

OOT 2019: A Pope for Every Packet

By George Braid, Isaac Brown, George Charlson, Oli Clarke, Laura Cooper, Dani Cugini, Alexander Hardwick, Claire Jones, Elisabeth Le Maistre, Freddy Leo, Isabella Morris, Caspar Paton, Alexander Peplow, Barney Pite, Jacob Robertson, and Leonie Woodland.

Packet 1

Toss-ups:

1. One event in this modern-day country saw a missed meeting between one force led by a veteran of the Stairs Expedition and another that had disembarked at the head of the Ubangi River. In a battle fought in this country, one side fired from behind zariba fortifications at enemies concealed behind the Surgham Hills. A year after that clash, Abdullah al-Taashi was killed here at Umm Diwaykarat. Lieutenant Winston Churchill was part of the 21st Lancers in one battle fought in response to the Turkiyah campaign in this country, and almost immediately after it the victorious commander was sent to deal with the Fashoda Incident. For 10 points, name this African country where Herbert Kitchener defeated the forces of the Mahdi at the Battle of Omdurman near Khartoum.

ANSWER: **Sudan** <CJ>

2. One theorem named for these entities requires that the derivative be non-zero and continuous at a point and can be proved using a contraction or with Newton's method. One type of these exists only if the kernel of a map is trivial, which is the case if no pivots are zero. For a unitary operator this function is the same as the Hermitian conjugate. If a function is bijective then it possesses one of these, which are maps from the image to the domain. Composing functions described by this word gives the identity map and the multiplicative example of these things is the reciprocal. For 10 points, give this term for pairs of functions that 'undo' each other, such as squaring and square rooting.

ANSWER: **inverses** <JR>

3. In 2008, Dosso Dossi's *Portrait of a Youth* was said to depict this figure. This person's last child was named in honor of Isabella d'Este during their residence in Ferrara, while this Governor of Spoleto had another child officially known as the '*Infans Romanus*'. Pedro Calderon was murdered after an alleged affair with this person, and Lord Byron called the letters she wrote to Pietro Bembo 'the prettiest love letters in the world' before stealing a lock of her hair. Johann Burchard probably inaccurately recorded her presence at the Banquet of Chestnuts given by her brother Cesare [CHE-sa-re], whom rumors accused of being the father of her son Giovanni. For 10 points, name this Italian noblewoman, the illegitimate daughter of Pope Alexander VI.

ANSWER: **Lucrezia Borgia** [prompt on Borgia alone] <CJ>

4. This poet ended one work with a refrain inspired by Archibald MacLeish's commentary on a 16th Century poem, 'But O that I were young again/And held her in my arms'. Another poem by this author claims that 'Lion and woman and the Lord knows what' are all on show and ends with the narrator saying he must 'lie down where all the ladders start/In the foul rag and bone shop of the heart'. This author of the poem 'Politics' wrote a work in which the narrator implores the reader to 'tread softly, because you tread on my dreams'. This author wrote a work in which they claim Connolly and Pearse ['purse'] 'are changed, changed utterly: A terrible beauty is born.' For 10 points, name this Irish poet, who wrote 'The Wild Swans at Coole' and 'Easter, 1916'.

ANSWER: William Butler **Yeats** <GDC>

5. Description acceptable.

During this event, a break-in left the priceless illuminated manuscript of a haggadah lying on the floor of a museum along with other items the thieves believed to be of no value. Civilians were evacuated from the site of this event in Operation Irma, while others were killed in the two Markale massacres. The Tunnel of Hope provided a link to a

UN-controlled area during this event, in which residents painted warnings to each other on the walls of Sniper Alley. The Wright-Patterson Air Force Base was the site of the signing of the treaty that ended this event after Operation Deliberate Force targeted the forces of Ratko Mladić [MLA-ditch]. The Dayton Accords lifted, for 10 points, what four-year battle for control of the Bosnian capital in the 1990s?

