**MKULTRA II: A Fucking Didactic Educational .docx File**

**The Milton Keynes Ultimate Liaison of Trash and Academia**

**Edited by Emma Laslett, Ian Bayley, Hugh Bennett, Tristram Cole, Edmund Dickinson, Jonathan Elliott, David Knapp, David Stainer and Christopher Stern**

**Round 7 - Packet by Emile Heskey’s Jacuzzi Party (Evan Lynch, Ellie Warner, Matthew Nixon and Tom Hill)**

Tossups

1. **Despite being 100 m behind the leader at one point, this man fought back to finish just 0.2 seconds behind gold medalist Gaston Reiff. World-record holder Jim Peters attempted to demoralize this athlete by telling him that the punishing speed they were running at was “too slow”, to which this man responded by simply speeding up. Despite being a national hero, this man was forced to work in a uranium mine for over five years following the (\*)** Prague Spring. This man’s decision to run his first marathon on the day of the event resulted in him becoming the only person to have won the 5000 m, 10 000m and marathon at the same Olympics, doing so at Helsinki in 1952. For ten points, name this Czechoslovak long-distance runner.

ANSWER: Emil **Zátopek**

2. **A complete lattice has this property if each element is equal to the least upper bound of the directed set of elements “way-below” it. According to a theorem of Peter Freyd, a functor from a complete category has a left adjoint if and only if it satisfies the “solution set criterion” and has this property, which means that it preserves small products and equalisers. Every function into a space with the coarse (\*)** topology has this property, since the preimage of an open set in the codomain of such a function cannot fail to be open. Every Lipschitz function automatically satisfies the uniform variety of this property. Although the Weierstrass function has this property at every point, it is differentiable nowhere. For 10 points, name this mathematical property that implies a small change in the input of a function can create an arbitrarily small change in its output.

ANSWER: **continuity** [accept word forms such as **continuous**]

3. **In one painting by this artist, the green face of the title figure is surrounded by text and is partially obscured by a white fish. This artist used the club symbol from playing cards as the head of the “Athlete of the Future” in a character design for the opera *Victory over the Sun*. This artist of *An Englishman in Moscow* used the “Principle of Glittering”to subtitle his work *The Knifegrinder.* This mentor of El Lissitzky wrote *On New Systems in Art* and painted “a peasant woman in two dimensions” using only a red (\*)** parallelogram. This artist’s contribution to the 0.10 exhibition included *Black Square* and he later painted a tilted white square on a white background in *White on White*. For 10 points, name this Russian artist who originated abstract geometric art and founded Suprematism.

ANSWER: Kazimir (Severinovich) **Malevich**

4. **In *Big Sur*, Jack Kerouac describes this novel as “stupid and senseless”. One character in this novel is compared to a child “whose joy is to dribble into his toy trumpet”. In the prologue to this novel, a description of the protagonist enthusing about the smell of an araucaria plant is provided by his landlady’s nephew. The protagonist of this novel occasionally thinks about his distant lover (\*)** Erica, and greatly admire the genius of men like Mozart and Goethe. The main character of this novel has an affair with Maria, but declines a threesome with her and a saxophonist called Pablo. The protagonist contemplates suicide and receives a Treatise on the title animal. This novel climaxes at the Magic Theatre where the mad protagonist stabs Hermine. For 10 points name this novel about Harry Haller by Herman Hesse.

ANSWER: *Der* ***Steppenwolf***

5. **One of this work’s creators remarked that ‘this is the result of two hours of devotion to the Virgin of Mercy’. The creation of this work inspired a comic opera composed by Paul Fowler. Ryanair offered a special discounted flight to the nearest airport for those wanting to visit it, and over 40,000 people paid a one-euro fee to see this work. This painting is located in the (\*)** Santuario de Misericordia church in the town of Borja, and is an unwitting collaboration between Elias Garcia Martinez and a well-meaning churchgoer named Cecilia Giménez, who clumsily restored parts of this work that had flaked off. For 10 points, name this fresco, which has been described as ‘a crayon sketch of a very hairy monkey in an ill-fitting tunic’.

