

# MindSweep 2015

## Part I —The Arts and 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 marked wrong.
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 highest scoring player overall, from all participating venues, will be **the KQA MindSweep Champion 2015**.
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>	

<p>1. One of his more famous works is a generational saga involving peasants, bandits, beggars and mercenaries whose lives revolve around the <i>kaoliang</i> liquor, while another is a historical narrative of the country's decades of turmoil from the viewpoint of a spoilt, illegitimate child. <b>Which author</b>, most of whose novels are set in a semi-fictional town, based on Gaomi in the Shandong province where he grew up?</p>	<p>1. <u>Mo Yan</u></p>
<p>2. This landmark comic-book originated, according to its creator, as an idea that he submitted to a script-writing contest as a 22-year-old. He later said that "[they] decided a transsexual terrorist wasn't what they were looking for". <b>Name the alliterative title that resulted, or the writer.</b></p>	<p>2. <u>V for Vendetta/Alan Moore</u></p>
<p>3. <b>Postmemory</b> is a term coined by Marianne Hirsch to describe the relationship that the "generation after" bears to the trauma of those who came before—to experiences they "remember" only by means of stories and images among which they grew up. <b>Which seminal 1980s work inspired Hirsch to come up with this term?</b></p>	<p>3. <u>Maus</u></p>
<p>4. In the fall of 1945, he bravely ventured to write a screenplay for <i>Alice in Wonderland</i>, for Walt Disney. Disney rejected it saying that it "was so literary I could understand only every third word." <b>Who?</b></p>	<p>4. Aldous Huxley</p>
<p>5. This well-known storyteller's name comes from a word meaning 'hostage'. In the early 1990s, Derek Walcott published an epic poem titled <i>Omeros</i>, inspired by his life and works. <b>Name him.</b></p>	<p>5. <u>Homer</u> (from Homeros)</p>
<p>6. <b>Film</b> ____ (French for 'grey'), a term coined by film critic Thom Andersen, describes a unique series of films released between 1947 and 1951, in the context of the first wave of the communist investigations, that were more pessimistic and went beyond noir conventions to offer shades of grey in the motivations of characters. <b>Name the genre.</b></p>	<p>6. <u>Film Gris/Gris</u></p>
<p>7. These are images from a book by Gond artist Baiju Shyam that details his experience of travelling from rural India to London to paint murals on the walls of a restaurant there. He titled it in homage to a famous 1894 collection of stories – this book adds the name of the city to the title. <b>Name the 1894 book.</b></p>	<p>7. <u>Jungle Book</u>. Baiju Shyam's book is titled <i>London Jungle Book</i></p>
<p>8. ____ 117 is the codename for Hubert Bonisseur de La Bath, a secret agent created by Jean Bruce. He worked with the CIA after working with _____, which was a short-lived predecessor to the CIA formed during WWII in order to coordinate espionage behind enemy lines. First appearing in a series of books from the 1940s, the character was revived a few years ago with two films that starred Jean Dujardin as de La Bath. <b>Fill the blanks. (An abbreviation will do).</b></p>	<p>8. <u>OSS</u>.</p>
<p>9. ____ _ is a 1999 Leos Carax film starring Guillaume Depardieu and Catherine Deneuve that is loosely based on the Herman Melville novel <i>Pierre; or, The Ambiguities</i>. The film title is an acronym of the French title of the novel, plus an indication of which draft version of the script was used in making the film. <b>Name it.</b></p>	<p>9. <u>Pola X</u></p>
<p>10. In April 2007, 5,567 people - led by the cast of the musical <i>Spamalot</i> - broke the Guinness World Record for the largest <b>X</b>-playing orchestra. <b>Which 'instrument' were they all playing?</b></p>	<p>10. <u>Coconuts</u></p>

