

# MindSweep 2016

## Part I – The Arts & The Sciences

PLEASE OPEN THIS BOOKLET ONLY WHEN YOUR PROCTOR SAYS “START”.

PLEASE FAMILIARISE YOURSELF WITH THESE DETAILS BEFORE THE START.

This BOOKLET contains 100 questions, divided into 2 topics. It comprises Part I of the contest. Your cumulative score across the topics will determine your ranking.

### Rules:

1. You have **75 minutes** to answer as many of these questions as possible.
2. Each section **ends with five 2-pointers**. The **maximum total score in each section is 55**.
3. Papers will be swapped with another player for marking at the end of 75 minutes.
4. Unless stated in the question, last names will suffice. However, if you give the wrong first name, your answer will be incorrect!
5. Phonetically correct answers will be accepted.
6. After the topics have been marked, you will get your paper back and you have 5 minutes to check you agree with the marking. Disputes must be referred to the coordinator in this time. Please indicate which answer(s) you are querying with a large “?” question mark.
7. At the end of marking, your checker should copy your scores into the table on this sheet. If you agree with their marking, sign next to the score(s) to confirm this. Your complete script should then be handed in (it will be returned to you later). Once this has been done, no further discussions will be entered into about your score. The score signed for will be considered to be correct.
8. The overall highest scoring player from all participating venues will be **the KQA MindSweep Champion 2016**.
9. In the event of any unprecedented occurrence or unforeseen circumstances arising in the course of the quiz, your proctor’s decision shall be final and binding. KQA will adjudicate if the proctor refers the matter to us.
10. Your commencing to answer the questions indicates your acceptance of these rules.

Thank you.

Arul Mani, Dibyendu Das, Varun Rajiv and Hrishikesh Varma, KQA

| Contestant's Name |              |        |
|-------------------|--------------|--------|
| #                 | Topic        | Points |
| 1                 | The Arts     |        |
| 2                 | The Sciences |        |
|                   | <b>Total</b> |        |

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| 1. <i>Sculptor behind the Mask: Mitzi Cunliffe's work of the 1950s</i> is an exhibition that opened at Leeds University earlier this year, about the American artist who did some of her most important work in Britain. Although she created some notable public sculptures, her fame rests on an object roughly 30cm x 14.5 cm x 5.5 cm in size. <b>What?</b>   | 1.  |
| 2. When Jeanne Calment died in 1997 aged 122 -the longest confirmed human lifespan on record- news outlets ran a famous anecdote about her. She was 12 or 13, and working in her father's fabric shop in southern France, when she sold coloured pencils to a man whom she described as ugly, ungracious, impolite and smelling of alcohol. <b>Who was this?</b>  | 2.  |
| 3. Boualem Sansal wrote a dystopian French novel titled X: The End of the World. The book attracted some attention because it is set in a desert kingdom called Abistan which is controlled by a theocracy. The X part of the title is a tribute plus 100 years to another famous dystopian novel. <b>What is X?</b>  | 3.  |
| 4. "I sort of went to bed with this guy that I liked and suddenly the next morning, I see these three in-laws, standing there" <b>Who, speaking about a relationship that resulted in another break-up?</b>   | 4.  |
| 5. The character of Anthony Royal in JG Ballard's <i>High Rise</i> was inspired by an architect who took to living in the topmost flat of a building he himself had designed- London's Balfour Tower. Like his fictional counterpart, he organised cocktail parties and referred to the residents as "my tenants." <b>Identify this man, who has a more obvious claim to fame.</b>                            | 5.  |
| 6. <b>Which tune</b> that presages a public appearance started out with words borrowed from Sir Walter Scott's <i>Lady of the Lake</i> ?  | 6.  |
| 7. In 1997, the 23rd issue of the fashion quarterly <i>Visionaire</i> had an elegantly designed wooden portfolio of nudes photographed by Karl Lagerfeld. <b>What opposite 4-word name</b> was given to the issue, reflecting its contents and the photographer's core area of interest?  | 7.  |
| 8. <b>Which celebrated writer</b> , offender-in-series and serial offender on many other counts did television critic Clive James diss with the words "He writes the kind of prose that might describe a sword hand-forged from a meteorite and make it less thrilling than a can-opener. I know this because I picked up one of his books and fell down shortly afterwards, and I wasn't even ill that day"? | 8.  |
| 9. <b>Which hero from an immortal novel</b> is pursued with dogged determination by an appropriately named <b>Inspector Fix</b> ?   | 9.  |
| 10. She began transforming the 'library' in her charge when she acquired the papers of William Selig, an industry pioneer, in 1947. The huge archive that resulted due to her efforts over many decades now bears her name. <b>Identify this woman who turns up in quizzes on the basis of her sharp memory where male relatives were concerned.</b>  | 10. |
| 11. <b>What is the single-word title of a 2016 biopic of Jesse Owens at the 1936 Olympics</b> – the title refers to both his chosen field of sport and the issues surrounding his success v Nazi Germany's claims of Aryan supremacy.   | 11. |