ANSWER: ***Ecce Homo*** [accept ***Ecce Mono***, accept any descriptive answers in the vein of ‘**Beast Jesus**’, ‘**Potato Jesus**’, ‘**Monkey Jesus**’, ‘that fresco of **Jesus** in **Zaragoza’**, prompt on partial answers and watch them flounder]

6. **Yang et al. reported attomolar detection of analytes by performing this technique on a Slippery Liquid-Infused Porous Surface. The “hyper” form of this technique uses high-power Q-switched lasers to achieve frequency-doubled higher-order detection. Two lasers are used in a “coherent” form of this technique, which uses surface plasmons to enhance the signal when it is surface (\*)** enhanced. Totally symmetric modes in centrosymmetric molecules can be observed by this technique, whose selection rule requires a molecule to be anisotropically polarisable. Stokes and anti-Stokes branches surround the absorption from Rayleigh scattering in this technique contrasted with infrared spectroscopy. For 10 points, what two-photon type of spectroscopy is named for an Indian physicist?

ANSWER: **Raman** spectroscopy

7. **The Spanish ambassador to England described the leader of this event as “a person of great truth and virtue”. The naval captain John Hawkins acted as a double agent during this event and was later rewarded with an appointment of Treasurer to the Royal Navy. Having earlier issued the controversial bull *Regnans in Excelsis,* Pope (\*)** Pius V declared his support for this event, whilst other supporters included the bishop of Ross and a messenger arrested at Dover, Charles Baillie, whose confessions during torture led to the deciphering of a series of letters. This event was followed 15 years later by the Babington Plot with the same objective. For 10 points name this 1571 attempt to assassinate Elizabeth I, organised by a namesake Florentine banker.

ANSWER: The **Ridolfi** Plot

8. **This man ignored his father’s advice to seek divine assistance, claiming that “even a coward could be successful with the help of the gods”. He attacked the Phrygian king Teleutas, and kidnapped his daughter Tecmessa. He defeated Hector twice, but was prevented from killing him by the gods. This man commanded the left wing of the Greek forces during the Trojan War, and was accompanied into battle by his bow-wielding half-brother (\*)** Teucer, who protected this man’s body after his death. This figure received his legendary strength as a child, when Heracles wrapped him in the skin of the Nemean Lion. For 10 points, name this son of Telamon, who feuded with Odysseus before falling on his sword.

ANSWER: **Ajax the Great** [prompt on ‘Ajax’, accept **Greater Ajax** or **Telamonian Ajax**; do not accept ‘Ajax the Lesser’ or ‘Ajax the Locrian’]

9. **After this battle, a young boy was acclaimed as a hero for continuing to play his bugle in the face of enemy projectiles. During this battle, the losing side faced heavy casualties whilst crossing the Rodriguez Canal, due to Thomas Mullins’ failure to bring the correct equipment. Thanks to a delay in relaying information, this battle, in which Edward Pakenham was killed, (\*)** took place several weeks after a peace agreement was reached at the Treaty of Ghent. A pardon was offered to French pirate Jean Lafitte after he provided crucial assistance to the victor of this battle. For 10 points, name this decisive victory for Andrew Jackson at the end of the War of 1812, which took place in and around a Louisiana city.

ANSWER: Battle of **New Orleans**

10. **This piece of music is heard over shots of a burning Hollywood sign in *Demolition Man*, and a variation on it is used in the soundtrack of *Jason and the Argonauts* during the scattering of the hydra’s teeth. Stephen Sondheim repeatedly referenced this work in the music to *Sweeney Todd*, and it is heard more clearly during the opening credits of Tim Burton’s adaptation. In Fritz Lang’s *Metropolis*, this melody is heard when Freder observes the statues of the (\*)** seven deadly sins in a cathedral. This melody is also quoted during the opening shot of Stanley Kubrick’s *The Shining*, as the camera pans over a lake. Also appearing in Liszt’s *Totentanz* and Berlioz’s *Symphonie Fantastique,* for 10 points, name this widely quoted Gregorian plainsong setting of a 12th century hymn.