<p>11. X is an article of clothing for women, referring often to a specific type of upper garment common in Europe from the 16th to the 18th century. Since 1980, X is most commonly found in a derogatory phrase used to describe a literary genre, thanks to the tendency of the covers of such novels to feature scantily-clad women being grabbed by the hero. <b>What phrase?</b></p>	<p>11. <u>Bodice-rippers</u></p>
<p>12. In Rolling Stone's <i>The 500 Greatest Songs of All Time</i>, published on December 9, 2004, there was only one song – at No. 345 – that was entirely not in English. <b>Name it.</b></p>	<p>12. <u>La Bamba</u></p>
<p>13. <b>Psychobiddy</b> is a colloquial term for a subgenre of horror/thriller movies that began in 1962 with <i>Whatever Happened to Baby Jane?</i>. 'Biddy' means a gossipy busybody, often an older woman, and is a diminutive for the name X. <b>Which name?</b></p>	<p>13. <u>Bridget</u></p>
<p>14. Arthur X St. John Y (we know the man as XY) was an English writer from the first half of the 20th century. The fact that the name X can be confused as a woman's name was used as a joke in the film <i>Lost in Translation</i>, but in fact the writer himself was at one point married to X Gardner, and amongst their friends they were known as 'He-X' and 'She-X'. <b>Name the writer.</b></p>	<p>14. <u>Evelyn Waugh.</u></p>
<p>15. Before eventually dubbing their 1966 album <i>Revolver</i>, the Beatles had wanted to call it <i>After-Geography</i> as a joking tribute <b>to which 1965 album</b> released by their arch-rivals, the Rolling Stones?</p>	<p>15. <u>Aftermath</u></p>
<p>16. X, Latin for 'lost one', is the name of one of the heroines in Shakespeare's <i>The Winter's Tale</i>. Mary Robinson was an English actress and poet who was known as 'the English Sappho' during her lifetime and earned the nickname X after having played the role on stage in 1779. More recently, X was the name given to the female protagonist in a 1956 book by Dodie Smith that was famously adapted into a Disney animated film. <b>Identify X?</b></p>	<p>16. <u>Perdita.</u></p>
<p>17. <i>Never Been Kissed</i> is a 1999 film starring Drew Barrymore in which her character, a journalist at the Chicago Sun-Times, is assigned by her editor to report undercover at a high school to help parents become more aware of their children's lives. The plot is a direct lift <b>from which 1981 book</b> that involved its author undertaking a similar exercise in San Diego?</p>	<p>17. <u>Fast Times at Ridgemont High.</u> Cameron Crowe went undercover to write the book, and later filmed it.</p>
<p>18. <i>When Harvey Met Bob</i> is a 2010 British film that has nothing to do with the Weinstein brothers - it focuses on the relationship between two people and the events leading up to the organisation of an event in 1985. If the 'Harvey' in the title is event promoter Harvey Goldsmith, <b>who is 'Bob'?</b></p>	<p>18. <u>Bob Geldof - the event was Live Aid.</u></p>
<p>19. <b>Fill the blanks</b> in this quote from CP Scott, erstwhile editor of <i>The Guardian</i>: '_____, but facts are sacred.'</p>	<p>19. <u>Comment is free.</u></p>
<p>20. <b>What was</b> Goethe, not particularly well-versed in issues of music, commenting on when he described it thus: "One hears four rational people conversing with one another and believes he gains something from their discourse"?</p>	<p>20. <u>The String Quartet</u></p>

<p>21. When this character was offered to Bela Lugosi, he rejected it because it was not a speaking role. The man who took it up did not get mentioned in the credits and wasn't even invited to the premiere, but it became his most iconic role. <b>Who?</b></p>	<p>21. <u>Boris Karloff (<i>Frankenstein</i>)</u></p>
<p>22. <b>About which 1963 movie</b> did a critic remark that "Dreams, nightmares, reality and memories coexist within the same time-frame; the viewer sees Guido's world not as it is, but more 'realistically' as he experiences it, inserting the film in a lineage that stretches from the Surrealists to David Lynch."?</p>	<p>22. <u>Fellini's 8 1/2</u></p>
<p>23. <b>X</b>, whose real surname was Quoirez, was a French playwright, novelist, and screenwriter most famous for her first novel <i>Bonjour Tristesse</i>. While her adopted surname evokes a connection to an American astronomer, she picked it from a character in Proust's <i>In Search of Lost Time</i>. <b>Name her (full name required).</b></p>	<p>23. <u>Francoise Sagan.</u></p>
<p>24. <b>X</b> monasticism is a monastic tradition that stresses community life - the Christian version was founded by Pachomius the Great. The word X is derived from Greek for 'common' and 'life'. X was also used by horror author Clive Barker to refer to a race of extraterrestrial beings often featured in his work, most famously in the Hellraiser series. <b>Identify X?</b></p>	<p>24. <u>Cenobite (or variations thereof).</u></p>
<p>25. <b>X</b> was a 1928 film adaptation of a Victor Hugo novel that starred Conrad Veidt - his appearance in the film was one of the primary inspirations for The Joker. The title of the film was used in 2005 by Ed Brubaker and Doug Mahnke as a subtitle to a widely-acclaimed one-shot Batman comic. <b>Name the film.</b></p>	<p>25. <u>The Man Who Laughs</u></p>
<p>26. The writer David Lagercrantz covered crime for the newspaper <i>Expressen</i> and ghost-wrote <i>I am Zlatan</i> for a famous sportsman. He was picked for a sensitive task--the result is titled <i>Det som inte dödar oss</i>, or <i>What Doesn't Kill You</i>, and is expected in August 2015. What are we talking about?</p>	<p>26. <u>Continuing Stieg Larsson's Millennium Trilogy</u></p>
<p>27. The title comes from mashing the name for a then-in-vogue technology that gave output to the left front, left back, right front and right back channels with a suffix that sounded like it belonged to a mental disorder. <b>Which cult 1970s film?</b></p>	<p>27. <u>Quadrophenia</u></p>
<p>28. His subjects included his grandson David, at about age 7, with a golf club, squinting into the sun, his wife Mamie, granddaughter Anne, a self-portrait, Viscount Montgomery of Alamein and Abraham Lincoln. He seems to have begun painting as a way of unwinding. The Lincoln portrait was painted in 1953, possibly the beginnings of a high-stress phase in his life. He managed about 260 paintings in the last 20 years of his life, and usually signed them DE or DDE. <b>Identify this amateur artist.</b></p>	<p>28. <u>Dwight David Eisenhower</u></p>
<p>29. <b>(VISUAL)</b>The 2011 Google Doodle issued in tribute to this luminary of 20th century art surveys in sequence of some of his best-known and most characteristic work: Prometheus, Leda, The Newborn, Sleeping Muse, Mademoiselle Pogany, Bird in Space, and The Kiss. <b>Who?</b></p>	<p>29. <u>Constantin Brancusi</u></p>
<p>30. Leah Umansky's poem _____ Says pays tribute to a key character from popular fiction thus: "In this story, she is fire-born/ knee-deep in the shuddering world./ In this story, she knows no fear,/ for what is fractured is a near-bitten star./". Tell us <b>who the poem is about</b> OR just <b>fill the blank</b> in the title.</p>	<p>30. <u>Danaerys Targaryen/Khaleesi.</u></p>

