## TOSS-UPS

1. The 1990 movie Tune In Tomorrow is an adaptation of this book, with Barbara Hershey and Peter Falk playing the book's title characters. Cousin Nancy and her would-be boyfriend Javier aid the book's protagonists, one a recent divorcee and the other a law student who works at a radio station, whose lives are used as fodder for a soap opera by Pedro Camacho, the titular author. FTP, name this thinly fictionalized autobiographical account of Mario Vargas Llosa's affair with his uncle's ex-wife.

Answer: Aunt Julia and the Scriptwriter or La tia Julia y el escribador
2. Their onset is subject to systematic and accidental gaps, the latter a source for phonologically valid nonsense words. One of these is closed if it has a coda, and penultimately stressed in English if it is heavy. They are divided into an onset and a rhyme, and consist of a nucleus usually made up of a glide, syllabic nasals or liquids, or vowel. FTP name this phonological unit of which there are two in the last word of this sentence.

Answer: syllable
3. It was destroyed by torpedoes fired by the submarine "I-58" while in the Philippine Sea. Its captain was court-martialed for failure to follow a zigzag course, though he had no reason to. A school project by Hunter Scott led to the captain's exoneration in 2001, though Charles McVay had committed suicide years earlier. The demise of most of the crew, eaten by sharks while waiting for rescue, is discussed in Jaws. FTP, name this cruiser sunk by a Japanese submarine on July 30, 1945 after carrying the "Little Boy" atomic bomb to Tinian.

Answer: USS Indianapolis
4. The unrealistic atmosphere of this painting is enhanced by the huge blue flowers on the left, and the moon hanging in a daytime sky on the right. Birds, a snake, a pair of curious lions, and a reclusive elephant appear in the foliage. A black woman in a brightly-colored skirt plays a recorder while a nude white woman reclines on the left. Sylvia Plath's poem "Yadwigha, on a Red Couch, Among Lilies" was inspired by, FTP, what Henri Rousseau painting of a sleeping woman who imagines herself in the jungle?

Answer: The Dream or Le rêve or Yadwigha's Dream
5. It was discovered when DNA hybridized to both the Antennapedia gene and the fushi tarazu gene. Also found in the bicoid gene in the bithorax complex of Drosophila, it codes for a 60 -amino-acid domain forming 3 alpha helices, one of which fits into the DNA major groove while others interact with transcription factors. Gehring, McGinnis, and Levine, and Kaufman and Scott independently discovered this set of 180 base pairs found arranged in the same order in humans, flies, frogs, and tomatoes. Crucial for development FTP name this sequence of DNA found in all fruit fly homeotic genes.

## Answer: homeobox or hox

6. He sprang from his mother's womb to save her from his siblings, who had been encouraged to kill her by his sister Coyolxauhqui. His siblings felt their mother had shamed them by being impregnated when she was touched by a falling ball of feathers. He guided his people until they saw an eagle perched on a cactus eating a snake. Often depicted as a blue-skinned man with hummingbird feathers on his head and left leg, FTP name this war and sun god, the patron deity of the Aztecs.

Ans: Huitzilopochtli (prompt on Mextli)
7. The western boundary of the United States between 1795 and 1803, this "crooked river's" mouth is only thirty miles from its headwaters in Geauga County. A "Time" magazine article said that it "oozes rather than flows" and that a swimmer "does not drown but decays," in reference to the events of June 22, 1969, which began when sparks from a train car of molten steel ignited an oil slick below. FTP, name this now less-flammable river in Cleveland, Ohio.

Ans: Cuyahoga river
8. The Babylonian Talmud claims that she is the daughter of the Moabite king Eglon. After the deaths of Chilion, Elimelech, and this woman's first husband Mahlon, Chilion's widow Orpa leaves, but this woman clings to the widow of Elimelech, Naomi, who urged her to glean at the field of a next-of-kin and lay at his feet until morning. FTP, name this mother of Obed, grandmother of Jesse, great-grandmother of David, and wife of Boaz.