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| 12. It was a cooperative venture set up by practitioners of the art in 1947 and took its name from a Latin word meaning 'great', while also rejoicing in its associations with toughness via guns, and celebration, via champagne. <b>What cooperative are we talking about?</b>   | 12. |
| 13. One of the flag-bearers of the Italian Renaissance school, this painter died young, with several of his paintings attributed to Titian as there were only a few surviving canvases with his signature. A document from 1800s by Marcantonio Michiel and the efforts of Giovanni Morelli in 1880s helped clarify some of the more well-known attributions. <b>Which artist?</b>                                 | 13. |
| 14. Recently Marco Santagata posed his own theory about this puzzle. He closely read the person's writings and ran a possible profile match, finally zeroing in on Marcella Marmo of the University of Naples. Prof. Marmo denied the association. <b>What are we talking about?</b>   | 14. |
| 15. Mendelssohn wrote an overture based on it, Neil Gaiman featured it in Sandman, Purcell loosely adapted it as 'The Fairy Queen', several moons got their names from it. <b>Which work?</b>  | 15. |
| 16. The sequels to <b>which classic 1913 work of children's literature</b> are called the "Glad Books", after the philosophy espoused by the title character?  | 16. |
| 17. Starting in the early 50s, he and his wife ran a little bookshop in Dartmouth that became a tourist attraction, but not for the books. People came asking for him, and mothers pointed him out to children; he avoided all of them. In 1974, he wrote <i>The Enchanted Places</i> , about his childhood and the problems that came about as a result of being the reason for his father's success. <b>Who?</b> | 17. |
| 18. Patricia Riggen's <i>The 33</i> , starring Antonio Banderas as Mario Sepulveda, is a film about <b>which group of newsmakers from the year 2010?</b>   | 18. |
| 19. A winner of the Oscar for Best Foreign Language Film, <b>name this 1973 film</b> directed by Federico Fellini whose title is a Northern Italian neologism for "I Remember".  | 19. |
| 20. TIME magazine's 'All-Time 100' movies list featured 106 films, with four entries being films with multiple parts. Three of them are Olympia, part 1 and 2 (1938), The Godfather Part I and II (1972, 1974), and The Lord of the Rings film trilogy (2001–2003). <b>Name the fourth.</b>  | 20. |
| 21. <i>A, A Novel</i> is a 1968 work by Andy Warhol that was intended to capture an uninterrupted twenty-four hours in the life of Ondine (an actor and Warhol Superstar), though it was eventually recorded over separate days over a two year period. It was intended to be a response <b>to which 1922 work?</b>  | 21. |
| 22. The registration number allotted, in the book, is GEN 11, because the author wanted to remind readers of the Latin term genii, and thus suggest magic. <b>What are we talking about?</b>   | 22. |
| 23. Alberto Manguel was working as a bookshop clerk in 1964, when he met a customer with poor eyesight. On the customer's request, Manguel would turn up at his apartment in Maipu 994 and read to him in the evenings. This continued for several years. <b>Who was the customer?</b>   | 23. |