<p>31. Initially called <i>ducat</i> for the Doge of Venice, it was renamed after the mint there, because the city began minting a silver coin with the same name in 1543. The name of the mint was derived from Arabic <i>sikka</i>, meaning a coin mould or die. In later centuries, these coins were stitched to women's headdresses - this led to the name of the coin coming to denote small shiny, circular decorations. <b>Name either the coin or the latter term.</b></p>	<p>31. <u>The Zecchino OR Sequin</u></p>
<p>32. The garments associated with the pair were made out of clay as smooth as porcelain. Straw, chaff, animal hair and quartz were part of the mixture that protected and strengthened the clay material, as did ropes attached to wooden pegs at the bottom layer. They were painted over several times. The outer robes on one were pink and later orange on the outside, with a pale blue lining, whereas the other was white. <b>What pair are we talking about?</b></p>	<p>32. The <u>Bamiyan Buddhas</u></p>
<p>33. In 2007, Jonathan Lethem wrote an article in <i>Harper's</i> titled 'The Ecstasy of Influence: A _____', which called for a return to the gift economy in the arts. The missing word literally means 'kidnapper' in Latin, with its root meaning 'snare/net', which in turn was based on the Indo-European root meaning 'to weave', which nicely dovetailed with the argument Lethem was making in his article. <b>What word?</b></p>	<p>33. <u>Plagiarism</u></p>
<p>34. Reflecting on this author's passion for nature conservation, Richard Dawkins responded to his 2001 death with the words 'Science has lost a friend, literature has lost a luminary, the mountain gorilla and the black rhino have lost a gallant defender.' <b>Who was Dawkins writing about?</b></p>	<p>34. Douglas Adams</p>
<p>35. <i>Dead Man's Land</i> by Robert Ryan is a novel set in the trenches during the WWI, where a bizarre death arises the suspicions of an army doctor, who decides to find out the mischief maker, using the tricks he learned from an old friend. <b>Name this character?</b></p>	<p>35. John <u>Watson</u> (from Sherlock Holmes)</p>
<p>36. A few years back, London artist Tim Wright took on a new student who, over two years, created over 400 works ranging from charcoal to oil paintings, and culminated in a full size copy of 'Snow Storm - Steam-Boat off a Harbour's Mouth.' <b>Who was the student?</b></p>	<p>36. <u>Timothy Spall</u> (in preparation for shooting <i>Mr. Turner</i>)</p>
<p>37. His diary entry for 2 August 1914 read "Germany has declared war on Russia. In the afternoon, swimming lessons". This entry is often quoted by scholars talking of the writer's estrangement from his own world; his <i>Weltfremdheit</i>, in other words. <b>Who is this writer?</b></p>	<p>37. Franz <u>Kafka</u></p>
<p>38. The shape is often described as a transparent teardrop and to its creator it signified the true nature of his people. Its dripless spout was created by inverting the design of spouts on teapots. <b>Identify either the designer or the iconic design</b> which found a place in the Museum of Modern Art.</p>	<p>38. <u>Kenji Ekuan OR The Kikkoman Soy Sauce Bottle</u></p>
<p>39. Some years back, when she was greeted by reporters at her doorstep informing her that she had won the Nobel Prize, her response was to mutter 'Oh, Christ!' and wave them away. Her Nobel lecture was titled 'On Not Winning the Nobel Prize' and stressed the importance of reading early in life. <b>Who?</b></p>	<p>39. <u>Doris Lessing</u></p>
<p>40. He was part of a coalition called 'The Mobe' (by the press) that marched on the Pentagon in 1967 to protest the Vietnam War. He later wrote a non-fiction work about this, the full title of which read 'History as a Novel/The Novel as History'. <b>Name him</b></p>	<p>40. <u>Norman Mailer</u> (<i>Armies of the Night</i>)</p>