Answer: Ruth
9. "How calmly does the orange branch/ Observe the sky begin to blanch," begins the final poem of the ninety-seven years young poet Nonno. The hero of this play lives on the fantastic level, but operates on the realistic level. When that hero, a black Irish minister turned tour guide, is accused of seducing Charlotte Goodall, a band of female tourists is stuck at Maxine Faulk's hotel. Pedro and Pancho catch the title creature in the jungle and tie it up in a bag. FTP name this Tennessee Williams play in which T. Lawrence Shannon is tied up in a hammock before freeing himself and the title lizard.

Answer: The Night of the Iguana
10. At his coronation, he was married to his people, not his wife, as the Catholic Henrietta Maria refused to take part in a Protestant event. The behavior of his counselors, including Thomas Wentworth, Earl of Strafford, and William Laud, Archbishop of Canterbury, increased the fear of popery among his subjects. Although he ruled alone during the "Eleven Years' Tyranny", this king's money problems forced him to call the increasingly hostile Short and Long Parliaments. FTP, name this hapless British king who lost his life on January 30, 1649.

Answer: Charles I
11. In a lucky accident, smoke from a cheap cigar held by one of the namesakes brought out the beam trace in an early plate produced by this experiment. The final form of the apparatus generated a beam by effusion of metallic vapor from an oven, and used a field gradient of about 10 tesla per centimeter. Providing early support for quantum theory, FTP name this experiment which used a strong magnetic field gradient to split a beam of silver atoms, implying space quantization.

## Ans: Stern-Gerlach experiment

12. In 1998, Jean-Claude Bianco found a bracelet in his trawl net engraved with the names of this man, his wife, and his publisher. In 2000, diver Luke Vanrel found the wreck of his P-38 Lightning off the Ile de Riou. This notoriously bad pilot had been banned from serving with the American force for crashing too many planes. FTP, name this man, whose disappearance during a July 31, 1944 reconnaissance mission added to the melancholy of works such as "Night Flight" and "The Little Prince."
Answer: Antoine de Saint-Exupery
13. Some of its resolutions are based on "the great precept of nature...that 'man shall pursue his own true and substantial happiness."' One resolution refers to "the circumscribed limits which corrupt customs and a perverted application of the Scriptures have marked out." Listed grievances include monopolizing "nearly all the profitable employments," American divorce laws, and the deprivation of "her inalienable right to the elective franchise." FTP name this document drafted by Elizabeth Cady Stanton for an 1848 women'srights convention.

Ans: Seneca Falls Declaration or Declaration of Sentiments and Resolutions
14. Their namesake conjectured that the first few were those with exponent $1,2,3,5,7,13,17,19,31,67,127$, and 257 , though after his death it was shown that 67 and 257 should not have been on the list, and 61,89 , and 107 should have been. The Lucas-Lehmer test serves as a useful method of finding them; also, if $p$ is the exponent, then any factor must be of the form $2 \mathrm{kp}+1$. Last November, Michael Shafer discovered the fortieth one, with index $20,996,011$, using GIMPS. FTP, identify these numbers, named for a 17 th-century French monk, that are primes one less than a power of two.

## Answer: Mersenne primes

15. Diaghilev rejected this work because it was "not so much a ballet, but a portrait of a ballet." Taking place in the Imperial Court of Vienna in 1855, it represents its composer's vision of war and death. Viennese dynamics and Straussian glissandos begin the dance that ends not in glorious apotheosis, but in
nightmare, frenzy, hysteria, and death: the feverish evil lurking behind convention and aristocracy. The second most famous dance by the composer of Rapsodie espagnole, FTP, name this work by Maurice Ravel.

## Answer: La valse (prompt on waltz)

16. One of its three main characters is a fan of Tintin, the New Zealand All Blacks rugby team, and guitarist Leo Kottke; he works as an ad exec. The second does all the household chores and has a toy T. Rex; the third is obsessed with eating monkeys (especially baboons) but loves Greek tuna in oil on crackers. The first is a man named Rob Wilco, the second is a yellow Lab/Shar Pei mix named Satchel, and the third is a psychotic Siamese named Bucky. FTP, name this comic strip drawn by Darby Conley.

