

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.

THE ANSWER TO THE LAST TOSS-UP SHOULD HAVE BEEN: **Ishiguro**

Packet 6

Toss-ups:

1. The agents of this disease have a ribonucleoprotein core comprising the monocistronic N, P, M, G and L genes. Atypical symptoms of this disease include Hener's vertigo syndrome, hemichorea and paraphasia. This disease is caused by agents in the genus *Lyssavirus*, which travel by retrograde axonal transport along the peripheral nerves from the site of entry. The only successful treatment regime for this disease was developed by Rodney Willoughby for the treatment of Jeanna Giese; that treatment is the Milwaukee protocol. For 10 points, name this disease whose symptoms include hydrophobia associated with feral dogs and spread by bites.

ANSWER: **rabies** [accept **hydrophobia** before mentioned, **Lyssavirus** before mentioned] <LC>

2. It's not Kantianism, but this school of philosophy defines freedom as 'the power to live as you will'. According to this school, the criterion of truth is the 'cognitive impression'. This school of philosophy argues that only what is morally good is good at all according to a work that outlines its 'paradoxes'. One thinker from this school claimed that existence was due 'either to Providence or blind atoms' in a work that also argues rationality and clear-mindedness allow one to live in harmony with logos. That work argues that health and wealth are irrelevant and is known as the *Meditations*. For 10 points, name this Greek philosophical school founded by Zeno of Citium.

ANSWER: **Stoicism** [accept word forms] <GDC>

3. The electronic energy spectrum of this material is approximately given by solutions to the Dirac equation for a single massless fermion. That approximation gives rise to the Dirac cone in the band structure of this material. Small pieces of this material have been found in the centre of onion-like spherules in pre-solar meteorites. This material can be prepared by ultrasonic exfoliation or by low-tech exfoliation using sticky tape. This material was first isolated by Konstantin Novoselov and Andre Geim and is the most electrically conductive material ever measured. For 10 points, name this two dimensional allotrope of carbon.

ANSWER: **graphene** [accept "**silicene**" before "onion"] <LW>

4. Late in life, this ruler acted in a play called *The Defeat of the Aggressors*. This man's wife's opium addiction intensified after her newborn daughter was murdered in front of her as punishment for an affair. Earlier, *Alice's Adventures in Wonderland* was one of the few English-language texts given to him by his tutor Reginald Johnston. The Lytton Commission interviewed this man while he was living in the Salt Tax Palace, where a relative of his known as Eastern Jewel had persuaded him to move. Earlier, Zhang Xun failed to restore him to power in the Forbidden City, where he had lost power following a 1911 revolution. The ruler of Manchukuo was, for 10 points, what last emperor of China?

ANSWER: **Puyi** <CJ>

5. In a work by an author from this country Ludovico is told by his teacher that 'you, the only spectator, will occupy the stage, the performance will take place in the auditorium'. In another novel by another author from this country, the title character kills the majority of people at a wedding after Lucas is hit by a bullet meant for the groom. This country is the setting of a novel where the protagonist promises agrarian reform to the peasants that have refused to till Don Gamaliel's land and is also home to the author of *Terra Nostra*. Twelve chapters of a novel from this

country each represent a month and feature a recipe prepared by the protagonist: that novel is *Like Water for Chocolate*. For 10 points, name this country, home to Juan Rulfo and Carlos Fuentes.

ANSWER: **Mexico** <GDC>

6. In a story by this author, Rufus tells Norton that he will only see his mother in heaven if he dies before he is corrupted, leading Norton to hang himself. In another story by this author, Mary Grace throws a book at Ruby Turpin, leading her to re-examine her religious life. John Wesley and June Star eat at Red Sammy's in Tennessee in a story by this author. In a story by this author, a typewriter salesman's mother is hit in the face with the pocketbook by a woman wearing the same hat as her. The Grandmother tells a man 'you're one of my babies – you're one of my own children!' before he shoots her in this author's most famous story. For 10 points, name this Southern Gothic author of 'Everything That Rises Must Converge' and 'A Good Man is Hard to Find'.