<p>41. The <i>Portrait of Pope Innocent X</i> is a 17th century painting described by many art critics as the greatest portrait ever painted. In the 1950s, an artist became so obsessed with the painting that he created dozens of his own versions, popularly known as the 'Screaming Popes'. <b>Name either of the two artists involved.</b></p>	<p>41. <u>Velazquez</u> OR Francis Bacon.</p>
<p>42. "Breugel followed in the shadow of X (c. 1450-1516), another painter of the same Flemish ethnicity. Breugel, in his own lifetime was called a 'second X' – but he ultimately transcended his mentor. X was a fantasist; Breugel portrays a world that is all too real. It was Breugel who saw the truth behind the nightmare. X is an architect of the unreal, Breugel was a historian of the horrors we know." Art critic talking about two artists. <b>Name X.</b></p>	<p>42. X: Hieronymus <u>Bosch</u></p>
<p>43. (VISUAL) These awards, which have been given since 1981 for significant work in science, humanities and the arts, were instituted by King Felipe of Spain and are named after the title he then bore. The award was designed by a Barcelona-based artist. <b>Name the award or the artist who designed it.</b></p>	<p>43. <u>Prince/Princess of the Asturias Awards</u> and <u>Joan Miro</u></p>
<p>44. (VISUAL) A private company named Myntverket handles the production of these artefacts every year. The visual shows one of the last stages in the production. <b>What do they make?</b></p>	<p>44. <u>Nobel Prize Medals</u></p>
<p>45. (VISUAL) Identify this artist, famous for turning casts and corsets from a painful three-month convalescence into artworks.</p>	<p>45. <u>Frida Kahlo</u></p>
<p>46. A certain writer composed the epitaph "At Least He Never Walked" for himself in a 2008 work devoted to running. The title, <i>What I Talk About When I Talk About Running</i>, is a tribute to a story by a celebrated American writer. <b>Name both writers. TWO-POINTER</b></p>	<p>46. Haruki <u>Murakami</u> and Raymond <u>Carver</u>.</p>
<p>47. In 1955, Johnny Cash suggested building a song around a saying he had heard in the army to an upcoming musician. The artiste wakes up early in the morning with the song ready in his head, and writes it down on a potato sack, with the word <i>swaed</i> figuring a lot in the lyrics. The number that resulted topped the country, R&amp;B and pop charts--the first time such an event had occurred. <b>Name the musician and the song. TWO-POINTER</b></p>	<p>47. <u>Carl Perkins</u> and <u>Blue Suede Shoes</u>.</p>
<p>48. Art Linkletter travelled to Copenhagen in 1951 with a certain X. The two of them went to the location Y, where Linkletter noticed X scribbling down notes about the seats, gardens, rides, food, and every other detail he considered important. In 1955, it became clear why X had been making notes so carefully. <b>Identify X, and name the location Y. TWO-POINTER</b></p>	<p>48. <u>X; Walt Disney, Y: Tivoli Gardens</u>.</p>
<p>49. "A ruddy and stocky girl pours milk into a bowl from an earthenware pitcher. She stands at the centre of her own world, magnificently realized as a kitchen with pocked, plaster walls and scattered, broken crusts of bread (she is making a bread pudding from the stale crusts). The girl's eyes are gently downcast with an otherworldly and rapturous distraction". Art critic about a famous painting. <b>Name artist and painting. TWO-POINTER</b></p>	<p>49. Jan <u>Vermeer</u>; <u>The Milkmaid</u>. Also accept <u>The Kitchen Maid</u></p>
<p>50. (VISUAL) A somewhat conservative artist introduced "a repulsive, egomaniacal, un-American, non-taxpaying horror" with a rhyming name into his long-running comic strip in the 1960s, but stoutly denied that she was modelled on a real-life musician/activist with a thing for folk songs. <b>Name a) either the artist or the comic-strip and b) either the character or the real-life inspiration for a point apiece. TWO-POINTER</b></p>	<p>50. a. Al <u>Capp</u> OR <u>L'il Abner</u> and b. <u>Joan Baez</u> OR <u>Joanie Phoanie</u></p>



VISUALS FOR THIS SECTION

29.



43.



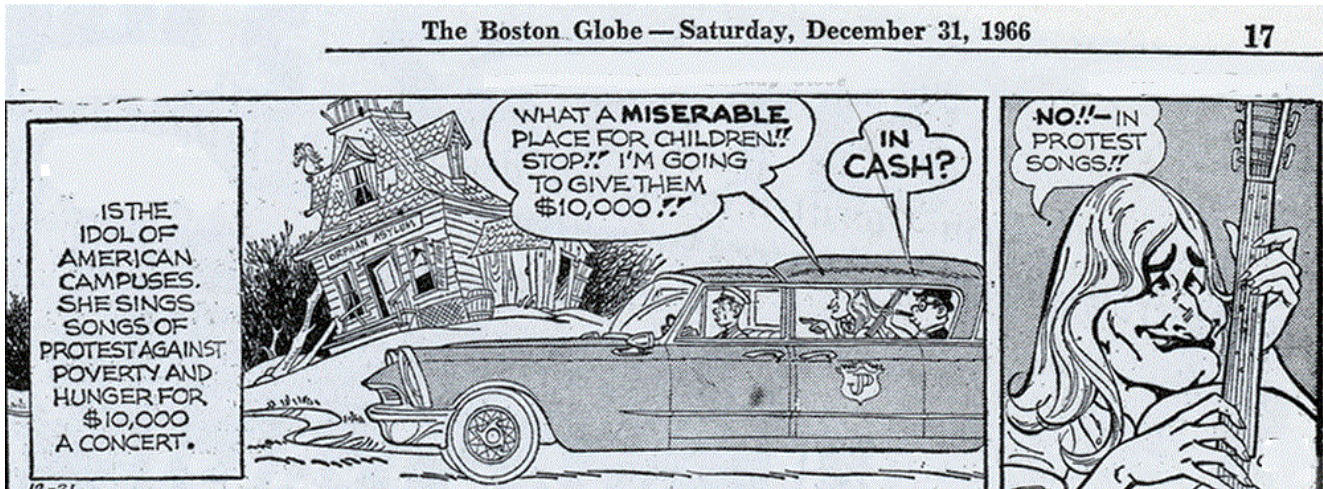
44.



