

1. **The McNamara brothers were defended by Clarence Darrow after they blew up a newspaper building in this state in 1910. The Briggs Initiative was proposed in this state to ban homosexuals from working in schools. Oliver “Bill” Sipple grabbed the arm of Sara Jane Moore to stop her from assassinating President Gerald Ford in this state, the home of a man nicknamed the “Mayor of Castro Street” who was assassinated by Dan White. Harvey Milk was the first openly gay elected official in the history of, for ten points, what state that contains San Francisco?**

Answer = California

2. **A “pentadienyl” variety of these chemical species are generated by diene-containing fatty acid derivatives like linoleic acid. Tetraethyllead decomposes into short-lived varieties of these species at temperatures found in internal combustion engines. Examples of these species include Frémy’s salt and TEMPO. “Fish-hook” arrows are used to denote initiation, propagation, and termination reactions, all of which involve these species. Antioxidants suppress, for ten points, what highly reactive species that contain unpaired electrons?**

Answer = Free Radicals

3. **One copy of this painting is currently housed in the Musée Lambinet, and another is owned by Edmond James de Rothschild. A woman in this painting wears a shepherdess hat, and a statue in it holds its finger in front of its lips. A man in a gray suit with a red flower is present in this painting below a stone angel known as a *putto*. This work also sees two ropes being held by a priest, who pushes a smiling girl in a pink dress as her shoe falls off on the title red seat. For ten points, name this Rococo-style painting by Jean-Honoré Fragonard.**

Answer = *The Swing*

4. **A 36-bar theme in A minor as well as a tempo change from Andante malinconico to animato before a rapid thirty-second line are in one work by this composer, and in a tone poem by himm the oboe represents a cockerel’s crow. This composer wrote *Introduction and Rondo Capriccioso*, as well as a work in which twelve D notes are played to represent the strokes of midnight. A Henry Cazalis poem inspired that piece by this composer, in which a xylophone is used to represent rattling bones. For ten points, name this French composer of *Danse macabre*.**

Answer = Camille Saint-Saëns

5. **A PNP bipolar transistor can be combined with an n-channel JFET to create the lambda variety of these devices, and their first use was in the demodulation of radio broadcasts. The forward voltage of one of these devices made of silicon is the basis for a kind of bandgap temperature sensor. William Shockley came up with an equation for the “ideal” variety of these devices. A p-n junction connected to**

two terminals makes up the “semiconductor” variety of, for ten points, what devices that allow current in only one direction, which also have a “light-emitting” kind?

Answer = Diode

6. **This author referenced “Sirmio, little eye of peninsulas and of islands” in one poem, and in another said “That yacht, which you see, my guests / says that it was the fastest of the ships.” He instructed a “servant boy of old Falernian wine” to “pour pungent cups for me” in another work. To commemorate his brother’s death, this poet wrote “Ave Atque Vale”, which translates as “Hail and Farewell.” His works were collected in 116 *carmina*, and he addressed the line “I hate and I love” to his lover Clodia, who he often called Lesbia. For ten points, name this Roman poet.**

Answer = Gaius Valerius Catullus

7. **This quantity is associated with “shirking” and “wage sluggishness” in a model that has demand-side and supply-side varieties. Another model with this quantity on the x-axis can indicate the current state of the economy in the business cycle using a 45-degree line. The Shapiro-Stiglitz and Beveridge curves use this quantity as an independent variable, and Okun’s Law correlates a 1% increase in this quantity and a 2% decrease in a country’s GDP. For ten points, name this quantity that models the number of people who don’t have a paid job.**

Answer = Unemployment

8. **This man mandated that slaves were to be baptized by the Roman Catholic Church as part of his *Code Noir* decree. This man signed the Secret Treaty of Dover with England and established the Chambers of Reunion. Belgium, Spain, and this man’s country signed the Truce of Ratisbon. The War of the Devolution was fought by this ruler’s country, and he began his rule after the death of Cardinal Mazarin. The War of the Spanish Succession was fought by, for ten points, what French king who legendarily declared “I am the state”?**

Answer = Louis XIV (prompt on “Louis” alone)

9. **In this film, a character stops a car to pick up a container from KFC that was thrown in the road; that character later calls Robert Kennedy after he is jailed. This film was directed by Peter Farrelly and it also sees the protagonist help his driver grammar-check a letter to his wife. This film includes a bouncer at the Copacabana club who assists a pianist during an eight-week concert tour. Viggo Mortenson and Mahershala Ali play Tony Lip and Don Shirley during, for ten points, what 2019 Best Picture winner titled for an African-American travel guide?**

Answer = Green Book

10. **In one play by this author, Ivanov shares a mental hospital cell with a schizophrenic who believes he has an orchestra under his command. This author**

wrote about the Cambridge professor Anderson in his play *Professional Foul*. In another work by this author, Hannah Jarvis and Bernard Nightingale plot about Septimus Hodge, the potential hermit of Sidley Park. A series of 92 coin flips always lands heads in another play by this author of *Arcadia*. For ten points, name this British playwright who wrote *Rosencrantz and Guildenstern are Dead*.

Answer = Sir Tom Stoppard (accept Tomáš Straussler)

11. This man told his cabinet that “this is an ultimatum” following the release of the Hull note, which was chronicled in the 1998 film *Pride*. This man’s dentist drilled a three-word phrase into his dentures via Morse Code during his time at Sugamo Prison. This leader of the Chahar Expeditionary Force ordered troops to attack Hebei Province following the Marco Polo incident. Nicknamed “The Razor”, this man was hanged in December 1948. For ten points, name this Prime Minister of Japan during World War II whose government ordered the attack on Pearl Harbor.