ANSWER: Flannery **O'Connor** <DC>

7. A conflict between two branches of this family saw one combatant incite a revolt of butchers in the capital, while the other relied on the support of their father-in-law Gian Galeazzo Visconti. The first ruler of this house bought the former County of Albon from Humbert II, while that monarch's father claimed the title Emperor of Constantinople through his wife Catherine of Courtenay. In order to liberate one king of this family from their captors, their son was forced to sign the Treaty of Brétigny, and this dynasty came to power when Philip the Fortunate was chosen as king over Joan of Navarre and Edward III of England. For 10 points, name this French royal house that ruled after the extinction of the direct line of Hugh Capet.

ANSWER: **Valois** <CJ>

8. Lesley M. Smith and Geoffrey Parker co-authored a book about a 'general crisis' of this period partly caused by cooling tied to the Maunder Minimum. The Bloody Corpus touched off the Reapers' War in this century that also saw the signing of the Treaties of Oliva and Andrusovo by the Polish-Lithuanian Commonwealth. Elsewhere, observers believed that a comet promised a catastrophic ending to a war begun in one year of this century after Frederick was declared King of Bohemia. One country lost up to half of its population thanks to famine and the effects of battles like White Mountain and Lützen, which saw the death of Gustavus Adolphus. For 10 points, name this century, in which the Peace of Westphalia ended the Thirty Years' War.

ANSWER: The **seventeenth** century [accept **1600s**] <CJ>

9. This author claims in one novel that 'Lyric poets generally come from homes run by women'. A poet turns his girlfriend's brother who is attempting to flee the country into the police in a novel by this author. In another novel by this author, an effort to revive a traditional 'Ride of the Kings' ceremony is interrupted by a motorcycle gang. In that novel by this author, Helena fails in a suicide attempt because she takes laxatives rather than aspirin after she leaves her husband for a man who claims that 'optimism is the opium of the people'. This author of *Life is Elsewhere* wrote a work in which Sabina wears her grandfather's bowler hat while having sex with Tomas. For 10 points, name this Czech author of *The Joke* and *The Unbearable Lightness of Being*.

ANSWER: Milan **Kundera** <GDC>

10. Paul Bohannon argued that the introduction of this thing to the Tiv people destroyed their traditional culture. One work titled for this thing argues that it tends to increase freedom but claims it results in the 'various elements of our existence [being] placed [in an] all-embracing teleological nexus'. William Jevons argued that this thing overcame the 'double coincidence of wants'. Georg Simmel wrote a work titled for the 'philosophy' of this thing, which Adam Smith claimed arose because of the inefficiencies involved in a barter economy. This thing is sometimes defined as being a 'unit of exchange'. For 10 points, what is this thing, examples of which are the pound and dollar?

ANSWER: **money** [accept **market** until 'titled'] <GDC>

11. This thinker rebutted St. George Jackson Mivart in one edition of their most famous work. John Henry Newman claimed that a theory developed by this thinker 'may simply be suggesting a larger idea of Divine Prescience and Skill'. In *Humani Generis* Pius XII decreed that 'research and discussions' into a theory originated by this thinker were not forbidden by the Catholic Church. In 2008, Malcolm Brown wrote an apology to this thinker on behalf of the Church of England in an essay called 'Good Religion Needs Good Science'. For 10 points, name this author of *On the Origins of Species*.

ANSWER: Charles **Darwin** <GDC>

12. The *Historia Brittonum* records how Urien besieged this place for three days and nights before his assassination, while Finian added onto a foundation at this site built at a royal request. Eadhbert was buried here in the place from which another man's remains had earlier been removed to Chester-le-Street. A 'Rainbow Arch' is one of the remnants of a building here that survived an event that 'poured out the blood of saints around the altar'. During that event, a group of gospels created by Billfrith were removed from the priory here along with the bones of St Cuthbert in order to flee the 'ravaging of wretched heathen men'. For 10 points, name this 'Holy Island' off the coast of Northumberland, the location of a devastating 793 Viking raid.