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| 24. He strenuously denied that there was anything sexual in his relationship with young men, claiming that he'd fathered illegitimate children, though none of them could be traced. But for several years he was inseparable from Peter Doyle, a bus conductor. Indeed, the 'Calamus' section of his great poetic cycle was so intensely homoerotic that it gave rise to the short-lived term 'calamite' to denote a man who loved men. <b>Who?</b> | 24. |
| 25. As a young lawyer, he had an entanglement with a woman named Charlotte Buff and her fiancé, Johann Kestner. Now, Kestner had a friend named Karl Jerusalem who committed suicide by borrowing his pistol. Splicing together the story of this unfortunate young man with his own love story, he wrote the novel that made him a literary celebrity in his mid-20s. <b>Identify him or the work he wrote.</b>                                     | 25. |
| 26. The first (1968) in this five-part film series refers to a location. This four word title is then repeated in all the other titles, usually after words such as Beneath... Escape from... Conquest of... and Battle for... <b>Just fill in the location.</b>   | 26. |
| 27. Hubert Bals began a major European film festival in 1972 and then directed it till his death to 1988. His name now lives on in a fund meant to support aspiring film-makers from across the world. <b>In which city did Bals host this festival--the name could sound like two swearwords in English?</b>  | 27. |
| 28. <i>Elstree 1976</i> is a documentary about the production of a film in the summer of '76 at Elstree Studios in England from the perspective of extras and actors who had bit parts in the film – usually covered either in prosthetics or helmets. <b>Which film?</b>  | 28. |
| 29. <i>An Awfully Big Adventure</i> is a 1996 coming-of-age film about a girl who joins a local theatre troupe in Liverpool who are staging an adaptation of the book <i>X</i> . The title of the film is from the book, in which the titular protagonist says, "to die will be an awfully big adventure." <b>Name the book.</b>   | 29. |
| 30. The 2015 documentary <i>Nerd Prom</i> is about an annual event that grew from a small affair that involved around 50 people in 1920, to a gathering of more than 2500 people today. Often derided for a blatantly highlighting a cozy relationship, the latest edition featuring a rollicking farewell speech by the chief guest. <b>What event?</b>   | 30. |
| 31. In <i>Waiting for Godot</i> , there is a scene where two characters named Estragon and Vladimir continuously swap their hats. Beckett, being an admirer of vaudeville, may have put it in as a tribute. The scene is almost an exact copy of a memorable scene in <b>which 1933 comedy?</b>  | 31. |
| 32. Athens was the first, in 1985, at the suggestion of Melina Mercouri. San Sebastian in Spain and Wrocław in Poland were chosen for 2016. According to the Palmer report of 2003, this decision raises the profile and impacts the chosen city beneficially. <b>What annual choice are we talking about?</b>   | 32. |
| 33. Dutch artist Florentijn Hofman is famous for creating floating sculptures. <b>For which particular object is he most well-known, usually created in huge sizes, yellow in color, and found floating on water bodies and harbours around the world?</b>   | 33. |
| 34. Gyula Halasz took a pseudonym from the town of his birth in Transylvania, Hungary and became famous for photographing the Parisian nightlife, influenced by the paintings of Toulouse-Lautrec. <b>Who?</b>   | 34. |