45.



50..



<p>1. It has been called the most famous failed experiment in the history of science. The men behind it set out to prove the existence the 'ether' medium- and ended up doing the opposite. <b>What experiment?</b></p>	<p>1. The <u>Michelson-Morley</u> experiment</p>
<p>2. In 1964, <i>Nature</i> magazine published an article about the lifestyle and family of a certain David Graybeard, a resident of Tanzania. The article radically changed the way humans perceived themselves within the animal kingdom. <b>Who was the author of the article?</b></p>	<p>2. <u>Jane Goodall</u>, (Graybeard was the alpha-male chimp which became friendly with her).</p>
<p>3. The aluminium layer offers protection from oxygen, flavours and light. The polyethylene layer offers protection from external moisture. The paperboard offers stability without adding weight. <b>In what would you find these three layers?</b></p>	<p>3. <u>TetraPak</u></p>
<p>4. This crop was first domesticated in Paraguay and bears the Latin species name <i>hypogaea</i> meaning 'under the ground'. The aspect identified in this name is an example of <i>geocarpy</i>, or reproducing into the soil. One end of the common English name is a misnomer, while the other end is a fairly accurate visual analogy. <b>What name are we looking for?</b></p>	<p>4. <u>Peanuts/Groundnuts</u></p>
<p>5. In the early 20th century, paediatricians Clemens von Pirquet and Béla Schick noticed that patients who had received injections of smallpox vaccine usually had more severe reactions to second injections. They coined a word to describe this, combining the Greek words for "other" and "activity." <b>What word?</b></p>	<p>5. <u>Allergy</u></p>
<p>6. He was renowned in his lifetime for being a botanist, and headed the botany section of the British Museum from its inception till his death. But we remember him for an 1827 observation he made while peering at pollen grains. <b>Who?</b></p>	<p>6. <u>Robert Brown</u> of Brownian Motion fame.</p>
<p>7. <i>Espuma</i> is the Spanish term for a technique which involves the use of fruit juices or vegetable purees, soup and stock bases, agents such as lecithin, additives such as Quillaia--an extract from the soapbark tree, or the glycyrrhizins from liquorice, and nitrous oxide cartridges. <b>What is Espuma?</b></p>	<p>7. <u>Culinary Foam/Foam</u></p>
<p>8. It founded the first branch of the U.S. patent agency in 1850, and initially, mostly covered developments at the US Patent office. It is also the oldest continuously published magazine in the country. <b>Name this publication</b>, in which over 140 Nobel laureates have been published.</p>	<p>8. <u>Scientific American</u></p>
<p>9. When he sent a paper that directly challenged Alexis Carrel's notion of cell immortality to the <i>Journal of Experimental Research</i>, their response was scathing. "The largest fact to have come from tissue culture research in the last fifty years is that cells inherently capable of multiplying will do so indefinitely". He took the article to another journal where it was published in 1961. <b>Either name this scientist or the concept.</b></p>	<p>9. <u>Leonard Hayflick</u> or <u>The Hayflick Limit</u>, which proposes that cell division can take place only a finite number of times</p>
<p>10. While Lewis and Clark were exploring Nebraska, they came across an area that looked like a manicured bowling green, and eventually found that an animal species was responsible for the modification. They called these animals 'barking squirrels', while French explorers described them as 'petit chien', or small dogs. Their biological name <i>Cynomys</i> translates to 'dog mouse'. <b>By what name is the species commonly known?</b></p>	<p>10. <u>The Prairie Dog</u></p>



