

MKULTR4: Very Vague And Not Well-Funded

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## Tossups

1. **A reductive one of these reactions uses metallic sodium to create cyclic acyloins from diesters. N-heterocyclic carbenes or the cyanide anion are commonly used to catalyse a reaction of this type which forms benzoin. Another reaction of this type has a rate-limiting E1CB step to generate the final alpha-beta-unsaturated alcohol. (\*)** Addition polymerisations are usually contrasted with reactions of this type, common examples of which are the production of nylon and the formation of peptide bonds between amino acids. Hydrolysis reactions are the reverse of, for 10 points, what class of reactions that release a small molecule such as water?

ANSWER: Condensation Reactions (anti-prompt on esterifications) <EM>

2. **One character in one play by this writer locks himself in his room after sheltering a rabbi from the Nazis and taking the blame for bottling an American officer, and spends his time talking to psychic crabs from the 30th Century. One character in another work by this author proposes a coalition government with the Pentagon, and is assassinated for this by (\*)** Hugo Barine. Another play by this author describes Jupiter as “god of [the eponymous entities] and death”, and is an adaptation of the Electra myth. Another play by this author sees Garcin, Inès, and Estelle trapped in a room together, and concludes that “Hell is other people.” For 10 points, give this French author of *The Condemned of Altona*, *Dirty Hands*, *The Flies*, and *No Exit*.

ANSWER: Jean-Paul Charles Aymard Sartre <EL>

3. **In the first draft of the libretto, this character requests “Eternal silence with eternal love” from an imaginary gondolier at the end of the opera she appears in. After falling over during a rehearsal, the composer requested that Maria Jeritzza always perform this character’s most famous aria lying on the ground. A character sings of how this woman makes him forget God before joining a choir in singing a (\*)** “Te Deum”, and she is compared to Mary Magdalene in the aria “Recondita Armonia”. After her lover Cavaradossi is executed by Scarpia’s henchmen, this character commits suicide by throwing herself from the top of the Castel Sant’Angelo. This character laments her regrettable position in the aria “Vissi d’arte”. For 10 points, name this title soprano of a Puccini opera.

ANSWER: Floria Tosca <BS>

4. **Marci Shore’s *Caviar and Ashes* is a foundational history of the interwar literature of this country. An author from this country was deported from France after publishing a novel in *L’Humanité* in which Pierre nervously wonders if he will be fired from his factory despite being a strike breaker. The novel *I Burn Paris* was written by an author from this country. Another author from this country wrote a novel that introduced Ursus, a character whose superhuman strength spawned a series of Italian peplum films. An author from this country wrote a novel about the love of (\*)** Marcus Vinicius for the Christian convert Lygia. That novel is *Quo Vadis*. For 10 points name this home country of Bruno Jasieński and Henryk Sienkiewicz.

ANSWER: Poland <JG>

5. **In *How I Met Your Mother*, Lily recalls asking a dog with this name “Where’s the poop?” when it makes a guilty face. During an appearance on *Blind Date*, a character with this surname rebuffed his date’s attempt at an introductory kiss in favour of a handshake. This is the nickname of a character who gets the bully Achilles (‘ah-SHEEL’) to protect his gang in the Orson Scott Card novel *Ender’s Shadow*. In *Fantastic Mr Fox*, a farmer with this surname lives on a diet of (\*)** cider brewed

from his own apples. The theme song for a TV show about a character with this surname begins 'Ecce homo qui est faba', and that character's second movie saw him attend the Cannes film festival. For 10 points, give this surname of a mini-driving teddy-loving character played by Rowan Atkinson.

ANSWER: Bean [accept Mr. Bean] <EM>

6. Antonio Damasio proposes his own theory of emotions in a work titled for *this philosopher's Error*. This philosopher's time at La Fleche influenced the structure of one of his major works. The voluminous *Objections and Replies* that accompany this philosopher's works bear out the long-standing clash he had with Gassendi. This philosopher imagined melting some wax in order to discern what properties are essential to a body. This philosopher proposed a version of the ontological argument that rested on his notion of (\*) clear and distinct ideas. The first section of one work by this philosopher concludes with the narrator imagining "some powerful, cunning demon" deceiving him. For 10 points, name this author of the *Meditations on First Philosophy*.