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| 35. <i>The Great Race</i> is an upcoming animated film where the hero will be joined by characters like Yong Bao from China (RM class 4-6-2 Pacific), the Indian Ashima (configuration: 0-8-2T, from the Niligiris), and Carlos from Mexico (GR-30 class 2-8-0). This is an attempt to introduce <b>multiculturalism into which children's favourite?</b>  | 35. |
| 36. <b>What simple name connects</b> the blue ox that accompanies Paul Bunyan everywhere, the protagonist of a 1995 Hollywood film, voiced by Christine Cavanaugh, and sports superstar Mildred Zaharias?  | 36. |
| 37. This German city awards a literary prize in the name of Heinrich Heine, a poet and onetime resident. <b>Which city?</b>  | 37. |
| 38. _____: <i>Thoughts Left Visible</i> is an ongoing exhibition at The Met that examines a subject that is critical to artistic practice. Featuring nearly 200 works, like Titian's <i>The Flaying of Marsyas</i> and van Gogh's <i>Street In Auvers-sur-Oise</i> , the exhibits share one feature that came about either purposely or due to unfortunate circumstances. <b>What?</b>   | 38. |
| 39. In mythology if Epimetheus was the 'afterthought', <b>who was the 'forethought'?</b>   | 39. |
| 40. Work commenced in 1769, and it occupied the next four decades of the creator's time in fits and starts. <b>What project</b> , known to us by an Italian name meaning hillock or small mountain, most probably a reference to the location of said project?   | 40. |
| 41. <b>(VISUAL)</b> Hans Wegner's cane-seated "Round Chair" was declared "the world's most beautiful chair" by the American magazine Interiors in 1950. It was also used in a 1960 event that made the phrase Five O'clock Shadow quite famous. <b>What event?</b>   | 41. |
| 42. <b>(VISUAL)</b> John Logan's bio-drama 'Red' starring Alfred Molina as the painter and Eddie Redmayne as his assistant Ken, focuses on a period when the painter was commissioned for a series of paintings for FOUR SEASONS hotel. He finally made thirty-nine wine-dark paintings collectively known as the SEAGRAM MURALS. <b>Name the painter.</b>   | 42. |
| 43. <b>(VISUAL)</b> This 1812 painting was a response of sorts to a more well known effort. Unlike the earlier painting, this does not celebrate the power of the individual, but expresses man's vulnerability in the face of nature's overwhelming force. The titular personality is also not portrayed unlike in the initial picture. In both cases, however, they are heading to Italy. <b>Name either of the subjects</b> | 43. |
| 44. <b>(VISUAL)</b> The story of <b>which pair of star-crossed lovers</b> , first mentioned by Ovid, is portrayed in this painting by John William Waterhouse?   | 44. |
| 45. <b>(VISUAL)</b> <b>Which female Iraqi</b> once famously commented: "There are 360 degrees. So why stick to one"?   | 45. |
| 46. There are similarities between these two momentous events: one real-life and one fictional. Not much of the subject matter is consumed in either case. In the first case, it is wasted and in the other, places are changed before any action can take place. Furthermore, both these made fun of an elaborate English ritual. <b>Name both events? (TWO POINTER)</b>  | 46. |

47. The last two on-screen portrayals of this character could not be more different. The more recent film was derided despite what many thought was a competent performance by the 6'4" lead actor. However, the 2014 film- where the character isn't the lead- was lapped up by audiences despite him being shown to be only an unprecedented 4cm in height. In fact, the character is even getting a spinoff in 2017. **Which character? Also name the 2014 film. (TWO POINTER)**

48. "Tru and Nelle" by G. Neri is an account of a friendship between a 6-year old girl and a 7-year old boy in small-town Alabama in the 1930s. The kids bond over Sherlock Holmes and investigate a theft at a drugstore, which leads them to Ku Klux Klan. **On which real-life personalities is the book based? (TWO-POINTER)**

49. This major American novelist's last work of fiction came out in 2007, and was titled The Castle in the Forest. It is narrated by a demon in human form named Dieter, or DT for short. DT has been assigned the job of ensuring that X does what he is supposed to do, and gives us accounts of X's troubled relationships with his parents Alois and Klara. **Name the novelist, and identify X. (TWO-POINTER)**

50. *Down the Mississippi steamed the Whipporwill* 50.  
*Commanded by the pilot, Mister \_\_\_\_\_*  
*The owners gave him orders on the strict Q.T.*  
*To try to beat the record of the Robert E. Lee.*  
A 1928 film took its title from the blanks in this Arthur Collins song, and had an extra word that suggested that it belonged to the following generation. Another film released later that year parodied this title - it is also by far the more famous because it introduced a cultural icon to audiences. **Name both films. (TWO POINTER)**

## VISUALS FOR THIS SECTION

41.



42.



43.



44.