ANSWER: **Lindisfarne** <CJ>

13. One work by this composer begins with a four-note motif for the cello comprising two semitones with a major sixth rise between; that starts a modified sonata form movement with three rotations of expositional material. Another work by this composer begins with just four bars of A major for solo violin, and was originally dedicated to George Bridgetower. Movements in this composer's string quartets include 'The Difficult Resolution' and 'Heiliger Dankgesang', and he composed a replacement finale for his thirteenth string quartet, publishing the original separately. For 10 points, name this composer of the *Grosse Fuge* and the *Kreutzer Sonata*, as well as piano sonatas such as *Appassionata* and *Moonlight*.

ANSWER: Ludwig van **Beethoven** <GB>

14. The recollision probability is the key parameter in Noyes' theory of reactions controlled by this process. Reactions controlled by this process can also be described by the Collins-Kimbal model which builds on the Smoluchowsky [smo-loo-CHOV-ski] equation for this process. This non-heat transfer process' namesake P.D.E. is first order in time derivatives and second order in spatial derivatives and is equivalent to Fick's laws. One half the mean free path squared divided by the collision time gives the namesake constant of this process if modelled as a random walk. For 10 points, name this net motion of particles from a region of higher concentration to a region of lower concentration.

ANSWER: **diffusion** <JR>

15. A *Simpsons* episode whose title references this film involves Homer taking a shot containing moth venom and stirred with a pregnancy test. A scene in this film cuts back and forth between the two main protagonists watching an elephant parade and a supporting character reciting lines from a poem. The declaration of 'Too many guys think I'm a concept' in this film is often discussed as a criticism of the Manic Pixie Dream Girl trope. This movie opens with an impromptu train ride to Montauk on Valentine's Day, and the action is spurred by Clementine's visit to Lacuna Inc. Its title taken from Alexander Pope's *Eloisa to Abelard*, for 10 points, name this 2004 film in which Jim Carrey and Kate Winslet star as a couple who have their memories of each other erased.

ANSWER: ***Eternal Sunshine of the Spotless Mind*** [the Simpsons episode is 'Eternal Moonshine of the Simpson Mind'] <DC>

16. A certain derivative operation taken with respect to one of these objects can be expressed as the commutator of these objects. These mathematical objects can be defined as derivations from smooth functions to smooth functions or equivalently as cross sections of the tangent bundle. A given one of these objects defines a flow via the exponential map. Surface integrals of these objects can be related to volume integrals using Gauss' theorem. Taking

first the curl and then the divergence of one of these objects yields zero whilst the gradient of a scalar yields one of these functions. For 10 points, name these functions that assign a quantity with direction and magnitude to every point in space.

ANSWER: **vector fields** [prompt on vector; do NOT accept or prompt on just “field”] <JR>

17. A person with this last name worked with their son to produce the album *Translinear Light*. That harpist with this surname created an album inspired by traditional Indian music that is named for Satchidananda Saraswati. An artist with this surname recorded a track whose disjointed collection of ii [“two”]-V [“five”]-7-I [“one”] and V [five]-7-I [“one”] changes surprised Tommy Flanagan so much that his improvisation on the recording is clearly stilted. An artist of this surname recorded a tribute track called *Mr PC*. That artist of this surname recorded the song “Naima” as a tribute to his first wife and collaborated on *Cosmic Sounds* with his second wife, Alice after developing his “sheets of sound” style in the late 1950s. For 10 points, give this surname of the jazz saxophonist of *A Love Supreme*.

ANSWER: **Coltrane** [accept Alice **Coltrane** and John **Coltrane**] <GDC>

18. A ‘quaint device’ used by a character of this name in one play has been posited to be a false tabletop. In one work, a character of this name is ‘plac’d’ on the ‘gilded mast’ of a ‘painted vessel’ and raises his ‘azure wand’. A character of this name sings the lines ‘Come unto these yellow sands, / and then take hands’ and another one tells his charge to ‘Beware of all, but most beware of man!’. Belinda’s guardian in *The Rape of the Lock* has this name. Before one play’s events, a character of this name is trapped in a ‘cloven pine’ by Sycorax for twelve years, before being freed by Prospero. For 10 points, give this name of the speaker of ‘Full fathom five thy father lies’, the air-spirit from *The Tempest*.