ANSWER: ***Dies Irae*** [accept ***Day of Wrath***]

11. **This nation’s highest peak is topped by a commemorative bust of a man killed on horseback during an ill-fated two-man battle charge. The largest natural freshwater lake in this nation has a name derived from its coloration due to the limestone deposits within it, the Laguna de Leche or “Milk Lagoon”. The southeast corner of this nation is home to a national park named for Alexander von Humboldt. The Cayo Coco and Cayo Guillermo are kays in an island chain that stretches along the north side of this nation; that chain is the (\*)** Sabana-Camagüey archipelago. Other islands which belong to this nation include the Colorados, as well as the Canarreos, which contain the Isla de la Juventud. For ten points, identify this Caribbean island nation governed from its capital Havana.

ANSWER: Republic of **Cuba**

12. **GQ magazine has recently suggested that referring to a basketball hoop as a “ring” is evidence for this theory. Julie Lozano notably created a cocktail named for this theory garnished with plastic machetes. According to polls, 10% of registered voters in Florida believe this theory to be true, while a further 28% could not rule it out. This theory originated in a 2013 tweet shortly after its subject spoke against the (\*)** Affordable Care Act, and has been propagated by Facebook groups such as “Bernie Sanders’ Dank Meme Stash”, despite the fact that the subject was only born in 1970, after all but one of the events in question had occurred. For 10 points, identify this mock-conspiracy theory which suggests that the Republican Senator for Texas is also a notorious serial killer.

ANSWER: Ted **Cruz** being the **Zodiac** Killer [accept clear-knowledge alternatives including both underlined parts]

13. **Isaac Newton traced back several ancient monarchs to this figure in his treatise *The Original Of Monarchies*. In Latter-Day Saint theology, this man is regarded as the same individual as the archangel Gabriel. This man reacts to an unspecified act by his son (possibly looking at him naked) by cursing the nation of Canaan. John Chrysostom argued that this man’s (\*)** drunkenness was defensible, as he was the first human to taste wine and therefore did not know its effects. This man was one of the few survivors of an event which began on “the seventeenth day of the second month,” along with his wife and sons, Shem, Ham and Japheth. For ten points, identify this biblical figure who spent forty days on the waters of the Great Flood in an ark.

ANSWER: **Noah** [accept **Noé** or **Noach**]

14. **A prose poem from this country is believed to be based on the author’s affair with George Barker. In a short story from this country Janet reflects on her father’s terminal illness whilst visiting a planetarium. In one novel from this country a parson’s wife is hit on the head by a snowball which causes her to go into premature labour. In addition to *By Grand Central Station I Sat Down and Wept,* and *The (\*)*** *Moons of Jupiter*, works from this country include a trilogy about Dunstan Ramsey and one which popularised the term ‘McJob’, *Generation X*. The short story collection *Dance of the Happy Shades* is by an author from this country. Douglas Coupland and Robertson Davies are from this country which is home to the authors of *The English Patient* and *Life of Pi*. For 10 points name this country of Alice Munro.

ANSWER: **Canada**

15. **This man wrote that he put his trust in “immortalists with points to prove” and wrote of “the stretches between godliness and sin”. A wall in Wellington is named for this man, due to persistent graffiti memorialising him. This man watched Werner Herzog’s *Stroszek* and listened to Iggy Pop’s *The Idiot* shortly before his death, after his final performance at Birmingham University. This singer’s band was initially called Warsaw, but its later, more famous name referred to purported (\*)** brothels in Nazi concentration camps. Whilst dancing on stage, this man famously mimicked the epileptic fits he frequently suffered. His memorial stone in Macclesfield Cemetery is inscribed with the words “Love Will Tear Us Apart.” For 10 points, name this English post-punk musician, the lead singer of Joy Division.

