

# 2000 Cal Classic V

## Round 8 Tossups

1. This nation was the first to convert to Christianity, having done so under King Trdat III circa in the year 301 C.E. Unlike their neighbours, its people did not convert to Islam in the seventh century, now they are surrounded by potentially hostile neighbours like the Azeris, with whom they recently fought a war over the enclave of Nagorno-Karabakh (Na GOHR no Kare a BACH). For 10 points, identify this former Soviet republic that was the site of a major earthquake in 1988. ~~which~~ with capital at Yerevan

Answer: Armenia

2. Pencil and Paper appropriate - Sure you know that mighty Casey struck out in his last at-bat. But in his first three at-bats he had a double, a triple, and ground out. If in his fourth at-bat, he struck out, FTP what is slugging average for these four at-bats.

Answer: 1.25

3. This collection ends with the widely anthologized story The Patient Griselda. In it, seven women and three men flee plague-stricken Florence for a villa in nearby Fiesole, where each person rules for a day and sets stipulations for the daily tales to be told by all the participants, resulting in a collection of 100 pieces, several of which became the basis for parts of Chaucer's "Canterbury Tales". FTP, name this collection of tales by Boccaccio.

Answer: The Decameron

4. The 15,000 kinds of these organisms are classified based on their mycobiont component. They can be crustlike, leaflike, or stalked, and are found worldwide due to their favorable symbiotic relationship, in which one part excretes a carbohydrate that is used as food by the other part, which in turn provides a protective structure for the first part. FTP, name these organisms composed of a fungus and an alga.

Answer: lichen

5. As a boy growing up in Simbirsk, he distinguished himself in Latin and Greek. He became a radical, however, in 1887, when his brother Alexander, a student at the University of Saint Petersburg, was hanged for conspiring to assassinate Czar Alexander III. FTP, name this founder and first leader of the Soviet Union.

Answer: Vladimir Ilyich Lenin (or Ulyanov)

6. Levels on the current version of this game include Mower Madness and Bow Wow Falls. Originally an arcade game, later made into an Atari game, Hasbro Interactive has updated it for computers as well as Sony Playstation, with all new levels and 3D graphics. FTP, name this game which features crocodiles, sinking turtles, cars, trucks, and the title amphibian.

(A: Frogger)

7. This author collaborated with John Huston on the screenplay for 1956's Moby Dick. At the age of 12 he began writing at least 4 hours a day, and followed his first collection of stories, Dark Carnival, with works like The Golden Apples of the Sun, The Illustrated Man, Dandelion Wine and Something Wicked This Way Comes. FTP, name this science-fiction author of Fahrenheit 451 and The Martian Chronicles.

Answer: Ray Bradbury

8. His career started in 1508 when he and Giorgione were commissioned to paint frescoes on the Fondaco di Tedesche (The German Exchange) in Venice. He defied convention in his 1526 work *Madonna of the House of Pesaro*, which was the first to not place the Madonna in the centre of the painting. His later works were marked by the use of intense colours and dissolving forms, a style which anticipated the Impressionists. For 10 points - identify this long-lived Venetian painter known for his use of the paintings *Sacred and Profane Love* and *Venus of Urbino*.

Answer: Tiziano Vecellio

Accept: Titian

9. Is it a moon or a planet? This "moon" has the largest size ratio in the solar system to the planet that it orbits. Scientists speculate it may be half of a binary planet system. FTP identify this moon named for the mythological ferryman of the underworld which orbits Pluto.

Answer: Charon

10. When swearing allegiance to the English crown, the president of Sidney Sussex College at Cambridge University ceremoniously draws a curtain covering a portrait of this man shut to avoid giving him offence. The man in the portrait attended the College in 1616, but left the following year after the death of his father. For 10 points – identify this man who executed King Charles I and later became Lord Protector of England.