<p>11. In the early 1880s, the botanist AB Frank was asked to find a way of profitably extracting the <i>Tuber melanosporum</i> species by the Prussian authorities. His research led him in another direction, and he ended up discovering mycorrhiza--symbiotic interactions between fungi and the roots of a plant. <b>What was the job originally given to AB Frank?</b></p>	<p>11. <u>Finding/Extracting Truffles</u></p>
<p>12. His contributions to Germany were not enough to protect him when the Nazis took over, He was forced to flee in 1933 on account of his Jewish origins, and died in Basel of a heart attack in 1934. In 1952, a plaque was put up in his memory at the Max Planck Institut, Dahlem, which commended him for 'finding a way of obtaining bread from air'. <b>Who are we talking about?</b></p>	<p>12. Fritz <u>Haber</u></p>
<p>13. <b>What was the rather appropriate name</b> of NASA's spacecraft that orbited Mercury between 2011 and 2015?</p>	<p>13. <u>Messenger</u></p>
<p>14. The mathematician Maria Reiche fled German in the 1930s owing to the political situation and made her home in Peru. Something outside her discipline caught her attention, and she wrote a book about it titled <i>The Mystery on the Desert</i> in 1949. <b>Identify this passion</b>, often protective, that led to her being nicknamed 'The Lady of the Lines'.</p>	<p>14. <u>The Nazca Lines</u></p>
<p>15. Kenneth Norris found that dolphins produce burst pulses in addition to echolocation clicks. He theorised that these pulses of sound which could go up to 228 decibels were both ways of stunning prey and, in milder forms, a courtship mechanism. This theory was immediately given a jocular name, borrowed from another discipline in the sciences. What was this two-word nickname?</p>	<p>15. <u>Big Bang</u></p>
<p>16. Jerome Murray invented the airplane boarding ramp after watching people struggle through rain at Miami International Airport in 1951. Of his many inventions, he considered the medical pump to be most significant, and donated it to Johns Hopkins University. This pump works by a wave-like motion of contractions and expansions, and is thus called the _____ pump after the bodily process it is modelled on. <b>What bodily process?</b></p>	<p>16. <u>Peristalsis/Peristaltic Pump</u></p>
<p>17. He discovered microbursts—localised columns of sinking air that affect a region of about 2.5 km, often posing serious threats to aviation--while researching the causes of the Eastern Airlines crash in 1975. <b>Identify this pioneer</b>, known through his career as the 'Tornado Man'.</p>	<p>17. Tetsuya <u>Fujita</u>, who designed the Fujita Scale to measure tornado damage.</p>
<p>18. The Quadratids, the Lyrids, the Eta Aquarids, the Delta Aquarids, the Draconids, the Northern Taurids, the Southern Taurids, the Orionids, the Geminids and the Ursids are a regular sequence with two missing elements. <b>Either identify the sequence, or name both missing elements.</b></p>	<p>18. <u>Meteor Showers OR Perseid &amp; Leonid. No halves</u></p>
<p>19. Between 1955 and 1974, Mexican peasants working at subsistence wages harvested 9.5 million tons of fresh Barbasco or <i>Dioscorea composita</i>, a species that had once been seen as a pesky weed. This gold rush on the species is a not-so-well-known part of the story in the mythology of 20th century science. <b>What caused the demand?</b></p>	<p>19. <u>Dioscorea composita</u> was the wild yam, from which <u>the first oral contraceptives were synthesised</u></p>
<p>20. Darwin felt that this distinctive feature was a secondary sexual characteristic, but recent research by Martin Nweeia suggests that it is a massive sensory organ, with a permeable outer membrane that channels seawater to a core rich with nerve-endings. This allows it to measure the salt concentration of water, and thus figure if the icebergs nearby are melting or forming. <b>Which species are we talking about?</b></p>	<p>20. The <u>Narwhal</u></p>