ANSWER: Ian **Curtis**

16. **A male chorus anachronistically tells one character that pain is given meaning and sin redeemed by Christ’s suffering in an opera set in this place. In the last movement of a tone poem named for this place, a drunken reveler is depicted by a solo tenor trombone, and music from *Benvenuto Cellini* and a cor anglais solo feature in a (\*)** Berlioz overture named for this place. Another work named for this place uses the sound of a nightingale recorded on to a phonograph at the end of its third movement. In an opera set in this city, Junius goads Tarquinius into testing the chastity of Collatinus’ wife. For ten points, identify this city, the namesake of a trilogy of works by Ottorino Respighi, the setting of Britten’s *The Rape of Lucretia*.

ANSWER: **Rome** (prompt on ‘Italy’)

17. **In this disease, membrane-limited vacuoles called Maurer’s clefts form in the cytosol of affected cells. One stage of this disease is caused by the binding of the proteins ankyrin and KAHRP, the latter of which forms knobs on the surface of infected cells. This disease can recur up to several years later due to the dormancy of hypnozoites, which hide in the (\*)** liver before transforming into merozoites, and people with either G6PD deficiency or one copy of the haemoglobin beta allele exhibit resistance to this disease. One compound found to treat this disease, artemisinin, is most effective against the *falciparum* species of *Plasmodium* parasites. For 10 points, name this disease which is treated by quinine and spread by *Anopheles* mosquitoes.

ANSWER: **malaria**

18. **One character in this novel is based on the murderess Maria Manning. A police inspector in this novel has a vision of a mill which looks like “an instrument of human torture”. The protagonist of this novel is nicknamed little old woman, Dame Durden and Cobweb by a man who proposes to her. Characters in this novel include a gin drinking rag and bottle merchant nicknamed the (\*)** Lord Chancellor, and the man child Horace Skimpole. Towards the end of this novel Inspector Bucket catches Mademoiselle Hortense, who had murdered the lawyer Tulkinghorn. In this novel Ada marries Richard Carstone and Krook spontaneously combusts. The heroine of this novel, Esther Summerson, discovers she is the illegitimate daughter of Nemo and Lady Dedlock. For 10 points name this novel by Charles Dickens which features the long running case of Jarndyce and Jarndyce.

ANSWER: ***Bleak House***

19. **It's not Danish, but a creole with this language as a superstrate was wiped out following the 1987 death of US Virgin Islands resident Alice Stevenson. Speakers of one dialect of this language glottalise the voiced velar fricative when speaking the principal form of this language such that the words for "hero" and "money" become homophonous, while features such as (\*)** double negation and contracting the indefinite article do not prevent a daughter of this language, spoken in Africa, from being mutually intelligible with this European language. West Flemish is a dialect of, and Afrikaans a daughter of, for 10 points, which Germanic language spoken in Suriname, Belgium and the Netherlands?

ANSWER: **Dutch**

20. **This state is home to the oldest live theatre venue still in operation, and its top tourist attraction is an open-air museum on a site that closely resembles Bentham’s panopticon. That former prison is named after former Lieutenant-Governor George Arthur, who organised a 30-mile-long chain of people that swept through the entirety of this region for six weeks to displace the native population in the Black War. It was discovered by a man who landed at (\*)** Blackmans Bay in 1642 after a storm drove him away from Storm Bay. That man had sailed via Mauritius from Batavia. Once it achieved self-government in 1855, this island was renamed after the discoverer that the Governor of the Dutch East Indies, Anthony Van Diemen, had sent. For 10 points, name this island state in the Commonwealth of Australia.

ANSWER: **Tasmania**

Bonuses

1. For ten points each, answer the following about the geography of Sporcle’s favourite nation, Kyrgyzstan:

[10] Known as Frunze prior to independence, this city at the base of the Kyrgyz Ala-Too Mountains is the capital and largest city of Kyrzgyzstan.