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| 1. The common term for this reptile genus comes from the Hindi word for black. The genus name, Bungarus, seems to come from the Telugu word for golden, perhaps because a species with alternating black and yellow bands is found in that part of the world. <b>What is this genus?</b>  | 1.  |
| 2. Carl Djerassi wrote several novels like "Cantor's Dilemma" and "Bourbaki Gambit", described as 'science-in-fiction'. While working for Syntex in the 1950s, he found that diosgenin, which occurred in yams, could be used to synthesise cortisone and progesterone. This discovery won him the title Father of the _ _ _ _ , a distinction which should have been shared with John Rock and Gregory Pincus. <b>Just fill the blank.</b> | 2.  |
| 3. In 2015, the UK Government confirmed plans to create a 834,000 sq.km marine reserve, the largest of its kind in the world, around a famous destination. <b>Identify the location that received this bounty.</b>  | 3.  |
| 4. This adjective meaning spindle-shaped figures in the two-word name for the part of the brain that is implicated in forms of synesthesia and in face-recognition. <b>Name the adjective or just give the two-part name.</b>   | 4.  |
| 5. The project grew out of a course in relativity theory by Rainer Weiss at MIT in the 1970s. Later Kip Thorne from Caltech and Ronald Drever from Glasgow joined. <b>What ground-breaking result did this project achieve?</b>   | 5.  |
| 6. This is a wearable wrist-band that can zap you with mild shock if you engage in a habit you are trying to stop. <b>After which Nobel-laureate is the device named?</b>   | 6.  |
| 7. When he was a young child, Frederick the Great asked him whether he intended planned to conquer the world like his namesake from the ancient world. His answer was: 'Yes, Sir, but with my head.' <b>By the time he died in 1859, he had done exactly that. Who?</b>   | 7.  |
| 8. The Hawaiian, Strombolian, Pelean and Plinian <b>are classifications of what?</b>  | 8.  |
| 9. The Atlantic Magazine in a recent article cited this sound to remind readers of an experience from not so long ago: "Pshhhkkkkrrrkakingkakingkakingshchchchchchchchch *ding*ding*ding". <b>What moment of satisfaction were they writing about?</b>  | 9.  |
| 10. It was created by Shintaro Uda and his colleague Hdestugu Yagi in 1926. In its most familiar form, it consists of five elements: three directors, a double rod, and a director. <b>To what use was it put in this form?</b>   | 10. |
| 11. When X began her work, she didn't have an undergraduate degree, let alone a doctorate. However, she earned her PhD in Ethology from Cambridge University in 1965, one of a tiny handful of individuals admitted to the graduate program at Cambridge without holding a bachelors degree. <b>Who is X?</b>   | 11. |



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| 12. The blood thinner was originally isolated from canine liver cells and hence its name. Mucosal tissues of slaughtered meat animals such as pig intestines or cattle lungs are used today for its production. <b>Name the drug.</b>  | 12. |
| 13. This 6 million sq. km tract encompasses parts of Malaysia, Indonesia, Philippines, Timor Leste and Papua New Guinea. It holds 75% of all the species that make up a constructively oriented group of organisms. That, and a shape give this region its name. <b>What name is this?</b>   | 13. |
| 14. Herbert Saffir was a structural engineer who began studying, in 1969, an occupational hazard in his line of work. He evolved a scale to assess such damage and deal with it. This scale was later modified with further inputs from Robert Simpson. <b>What was this hazard?</b>   | 14. |
| 15. The Kremer Prize, set up in 1959, offered 50000 pounds to the first group that could execute a figure-8 over one mile, among other conditions. Paul MacReady won the prize in 1977 for his Gossamer Condor, with the help of amateur cyclist Bryan Allen. <b>What specific achievement did the Kremer Prize seek to reward?</b>          | 15. |
| 16. Joseph Priestley, James Watt, Erasmus Darwin and Josiah Wedgwood were part of a secret Birmingham group that met to discuss ideas in science and the arts. <b>Name this group, or explain the circumstance that led to this name.</b>  | 16. |
| 17. It has a name meaning unquenchable in Greek, which actually refers, in some twisted way, to the fact that it does not burn. This member of the silicates family has been the object of much suspicion after it was found that its capacity to break off into little fibrils made it a health hazard. <b>What?</b>                        | 17. |
| 18. If you used the symbols for the elements sulphur, uranium, phosphorus, erbium, calcium, lithium, francium, silver, iodine, lithium, sulphur, titanium, and carbon, <b>what would you have begun to spell out?</b>  | 18. |
| 19. Merbromin was an effective topical antiseptic for cuts and bruises that also stained the skin a deep red. A health panic caused it to be driven out by the 1990s. <b>Under what trade name did it enjoy quick recognition?</b>   | 19. |
| 20. He was of Swedish origin, and his genius caused him to present as midwife at the birthing of several chemical elements in the 20th century. If his original surname was Sjoberg, <b>how do we know him today?</b>  | 20. |
| 21. Given the element that he discovered, it is perhaps appropriate that his surname is one of the German words for 'fire'. He was an alchemist, and that may explain why he was working with a golden yellow source when the discovery was made. The element was Phosphorus. <b>Name either the discoverer, or the source that he used.</b> | 21. |
| 22. This seven-letter word is usually associated with oil spills. In computing, it also means a collection of files into one single entity. <b>What's the word?</b>  | 22. |