ANSWER: René Descartes <JG>

7. In 'Óró sé do bheatha bhaile' ('OH-ro she doh VAH-ha WAHL-ya'), Gráinne Mhaol ('GRAWN-yuh VOWEL') is described as coming over the sea accompanied by these people. In one song, the eponymous character claims "The devil confound me gin I ken" where one group of these people are after being frightened away by another group of these people, and in another, the eponymous character disguises herself as a man in order to become one of these people. As well as (\*) Johnny Cope and Sweet Polly Oliver, a song's eponymous character with this profession is described as "put in a bowl to beg" after losing his limbs and eyes in Ceylon. For 10 points, name this profession, which the narrator warns against enlistment into in 'Paddy's Lament', and which is referred to by the refrain "Guns and drums and drums and guns" in 'Johnny, I Hardly Knew Ye'.

ANSWER: soldiers [accept clear knowledge equivalents such as warriors] <EL>

8. Gordon Clark established a near monopoly on a material used to produce equipment for this activity. Sandra Dee played Frances Lawrence, a girl who takes up this pastime in the movie *Gidget*. The industrialist Henry Huntington made an attraction out of showing George Freeth demonstrating this pastime. Jack London wrote the essay "A Royal Sport" which popularised this sport in the (\*) continental USA. In between winning Olympic swimming medals, Duke Kahanamoku introduced this pastime to Australia. Kelly Slater has won a record number of World titles in this sport. For 10 points, name this sport where people ride waves on boards.

ANSWER: Surfing <EM>

9. The 2005 roundtable between the Free Aceh Movement and the Indonesian government took place in this country and was moderated by a former President of this country who spearheaded a 2007 plan for the recognition of Kosovo. This country names the process by which a smaller country is made to adhere to a larger country's foreign policies while maintaining nominal sovereignty. Robert Bernstein founded an organisation named for a city in this country. The (\*) OSCE's first major conference resulted in a document signed in this country. Human Rights Watch was originally named for a city in this country. Martti Ahtisaari was the 10<sup>th</sup> President of this country. For 10 points, name this country that ceded Karelia after its defeat in the Winter War.

ANSWER: Finland <JG>

10. Trichome ("TRY-comb") formation in this plant is initiated by the GLABROUS1 protein, and knockouts of the corresponding gene are used to test CRISPR/Cas9 editing. Major recognised strains of this plant are named for Columbia and Landsberg, which was further differentiated by X-ray mutation into the *erecta* variant. Unexpected reversion of mutant copies of the (\*) *HOTHEAD* gene in this plant were eventually shown to be a result of increased outcrossing, rather than non-Mendelian inheritance. Foreign plasmids are commonly inserted in this plant for study purposes, as

transgenic seed can be produced by dipping it in a broth of *Agrobacterium tumefaciens*. For 10 points, name this plant of the family Brassicaceae, a popular model organism and the first plant to have its genome sequenced.

ANSWER: Arabidopsis thaliana [accept A. thaliana, prompt on partial answer, 'thale cress' or 'mouse-ear cress'] <EL>

11. Applying this operation to a Littlewood-Paley block results in a function compactly supported on an annulus. This operation can be defined on the Pontryagin dual of a locally compact abelian group, and it forms an automorphism on the set of Schwartz functions. The Schönhage-Strassen algorithm relies heavily on calculating a (\*) discrete form of this operation. Plancherel's theorem relates the norm of a function to the norm of this operation applied to it – a related result applied to inner products is named for Parseval. Like a similar operation named for Laplace, the convolution theorem applies to this operator, which, for a function 'f', gives the integral of "f times a negative complex exponential". Mapping the time domain into the frequency domain, for 10 points, name this "transform" named for a Frenchman.

ANSWER: Fourier transform [accept Fourier after "transform" is read; do not accept or prompt on "Fourier series"] <BS>

12. In *Goldeneye*, Natalya is unable to perform this task because she keeps thinking of dirty words for bums. In the Dan Brown book *Deception Point*, this action is performed by Gabrielle Ashe after she considers her employer's Presidential ambitions and his love of his own initials. The prominent positioning of autobiographies of Churchill and Thatcher in Major Barrymore's office help (\*) Sherlock Holmes to perform this task in *The Hounds of Baskerville*. In *Archer*, this task is repeatedly accomplished by typing the word "guest". In real life, this task is often done by typing "123456" or "qwerty". For 10 points, name this process by which you could get into someone else's computer.