ANSWER: **Bishkek**

[10] East of Bishkek is this largest lake of Kyrgyzstan, the second largest mountain lake in the world after Lake Titicaca. Its name literally means “warm lake” in Kyrgyz.

ANSWER: **Issyk-Kul**

[10] Wikipedia dubiously claims that Kyrgyzstan is occasionally referred to as the “Switzerland of Central Asia”, due to the fact that over 80% of the country is covered by this mountain range shared with China.

ANSWER: **Tian Shan**

2. This anti-conservative art movement had an official magazine called *Ver Sacrum*. For 10 points each:

[10] Identify this movement established in a certain European capital by artists including Max Kurzweil, Koloman Moser, and the architect Joseph Maria Ulbrich.

ANSWER: **Vienna Secession** (or **Wiener Secession**; accept **Union of Austrian Artists** or **Vereinigung Bildender Künstler Österreichs**; prompt on “secession”)

[10] The Secession building houses the Beethoven Frieze, a work by this artist, that, like his works *Portrait of Adele Bloch-Bauer* and *The Kiss*,makes heavy use of gold.

ANSWER: Gustav **Klimt**

[10] This disciple of Klimt founded the Neukunstgruppe and died in the Spanish flu epidemic of 1918. His works include *Death and the Maiden* and a portrait of “Wally” Neuzil.

ANSWER: Egon **Schiele**

3. In 1867 this man correctly predicted that the Austro-Hungarian Empire would collapse during a great European war. For 10 points each:

[10] Name this lawyer and revolutionary who briefly led Hungary shortly before its unification with Habsburg Austria.

ANSWER: Lajos **Kossuth**

[10] Kossuth’s coup took place during this “Year of Revolution”, which also saw uprisings in Germany, Denmark and the establishment of the Second Republic in France.

ANSWER: **1848**

[10] After being defeated by the Habsburgs, Kossuth fled Buda with this object, which he buried in a forest in Romania. This object was later taken to Vienna and then Fort Knox before it was ceremonially returned to Hungary by Jimmy Carter.

ANSWER: **Crown of St Stephen** [accept **Holy Crown** of Hungary, but prompt on just ‘crown’]

4. Everyone loves right wing populism! [citation needed] For ten points each, answer some questions on a few of its rising stars:  
[10] This Freedom Party candidate may yet become President of Austria, as mishandling of votes in his defeat to Alexander van der Bellen of the Greens means the election will have to be redone.  
ANSWER: Norbert **Hofer**  
[10] This party, led by Timo Soini, was founded after the dissolution of the Finnish Rural Party in 1995. It holds 37 seats in the Finnish parliament and is currently part of a coalition government.  
ANSWER: **Finns** Party [accept **True Finns**, **Perussuomalaiset** or **Sannfinländarna**]  
[10] Closer to home, we of course have UKIP, who at time of publication may or may not be led by Nigel Farage. This UKIP MP for Clacton was the first in his party ever to be elected to Parliament.  
ANSWER: Douglas **Carswell**

5. Psychoanalysis isn't just a boys’ club! Women can think about brains and emotions and stuff too. For 10 points each:

[10] This psychoanalyst furthered work on ego psychology begun in publications such as *Beyond the Pleasure Principle* in her book *The Ego and the Mechanisms of Defense*.  
ANSWER: Anna **Freud** [both names required, prompt on ‘Freud’]  
[10] Anna Freud notably disagreed with Melanie Klein on theories of the psychology of these people, who were her primary analytical focus. Studies of these people may involve observing them playing with toys or learning to speak.  
ANSWER: **children**[10] Another famous female psychoanalyst was this German creator of the concept of "womb envy" who wrote *The Neurotic Personality of Our Time* and founded the *American Journal of Psychoanalysis*.  
ANSWER: Karen **Horney** (pron. ‘horn-eye’)

6. The most common of these elements is the Alu element. For 10 points each:

[10] Name these sequences of DNA that can move around the genome, discovered by Barbara McClintock in maize.