ANSWER: **Siege of Sarajevo** [prompt on **Bosnian War** or equivalents] <CJ>

6. A landmark paper on this phenomenon was written by Ruelle and Takens. Landau-Hopf theory was an early attempt to understand this phenomenon, which is the subject of Taylor's hypothesis. Length scales relevant to this phenomenon include the Taylor microscale and one proportional to viscosity to the three-quarters. One theory of this phenomenon, which assumes an energy cascade from the longest to the shortest length scales, was proposed by Andrey Kolmogorov. Occurring at very high Reynolds numbers, this phenomenon is characterised by chaotic variations in fluid velocity. For 10 points, name this phenomenon, contrasted with laminar flow, that causes discomfort on aeroplanes.

ANSWER: **turbulence** [or '**turbulent** flow'] <GB>

7. This thinker argued that the 'chief part of human happiness' comes from the consciousness that we are 'beloved'. This thinker's moral theory centres on the idea that people naturally seek to be 'principally concerned' agents. A problem named for this thinker revolves around trying to reconcile the emphasis on benevolence in one of their works with the focus on self-interest in another. Joseph Stiglitz criticised an idea developed by this thinker by saying that the reason it 'seemed invisible is because it's often not there'. This thinker's moral theory is developed in *Theory of Moral Sentiments*. For 10 points, name this Scottish philosopher who wrote about the division of labour in a pin factory in *The Wealth of Nations*.

ANSWER: Adam **Smith** <GDC>

8. In 2018, a restaurant called Buonanotte in this city was fined for using the word 'pasta' on its menu. A novel set in this city names a cultural phenomenon known as the 'two solitudes' which describes a separation between cultures in this city. A film set in this city has the translated title *I Killed My Mother* and was directed by Xavier Dolan, who is also from this city. The OQLF is based in this city and fines restaurants that display signs in English. This city is often said to be linguistically divided by Saint Laurent or Saint Lawrence Boulevard. For 10 points, name this largest Francophone city in North America, the largest in Quebec.

ANSWER: **Montreal** <GDC>

9. In 2008, a press conference involving this activist was interrupted by a remote-controlled airborne dildo. This activist founded the United Civil Front, and succeeded Vaclav [VATS-lav] Havel as Chairman of the Human Rights Foundation in 2011. This figure has also written on the rise of artificial intelligence in their 2017 book *Deep Thinking*. This figure's outspoken track record against Vladimir Putin includes a book entitled *Winter is Coming*. This activist first rose to prominence during a series of matches against Anatoly Karpov. For 10 points, name this former World Chess Champion who lost a rematch against Deep Blue in 1996.

ANSWER: Garry Kimovich **Kasparov** <AH>

10. The main character of this work spends time at the Weimar court but is eventually asked to leave because he is not a nobleman. After the climactic event of this novel, a copy of *Emilia Galotti* is found on the main character's desk. The title of Kierkegaard's work *The Sickness unto Death* is thought to have been taken from this novel, in which the phrase describes the protagonist's depression. After reading a passage from *Ossian* out loud to her, the main character is overcome by passion for his love interest, Lotte, and commits suicide when he is rejected. For 10 points, name this *Sturm und Drang* novel which sparked a namesake cult, written by Johann Wolfgang von Goethe.

ANSWER: *The **Sorrows of Young Werther*** [accept *Die **Leiden des jungen Werther(s)***] <FL>

11. A princess who held this title is said to have lived for ninety-nine years and had a name that translates as 'Ocean of Wisdom'. Five holders of this title are collectively known as the Tathagatas and are also emanations of the five

qualities of the primordial holder of this title. Holders of this title can be classed as pratyeka or samyaksam depending on whether or not they pass on their teachings to others. The most famous holder of this title was supposedly conceived after his mother dreamt of a six-tusked white elephant entering her side; that holder of this title achieved insight into the Four Noble Truths after meditating under a Bodhi tree. For ten points, identify this title, whose literal meaning is 'Enlightened One' and whose most famous holder was Siddhartha Gautama.