ANSWER: Guessing someone's password (or anything similar, prompt on 'hacking') <EM>

13. The postscript to Ryunosuke Akutagawa's suicide note asks its addressee to recall reading a poem by this author under some linden trees. This poet decided not to include that poem in his first collection because it was too depressing. This author of "Empedocles on Etna" complained about the police handling of riots in Hyde Park in a collection of essays emphasizing the importance of sweetness and light. This poet imagined the "naked (\*) shingles of the world" as the destination of a "melancholy, long, withdrawing roar" This author of *Culture and Anarchy* concluded a poem by limning a place "where ignorant armies clash by night". For 10 points, name this poet of "Dover Beach".

ANSWER: Matthew Arnold <JG>

14. An artist who produced a book of 20 pictures of these things converted to Catholicism and built a chapel in Reims in 1966. That artist is Tsuguharu Foujita, who is best-known for his *Book of these things*, which includes many self-portraits next to them. Remedios Varo depicted a tower with a large mobile coming off its weathhher vane in a painting titled for a *Paradise for these things*. The purporterdly schizophrenic Louis (\*) Wain painted thousands of these things. One of these things is the third title subject of a painting that shows a lamp and a rotary phone at its bottom right corner. For 10 points, what sort of creature is Percy, who appears in Mr Clark's lap in a Hockney painting?

ANSWER: cats <JG>

15. This noun appears in the name of a theory of crime that uses the idea of routine activities to argue that criminals are rational agents weighing risk and reward. In a book about this concept, John Roemer argued that there were two views of this concept which could be distinguished into "before" and "after" types. A steep production-possibility frontier curve is linked to a higher

**marginal rate of transformation, which can express a certain form of this concept. Proponents of distributive justice emphasise (\*)** equality of outcome over equality of this concept. The phrase “there ain’t no such thing as a free lunch” is used to introduce a cost associated with this concept. For 10 points, name this word that describes costs an individual takes when choosing one option instead of another.

ANSWER: opportunity [accept equality of opportunity or opportunity cost] <JG>

**16. Viet Thanh Nguyen employed the philosophy of Avishai Margalit in *Things Never Dies*, which attempted to develop an ethics of this thing. Giulio Camillo developed a *Theatre* of this thing. Giordano Bruno’s strange circular diagrams used for this purpose were analysed in a book that traces the role of this thing in the development of science. That work is Frances Yates’ book on *The Art of this thing*. In 2007 Spain passed a law concerning those prosecuted during the (\*) Civil War that is commonly called the Historical *this* Law. The analogy ‘palace’ of this thing was developed out of a story about Simonides of Ceos and a collapsing banquet hall. For 10 points, name this faculty of recollection, useful in quizzes.**

ANSWER: memory [accept clear-knowledge equivalents] <JG>

**17. The boss of the King’s Passage in *Dark Souls II* is named for these objects, which it uses to summon other players to the fight. In China Miéville’s *The Tain*, London is infested by entities coming from these objects, known as ‘imagos’. In *Witches Abroad*, Lily Weatherwax is trapped in a dimension made of these objects after standing (\*) between two of them and being unable to find her true self. In *Doctor Strange*, sorcerers keep the real world safe during combat by fighting in a dimension named for these objects. In one book named for these objects, the title character finds the poem *Jabberwocky* in a room behind one of these objects. For 10 points, name these objects, one of which Alice went through in an eponymous sequel.**

ANSWER: mirrors [accept clear equivalents, such as looking-glasses] <EL>

**18. William Reveley drew up plans for a never-built one of these places based on a concept developed by two brothers in Krichev in Belarus. Edmund Du Cane pushed the Disraeli government for the repeal of local authority control of these institutions, and Joshua Jebb led a programme for constructing them after 1842. The writing (\*) “His Majesty, King Mob” was written on a remaining wall of one of these places which was destroyed during the Gordon riots. John Howard published a popular book calling for the reform of these places. HMS *Bellerophon* and HMS *Temeraire* were converted into these institutions and called “Hulks”. Elizabeth Fry worked to reform, for 10 points, what kind of institution such as Wormwood Scrubs?**

ANSWER: Prisons <EM>

**19. Hainan is currently the only province in China to be exempt from a ban on building new locations of this type. In China, Communist Party members are banned from using these locations for free, and builders of these locations often have to pay off locals to remove fake graves during construction. One of these locations in Coober Pedy allows users to carry a piece of artificial (\*) turf around with them, and uses oil-covered sand where most other facilities have very close-cut grass.. Mission Hills in Guangdong contains many of these facilities. The construction of one of these facilities in Aberdeenshire destroyed several sand dunes, and resulted in local backlash against the developer, Donald Trump. For 10 points, name these sporting venues found at Augusta and St Andrews.**