ANSWER: **transposon**s [or **transposable elements**, or **jumping genes**]

[10] Transposons mediate this process, where coding sequences of DNA are rearranged to form new genes. Different mechanisms of this process use LINE elements, helitrons and LTR retrotransposons.

ANSWER: **exon shuffling** [prompt on partial answers]

[10] Retrotransposons copy themselves throughout the genome via an RNA intermediate, which is copied back into the genome using one of this class of enzymes.

ANSWER: **reverse transcriptase**s

7. This poem describes the hasty ‘uncoffined’ burial of an anonymous young English soldier during the Boer War. For 10 points each:

[10] Name this poem which laments that “His homely Northern breast and brain / Grow to some southern tree / And strange eyed constellations reign / His stars eternally’.

ANSWER: ***Drummer Hodge***

[10] *Drummer Hodge* comes from rural Wessex, and dies a tragic death – much like many of the other characters created by this poet of *Hap* and *The Darkling Thrush.*

ANSWER: Thomas **Hardy**

[10] In Hardy’s *Tess of the D’Urbervilles* this character assumes that all farm-folk are pitiable dummies known as Hodge when he comes to board at Talbothays Dairy.

ANSWER: **Angel** **Clare** (accept either)

8. This work declares the words "renown and grace" uttered by Macbeth to be a "masterly line", and thus uses Macbeth's despair after the murder of Duncan to illustrate sin. For 10 points each:

[10] Name this work written under the pseudonym Anti-Climacus, which contrasts despair with faith and begins by discussing the raising of Lazarus.

ANSWER: *The* ***Sickness unto Death*** (accept ***Sygdommen til Doden***)

[10] *The Sickness Unto Death* was written by this Danish existentialist author of *Either/Or* and *Fear and Trembling*.

ANSWER: Soren (Aabye) **Kierkegaard**

[10] Various sins of despair are described in *The Sickness Unto Death*, including this sin which he describes as "the highest intensification of sin". The Bible describes it as the only unforgivable sin.

ANSWER: **Blasphemy** of the Holy Spirit [accept clear-knowledge alternatives]

9. The reign of this king was described by historian Sir Frank Stenton as “a time of national degeneracy”. For 10 points each:

[10] Name this English king and father of Edward the Confessor who was driven from England by Swein Forkbeard. His famous nickname means “ill-counseled”.

ANSWER: **Aethelred II** “Unraed” [accept **Aethelred the Unready**; prompt on “Aethelred”]

[10] Swein’s invasion was possibly triggered by the murder of his sister during this 1002 event, during which Aethelred supposedly ordered the death of every Dane in England.

ANSWER: **St Brice’s Day Massacre**

[10] The Anglo-Saxon Chronicle writes that this man “betrayed his natural lord and all the people of England”. This ealdorman of Mercia betrayed Aethelred by defecting to Sweyn’s invading force.

ANSWER: **Eadric Streona** [prompt on ‘Eadric’]

10. In early 2016, it was reported that insects are causing this structure to turn green. For 10 points each:

[10] This iconic structure has also been afflicted by acid rain produced by pollution from the nearby Mathura oil refinery, as well as by a decline in groundwater causing parts of it to tilt.

ANSWER: the **Taj Mahal**

[10] One of the first European visitors to the Taj, Jean-Baptiste Tavernier, may have originated the long standing myth that a black version of it was planned to face it, across this river.

ANSWER: **Yamuna** River [accept **Jamuna**]

[10] In 2006, archaeologists reconstructing a pool in the Moonlight Garden found a more credible explanation for the black Taj in the dark reflection seen in the water, befitting this Mughal emperor’s obsession with symmetry.