ANSWER: **Buddhas** [accept **Buddhahood**; accept pratyekab**uddha** or samyaksamb**uddha** before mention] <FL>

12. Five figures look at the word 'Bedlam' in red on a wall in the eighth plate of a series by this artist referencing an earlier painter's work. This artist worked from a postcard and a flower-arrangement manual to produce his painting *Mount Fuji and Flowers*. A book on Chardin [shar-DAN] and a postcard reproduction of Piero della Francesca's *Baptism of Christ* are visible in this artist's portrait *My Parents*. A print from this artist's series responding to Hogarth's *A Rake's Progress* can be seen on the left of a painting by him which reverses a traditional marriage portrait by having the wife standing while the husband sits with a white cat on his lap. *Mr and Mrs Clark and Percy* is, for 10 points, a work of which Bradford-born artist?

ANSWER: David **Hockney** <IB>

13. One theory that describes the transfer of these particles was validated when Miller, Calcaterra and Closs demonstrated the existence of an inverted region that theory predicts. That theory describes the transfer of these particles using the reorganisation energy symbolised lambda. A Farbe centre is a defect in which one of these particles is found at a lattice site. Solvated examples of these particles have a blue colour. Davisson and Germer showed that these particles possess wave-like properties. A lone pair of these is donated by a single species to form a dative covalent bond. For 10 points, the dots and crosses in a Lewis diagram represent what subatomic particles?

ANSWER: **electrons** [prompt on Marcus theory saying 'which describes the transfer of?'] <JR>

14. One of this composer's works was first recorded by his student Arthur Friedheim in 1905. That piece begins by stating three of its themes in succession; the first includes a descending G Phrygian scale marked *sotto voce*, which also ends that piece after the quiet return of a theme from the *andante sostenuto* section. A fugato section in that piece by this composer is both a scherzo and the transition to the recapitulation of an overarching sonata structure, part of that piece's double-function form. A set of other pieces by this composer includes "Feux Follets" and one in which repeated thirds evoke a galloping horse, "Mazeppa". For 10 points, name this composer of a *Sonata in B Minor* and the *Transcendental Études*.

ANSWER: Franz **Liszt** <GB>

15. This author identified the 'air of reality' as the supreme virtue of the novel in an essay responding to a pamphlet by Walter Besant. In a story by this author, Charlotte acts out a *tableau vivant* after finding the central object among her deceased aunt's possessions. This author of 'The Art of Fiction' reversed Maupassant's 'The Necklace' in his story 'Paste'. He wrote about a character who meets Marie de Vionnet after travelling to Paris in pursuit of Chad Newsome. The protagonist of another novel by this author leaves Rome to comfort her dying cousin Ralph Touchett against the wishes of her husband Gilbert Osmond. For 10 points, name this author of *The Ambassadors* and *The Portrait of a Lady*.

ANSWER: Henry **James** <IB>

16. A 1998 paper by Christianson and Lindholm found that expectations in this procedure are similar across individuals due to the details of the environment. The phenomenon known as the 'post-event misinformation effect' impacts this procedure. Drawing on cases such as those of Adolf Beck and Oscar Slater, the 1976 Devlin report raised the question of whether this procedure led to false convictions, and it has since been established that 75 percent of DNA-based exonerations concern victims of false convictions arrived at through this procedure. Stress, view, misleading questions, and prior instructions may contribute to the fallibility of this procedure. For 10 points, name this legal procedure in which a bystander or victim recounts their observation of a specific incident under

investigation in a courtroom.

ANSWER: eyewitness testimony <FL>

17. At the beginning one of this director's films a man claims that the road ahead looks like 'a fucked-up face'. In that film by this director, a campfire scene was changed to be more explicit by the film's leading actor. This director directed a film in which David attempts to find a supply of dilaudid and later shoots Bob, who he claims was shot by a TV baby instead. A film by this director features a scene in a bar where the lead character mocks a graduate student for plagiarising historical analysis of pre-revolutionary American history. That film by this director of *Drugstore Cowboy* features a young Matt Damon solving a maths problem on a blackboard at MIT. For 10 points, name this director of *Good Will Hunting* and *Milk*.