ANSWER: **Ariel** <DC>

19. A woodblock print by this artist shows a menacing black figure next to a white-clad woman looking out to sea. This artist of *Two Women on the Shore* depicted a crowd of hatted figures walking towards the viewer as a single figure walks in the other direction in a painting titled for an ‘Evening’ on a street. Seated figures clasp their hands together and bow their heads in a number of paintings inspired by the death from tuberculosis of this artist’s sister Sophie. This artist included ‘Love’, ‘Angst’, and a ‘Death’ section containing *Death in the Sickroom* in his series *The Frieze of Life* and showed a blood-red sunset above the central figure on a bridge in his most famous work. For 10 points, name this Norwegian artist of *The Scream*.

ANSWER: Edvard **Munch** [moonk] <IB>

20. [note to moderators: this tossup is on a **county**, make sure you don’t say country!]

The Cajun and Zydeco Festival in a city in this UK **county** is the largest of that kind in Europe. The arts and crafts museum Court Barn is in this county. A pub is named The Whittle in this county because the first British jet engine was first tested at an airfield that was owned by a company named for this county. Chris Anderson has won the most races in an event that takes place on Cooper’s Hill in this county every year: that event involves the rolling of cheese down a hill and running after it. A cheese partly named for a city in this county has “double” in its name. In a nursery rhyme, Doctor Foster went to a city in, for 10 points, which county?

ANSWER: **Gloucestershire** <GDC>

Bonuses:

1. The confluence of the Chobe river and this river at Kazungula was for a time thought to be a quadripoint where four countries' borders met. For 10 points each:

[10] Name this river, on which the construction of the Kariba dam forced the displacement of the Tonga tribe. This river plunges into the First Gorge at the Victoria Falls

ANSWER: **Zambezi**

[10] Unlike the Zambezi which drains into the Indian Ocean, this other southern African river drains into an endorheic basin, forming an inland delta. Mokoro canoes are often used to navigate the delta, which is surrounded by the 'Buffalo Fence' to protect cattle but which restricts migration of wild species.

ANSWER: **Okavango** [accept **Cubango**]

[10] Both the Zambezi and the Okavango flow through this region of Namibia. Home to many endangered Wild African Dogs, a namesake Liberation Army of the Lozi people of this region attempted to secede in the late 1990s.

ANSWER: **Caprivi** Strip <OSC>

2. In a play written in this language, the Commander begins abducting women after arriving in the title village. For 10 points each:

[10] Name this language used to write *The Sheep-Well* and a play which begins with Rosaura, dressed as a man, arriving at the tower in which the Polish prince Segismundo has been imprisoned by his father Basilio, *Life is a Dream*. Those plays were written in its 'Golden Age'.

ANSWER: **Spanish** [or **Español**]

[10] In Pedro Calderon de la Barca's play *Life is a Dream*, Segismundo's old tutor Clotaldo nearly has Rosaura killed before recognising that she is carrying one of these objects that used to belong to him. In Jean Racine's *Phèdre*, the title character uses one of these objects to inculcate Hippolyte to her husband Thésée [teh-ZAY].

ANSWER: a **sword** [accept **espada** or **épée**]

[10] In Lope de Vega's *The Sheep-Well*, Frondoso picks up one of these weapons belonging to the Commander in the forest and uses it to force him to allow his lover Laurencia to leave. Frondoso is later imprisoned over the incident.

ANSWER: his **crossbow** [prompt on **bow**] <IB>

3. In this story, Nicholas has an affair with a carpenter's wife after grabbing her 'by the queynte' ['quaint'] and persuading her to have sex with him. For 10 points each:

[10] Name this bawdy 'tale', the second of the *Canterbury Tales*. In this tale, Alisoun [Allison] tricks Absolon into kissing her 'ers' instead of her lips, and Nicholas convinces John that the Great Flood is coming, leading John to hide in a bathtub hanging from the ceiling.