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| 23. "Imagine a cocktail party of political party workers who are uniformly distributed across the floor. The ex-Prime Minister enters and crosses the room. All of the workers in her neighbourhood are strongly attracted to her and cluster round her ...Because of the knot of people always clustered round her she acquires a greater mass than normal ..." This was part of physicist <b>David Miller's award-winning entry for explaining which phenomenon ?</b>   | 23. |
| 24. Only tigers, lions, leopards and jaguars have this ability due to the incomplete ossification of the hyoid bone as well as the morphological features of the larynx. <b>Which ability?</b>  | 24. |
| 25. His landmark achievement came when he was just 22, resulting in an unprecedented honour three years later. Yet, his first love was gardening and later on life, when living in London, he missed his garden. So he hired himself out as a gardener to an unknown lady, and told her his name was Willie. All went well till one day a visitor, glancing out of the window, said to her hostess, ' <i>My dear, what is Sir _____ doing in your garden?</i> '. <b>Identify this man, the famous son of a famous father.</b> | 25. |
| 26. In the mid-1800s, when a certain country welcomed outsiders after centuries of isolation, its ruler requested Lord Kelvin to send his students to head colleges in his country. One of them, John Perry, studied a natural phenomenon that was quite common in the country and ended up challenging Kelvin's estimate of age of earth. His ideas were later proved right. <b>Name either the country or the phenomenon that Perry studied</b>   | 26. |
| 27. Sounding similar to a popular term in today's digital age, what word is used to describe a method of seed generation in which the pollen donor and the egg donor are from the same plant?   | 27. |
| 28. They are now 67 in number. They are classified into groups such as the Main, the Amalthea group, the Himalia group, the Pasiphae group, and then a bunch of others on their own, irregular trips. <b>What might these be? OR what Italian name is given to the main group?</b>  | 28. |
| 29. It is called the Maillard Reaction in tribute to Louis Camille Maillard who described it while researching protein synthesis. It occurs between 284 and 329 degrees Fahrenheit, and connects toast, French fries, fried onions, steaks and marshmallows. <b>What colour does the Maillard Reaction normally produce?</b>  | 29. |
| 30. Ben Bolin, the Swedish meteorologist, was founding president (1988-97) of a unique body that won the Nobel Peace Prize for its pioneering efforts in 2007. <b>Just name this body--initials will do.</b>  | 30. |
| 31. Demis Hassabis was a child prodigy in chess and captained many of the England junior chess teams. In 2010, he co-founded a machine-learning startup which achieved a major first in March 2016. <b>What did it achieve?</b>   | 31. |
| 32. This keratinous body part, prominently used by a set of creatures in feeding, comes from a word that is also the Greek name for the creature. Filtering your guesses might help. <b>What part?</b>  | 32. |
| 33. It was her father Richard who got her and her brother hooked on to this - it was seen as a way of supplementing the family income. However, when she was ten, Richard tumbled off one of the cliffs that had made her town, Lyme Regis, famous. She stuck to her passion, and eventually, discovered fame, among other things. <b>Who?</b>  | 33. |