ANSWER: Golf courses <EM>

**20. The meaning of this deity’s name is unclear, although it may have been connected to ointment jars, as a result of which this deity gained the epithet ‘perfumed protector’, and the role of protector against disease. This deity’s cult centre lay near the modern-day Zagazig, and is rendered in the Bible as ‘Pibeseth’. This deity is generally depicted holding a vaguely-defined aegis in one hand and a sistrum in the other. This deity’s son fought the serpent (\*) Apep every**

night - he is Maahes, and his father was either Ptah or Ra. This deity was originally associated with war and depicted as a lion, but her role evolved into that of a household protector to distinguish her from Sekhmet in the unified Egypt. For 10 points, known as Ailuros in Greek, name this Lower Egyptian tutelary goddess, depicted with the head of a cat.

ANSWER: **Bastet** [accept **Ubaste**, **Baset** or **Ailuros** before said] <EL>

## Bonuses

1. Everyone likes systematically categorising musical instruments, so let's have some bonuses on the Hornbostel-Sachs system! For 10 points, each:

[10] Division 1 of Hornbostel-Sachs is occupied by this class of instruments, which provide sound through vibration of their own body. Examples include the xylophone and jaw harp.

ANSWER: **idiophones**

[10] Category 24 ('two four') of Hornbostel-Sachs covers instruments that modify sounds with a vibrating membrane, and is named for these instruments, which make a buzzing tone when hummed through.

ANSWER: **kazoos** [prompt on mirliton]

[10] Classification 422.122 is occupied by the bassoon and this other woodwind instrument with a double reed.

ANSWER: **oboe** <EL>

2. One of this man's works follows Ken Kesey and the Merry Pranksters on an acid-fuelled road trip. For 10 points each:

[10] Name this American author of *The Electric Kool-Aid Acid Test*, whose satirical *The Bonfire of the Vanities* was serialised in *Rolling Stone*.

ANSWER: Tom **Wolfe**

[10] This Wolfe non-fiction work follows the "Mercury Seven" astronauts and is named for a characteristic which was required for being a respected test pilot.

ANSWER: ***The Right Stuff***

[10] In *The Right Stuff*, Wolfe claims that all commercial pilots adopt an incomprehensible Appalachian drawl to mimic this test pilot, the best of them all. The book ends with this character standing badly burned by the side of a road after catching fire while bailing out.

ANSWER: Chuck **Yeager** <EM>

3. This ship served as a German cruiser called *Monte Rosa* in the 1930s. For 10 points each:

[10] Name this ship that brought over 1000 passengers from Jamaica to London in 1948.

ANSWER: HMT ***Empire Windrush*** [prompt on partial]

[10] A public inquiry headed by William Macpherson concluded that the Met Police was institutionally racist. That inquiry was prompted by the poorly handled investigation into the murder at a bus stop in Well Hall of this son of Jamaican immigrants.

ANSWER: Stephen **Lawrence**

[10] This revolutionary from Trinidad and Tobago received a donation of hair from John Lennon and Yoko Ono to help fund a commune he established in London. He was later hanged for murder in Port of Spain.

ANSWER: **Michael X** [or Michael **de Freitas** or **Abdul Malik**] <JG>

4. Simon Sellars runs a blog devoted to this author, and recently published a work of autofiction/theory-fiction titled for this man's thought *Applied*. For 10 points each:

[10] Name this author who wanted “to rub the human face in its own vomit, then force it to look in the mirror.” He produced a series of surgical fictions in which anonymised names from medical journal descriptions of surgeries are replaced with those of celebrities.

ANSWER: J(ames) G(raham) **Ballard**

[10] J. G. Ballard wrote this novel in which the narrator, James Ballard, falls under the sway of the psychopathic Dr Robert Vaughan whose fantasy involves dying alongside Elizabeth Taylor in one of the title events.

ANSWER: **Crash**

[10] J. G. Ballard’s least experimental work is likely his autobiography *Empire of the Sun*, which is largely set in the International Settlement established in this city in WW2. Kazuo Ishiguro’s *When We Were Orphans* is also set in the International Settlement in this city.