ANSWER: **Miller's Tale**

[10] In this other Chaucer work, Pandarus takes the candle and ostentatiously claims he is going off to read 'an old romaunce', leaving his two young charges alone together. This work has the same name as a 'problem play' by Shakespeare, which focuses more widely on the ongoing Trojan war.

ANSWER: **Troilus and Criseyde** [accept **Troilus and Cressida**]

[10] This short narrative poem by Chaucer can be best described as a combination of astrological allegory, love poetry, philosophical argument, and good old-fashioned ranting. The protagonist of this poem has a love affair with Venus until Phoebus shines his light on the pair, exposing them to the other gods.

ANSWER: The **Complaint** of **Mars** [prompt on just **Mars**] <DC>

4. This figure has been criticised for claiming that black Africans are 'cows with human faces'. For 10 points each:

[10] Name this figure, whose claim that science and religion are compatible with one another seems at odds with their belief that 'creatures' can be found on every planet and copper can be transformed into gold.

ANSWER: **Bahá'u'lláh** [Bu-'howl'-er]

[10] Bahá'u'lláh was the founder of this faith, which originated in nineteenth Century Iran. This religion's major book of worship is the Kitáb-i-Aqdas.

ANSWER: **Baha'i**

[10] This great-grandson of Bahá'u'lláh died of Asian flu before he was able to appoint a successor. That led to the election of the first Universal House of Justice, who now govern the Baha'i faith.

ANSWER: Shogun **Effendi** <GDC>

5. These organic compounds can be synthesised into polymers by Ziegler-Natta [ZEE-gluh-NATT-uh] catalysts. For 10 points each:

[10] Name this homologous series of unsaturated hydrocarbons which contain at least one carbon-carbon double bond. They can be expressed using the general formula C_nH_{2n} .

ANSWER: **alkenes** [do NOT accept or prompt on alkanes or alkynes: ask competitors to repeat and/or spell their answers for clarification if necessary]

[10] The simplest alkene, ethene, can be used to produce ethanol through a hydration reaction. That reaction is most commonly catalysed by this triprotic acid, adsorbed onto a porous support such as silica gel.

ANSWER: **phosphoric** (V) acid [or ortho**phosphoric** acid]

[10] Ethene can also be oxidised to form acetaldehyde through this cyclic process, in the presence of a palladium (II) chloride catalyst. In a subsequent step of this process, the palladium chloride catalyst is regenerated using copper (II) chloride as an oxidising agent.

ANSWER: **Wacker** process [or **Hoechst-Wacker** process] <AH>

6. Zoe Leonard's poem 'I want a president' includes the line 'I want a president who lost their last lover to' this illness, and a 1993 photo of the San Francisco Gay Men's Chorus shows only seven men wearing white shirts to symbolize their survival of this disease. For 10 points each:

[10] Name this sexually transmitted autoimmune disease whose crisis in the 1980s, as well as the Reagan administration's largely indifferent response to it, was detailed in Randy Shilts' book *And the Band Played On*.

ANSWER: **AIDS** [accept **HIV**]

[10] This African-American choreographer of *Revelations* and founder of a namesake New York Dance Theater persuaded their doctor to attribute their 1989 death to blood dyscrasia, reportedly in order to spare their mother the stigma of their AIDS diagnosis.

ANSWER: Alvin **Ailey**

[10] Before his own 1996 death from AIDS, Félix González-Torres created *Untitled (Portrait of Ross in L.A.)*, an installation commemorating the death of his partner Ross Laycock made up of a pile of these objects. Visitors to the installation were encouraged to take one of these things away with them, over time decreasing the pile to nothing.

ANSWER: pieces of **candy** [accept **sweets** or equivalents] <CJ>

7. Richard Wright attended this event on behalf of the Congress for Cultural Freedom, and Zhou Enlai signed on to an agreement about the overseas Chinese after surviving an assassination attempt while traveling to it. For 10 points each:

[10] Name this gathering of African and Asian leaders held in Indonesia in 1955 with the goal of opposing imperialism and promoting Third World cooperation.