ANSWER: Mirza Shahabuddin Baig Muhammad Khan **Shah Jahan** [accept **Khurram**]

11. In this novel, the narrative is interrupted by passages from a book entitled *The World Was Silent When We Died* which describes the political situation during the Biafran War. For 10 points each:

[10] Name this novel in which university lecturer Olanna employs the houseboy Ugwu, and Richard falls in love with her twin sister Kainene.

ANSWER: ***Half a Yellow Sun***

[10] *Half a Yellow Sun* is a novel by this author of *Purple Hibiscus* and *Americanah*

ANSWER: Chimamanda Ngozi **Adichie**

[10] This other Nigerian author wrote about a spirit child called Azaro in *The Famished Road*.

ANSWER: Ben **Okri**

12. This psychedelic work is based on a pitch lattice of harmonic sevenths and perfect fifths, For 10 points each:

[10] Although this piece was debuted in 1974, its composer still considers it unfinished. Performances of this work last between 5 and 6 hours, and its name puns on a work by J S Bach.

ANSWER: The **Well-Tuned Piano**

[10] *The Well-Tuned Piano* is a work by this minimalist composer, who founded the *Theatre of Eternal Music*, a collective that focused on creating avant-garde drone music.

ANSWER: **La Monte** **Young** (accept either underlined section)

[10] Young has said that his work was heavily influenced by this kind of music pioneered by Schoenberg and Webern.

ANSWER: **serialism** (accept **twelve tone technique**)

13. The final of this TV show was the most watched TV broadcast in the UK in 2015. For 10 points each:

[10] Name this competition, judged by Mary Berry and Paul Hollywood, in which contestants compete in signature, technical and showstopper challenges to avoid being eliminated.

ANSWER: The **Great British Bake Off** [accept **GBBO** or **Bake Off**]

[10] This 2015 winner of the competition was crowned star baker on three occasions before the final. Her popularity on social media was heralded as an important step towards acceptance of cultural diversity.

ANSWER: **Nadiya Hussain** [accept either name]

[10] Nadiya’s final showstopper of the competition was a three-tiered cake given this name, a play on the title of a 2002 film starring Nia Vardalos and John Corbett.

ANSWER: **‘My Big Fat British Wedding Cake’**

14. Bosons have integer values for this property, while fermions have half integer values. For 10 points each:

[10] This property of elementary particles and atomic nuclei is also known as intrinsic angular momentum.

ANSWER: **spin** angular momentum

[10] The existence of spin was revealed in this doubly-eponymous experiment, in which a beam of silver atoms was split by a magnet producing an inhomogeneous field.

ANSWER: **Stern–Gerlach** experiment

[10] An extended version of the Stern–Gerlach experiment was used by this scientist to show that application of a varying magnetic field can cause the magnetic moment of an atom to flip, in his namesake oscillations.

ANSWER: Isidor (Isaac) **Rabi** [or Israel Isaac **Rabi**; accept **Rabi** oscillations]

15. A Swedish pornographic film based on this novel starred Harry Reems. For 10 points each:

[10] Name this novel in which Georges Duroy becomes an eminent journalist by sleeping with a variety of women like Clotilde de Marelle and Madeleine Forestier.

ANSWER: ***Bel Ami***

[10] *Bel Ami* is a novel by this author of short stories like *The Horla* and *The Necklace.*

ANSWER: Guy de **Maupassant**

[10] In this Maupassant short story, the unpleasant German Captain Wilhelm von Eyrick is stabbed by the prostitute Rachel.

ANSWER: ***Mademoiselle Fifi***

16. In Egyptian mythology, the Nile was closely associated with the cycle of life and death. For 10 points each, answer some questions on the following river deities.

[10] Despite being male, this god was often depicted with breasts and a pregnant stomach, representing the fertility brought about by the river’s annual flooding, or even as two people. He shares his name with a son of Horus featured on canopic jars.

ANSWER: **Hapi**

[10] This ram-headed god created human life by forming babies from clay and placing them in their mother’s womb. He also symbolized the source of the Nile.