ANSWER: Gus Van Sant <GDC>

18. Proximal articulation of the stylohyal bone distinguishes users of one form of this technique from similar species. An adaptation in *Galleria mellonella* for avoiding users of this technique is to start diving unpredictably. Under water, a waxy melon is used to transmit signals used in this technique, while in air, they are sometimes emitted via the nostrils. Users of this technique increase the rate of signals when approaching prey, producing a feeding buzz. Species that use this technique include shrews, oilbirds, and sperm whales. For 10 points, name this technique of sensing by detecting reflected calls, most famously found in bats.

ANSWER: echolocation [accept bio-sonar; prompt on sonar] <LW>

19. Meghavarman sent a monarch of this dynasty 'many pearls and jewels' when asking for permission to build a monastery at Bodh Gaya as recorded by Xuanzang, and a text in praise of this dynasty claims that they ruled all the island nations. One member of this dynasty is praised in that panegyric by their minister and court poet Harishena below an earlier inscription on the Allahabad pillar. This dynasty's empire grew out of the remnants of the Kushans, and was initially centred on Uttar Pradesh and Bihar. The fall of this dynasty was precipitated by the invasion of the Hunas peoples, also known as the White Huns. For 10 points, name this Indian empire founded by Chandra I whose peak was in the fourth to sixth centuries.

ANSWER: Guptas <OSC>

20. In one novel by an author from this country, a character spends his childhood diving for seaweed after reading a book entitled *Animals and Plants of the European Coastal Region*. In another novel from this country, a woman divorces her husband Jean de Satigny for taking nude photographs of his servants. A novel by an author from this country, which includes 'The Part about Amalfitano' and 'The Part about Fate', focuses on the elusive writer Benno von Archimboldo. Another novel from this country follows four generations of the Trueba family. For 10 points, the novels *2666* and *The House of the Spirits* were written by Roberto Bolaño and Isabel Allende, who hail from which country?

ANSWER: Chile <FL>

Bonuses:

1. The existence of magnetic monopoles would explain the quantisation of this quantity. For 10 points each:

[10] Name this quantity. The Lorentz force experienced by a particle is proportional to the amount of this quantity possessed by that particle, as is the electric field produced by the particle. This quantity for an electron is equal and opposite to this quantity for a proton.

ANSWER: electric **charge**

[10] The existence of magnetic monopoles would also change Gauss's law for magnetism. That law states that this operation performed on the magnetic field is zero.

ANSWER: **divergence**

[10] The quantisation of electric charge in the presence of magnetic monopoles can be derived by considering an effect analogous to this one. In this effect, the phase of a particle changes due to the presence of a vector potential, even if the magnetic field is zero.

ANSWER: **Aharonov-Bohm** effect [accept **Ehrenberg-Siday-Aharonov-Bohm** effect] <LW>

2. Forts along this pass include Ali Masjid, and its highest point is at Landi Kotal, the namesake terminus of a no-longer-functional railway safari. For 10 points each:

[10] Name this pass where the Afridi tribe of one group have long exercised the right of toll for those crossing the Spin Ghar mountains.

ANSWER: **Khyber** Pass

[10] Home to one of Europe's many 'Devil's Bridges', which was painted by Turner, this Alpine pass has now been repeatedly bypassed by exceptionally long tunnels. The most recent of them, the 'Base Tunnel', vastly reduced travel time between Zürich and Milan.

ANSWER: **Gotthard** Pass

[10] Migrants travelling on this route crossed the Rocky Mountains through the South Pass. The final goal of many migrants on this route was Willamette Valley in its namesake northwestern state.