ANSWER: **Bandung** Conference

[10] The Bandung Conference is usually seen as an early step in the formation of this group of states, established six years later in Belgrade. Several of its most prominent leaders, including Jawaharlal Nehru and Gamal Abdel Nasser, were present at the conference.

ANSWER: **Non-Aligned Movement**

[10] The goals of the Non-Aligned Movement were articulated in a 'Declaration' made in this city in 1979 by its country's then-leader. This city was also the site of the first Tricontinental Conference, an expansion of the

Organization for Solidarity for the People of Asia and Africa, in 1966.

ANSWER: **Havana** <CJ>

8. This philosopher critiqued GA Cohen's contention that equality means compensating people for being 'temporarily gloomy' with the claim that 'egalitarians are oblivious to the proper limits of state power'. For 10 points each:

[10] This philosopher argues against a certain type of utilitarian by suggesting that they 'abandon even prudent people to their fates when the risks they run turn sour' in their essay 'What is the Point of Equality?'

ANSWER: Elizabeth **Anderson**

[10] 'What is the Point of Equality?' is largely a critique of a school of political philosophy that Anderson calls 'this concept' egalitarianism. An idea named for the 'moral' form of this concept was coined by Thomas Nagel.

ANSWER: **luck**

[10] Anderson uses this thinker's argument that luck egalitarianism requires that people are judged according to other people's judgement of what they should have made of their opportunities. This thinker also wrote *The Road to Serfdom* and *The Constitution of Liberty*.

ANSWER: Friedrich **Hayek** <GDC>

9. A memorial for this author in the form of a bus was unveiled in London in 2006, but was denied entry into a city in which they lived nine years later. For 10 points each:

[10] Name this author, whose most famous written work involves Mene joining the army to impress Agnes, as well as the people in his home village of Dukana.

ANSWER: Ken **Saro-Wiwa**

[10] Ken Saro-Wiwa's daughter, Noo, contributed to *An Unreliable Guide to* [this city] in 2016. In Adichie's *Americanah*, Obinze becomes an illegal immigrant in this English city and Ben Okri spent much of his childhood in this city.

ANSWER: **London**

[10] Ken Saro-Wiwa was a writer an activist in this country, which is also home to the author of *The Lion and the Jewel*, Wole Soyinka.

ANSWER: **Nigeria** <GDC>.

10. These compounds are important in plant physiology, and include strigolactones, which were originally described as germination signals for parasitic plants, but were later found to play an important role in mycorrhiza recruitment. For 10 points each:

[10] Name this heterogeneous group of compounds, examples of which include strigolactones, abscisic acid and auxins. The auxin I·A·A is responsible for the phototropic response of growing shoots when it is moved to the darkened side of the shoot and induces cell elongation. A description is acceptable.

ANSWER: **phytohormones** or **plant hormones** [accept **hormones** alone but give 'phytohormones' as the answer; anti-prompt on a less inclusive group of phytohormones e.g. those named below]

[10] Name this gaseous phytohormone produced in the Yang cycle and whose reception by a cell activates the transcription factor E·I·N·3. It is associated with leaf abscission as well as fruit ripening, inhibition of leaf expansion and its characteristic triple response.

ANSWER: **ethylene**

[10] This phytohormone was first isolated from the agent of 'foolish seedling' disease of rice, and its name is derived from the fungal agent of that disease. Semi-dwarf wheat strains important in the Green Revolution are insensitive to this hormone as they lack function enzymes for its synthesis.

ANSWER: **gibberellin** <LC>

11 This novel is set in the fictional town of Port Ticonderoga and contains a story within a novel within a novel. For 10 points each:

[10] Name this novel, in which the narrator is unhappily married after growing up at Avilion. Children with the titular profession are forced to sew intricate carpets in a fantasy kingdom in a story told by Alex Thomas.

ANSWER: *The Blind Assassin*

[10] This Canadian author wrote *The Blind Assassin*, for which they received the Booker Prize in 2000. Their other works include *Cat's Eye* and *Alias Grace*.

