** [or Jules François Camille **Ferry**]

[10] This seventeenth-century Czech bishop championed universal education in his *Didactica Magna*, made Latin easy to learn with his book *Janua Linguarum Reserata*, or *The Gate of Tongues Unlocked*, and published the *Orbis Pictus*, one of the earliest picture books for children.

ANSWER: John Amos **Comenius**

16. Dimensional analysis is more than just a technique to do stoichiometry problems in high school chemistry.

Identify some uses for it, for 10 points each.

[10] This dimensionless number characterizes the difference between turbulent flow and laminar flow. It is given by the ratio of inertial forces to viscous forces.

ANSWER: **Reynolds** number

[10] This theorem named for a Greek letter asserts that given a system with  $n$  physical variables and  $k$  dimensions, one can construct  $n - k$  dimensionless parameters that characterize the system.

ANSWER: **Buckingham pi** theorem

[10] This British physicist used dimensional analysis and a photo in *Life* magazine to estimate the energy of a nuclear explosion. He is the alphabetically-later namesake of an instability that occurs when a light fluid pushes on a denser fluid.

ANSWER: Geoffrey Ingram **Taylor**

17. This poet invoked a metaphor from Jeremiah in the title of a poem declaring that "War's annals will cloud into night / Ere their story die." For 10 points each:

[10] Identify this poet who wrote that "the smile on your mouth was the dearest thing / Alive enough to have strength to die" in his poem "Neutral Tones," penned "In the Time of 'The Breaking of Nations,'" and created a darkly comic depiction of the plight of lower-class women in "The Ruined Maid."

ANSWER: Thomas **Hardy**

[10] Hardy commemorated the turn of the twentieth century with this poem, his most famous, which describes an aged bird, "frail, gaunt, and small, In blast-beruffled plume," that "had chosen thus to fling his soul / Upon the growing gloom."

ANSWER: "The **Darkling Thrush**"

[10] Hardy gave this name to the force which he believed shapes the course of human events. In "The Convergence of the Twain," it "stirs and urges everything," including the collision of the Titanic with the iceberg, and it purportedly gains consciousness in Hardy's verse-drama *The Dynasts*.

ANSWER: **Immanent Will** [prompt on partial answer]

18. An owl flies off to the distant moonlight night in this painting, which depicts parts being recycled at the Morris Motor car factory. For 10 points each:

[10] Name this German-titled war painting by the Surrealist English artist Paul Nash, which is populated by a pile of crashed Luftwaffe planes.

ANSWER: Totes Meer [or Dead Sea]

[10] *Totes Meer* strongly resembles *The Sea of Ice*, a similarly jagged, desolate landscape painted by this German Romantic artist of *Wanderer Above the Sea of Fog*.

ANSWER: Caspar David Friedrich

[10] The angular, harsh war paintings of Paul Nash were influenced by the canvases of this British Modernist art movement, whose manifesto was signed by Jessica Dismorr, Henri Gaudier-Brzeska, and Wyndham Lewis, and was published in the inaugural issue of *BLAST*.

ANSWER: Vorticism [or word forms, such as Vorticist]

19. MODERATOR NOTE: Don't read the alternate answers to the first part if missed, thanks. This god laughed at the ridiculous sight of Ganesh falling off his mouse and breaking his stomach, so the elephant-headed god threw one of his tusks at him and created his dark spot. For 10 points each:

[10] Name this lunar Hindu god, who was cursed to wax and wane because he paid extra attention to one of his twenty-seven wives.

ANSWER: Chandra [or Rajanipati; accept Soma]

[10] Chandra is identified with the Vedic deity of this drink, which confers immortality.

ANSWER: soma

[10] Chandra is the father with Tara of this greenish god, the protector of merchants and the personification of the planet Mercury.

ANSWER: Budha

20. This party received \$700,000 from the Beauharnois Light, Heat, and Power company in exchange for the right to alter the flow of the St. Lawrence River. For 10 points each:

[10] Name this left-of-center Canadian political party to which Wilfred Laurier and William Lyon Mackenzie King belonged. It is left of the Conservative Party, but right of the New Democratic Party.

ANSWER: Liberal Party of Canada [or Grits; or Parti liberal du Canada]

[10] This social reformer bargained with the Liberals to get them to introduce an old age pension plan, and became the first leader of the Cooperative Commonwealth Federation, the precursor to the New Democratic Party.

ANSWER: J. S. Woodsworth [or James Shaver Woodsworth]

[10] This Liberal Prime Minister from 1948-57 enthusiastically got Canada on board NATO, expanded social security, and directed his Secretary of State for External Affairs, Lester Pearson, to resolve the Suez Crisis.

ANSWER: Louis St. Laurent [or Louis Stephen St. Laurent; or Louis-Etienne St-Laurent]

TB. The limestone Guinnol lioness-woman is a major artifact of this civilization, which reached the apex of its power during the reign of the king Shutruk-Nakhunte. For 10 points each:

[10] Name this ancient Near Eastern civilization centered at Susa in the Khuzestan lowlands of modern-day southern Iran.

ANSWER: Elam [or word forms, specifically Elamites]

[10] The Elamites displaced these people from the Zagros Mountains as rulers of Babylon. Their capital was Dur-Kurigalzu, they used boundary stones to record land grants, and they established the Middle Babylonian dynasty after the 1595 BC Hittite sack.

ANSWER: Kassites

[10] A Kassite invasion was repulsed, and an Elamite invasion by Kutir-Nakhunte I suffered, by Samsu-iluna, the son of this Amorite king of Babylon who promulgated a namesake law code.

ANSWER: Hammurabi