ANSWER: **Oregon Trail** <OSC>

3. One version of this scene involved 32 dancers all in white tutus descending one by one in a series of arabesque penchées. For 10 points each:

[10] Frederick Ashton asked Rudolf Nureyev to reinvent the choreography for this scene, which he did by including a solo for the male part in this scene which was inspired by Chabukiani's choreography of Act II of the ballet in which this scene appears.

ANSWER: '**Kingdom of Shades**' [accept **Act III, scene 2** of **Bayadere**, but don't reveal this if the team does not say it]

[10] 'Kingdom of Shades' is a scene in this ballet, which was composed by Ludwig Minkus and originally choreographed by Marius Petipa.

ANSWER: **La Bayadere** [or **The Temple Dancer**]

[10] Marius Petipa also choreographed this ballet, which was revived by Alexander Gorky in 1900. The title character of this ballet, set in Spain, asks his companion Sancho Panza to fetch him his horse Rocinante [ro-see-NON-te] in the prologue.

ANSWER: **Don Quixote** <GDC>

4. The 2015 iteration of this event featured Keegan-Michael Key in character as an 'anger translator' as well as Cecily Strong asking, 'Feels right to have a woman follow President Obama, right?' For 10 points each:

[10] Name this annual Washington, D.C. event that will break with tradition by featuring Ron Chernow as its speaker in 2019.

ANSWER: **White House Correspondents' Dinner**

[10] At the most recent White House Correspondents' Dinner, Michelle Wolf drew backlash for comparing Sarah Huckabee Sanders to a character from this television series. Dressing up as characters from this show in long red

dresses and white bonnets has become a popular form of protest by women during the Trump presidency.

ANSWER: *The Handmaid's Tale*

[10] This man's remarks at the 2011 Correspondents' Dinner have been blamed by some for motivating Donald Trump to run for president. At the dinner, this then-head writer of *Saturday Night Live* made several jokes at Trump's expense, including, 'I like that Trump is filthy rich but nobody told his accent'.

ANSWER: Seth Meyers <CJ>

5. This regime seized power after the Third Republic moved to Tours, and it was suppressed by Adolphe Thiers' government forces during Bloody Week. For 10 points each:

[10] Name this radical workers' regime that took control of the French capital for two months during the end of the Franco-Prussian War.

ANSWER: Paris Commune

[10] This socialist revolutionary and author of *Instructions for an Armed Uprising* was elected the honorary president of the commune. He avoided transportation to the colonies as punishment due to his poor health and was elected a deputy for Bordeaux in 1879, though the result was invalidated.

ANSWER: Louis Auguste Blanqui

[10] Blanqui clashed with more moderate republicans during the revolution of 1848, after which the newly established Second Republic almost immediately faced this urban revolt against their attempt to close the national workshops. Louis Eugène Cavaingac's suppression of this uprising marked the moderates' victory.

ANSWER: June Days [accept les journées de Juin] <CJ>

6. In Chuck Palahniuk's *Fight Club*, the protagonist struggles with this condition and begins going to support groups for various illnesses after first visiting one for this condition. For 10 points each:

[10] Name this condition, which also afflicted Emily Brontë and Marcel Proust, who referenced it in the 'Overture' section of *Swann's Way*. Colette described this condition as 'an oasis in which those who have to think or suffer darkly take refuge'.

ANSWER: insomnia [accept descriptive answers about not being able to sleep]

[10] *Swann's Way* is the first of seven novels in this long work by Marcel Proust. In the original French, this work's longest sentence comes to 856 words, while one about the insomniac Marcel's 'waking dream' comes to a modest 599.

ANSWER: In Search of Lost Time [accept Remembrance of Things Past or À la recherche du temps perdu]

[10] This author paid homage to Proust in his 2015 Goncourt [gon-kor] Prize-winning novel *Compass*, set over a single sleepless night. This author also managed to outdo Proust's loquacity with his novel *Zone*, a spy thriller written as a single sentence.