<p>21. The historian Thomas Trautmann's latest book is on a subject that has evoked much poetry in South/South East Asia. Sufis compare the soul of the mystic with an _____ in bondage in a distant, foreign land. When he dreams of his homeland, nothing can stop him - he breaks his chains and runs towards Hindustan. According to a Cambodian Sanskrit inscription, a man leaving for the forest after surrendering all his wealth is an _____ freed of its chains. <b>What is Trautmann's book about?</b></p>	<p>21. <u>Elephant/s</u></p>
<p>22. The names of Cuvier, Laplace, Lavoisier, Ampere and some 68 others have been visible since 1986, and were returned to gold lettering, as per original plan, in 2011. <b>What are we talking about?</b></p>	<p>22. <u>72 names of scientists on the Eiffel Tower/Accept any answer with Eiffel Tower.</u></p>
<p>23. A 2008 paper titled <i>Astrophysical implications of hypothetical stable TeV-scale black holes</i> by Giddings and Mangano has been carefully studied, reviewed and finally endorsed by investigators from several countries, including Japan, Russia and the United States. These investigators have come from fields as diverse as astrophysics, cosmology, general relativity, mathematics, particle physics and risk analysis, and include several Nobel Laureates in Physics. <b>What have Giddings, Mangano and all these other people established?</b></p>	<p>23. <u>That using the LHC is safe/poses no threat</u></p>
<p>24. Willem ten Rhijne was a botanist in the employ of the Dutch East India Company. While working at their trading post in Dejima, Japan, he noticed a certain practice and made copious notes. In 1683, he wrote a volume titled <i>Dissertatio de Arthritide</i>, where he coined the term now used for a system that is also called Meridian Therapy. <b>What term did ten Rhijne coin?</b></p>	<p>24. <u>Acupuncture</u></p>
<p>25. South African researchers Hillel Abbe Shapiro and Harry Zwarenstein turned a discovery by Lancelot Hogben about the amphibian species <i>Xenopus laevis</i> into a medical procedure that was up to 98% accurate. A doctor wrote a letter to them that concluded "You may be interested to know that of one GP of many years' standing, one specialist and one <i>Xenopus</i>, only the last-named was correct.' <b>What did Shapiro and Zwarenstein devise thus in the 1940s?</b></p>	<p>25. <u>Pregnancy Test/Bufo Test/Pregnancy Test using African frogs</u></p>
<p>26. The drug Metrazol was found to produce convulsions similar to epilepsy, but sometimes this resulted in subjects breaking their spines. Ugo Cerletti wanted to be able to produce such convulsions in a more controlled manner, and this eventually led him away from drugs <b>to what controversial procedure?</b></p>	<p>26. <u>Electroshock Therapy/Accept Shock Therapy.</u></p>
<p>27. Goldsmiths were perhaps the first professionals to diversify into this line. The hippopotamus, the elephant and the walrus have served as sources of raw material for this product. Large social gatherings such as the Battle of Waterloo were another source. The first man-made substance to serve this need was vulcanite, developed by the Goodyear family. Modern versions of this product are usually made from Polymethylmethacrylate Acrylic or PMMA. <b>What product is this?</b></p>	<p>27. <u>Dentures. Accept Artificial teeth/False teeth etc.</u></p>
<p>28. Colin Murdoch trained as pharmacist and vet, and produced such inventions as the disposable syringe and the child-proof bottle-cap. His best-known invention however came as a response to the problem of studying the Himalayan Tahr in his native New Zealand. He devised a compressed-gas mechanism which allowed researchers to track the animal down without killing it, and started the firm Paxarms to market the product. <b>What did Murdoch create?</b></p>	<p>28. <u>The Tranquiliser Gun/Accept Tranquiliser darts</u></p>

<p>29. Introduced in 1947, this code governs experimentation using human subjects, and introduced the notion of informed consent. <b>Which city</b> lends its name to this protocol for trial if not error</p>	<p>29. <u>Nuremberg</u></p>
<p>30. Since 2008, the WHO has put its weight behind a six-prong strategy titled MPOWER, which stands for <b>Monitor, Protect, Offer help, Warn about, Enforce bans and Raise taxes</b>. <b>Which 'worldwide epidemic' are they targeting thus?</b></p>	<p>30. <u>Tobacco Use/Accept Cigarettes/Smoking</u></p>
<p>31. This tree species is found across the Middle East and parts of Africa, and thus plays a small part in a Biblical story of a man who wanted to catch a glimpse of Christ passing by. The name comes from the Greek words for fig and mulberry, possibly because its fruits resemble figs while its leaves look like they came from the mulberry. <b>What tree species, all of eight letters?</b></p>	<p>31. <u>The Sycamore</u></p>
<p>32. Once widespread in Southeast Asia, this mammal is reduced to two sub-species--<i>annamiticus</i> rumoured to be in small pockets of the Dong Nai region in Vietnam, and the <i>sondaicus</i>, one group of which is known to inhabit the Ujung Kulon national park in Indonesia. <b>Which critically endangered mammal that can weigh up to 2300 kilos?</b></p>	<p>32. <u>The Javanese Rhinoceros.</u> Accept Javan Rhino.</p>
<p>33. This American rodent has coarse, glossy fur that ranges from pale orange through shades of brown to blackish. The individual hairs alternate between black and buff bands, leading to this rodent's common name being used as a way of describing similar colouration in horses, rabbits, cats and dogs. Give us a six-letter answer.</p>	<p>33. The <u>Agouti</u></p>
<p>34. Tight oil is crude oil found in low permeability conditions. The common name for this substance came from the circumstance in which it usually found, but caused much confusion since a similar name was used for kerogen-bearing rock. The International Energy Agency has recommended the use of the alternative term tight oil to prevent confusion. What is the common name for tight oil?</p>	<p>34. <u>Shale Oil.</u></p>
<p>35. Saturn's moon Titan has a number of geographical features which are often given connected names: craters, for example, are named after deities of wisdom. The fretums (straits of liquid) of Titan are named Bayta, Hardin and Seldon. <b>What are they named after?</b></p>	<p>35. Characters from Asimov's <u>Foundation series</u></p>
<p>36. A recent study says that this feature, whose purpose has long baffled palaeontologists, is proof that a certain animal was sexually dimorphic. They are of two types- broad, oval ones and tall, narrow ones about a third smaller than the oval ones. <b>Which creature are we talking about?</b></p>	<p>36. (Plates on a) Stegosaurus.</p>
<p>37. <i>First Time</i> is an upcoming Russian movie set and is about an event whose 50th anniversary was celebrated this year. The event itself lasted around 12 minutes, hinged around a 16 ft cable- and nearly ended in disaster. <b>Who is the central character in the story?</b></p>	<p>37. Alexei <u>Leonov</u> (first space walk)</p>
<p>38. He was comfortable enough in his own greatness to suggest that his epitaph be "Princeps Botaniorum" - the Prince of Botanists. In 1735, he published the first edition of his magnum opus. Initially only 14 pages long, it had over 12,000 entries by the 12th edition. <b>Name him, or the work.</b></p>	<p>38. <u>Carolus Linnaeus, Systema Naturae</u></p>
<p>39. X, a term used to describe one of a number of alternative forms of a gene, is a shortening of which word meaning 'other form', used in the early days of <b>genetics to describe variant forms?</b></p>	<p>39. <u>Alleles.</u></p>