## Answer: Get Fuzzy

17. This play was the third of its author's to feature Euripides, who was dead at the time. In it, Xanthias is made to walk around a river and to switch costumes with his master, so that the angry residents of Hades will think that he is Heracles. After being weighed in the scales, it is shown that Aeschylus' verses are heavier than Euripides', thus proving Aeschylus the King of Tragedy, at least until Dionysus takes him back to earth. FTP, name this Aristophanes play whose title creatures form a chorus in the River Styx. Answer: The Frogs
18. This socialist wrote his ideas in The Philosophy of the Revolution, published in 1959. True to his beliefs, he fought as the leader of the Free Officers against King Faruk. Two years after surviving an assassination attempt in 1954, he turned his country into a socialist state, causing the U.S. to withdraw funds for the construction of the Aswan Dam, prompting him to retaliate by seizing the Suez Canal from Britain. FTP, name the Egyptian leader who was succeeded upon his 1970 death by Anwar Sadat.

## Answer: Gamal Abdel Nasser

19. This object zips around its primary about three times a day, rising in the west and setting in the east. At an altitude of 3,700 miles, it's so close that the curvature of the planet prevents it from being seen at latitudes above 70 degrees; its slowly decaying orbit will probably cause its conversion into rings in tens of millions of years. Its largest crater, Stickney, is named for the wife of its discoverer, Asaph Hall. FTP, name this innermost and largest of the moons of Mars.

## Answer: Phobos

20. The end of Evelyn Waugh's The Loved One contains a terrible pun on this poem's phrase "Nicean barks of yore." Its addressee is described as "Psyche, from the regions which/ Are holy land," and her "hyacinth hair," "classic face," and "Naiad airs" have brought the poet "home/ To the glory that was Greece,/ And the grandeur that was Rome." FTP, name this Poe poem addressing the women whose face launched a thousand ships.
Answer: To Helen



## BONUSES

1. Identify the following from the history of the Panama Canal FTPE:
10) The Geographical Society of Paris organized a committee, with this man at its head, to study the feasibility of an interoceanic canal; his recommendation of a sea-level route proved disastrous.

Ans: Ferdinand de Lesseps
10) This man discovered the mosquito vector for yellow fever while in Cuba in 1900; his subordinate would push for mosquito eradication in the Canal Zone.

Ans: Dr. Walter Reed
10) This man was chief engineer when the canal was completed; a New York City bridge is named for him.

## Ans: Colonel George Washington Goethals (pronounced GOTH-ulls)

2. Given the names of the title character and author, name the work of literature, FTPE.
10) Sarah Woodruff, in a John Fowles novel

Answer: The French Lieutenant's Woman
10) Helen Graham, in an Anne Bronte novel

Answer: The Tenant of Wildfell Hall
10) Roy Hobbs, in a Bernard Malamud novel

Answer: The Natural
3. Identify these baseball players who suffered sleep-related injuries, FTPE:
10) This Tampa Bay centerfielder, who hails from Rhode Island, had to DH in a game because he strained his neck, probably while sleeping.

Ans: Rocco Baldelli
10) This Oakland right-hander, a rookie in 2003, strained his shoulder in spring training while reaching for his alarm clock.

Ans: Rich Harden
10) This outfielder, who played for seven different teams and slugged 186 homers between 1989 and 2001, went on the DL because he cut himself smashing a glass table while dreaming he was being attacked by spiders.

Ans: Glenallen Hill
4. Stuff from the kinetic theory of gases, FTPE.
10) As temperature increases, this distribution flattens. It peaks at the square root of 2 kT over m, and describes the statistical distribution of non-interacting particles.

Answer: Maxwell-Boltzmann speed distribution
10) The average speed times the collision frequency is one over this value, the average distance traveled by a molecule between successive collisions.

Answer: mean free path
10) In the absence of advection, the mean-square displacement equals 6 times the elapsed time times this parameter, which has units of length squared over time.

Answer: diffusion constant
5. Given the Greek subject of one of Plutarch's Parallel Lives, give the Roman subject with whom they're paired, F15PE or 5 if you need an easier clue.
15) Agis and Cleomenes
5) These brothers were each assassinated after trying to introduce land reforms in the Senate.