ANSWER: **Khnum** [accept **Khnemu**, do not accept or prompt on ‘Khmun’]

[10] As well as bringing life, the river could take it away: the ferocious god Sobek was depicted as this animal, the largest and most dangerous of the Nile’s predators.

ANSWER: Nile **Crocodile**

17. In 1998, a radio station was turned into a museum on the fiftieth anniversary of an event in which it had been seized by protesters. For 10 points each:

[10] This event was sparked by the beating with a pistol of an old woman for selling contraband cigarettes. It led to widespread violence and looting, and the deaths of tens of thousands of civilians at the hands of the army.

ANSWER: **228** Incident [accept **February 28** Incident; accept clear synonyms such as massacre or uprising]

[10] The 228 Incident led to a 38-year period of martial law known as the “White Terror” of this East Asian island state formerly controlled by Japan.

ANSWER: **Taiwan** [accept **Republic of China**, begrudgingly prompt on ‘Chinese Taipei’]

[10] In 1995, “father of democracy” Lee Teng-hui issued the first official apology for the 228 Incident. As president, Lee represented this major nationalist political party.

ANSWER: **Kuomintang** [accept **KMT** or **Guomindang**]

18. It’s not all chiptunes and horror strings. For 10 points each, answer some questions about rock music in video games.  
[10] The *Borderlands* franchise has a long history of including rock music, starting with this song by Kentucky rock band Cage the Elephant playing over the opening cinematic of the first game.  
ANSWER: **‘Ain’t No Rest for the Wicked’**  
[10] In Tim Schafer’s *Brütal Legend,* an early set piece involves the protagonist escaping the Temple of Ormagöden on an enormous hot-rod, to the sound of ‘Through the Fire and Flames’ by this British-based power metal band.  
ANSWER: **DragonForce**  
[10] ‘Through the Fire and Flames’ also featured as the most difficult song in *Legends of Rock*, the third installment of this series of rhythm games, famous for its plastic peripherals simulating the experience of playing the titular instrument.  
ANSWER: ***Guitar Hero***

19. Let’s talk about methods of oxidising double bonds. For 10 points each:

[10] An alkene can be cleaved into two carbonyl compounds using this compound that forms the Criegee intermediate. This molecule composed of three oxygen atoms is relatively abundant in the stratosphere.

ANSWER: **ozone**

[10] Cis-dihydroxylation of an alkene can be achieved with iodine, silver acetate and acetic acid in a reaction named for this chemist, who also names a set of rules for pericyclic reactions with Roald Hoffmann.

ANSWER: Robert (Burns) **Woodward**

[10] Terminal addition of an alcohol group to an alkene is accomplished by hydrogen peroxide oxidation after hydroboration, which in practice uses bulky reagents such as this air-stable cyclooctadiene derivative to maximise regioselectivity.

ANSWER: **9-BBN** (or **9-borabicyclo**[3.3.1]**nonane**)

20. For ten points each, answer some questions on sportsmen who have surprised their opponents with some unusual techniques:

[10] In 1996, this snooker player was accused of disrespect after playing left-handed in a match against Alain Robidoux. In 2013, this man won his fifth World Championship title and he holds the record for the fastest maximum break.

ANSWER: (Ronald Antonio) “Ronnie” **O’Sullivan**

[10] This maverick former Colombian international goalkeeper sometimes cleared balls from the area by flicking his legs over his head in what became known as the “scorpion kick”. He memorably performed one to clear a wayward Jamie Redknapp cross in a friendly against England.

ANSWER: (José) René **Higuita** (Zapata)

[10] This Super League club’s stand-off Marc Sneyd [“SNEED”] has an unusual goalkicking technique that sees him start with his back to the posts. Sneyd’s excellent kicking has helped this club to the 2016 Challenge Cup final and top of the Super League table at the end of the regular season.

ANSWER: **Hull** Football Club