ANSWER: **Shanghai** <JG>

5. Usually when video game studios need voice acting, they just call Nolan North, but when they need a face as well, in come the celebrity actors. For 10 points each:

[10] Players of *Until Dawn* will remember being shouted at by the therapist played by this Swedish actor, better known for playing a cosmonaut in *Armageddon* and career criminal Gaear Grimsrud in *Fargo*.

ANSWER: Peter **Stormare** [accept Rolf Peter Ingvar **Storm**]

[10] This actor lent his voice and likeness to Harm’ny in *Broken Age* and Eddie in *Brütal Legend*, but is more well-known for starring in *School of Rock* and *Tropic Thunder*, as well as fronting Tenacious D.

ANSWER: Jack **Black** [accept Thomas Jacob **Black**]

[10] While you might have seen this Irish actor playing Paul Serene in *Quantum Break*, you’re more likely to recognise him as *Peaky Blinders*’ Abeyrama Gold or *Game of Thrones*’ Petyr Baelish.

ANSWER: Aidan **Gillen** [accept Aidan **Murphy**] <EL>

6. Nine rounds into this tournament, we could probably all use an espresso. But how are you making that? For 10 points each:

[10] You could use an espresso machine such as the iconic ones produced by this company, named for the patent-holder on the first espresso machine, but you probably didn’t have space for one in your bag.

ANSWER: **Gaggia**

[10] Slightly more portable would be one of these aluminium pots that force steam up through coffee grounds, but then you’d be limited by needing a stovetop to boil it on.

ANSWER: **Moka** pot

[10] Probably the most common way of making espresso (as well as the most likely for anyone to have packed) is this apparatus, where boiling water is added to grounds and a filter forced down through it.

ANSWER: **Cafetière** [accept **plunger** or **French press**] <EL>

7. In the interest of having more than one linguistics question in this tournament, have some bonuses on language revitalisation. For 10 points each:

[10] There is an ongoing revival effort for this Latvian minority language, which was declared extinct with the death of Grizelda Kristiņa in 2013.

ANSWER: **Livonian** [accept **livõ kēļ** or **rāndakēļ**]

[10] Meanwhile in the UK, this Goidelic language never became fully extinct, despite the death of the last native speaker in 1974, and has undergone a revival in recent years, with 1,800 speakers in 2015.

ANSWER: **Manx** [accept **Manx Gaelic**, **Gaelg** or **Gailck**]

[10] Undoubtedly the biggest success story in the field is this former liturgical language, which was dead for some 1,400 years before being revived in the 19th Century, and now has 5 million native speakers.

ANSWER: **Hebrew** [accept **Ivrit**] <EL>

8. This artist produced a book of *Penis Drawings for Ken Hicks*. For 10 points each:

[10] Identify this pop artist and muralist whose work is characterised by joyful, dynamic and flat stick-figure like drawings, often in black and white.

ANSWER: Keith **Haring**

[10] Haring was one of many gay artists based in this city to die of AIDS. The photographer David Wojnarowicz wrote the memoir *Close to the Knives* about his time living with AIDS as an artist in this city.

ANSWER: **New York City**

[10] This Cuban-born artist died of AIDS related complications in 1996. He produced several installations in which a large pile of candy is placed in the corner of a room in a gallery.

ANSWER: Felix **Gonzalez-Torres** <JG>

9. A woman associated with this philosophical group wrote *The Principles of the Most Ancient and Modern Philosophy* to expound upon her monist views. For 10 points each:

[10] Identify this 17<sup>th</sup> century philosophical group led by Ralph Cudworth and Henry More.

ANSWER: **Cambridge Platonists**

[10] This woman who wrote *The Principles of the Most Ancient and Modern Philosophy* introduced the notion of monads. Leibniz is known to have read and made use of this philosopher's work.

ANSWER: Lady Anne **Conway**

[10] Leibniz introduced this term in a namesake work that dealt with the problem of evil. This word describes attempts to explain how or why God might permit evil in the world.

ANSWER: **theodicy** [accept **Théodicée**] <JG>

10. A magical sign in the lobby of the Tet Corporation's headquarters in these books reads 'Cam a Cam-Mal, Pria-Toi, Gan Delah'. For 10 points each:

[10] Give this series of seven books by Stephen King, featuring central characters like Stephen King, Jake Chambers, and Susannah Dean.

ANSWER: *The* **Dark Tower**

[10] The *Dark Tower* series is inspired by an 1855 poem by Robert Browning, and the protagonists of both share this name with the titular knight of an 11th-century *chanson de geste*.