<p>40. This work, which landed the author in a spot of bother, was presented as a conversation between three people named Salviati (who acted as a spokesperson for the writer), Sagredo (a layman) and Simplicio (who represented the traditional view of the authorities.) <b>Name the author.</b></p>	<p>40. <u>Galileo</u></p>
<p>41. He was King of Argos and one of the key warriors in the conflict with Troy. This mythical character has been worshipped as a god. According to one story, several birds of a particular genus sang a farewell for him on his death. His name is now used in biology for that family of birds whose members include the Shy, the Wandering, the Tristan, the Antipodean and the Amsterdam. <b>Name hero OR bird.</b></p>	<p>41. <u>Diomedes</u> OR <u>The Albatross</u></p>
<p>42. A pocket of magma lies beneath and leaks carbon dioxide, changing water into carbonic acid. On August 21, 1986, possibly as the result of a landslide, the location suddenly emitted a large cloud of CO<sub>2</sub>, which suffocated 1,700 people. <b>Identify the location OR the country where this tragedy occurred.</b></p>	<p>42. <u>Lake Nyos</u> OR <u>Cameroon</u></p>
<p>43. (VISUAL)The Caduceus, a staff carried by Hermes, is a recognized symbol of commerce and negotiation due to its associations with the God. It is often used incorrectly as the symbol of another profession, especially – some would say appropriately – in the United States, due to some similarities with the staff carried by another Greek God. One survey in the US found that 62% of professional associations used the correct symbol, while 76% of commercial organizations used Caduceus – it was suggested that the professional organizations probably had a better understanding of the symbols, whereas the commercial ones were just looking for visual impact. <b>What is the other symbol (no points for the other profession)?</b></p>	<p>43. <u>Rod of Asclepius</u></p>
<p>44. Labradorite, a feldspar mineral, displays an iridescent optical effect known as Labradorization, which was named thus and defined by O.B. Boggild as 'the peculiar reflection of the light from submicroscopical planes orientated in one direction (rarely in two directions)'. Inuits believed that the mineral - due to this optical effect - had captured something. <b>What did they believe had been captured within Labradorite?</b></p>	<p>44. <u>The Northern Lights/Aurora Borealis</u></p>
<p>45. Christiaan Eijkman's claim to fame rest on his late 19<sup>th</sup>-century experiments. These involved feeding unpolished rice to chickens suffering from a disease whose name came from an emphatic Sinhalese term for "weakness". <b>What discovery did these findings directly lead to?</b></p>	<p>45. <u>Vitamins</u></p>
<p>46. This location was considered ideal because it lacked tectonic activity and had permafrost. It being 130 metres above sea level is an advantage even if the ice caps melt. Locally-sourced coal provides power for refrigeration, ensuring that the internationally recommended standard of -18 °C is maintained. Even if the equipment fails, it will take several weeks before the facility rises to the surrounding sandstone bedrock's temperature of -3 °C. <b>Which location? Ideal for what? TWO-POINTER</b></p>	<p>46. <u>Svalbard; Global Seed Vault</u></p>
<p>47. This award was initiated in 1875 by the Royal Academy of Arts and Sciences in a European country as a way of marking the bicentenary of an important invention/discovery. The first award was made in 1877, and is by convention given out once every ten years or so for signal contributions to microbiology. The 2015 winner leads an enterprise named Celera Genomics. <b>Name the award and the 2015 winner. TWO-POINTER</b></p>	<p>47. <u>The Leuwenhoek Medal</u> and <u>Craig Venter</u> who led the Human Genome Project.</p>

48. In November 1837, he presented his initial observations on a pet subject at the Royal Geological Society. In 1881, a year before his death, he completed these researches and published his findings under the title *The Formation of Vegetable Mould*. The book sold thousands of copies in the first few weeks, and its subject inspired a rude cartoon in Punch Magazine.

**Who? What was this subject?** TWO-POINTER

48. Charles Darwin and Earthworms

49. "We aren't the \_\_\_ of New Guinea,/we don't indulge in ritual cannibalism,/we don't harbour the slow virus that/causes degeneration".

**What disease** does this poem by Miroslav Holub refer to? **Also fill the blank** in the first line. TWO-POINTER

49. Kuru and Fores

50. (VISUAL) This diagram was unearthed by journalists trying to deal with the great curiosity that greeted somebody who breached an exclusively male preserve in 2014. **Who? What achievement?** TWO-POINTER

50. Maryam Mirzakhani, the first woman to win the Fields Medal.

## VISUALS

43.



50.