Answer: Tiberius Sempronius and Gaius Sempronius Gracchus or the Gracchi
15) Demosthenes
5) This man, a prolific author, prosecutor, Senator, and orator, is perhaps best known for foiling Catiline's conspiracy.
Answer: Marcus Tullius Cicero
6. Name these Church councils, FTPE.
10) Called by Constantine in 325 , this first ecumenical council condemned Arianism.

Answer: First council of Nicaea
10) At this 1095 council Pope Urban II called for help for the Eastern Churches, leading to the First Crusade.
Answer: Council of Clermont
10) This 1179 council condemned the Waldensian and Cathar heresies. Its election reforms countered a recent schism led by the antipope Callistus III.
Answer: Third Lateran Council
7. In books set in the tropics, ice often plays an important role. Name these books on a 15-5 basis.
15) The patriarch of the central family, when shown ice by a gypsy, exclaims "This is the great invention of our time."
5) That patriarch is Jose Arcadio Buendia

Ans: One Hundred Years of Solitude
15) This novel set in Honduras revolves around a giant ice machine, nicknamed "Fat Boy", built in the jungle by inventor Allie Fox.
5) The title refers to a region of Nicaragua and Honduras fronting the Caribbean Sea whose name does not refer to pesky blood-sucking insects.

## Ans: The Mosquito Coast

8. Answer the following about greedy algorithms in computer science FTPE:
10) This man's greedy algorithm, given a character frequency table, constructs an optimal prefix code.

Ans: David A. Huffman
10) The greedy algorithms of both Kruskal and Prim create this structure on a weighted, undirected graph.

Ans: minimal spanning tree (prompt on partial answers)
10) This Dutch computer scientist described a greedy algorithm in 1959 that solves the single-source shortest-paths problem on weighted, directed graphs.

Ans: Edsger Wybe Dijkstra
9. Identify these locations on the Gettysburg battlefield, FTSNOP:
$5 ; 5)$ On the second day of the battle, the Union and Confederate forces faced each other from these two similarly-named ridges.

Ans: Cemetery ridge and Seminary ridge (either order)
10) Union General Daniel Sickles unwisely advanced from Cemetery Ridge to this fruit-bearing feature on the Emmitsburg Road, which was hit from three sides by James Longstreet's Confederates.

Ans: Peach Orchard
10) General G.K. Warren saved this strategic hill on the Union left flank when he noticed it was unoccupied.

Ans: Little Round Top
10. Name the artist of each these altarpieces, FTPE.
10) The Ghent Altarpiece (name either artist)

Answer: Hubert or Jan Van Eyck
10) The Maesta Altarpiece

Answer: Duccio di Buoninsegna
10) The Isenheim Altarpiece

Answer: Matthias Grunewald
11. Answer these questions about the history of the Democratic Republic of the Congo FTPE:
10) When the Congo declared independence from Belgium in 1960, this man was appointed as its first prime minister; he was later arrested and murdered in jail.

Ans: Patrice Lumumba
10) This copper-rich province, with a name similar to that of Yaphet Kotto's drug lord villain in "Live and Let Die", attempted to break away from the Congo in 1960.

## Ans: Katanga

10) This man was President of the briefly-extant Katanga, and went on to become prime minister of the Congo in July 1964.

Ans: Moise Tshombe
12. Answer these questions about Catullus, FTSNOP.
5) Probably Clodia, this woman's name appears in 7 of Catullus' poems, which describe his love affair with her.
Answer: Lesbia
10) Catullus 51 is a translation of a poem by this Greek poet from Lesbos who was also known for loving women.
Answer: Sappho
15) This is the name Catullus gave to the young man with whom he writes of having had another affair.

Answer: Iuventius ( "Iu" pron. "yoo"; accept Juventius)
13. Identify the following films found within films, FTPE.
10) Plotting not her comeback, but her return, Norma Desmond in Sunset Boulevard hosts a private showing of this incomplete 1928 Erich von Stroheim masterpiece starring Gloria Swanson as the title monarch.

Ans: Queen Kelly
10) C. C. Baxter watches an informercial for this film on TV in Billy Wilder's The Apartment. It features Greta Garbo uttering her trademark line "I want to be alone," and takes place in a lavish German inn.