ANSWER: Mathias Enard <IB>

7. Bertran de Born eulogised this person in a poem of 1183 as 'the best king who ever bore a shield', though Walter Map described them as 'a limpid spring of wickedness'. For 10 points each:

[10] Name this person who died at Martel while campaigning against his younger brother, the future Richard I, for control of the Duchy of Aquitaine, and who is no longer numbered as a king of England.

ANSWER: Henry, the Young King [accept any description of Henry as son of Henry II; prompt on Henry]

[10] As a child, Henry was sent to live in the household of this man, his father's chancellor. As Archbishop of Canterbury, this man was supposed to crown Henry, but the falling-out with Henry II which eventually resulted in this man's murder precluded it.

ANSWER: Thomas Becket

[10] Henry's war with Richard focused on control of this French city, where Henry and his brother Geoffrey were besieged by Henry II. Its famous enamelware was popular for reliquaries of Thomas Becket.

ANSWER: Limoges <AP>

8. This equation demonstrates that a change in the average trait value in a population between generations is determined by the covariance between the trait values and the fitnesses of the subpopulations. For 10 points each:
[10] Name this equation which captures the effects of natural selection and the expected change in trait value due to factors other than direct selection, including drift and multi-level selection.

ANSWER: The **Price** equation

[10] The Price equation was formulated in response to Hamilton's description of this type of selection, whereby individuals may act to benefit another if the cost C to themselves is less than the benefit B to the other weighted by r, the coefficient of relatedness.

ANSWER: **kin** selection

[10] Kin selection can be used to explain this helpful form of social behaviour, defined as when an individual acts to enhance the fitness of another, at the cost of their own fitness, an example of which is older siblings caring for their parents' offspring.

ANSWER: **altruism** <LC>

9. In the 1980s, this country experienced massacres of so-called dissidents known as the Gukurahundi, and an earlier guerrilla war here saw one side stage Operation Eland while the other bombed a Woolworths department store. For 10 points each:

[10] Name this country whose independence movement is also known as the Second Chimurenga.

ANSWER: **Zimbabwe**

[10] This man recounted the years leading up to Zimbabwe's independence in his memoir *The Great Betrayal*. As Prime Minister of Rhodesia, he unilaterally declared independence in 1965 in defiance of the principle of 'no independence before majority rule'.

ANSWER: Ian **Smith**

[10] Smith was part of the delegation representing this Prime Minister at the negotiation of the Lancaster House Agreement. This Methodist bishop held power for only a few months after the Internal Settlement before being replaced by Robert Mugabe.

ANSWER: Abel **Muzorewa** <CJ>

10. Andres Serrano used some of this substance for a red-tinted photograph of a plastic crucifix. For 10 points each:

[10] Name this substance, which another artist applied to copper-based paints in his *Oxidations* series.

ANSWER: **urine** [accept **uric acid** or **Piss Christ**]

[10] This US artist invited his friends to urinate onto those *Oxidation* canvases in his studio, the Factory. He depicted another liquid in his *Campbell's Soup Cans* prints.

ANSWER: Andy **Warhol** [or Andrew **Warhola**]

[10] This Young British Artist notoriously put ten pints of his own blood into silicon casts of his head in his self-portrait series *Self*. He is also known for his sculpture *Alison Lapper Pregnant*, which stood on the fourth plinth in Trafalgar Square.

ANSWER: Marc **Quinn** <IB>

11. This group's origins can be traced back to the foundation of the Wardly Society, which were a break-off group from the Quakers. For 10 points each:

[10] Name this charismatic Christian sect, who are named for the ecstatic nature of their worship services and are sometimes known as the United Society of Believers in Christ's Second Appearing.

ANSWER: **Shakers** [accept **shaking Quakers**]

[10] This early Shaker leader emigrated to New York in 1774. This preacher advocated celibacy and was believed by Shakers to be the second coming of Christ.

ANSWER: Ann **Lee** [or **Mother Ann**]

[10] Shakers believe in a concept they call 'dualism' which holds this specific view about the nature of God, taken from Genesis 1:27. A description is acceptable.