ANSWER: Margaret Atwood

[10] In this other novel by Margaret Atwood, the Snowman - previously called Jimmy - is the only original human left alive in a world devastated by a deliberate pandemic. Both the title characters take their names from the online game *Extinctathon*.

ANSWER: *Oryx and Crake* <AH>

12. The names 'Hannibal' and 'Karolus Magnus' are carved on rocks in the foreground of a painting of this event in which the subject's cloak flies dramatically around them. For 10 points each:

[10] Name this event depicted by David [da-VEED], as well as in a much more subdued version by Delaroche, whose subject sits on a mule in a brown overcoat instead of on a rearing horse.

ANSWER: Napoleon crossing the Alps [accept reasonable equivalents]

[10] One of Delaroche's subdued *Napoleon Crossing the Alps* paintings hangs in this UK museum, as does Henry Holiday's *Dante and Beatrice*. Rossetti's *Dante's Dream*, which depicts the poet dressed in black watching the death of Beatrice is also in this museum.

ANSWER: The Walker Art Gallery

[10] The Walker Art Gallery also houses this painting by William Frederick Yeames depicting a scene set during the English Civil War in which a boy in a light blue suit stands in front of a table while a grey-clad man leans towards him.

ANSWER: *And When Did You Last See Your Father?* <AP>

13 The Guinean town of Niagassola claims to have the original example of this instrument; dating to the thirteenth century, it is at least the oldest which still exists. For 10 points each:

[10] Name this West African percussion instrument, in which wooden keys hang over resonators made from bottle gourds, whose holes are traditionally covered with material from spider egg sacs.

ANSWER: balafon

[10] The gyl [jeel] is a type of balafon used by the Dagaare people tuned to this type of scale, which is a prominent element in many musical traditions, such as in the basic scale of Chinese music.

ANSWER: pentatonic

[10] The ngoni, also made from a bottle gourd, is thought to have influenced the invention of this string instrument by slaves in the Caribbean. Now a staple of country music, it was traditionally played in the clawhammer style, and is characterised by the use of roll patterns and drone notes.

ANSWER: banjo <AP>

14. These design patterns include "maybe" and "I/O" and must include a converter or return function as well as a combinator or bind function. For ten points each:

[10] Give this design pattern enabling various effects to be handled explicitly whose bind operation must be associative and whose return operation is an identity for bind.

ANSWER: Monads

[10] Monads are a feature often seen in languages of this paradigm. Languages like Haskell are described as belonging to this paradigm since they avoid side effects.

ANSWER: Functional

[10] Iteration in functional programming is often achieved via this technique which has a tail form. This technique describes functions that can call themselves, and is also used when defining a Fibonacci number as the sum of the previous two Fibonacci numbers or n factorial as n times n minus one factorial.

ANSWER: **Recursion** <JR>

15. YouTube isn't just for Let's Plays and bootlegged quiz shows: let's talk about political YouTube. For 10 points each:

[10] YouTubers such as TJ Kirk and Thunderf00t are part of a YouTube community clustered around this ideology. Outspoken holders of this ideology include Richard Dawkins and Christopher Hitchens.

ANSWER: new **atheism**

[10] Various anti-feminist YouTubers helped bring the movement known by this name to prominence in 2014. This movement was claimed to be a protest against ethics violations in a certain type of journalism, but was in fact a harassment campaign against various female media figures.

ANSWER: **Gamergate**

[10] This YouTuber's series 'Tropes vs Women in Video Games' on the channel FeministFrequency was a central target of GamerGate. In it, they describe various sexist media tropes in video games, such as 'Women as Background Decoration' and 'Women as Reward'.

ANSWER: Anita **Sarkeesian** <DC>

16. T-O maps, popularised by Isidore of Seville, are heavily simplified examples of this type of map, other types of which are known as Macrobian, Beatus, and Complex. For 10 points each:

[10] Name this type of medieval map, whose examples vary between extreme schematisation and minute detail, the latter of which could be seen in the heavily-annotated Ebstorf example before its destruction in 1943.