ANSWER: **Roland** [accept **Roland Deschain** or **Childe Roland**, but not the other part of either on its own]

[10] One central antagonist of the *Dark Tower* books (before he gets eaten by a spider-baby) is this sinister wizard, who also appears in King books like *The Eyes of the Dragon* and *The Stand*.

ANSWER: Randall **Flagg** [accept Walter **o'Dim**, Walter **Padick**, **Marten Broadcloak**, Richard **Farris**, Raymond **Fiegler**, Richard **Fannin**, John **Farson**, the **Good Man**, the **Dark Man**, the **Walking Dude**, or the **Covenant Man**, give them the benefit of the doubt and prompt on literally any other name with the initials RF] <EL>

11. Lorraine Daston and Peter Galison's history of *Objectivity* in western science is grounded in a study of images in these objects. For 10 points each:

[10] Identify this kind of object. The first known example of these objects was created by Abraham Ortelius.

ANSWER: historical **atlas**

[10] This Italian Jesuit created the *Kunyu Wanguo Quantu* atlas at the behest of the Ming Emperor Wanli.

ANSWER: Matteo **Ricci**

[10] This city's cathedral holds a 700 year old T and O style Mappa Mundi.

ANSWER: **Hereford** <JG>

12. For 10 points each, answer some questions about athletes who have competed in multiple sports.

[10] Beth Potter and Alex Yee are among the athletes to represent Great Britain in both the 10,000 metres and this sport. Other British competitors in this sport include Jess Learmonth and Vicky Holland.

ANSWER: **Triathlon**

[10] This New Zealand athlete won seven consecutive World Rowing Championships in the coxless pair with Eric Murray, before switching to cycling and winning a Commonwealth bronze in the time trial.

ANSWER: Hamish **Bond**

[10] Pita Taufatofua represented this country at both taekwondo and cross-country skiing, and achieved notoriety for carrying this country's flag while shirtless and covered in oil.

ANSWER: **Tonga** <EM>

13. The now-disused Don Det-Don Khon narrow-gauge railway was built in this country to avoid passing through rapids on the Mekong River. For 10 points each:

[10] Name this country which now only has 2 miles of railway linking a border crossing with Thailand to Thanaleng station, about 20 miles west of its capital at Vientiane.

ANSWER: **Laos**

[10] Hopefully, Laos will be connected into a network of railways in South-East Asia which will link Singapore to Kunming, the capital of this south-western province of China.

ANSWER: **Yunnan**

[10] Of course, there would already be a Kunming-Singapore link had French colonial administrators bothered to complete the "missing link" between Phnom Penh and this city. American citizens were signalled to evacuate this city by the playing of "White Christmas" on the radio.

ANSWER: **Ho Chi Minh** City (or **Saigon**) <EM>

14. Hashimoto's disease is an autoimmune condition which causes the slow destruction of this organ. For 10 points each:

[10] Name this gland in the neck which is examined by using radioactive iodine.

ANSWER: **Thyroid** gland

[10] The parafollicular cells of the thyroid gland produce this 32-amino acid polypeptide hormone that opposes the effects of PTH and lowers blood calcium levels by inhibiting osteoclast activity.

ANSWER: **Calcitonin**

[10] The hormones T3 and T4 which are produced by the thyroid are based on this amino acid. This amino acid, tryptophan and phenylalanine are mainly responsible for intrinsic protein fluorescence.

ANSWER: **Tyrosine** <EM>

15. The name given to this group of war-adjacent people was derived from a nickname given by British soldiers to Hadendoa fighters in Sudan. For 10 points each:

[10] Identify this name given by Australian soldiers to locals who assisted the war-wounded in their march along the Kokoda Track during the Second World War.

ANSWER: **Fuzzy Wuzzy Angels** [prompt on partial]

[10] The Fuzzy Wuzzy Angels were native to this country. The Kokoda Track ran from this country's north to its capital at Port Moresby on the southern shore.

ANSWER: **Papua New Guinea** [do not accept or prompt on 'New Guinea']

[10] Another East Asian trail from WW2 was this one, that does not include the Twenty-Four Bends. The Allies had to fly supplies over The Hump in this road to support the Chinese against Japan.

ANSWER: **Burma** Road <JG>

16. A variety of them named for Frenkel has a size comparable to the unit cell of the material in which they are located. For 10 points each:

[10] Name these quasiparticles which are generated when a photon hits a dye molecule or quantum dot in a solar cell.