Ans: Grand Hotel
10) Produced by Monumental Pictures, this film produced in its namesake film stars Don Lockwood and Kathy Selden, who used to dub voices for lavish silent films. It contains a number sung by Gene Kelly whose choreography involves lampposts.

Answer: Singin' in the Rain
14. Identify these islands that just barely make the largest-100 list from descriptions, FTPE:
10) About 400 ships have wrecked on the outlying reefs of this island, 90 th in size, that lies at the entrance of the St. Lawrence River.

Ans: Anticosti Island
10) This island, 94th in size, is the home of Copenhagen, Denmark, and the older namesake of two larger islands.

Ans: Zealand or Sjaelland
10) Grande Terre, 97th in size, is the main island of this archipelago, a French possession in the southern Indian Ocean.

## Ans: Kerguelen

15. Name these geological periods of the Paleozoic era on a 15-5 basis.
15) It saw a rebound in marine life like jawless and bony fishes, and the first colonization of land by arthropods like scorpions and millipedes.
16) Lasting from about 440 to 400 million years ago, this fourth period of the Paleozoic era falls between the Devonian and Ordovician.

Answer: Silurian
15) Insects evolved wings and diversified. Low sea levels and the appearance of bark-bearing trees led to the formation of large coal deposits.
5) Lasting from about 345 to 290 million years ago, this second period of the Paleozoic era is sometimes subdivided into the Pennsylvanian and Mississippian.

Answer: Carboniferous
16. Identify the following FTPE.
10) This effect provides the theoretical basis for looking at the moderator while quiz bowl questions are being read. It states that listeners who watch the lips of the speaker are more likely to interpret distorted, noisy speech signals correctly.

Answer: McGurk effect
10) Working at the McGurk Institute of New York under Max Gottlieb, this titular research scientist in a Sinclair Lewis novel discovers the X principle.

Answer: Dr. Martin Arrowsmith
10) The X principle was actually one of this type of virus that can undergo either lytic or lysogenic cycles in its infection of bacteria.

Answer: bacteriophage
17. Name these writers FTPE.
10) This French critic and author of What is Cinema? wrote about cinema in his journal Cahiers du Cinema, building a theoretical basis for the New Wave.

Ans: Andre Bazin
10) This Spanish writer of What is Philosophy? philosophized on the destructive nature of mass-minded mediocre people in The Revolt of the Masses.

Ans: Jose Ortega y Gasset
10) This German physicist and author of What is Life? developed the basic wave equation of quantum mechanics.

## Ans: Erwin Schrödinger

18. She began her career by writing fashion picture captions for Vogue and moved on to writing mostly negative drama reviews for Vanity Fair. FTPE:
10) Name this member of the Algonquin Roundtable whose reviews for The New Yorker were collected in Constant Reader, and whose poetry was published in Enough Rope and Not So Deep as a Well.

Answer: Dorothy Parker
10) "Woman wants monogamy; / Man delights in novelty. / Love is woman's moon and sun; / Man has other forms of fun. / Woman lives but in her lord; / Count to ten, and man is bored." This is the gist and sum of Parker's general review of what situation?

Answer: General Review of the Sex Situation
10) Along with husband Alan Campbell, Parker wrote the screenplay for this 1937 William Wellman film about the suicide of declining actor Norman Maine and the rise of his wife Esther Blodgett, played in the 1954 George Cukor version by Judy Garland.

## Answer: A Star is Born

19. Name the doctrine from quotes about it, 30-20-10.
30) Bierce defined one who subscribed to it as "A pious gentleman, who believed in letting all people do as he liked."
31) Mencken described it as "the haunting fear that someone, somewhere, may be happy."
32) Macaulay noted that its followers "hated bear-baiting, not because it gave pain to the bear, but because it gave pleasure to the spectators."
Answer: Puritanism
20. Give the authors of these eighteenth century comedic plays, FTPE.
10) The Beggar's Opera

Answer: John Gay
10) She Stoops to Conquer

Answer: Oliver Goldsmith
10) The Tragedy of Tragedies

Answer: Henry Fielding