ANSWER: God is both a **man and a woman** [or God is both **female and male**; accept obvious equivalents]
<GDC>

12. For a pendulum, the fixed point where it is hanging vertically down has this property, whereas the one where it is vertically upwards has the opposite of this property. For 10 points each:

[10] If a fixed point has this property, systems will converge to it from nearby points and small fluctuations away from it will decay, meaning that the system will stay nearby.

ANSWER: **stable** or **stability**

[10] At this type of fixed point, the eigenvalues of the Jacobian are complex. That means that the trajectory of the system through phase space oscillates at the same time as moving towards or away from the point, so that the trajectory describes this system's namesake curve.

ANSWER: **spiral**

[10] Changing control parameters can cause this type of bifurcation in symmetrical 1 dimensional systems. Its supercritical type occurs when a stable node becomes an unstable node and stable nodes are created either side of it.

ANSWER: **pitchfork** <LW>

13. The speaker of 'La Belle Dame Sans Merci' saw 'warriors' as well as 'kings and princes too' described by this adjective. For 10 points each:

[10] Give this adjective, which also appears in the second and fifth lines of John Suckling's 'Song', whose first stanza repeats the question 'Prithee why so [this adjective]?'

ANSWER: **pale** [do NOT accept or prompt on 'wan']

[10] This poet described the 'palely loitering' title figure in 'La Belle Dame Sans Merci'. He described a place 'where youth grows pale, and spectre-thin, and dies' in 'Ode to a Nightingale'.

ANSWER: John **Keats**

[10] The line 'Of pale-mouth'd prophet dreaming' ends two stanzas in this other poem. This poem's speaker talks about creating a place with 'A bright torch, and a casement ope at night, / To let the warm Love in!'

ANSWER: "**Ode to Psyche**" <IB>

14. In one work this philosopher claimed that the working class enjoyed being part of the industrial revolution. For 10 points each:

[10] This thinker argued that one framework of thought ought to look for what is 'irreducible to commodification' and should 'open up new ways of thinking that are unrepresentable in current language games'.

ANSWER: Jean-Francois **Lyotard**

[10] Lyotard borrowed the concepts of language games from this Austrian philosopher, the author of *Tractatus Logico-Philosophicus*.

ANSWER: Ludwig **Wittgenstein**

[10] In his most famous work, *The Postmodern Condition*, Lyotard defined postmodernism loosely as 'an incredulity to [these concepts]', instead arguing for 'multiplicity of theoretical standpoints'.

ANSWER: **metanarratives** [or **grand narratives** or **métarécit**] <GDC>

15. Several texts in the name of this ruler describe his lineage from Achaemenes through to his father Hystaspes. For 10 points each:

[10] Name this ruler, who describes in a foundation tablet how he built a palace at Susa where the Babylonians made the brick, the cedar came from Lebanon, the gold from Lydia and Bactria, and the stonecutters were Greeks.

ANSWER: **Darius I** or **the Great** [accept **Dārayavauš**]

[10] Darius' rise to power is described in the Bisitun inscription, which claims that Gaumata, one of these people, pretended to be Smerdis, the brother of Cambyses II. These people, who in Sasanian times were led by a chief figure called the *mowbed*, are described by Herodotus as one of six Median tribes.

ANSWER: **Magi**

[10] The palace at Susa had a great Apadana, much like this site. The Fortification and Treasury Archives of clay

tablets from this capital of the Persian Empire are valuable sources for the administrative structure of the empire.
ANSWER: **Persepolis** [accept **Pārsa**] <OSC>

16. In the second Brandenburg Concerto, this term refers to the instruments which are not the natural trumpet, recorder, oboe, or solo violin. For 10 points each:

[10] Give this term used for the non-soloist part of an orchestra in a *concerto grosso*, contrasted with the *concertino*.