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| 34. It was first isolated by Andre Geim and Kostya Novoselov in 2004 while they were fooling around with sticky tape on a mass of graphite and noticed that it left flakes on the tape. The material they identified is touted to be 200 times stronger than steel, and to the world's most conductive material. <b>What did the two researchers discover?</b>  | 34. |
| 35. Species belonging to the families Unionidae and Margaritiferidae are, as these names might indicate capable of fulfilling <b>what precious function?</b>  | 35. |
| 36. <b>Which geological period</b> takes its name from the fact that many of the world's coal beds were formed during this time?  | 36. |
| 37. In 1960, X announced success with his ongoing project at Hughes Aircraft, but left the next year to join Quantatron, a company set up to make ruby crystals in-house. He later founded the Korad Corporation to exploit his invention. Charles H Townes, an innovator in the same area, generously described X's 1960 announcement in Nature as 'more important per word than any other paper published in the last century. <b>Name either the inventor, or the invention.</b> | 37. |
| 38. The Kessler syndrome/ Kessler effect is a scenario in which there is a cascade of collisions between objects near the Earth causing great hindrance to space activities and artificial satellites. <b>Which author uses this as a central theme in his latest book where such an event is triggered by the breaking of the moon into seven pieces?</b>  | 38. |
| 39. "Turritopsis Dohrnii" is one of the species of this sea creature, believed to be an immortal, a kind of 'Benjamin Button' of the sea. It gets younger and younger until it starts its life all over again. <b>Which common sea creature is Turritopsis a species under?</b>   | 39. |
| 40. <b>What would a medical student remember</b> using the mnemonic NICER DRUMS?  | 40. |
| 41. <b>(VISUAL)</b> The South Foreland Lighthouse in Dover is a 19th century structure that was the first in the world to make use of an electric lamp. However, it also has a trivial claim to fame in scientific history: in 1899, it was at the receiving end of something from Wimereux, France. <b>What first was this?</b>  | 41. |
| 42. <b>(VISUAL)</b> Named after a videogame character this gene in humans is critical for the development of limbs. In a hand for instance, the gene tells the limb which side will be the thumb and which side the little finger. <b>Name the gene.</b>  | 42. |
| 43. <b>(VISUAL)</b> <b>Which element of the Periodic Table is</b> usually pressed into service to describe the crest of this cockatoo?  | 43. |
| 44. <b>(VISUAL)</b> Ken Ono and Manjul Bhargava are seen here attending the <b>premiere of which film?</b>  | 44. |
| 45. <b>(VISUAL)</b> Unlike its more versatile cousin, this species may only migrate as far as South America or South Africa from its natural habitat. <b>What is the common name for this species, known in biology as Sterna vittata?</b>  | 45. |
| 46. Some biologists divide primates into the sub-orders Strepsirrhini, including the lemurs, and Haplorhini, which covers tarsiers and simians. <b>Which prominent organ is the basis for this division? What difference in the organ do the names given refer to?</b><br><b>TWO-POINTER</b>  | 46. |

47. Despite his support of Lysenko's shady opinions, this Soviet biologist seems to have been bang on target about how life may have originated on this planet. He coined an evocative two-word phrase for these origins, much like Darwin's 'warm little pond'. **Identify this Soviet biologist who today has a medal named after him for work in this field, and the phrase that he coined. TWO-POINTER**

48. The original 1952 experiment produced Glycine,  $\alpha$ -Alanine,  $\beta$ -Alanine, Aspartic acid and  $\alpha$ -Aminobutyric acid, but later versions were more productive, perhaps because technology available then did not allow a full recognition of what had been produced. **Who were the two researchers behind the original 1952 experiment? TWO-POINTER**

49. X is famous because of his association with Y, who once named a dolphin species after him. That species is now known as the dusky dolphin. His ill-luck followed him into a brief spell as Governor of New Zealand. Later in life, when he set up the first ever Meteorological Department in the UK and began forecasting weather, Punch magazine gave him titles such as Admiral of the Blew. **Who is X? And who is the more famous Y? (TWO-POINTER)**

50. An ore famous in the mythology of 20th Century science gave us two elements, both of which take their names from the word for 'ray' in Latin and Greek respectively. **Name the ore, and name the element discovered by Andre Debierne that bears a Greek name. TWO-POINTER**

## VISUALS FOR SECTION II

41.



42.



43.



44.



45.