ANSWER: **mappa mundi** [accept **world maps**]

[10] Contrasting with the large-scale T-O maps of the three continents are these medieval maps of coastlines which are constructed using a network of rhumbines radiating from compasses spread around the map.

ANSWER: **portolan** chart

[10] Rather than T-O maps, Islamic cartographers, such as Al-Khwarizmi, drew directly on the *Geography* of this Greek author, who lived in Alexandria and also developed a namesake astronomic system in their *Almagest*.

ANSWER: Claudius **Ptolemy** <AP>

17. This phenomenon places the principle limit on the resolution of optical equipment. For 10 points each:

[10] Name this phenomenon, the spreading out that occurs when a wave passes through an aperture of size comparable to the wavelength.

ANSWER: **diffraction**

[10] This person's namesake theory states that information about small spatial separations is diffracted to high angles so a large aperture is required to reconstruct small details. This person also discovered the resolution limit for a microscope.

ANSWER: Ernst **Abbe**

[10] Diffraction patterns are given exactly by the Fresnel-Kirchhoff [fruh-NELL-KURCH-off] integral. In the far field, that formula reduces to this type of diffraction, where the diffraction pattern is the Fourier transform of the aperture.

ANSWER: **Fraunhofer** diffraction <LW>

18. Coined from words meaning 'remote' and 'people' by Willen van Schendel, James C. Scott's use of this term has been criticised as exaggerated and overly-reliant on oral traditions. For 10 points each:

[10] Name this term which refers to a large upland area of South-East Asia, which Scott characterised by its resistance to state-government.

ANSWER: **zomia**

[10] Scott argues that the deliberate rejection of this ability is a feature of zomia peoples like the Hmong, who claimed that their books had floated away while they crossed a river to escape the Han. Study of the history of this ability is hindered by the fact that, of its two elements, only writing leaves tangible evidence.

ANSWER: **literacy** [accept **reading** and **writing** or reasonable equivalent]

[10] Laos is the only country fully covered by Scott's definition of zomia. Its prehistoric inhabitants created this landscape, covered in thousands of namesake stone cylinders, though it was heavily bombed by the USA during the Secret War.

ANSWER: **Plain of Jars** <AP>

19. According to Islamic tradition, the first *hijra*, or migration of Muhammad's followers, was into this country. For 10 points each:

[10] Name this modern-day country historically known as Abyssinia, whose city of Yeha in Tigray may have been the capital of the ancient D'mt [DAH-mat] kingdom.

ANSWER: **Ethiopia**

[10] The Migration to Abyssinia took place during the rule of this kingdom, which was converted to Christianity by the former slave Frumentius in the fourth century. This kingdom replaced Kush as the main supplier of sub-Saharan goods to Egypt through its port of Adulis.

ANSWER: **Axum** [accept **Axumite** dynasty]

[10] The construction of these objects by rulers of Axum predated the adoption of Christianity. They were used as grave markers or as sites of proclamation, such as the Ezana Stone that recorded its namesake king's conquest of Meroë [me-ROW-eh].

ANSWER: **stelae** [accept **obelisks**] <CJ>

20. In social psychology, deindividuation is a phenomenon which affects members of these entities. For 10 points each:

[10] Name these entities, whose behaviour is discussed by Floyd Allport's convergence theory. Major riots such as London 2011 often encourage discourse on these entities' psychology.

ANSWER: **crowds** [or **mobs** or **groups** of people]

[10] This polymath is widely credited with creating crowd psychology as a discipline with their 1895 work *The Crowd: A Study of the Popular Mind*. This person argued that 'psychological crowds' are created by phenomena including anonymity and suggestibility.

ANSWER: Gustav **Le Bon**

[10] Elias Canetti wrote a work on crowd psychology, entitled *Crowds and this concept*. Robert Dahl's first major work is titled for this concept, which he subsequently studied using the case of New Haven, Connecticut.

ANSWER: **power** [accept **macht**; accept **Crowds and Power** or **The Concept of Power**] <AH>