ANSWER: **ripieno**

[10] The cantus firmus 'O Lamm Gottes [goh-tes], unschuldig' is sung by a ripieno soprano choir in the opening chorus of this work. This work's alto aria 'Erbarme dich' is accompanied by an extended violin obbligato.

ANSWER: St **Matthew Passion**, BWV 244 [**Matthäus-Passion**]

[10] This composer of the Brandenburg Concertos wrote the *St Matthew Passion* for St. Thomas's Church in Leipzig, where it was performed only three times in their lifetime.

ANSWER: **Johann Sebastian Bach** <AP>

17. Harry Houdini pays a visit to the wealthy central family in this novel, named simply Mother, Father, and Mother's Younger Brother. For 10 points each:

[10] Name this novel, in which Coalhouse Walker, who is fond of playing the piano, is arrested for complaining to the police after his Ford Model-T is vandalised.

ANSWER: **Ragtime**

[10] E. L. Doctorow, the author of *Ragtime*, wrote another novel in which Billy Barthgate starts working for this historical figure after impressing him by juggling. William S. Burroughs ['burrows'] wrote a closet screenplay titled for the 'last words' of this man.

ANSWER: Dutch **Schultz**

[10] Burroughs was a notable member of this literary movement, along with Jack Kerouac and 'Howl' author Allen Ginsberg.

ANSWER: **Beat** Generation <IB>

18. This work claimed that, contrary to previous claims, people working within the Ptolemaic astronomy were engaged in an entirely reasonable scientific project. For 10 points each:

[10] Name this work, which argues that the title scientist was indebted to the previous thinkers who were engaged in the same kind of puzzle solving as they were.

ANSWER: *The **Copernican Revolution***

[10] The author of *The Copernican Revolution* also wrote this book, which delineates the difference between periods of normal science and revolutionary science and outlines its author's incommensurability thesis.

ANSWER: *The **Structure of Scientific Revolutions***

[10] In *The Structure of Scientific Revolutions*, Thomas Kuhn outlines his theory of 'shifts' in these concepts, which involve a transition from 'normal science' to a new way of thinking. Kuhn defines these concepts narrowly as exemplars of good science.

ANSWER: **paradigms** <GDC>

19. This correction appears in formulae for the excited energy levels and spin-orbit splitting of multi-electron atoms. For 10 points each:

[10] Name this correction which accounts for the fact that the core of multi-electron atoms is not the same as the core of a hydrogenic atom. It is equal to the difference between the actual atomic principal quantum number and the effective principal quantum number.

ANSWER: **quantum defect**

[10] Simply replacing the principal quantum number with an effective principal quantum number in formulae works best for atoms in this group. Atoms in this group have a single outer electron, so the central field approximation works well for them.

ANSWER: **Alkali** metals or **group 1A**

[10] The quantum defect is a correction to over-correcting due to this effect. This effect causes the effective nuclear charge seen by the outer electrons to be less than the total nuclear charge due to repulsion by the inner electrons. It is described by Slater's rules.

ANSWER: **shielding** or **screening** <LW>

20. The 1945 publication of a translation of James Joyce's *Ulysses* in this city inspired a wave of modernist novels, including one structured after the *Inferno* whose central character, Adán, has a variant spelling of this city as his surname. For 10 points each:

[10] Name this capital city, described as 'a map / Of my humiliations and failures' by a writer who worked on the literary magazine *Sur*, which was published here.

ANSWER: **Buenos Aires** [accept *Adán Buenosayres*]

[10] This story, set in Buenos Aires and published in *Sur*, also references Dante in the names of the deceased Beatriz and her cousin Daneri, who 'set[s] to verse the entire face of the planet' in his poem 'The Earth'. In the postscript to this story, Daneri's house on Garay Street has been knocked down.

ANSWER: 'The **Aleph**' [or *El Aleph*]

[10] This Argentine author wrote 'The Aleph', and included his story 'The Garden of Forking Paths' in *Ficciones*.

ANSWER: Jorge Luis **Borges** [BOR-hes] <IB>