Answer = Hideki Tojo

12. A bronze figure situated on a bridge in this building between the steeples of two saints represents the ascension of Jesus. One façade in this building contains a magic square which was based off one in the 1514 print *Melencolia* and which adds up to 33 rather than the standard 34. A winged bull are among the planned eighteen spires for this building that will represent, among others, the twelve Apostles. The Passion and Glory façades are part of, for ten points, what basilica in Barcelona, Spain that was designed by Antoni Gaudí?

Answer = Basilica de la Sagrada Família

13. The Alcubierre drive is based on a solution in this theory, and Whitehead’s theory and Brans-Dicke theory are alternatives to this theory. The Shapiro time delay uses radar signals to test this theory, which was tested in an experiment at Harvard University that saw gamma rays emitted from the top of a tower. Pound and Rebka conducted that experiment. The perihelion precession of Mercury was first predicted by this theory which explains gravitational redshift and time dilation. For ten points, name this theory first proposed in 1915 by Albert Einstein.

Answer = General Relativity (prompt on “relativity” alone, don’t accept prompt on “special relativity”)

14. This novel includes a character who likes peanut brittle and lives all by himself in a two-man tent, where he shoots field mice every night, as well as a character who says “it must be nice to live in a vegetable.” This novel’s protagonist complains of a “pain in his liver that fell just short of being jaundice.” The Life Magazine photographer “Hungry Joe” is in this novel that sees M&M Enterprises buy all of the Egyptian cotton in the world. Milo Minderbinder is a character in, for ten points, what satirical novel featuring Yossarian, titled for a certain paradox?

Answer = Catch-22

15. A betrayal during this conflict allowed the Albanians under Omer Vrioni to pass the right flank and seize the village of Peta. The American Samuel Gridley Howe served as a doctor during this conflict that saw Frank Abney Hastings provide support with his ship the *Karteria*. This conflict's Battle of Maniaki saw Ibrahim Pasha rout the enemy army. The Massacre at Chios and Battle of Navarino occurred during this conflict. For ten points, name this 1821-to-1830 conflict that saw Alexander Ypsilantis lead a namesake Balkan country to break free from Ottoman rule.

Answer = Greek War of Independence (accept Greek Revolution, accept "Agonas", accept Greek Uprising)

16. This deity's symbols include the rosette and a namesake eight-pointed star. Shara is the son of this deity, as well as the patron deity of Bad-tibira, Lulal. This god moved a huluppu tree to a garden in order to carve into a throne, but Lilitu and the serpent Anzû-bird inhabited it, causing this god to cry. The death of Enkidu ensued after this deity sent the Bull of Heaven to a hero who rejected her. In one story, this deity visited the Underworld of her sister Ereshkigal. Associated with Venus, for ten points, name this Babylonian goddess of love and war.

Answer = Ishtar (accept Innana or Astarte)

17. This nation's districts are called *ressorten*, and they include Livorno and Centrum. The Johan Adolf Pengel International and Zong en Hoop airports are in this nation, which is the headquarters of Caricom Airlines and Gum Air. The Jules Wijdenbosch Bridge is also in this nation. The English-based creole Sranan Tongo is a *lingua franca* used in this country home to Juliana Top. Brazil is bordered to the south and Guyana is bordered to the west by, for ten points, what nation with a Dutch-language majority which has capital at Paramaribo?

Answer = Suriname

18. This book's three parts were identified in *A History of Western Philosophy* by Bertrand Russell, who said that it describes an ideal community and the education of its Guardians. Leo Strauss identified a "Just City in Speech" in this work, which ends by discussing the Myth of Er. A "city of pigs" is described by Glaucon in this book that also includes analogies of the sun and the Divided Line in its "Allegory of the Cave." Philosopher-kings are discussed in, for ten points, what book about city-states and justice, written in 375 BC by Plato?

Answer = The Republic

19. A doctor in this work tells a landlady to order a pine coffin rather than an oak coffin to save money. Its protagonist, whose ancestors always wore boots, has a

habit of arriving beneath a window just as trash is being thrown out of it. That protagonist stops drinking tea and burning candles in order to save money for an accessory. That accessory costs 80 rubles and was made by Petrovitch for a copyist; after it's stolen, it haunts the residents of St. Petersburg. Akakiy Akakievich dies in, for ten points, what Nikolai Gogol short story titled for a clothing item?

Answer = "The Overcoat" (accept "The Cloak", accept "Shinel")

20. These structures are present in both lateral and polar types in *Aeromonas* and *Vibrio parahaemolyticus*, and the "swarmed" daughter cells of *Caulobacter crescentus* have only one of them. These structures project in all directions in peritrichous organisms. *E. Coli* "run" and "tumble" by using chemotaxis and rotating these structures. The hook and filament of these structures are connected by rods to their basal bodies. A "9+2" arrangement of microtubules is present in, for ten points, what structures that move like a whip to facilitate motion?

Answer = Flagella (accept Flagellum, do not accept or prompt on "cilia")

Tiebreaker

1. One material with this property may contain a geometric pattern called a boojum. The existence of this property in neutron stars was proposed by Arkady Migdal, and its occurrence in an ultracold fermionic gas was proven by Wolfgang Ketterle after observance of quantum vortices in a Lithium isotope. Lev Landau proposed a theory regarding this phenomenon which is seen in Rollin films and rotons. Below the lambda point, Helium-4 exhibits, for ten points, what phenomenon in which liquids or gases exhibit zero velocity?

Answer = Superfluidity (accept Superfluids)