ANSWER: **Excitons**

[10] An exciton consists of a bound state of an electron and one of these positively-charged quasiparticles. These quasiparticles are the major charge carriers in p-doped semiconductors.

ANSWER: Electron **holes**

[10] The recombination of excitons to release photons is the operating principle behind these devices, whose blue varieties were developed by Shuji Nakamura, Hiroshi Amano and Isamu Akasaki.

ANSWER: **LEDs** or **Light Emitting Diodes** <EM>

17. This small republic is located in the Indian Ocean and consists of several semicolon-shaped islands. For 10 points each:

[10] Name this republic with its capital at Bodoni on the island of Upper Caisse. The rapid erosion of this republic means that it moves Eastward by almost 1400 metres per year.

ANSWER: **San Serriffe**

[10] Before the popularisation of word processing software, many people reading about San Serriffe in *The Guardian's* April Fools' Day edition didn't realise it was a joke. Now of course, font humour usually targets this excessively informal font, which CERN claimed they would be using for all future publications.

ANSWER: **Comic Sans**

[10] This phrase, consisting of the twelve most frequently used letters in English in approximately descending order, gained fame among typographers due to errors in hot-type printing.

ANSWER: **Etaoin Shrdlu** <EM>

18. These beings include examples such as Geush Tashan and Sraosha, and many of these beings became known as the Amesha Spentas in later tradition. For 10 points each:

[10] Give this class of holy or divine entities in Zoroastrian tradition, with a name meaning 'worthy of worship', one of whom was associated with each day in the Achaemenid calendar.

ANSWER: **Yazatas**

[10] The greatest of the yazatas is this supreme benevolent deity and creator god, the 'uncreated spirit' and enemy of Angra Mainyu, whose name means 'mighty wisdom'.

ANSWER: **Ahura Mazda** [accept **Ohrmazd** or **Hormazd**]

[10] Ahura Mazda is portrayed as the champion and upholder of this core principle of Zoroastrianism, with an Avestan name meaning 'truth' or 'order', in contrast to Angra Mainyu's *druj*.

ANSWER: **asha** [accept **Asha Vahishta**] <EL>

19. Twisted Spoon Press is doing good work giving Anglo-monoglots access to new European works. For 10 points each:

[10] They specialise in novels in this language, such as *Glorious Nemesis*, which concerns the young Sider having a fateful encounter with Errata and Orea on a mountainside. Another novelist from this country wrote *Too Loud a Solitude* about a man who is in love with a woman who keeps shitting herself.

ANSWER: **Czech**

[10] *Too Loud a Solitude* is a novel by this author of *I Served The King of England* and *Dancing Lessons for the Advanced in Age*.

ANSWER: Bohumil **Hrabal**

[10] Twisted Spoon hasn't felt the need to put their team of translators to work on the back catalogue of this Czech author-cum-politician who wrote *The Garden Party*.

ANSWER: Vaclav **Havel** <JG>

20. Undergraduates are often made to prepare samples for this technique by grinding them into a Nujol mull. For 10 points each:

[10] Name this type of spectroscopy which uses electromagnetic radiation with a longer wavelength than visible light.

ANSWER: **Infrared** Spectroscopy (or **IR** spectroscopy)

[10] This type of molecular movement is probed in infrared spectroscopy. The transitions in this type of molecular movement are at higher energies than rotational transitions but lower than electronic transitions.

ANSWER: **Vibrational** Transitions

[10] For molecules with this property, the same vibrational transition cannot appear in both the IR spectrum and the vibrational Raman spectrum. The Laporte selection rule only applies to molecules with this property.

ANSWER: **Centrosymmetry** (or **Inversion** symmetry, accept word forms) <EM>

### **Tiebreaker**

**One photo titled for being a portrait of this artist just shows a sideways T-shaped gap in a cloudy sky. It's not Miro, but this artist painted a picture of a ladder floating in front of a green-blue sky with a small half-moon at the top of the canvas. This artist painted numerous depictions of a doorway to her house in Abiquiú. While living in the Shelton Hotel this began painting cityscapes like her precisionist-style (\*) *Radiator Building*. This artist painted a series of fluffy white on blue paintings called *Sky above Clouds*. This woman was frequently photographed by her husband Alfred Stieglitz. For 10 points, name this artist of many paintings of flowers and skulls.**

ANSWER: Georgia **O'Keeffe**