Answer: Oliver Cromwell

11. "I thought that if I could bestow animation upon lifeless matter, I might in process of time renew life where death had apparently devoted the body to corruption." These words, spoken by the titular character of this book denote the point where his Prometheus idea takes root and his obsession with animation begins. They also show that he is still thinking about the untimely death of his mother in an epidemic, and thinking that he might be able to bring her back to life. Subtitled "The Modern Prometheus," for ten points, name this 1818 published work.

(A: Frankenstein)

12. There is no church or clergy, nor teaching on the worship of God or gods, or life after death. Focusing on social life, government, education, and personal behavior, important texts include the book of the second sage known as Mencius, as well as the book of changes, the I Ching. FTP, what is this philosophy founded in 6th century BC China whose main text is the Analects?

Answer: Confucianism

13. Related to the Goths, this Germanic tribe of the middle Danube fled west following the Hunnish invasions of 376 AD, ultimately crossing the Rhine into the Roman empire in 406. They conquered the whole of Roman Africa, and their pirate fleets roamed the Mediterranean, sacking Rome in 455. Their last king, Gelimer, was defeated by the East Romans under Belisarius in 534, and they disappeared. FTP name this tribe whose name has survived as a synonym for willful destruction.

(A: Vandals)

14. They are so reactive that they never occur free in nature; instead, they are found combined with metals in salts such as sodium chloride. This has led to their name, which means "salt-formers". FTP, what is the collective name of these elements in group 7, which include fluorine, chlorine, bromine, iodine, and astatine?

Answer: Halogens

15. This river's valley is home to the cities of Aix-en-provence (Eks-on-Provance) the home of Paul Cezanne and the Papal palace at Avignon. You find Marseilles at the mouth of this river. FTP identify this French river along which a prominent wine-producing region is found.

Answer: The Rhone

16. In response to the war cry, "American blood has been shed upon American soil," he maintained an even temper. By impugning the validity of the statement in Congress and issuing "spot resolutions," he revealed that such Mexican transgressions were often hype. For ten points, identify this individual.

(A: Abraham Lincoln)

17. This Roman statesman was elected consul in 63 BCE, but Clodius Pulcher had him exiled 5 years later. Author of the treatises "On the State", "On the Nature of the Gods", and "On the Orator", he served as governor

of Cilicia before being executed due to his opposition to Octavian in 43 BCE, and is known today for the more than 900 letters which have survived to the present day. FTP, name this greatest of all Roman orators.

Answer: Marcus Tullius Cicero

18. If you listen carefully to this song, you'll hear lead singer Jack Ely start singing one of the verses two bars early. It is one of the most heavily litigated songs in history, having been the subject of an FBI obscenity investigation in the 1960s and a royalties lawsuit in 1998. For 10 points – identify this 1963 hit by the Kingsmen legendary for its poorly enunciated lyrics.

Answer: Louie Louie

19. It is a whitish form of limestone, composed of the remains of small marine organisms such as foraminifera and coccolithophores; it formed after the shells and skeletons of these organisms were deposited on the sea bottom. Chemically it is almost pure calcium carbonate. It is particularly common in strata of the Cretaceous period, which takes its name for the Latin for this form of limestone. Large deposits are found in Iowa, Texas, and Arkansas, and in the British Isles, where it is notably exposed in the White Cliffs of Dover. FTP, name this substance found in most classrooms.

Answer: Chalk

20. He created the humans of the current age by descending to Mictlan and sprinkling his blood on the bones of deceased humans from earlier ages. Another legend had him being driven into exile by Tezcatlipoca; he promised to return from the east in the year 1-Reed, which corresponded to 1519 on the Julian calendar. For 10 points – identify this Aztec god whose was prophesied to return to Mexico in the same year that Hernan Cortes arrived.

Answer: Quetzalcoatl

#### Round 8 Bonuses

1. Three women are the only people to win the Newbery medal twice. For ten points each, name them given books.

The Giver; Number the Stars

Answer: Lois Lowry

Jacob Have I Love; Bridge to Terabithia

Answer: Katherine Patterson

The View from Saturday; From the Mixed-Up Files of Mrs. basil E. Frankweiler

Answer: E.L. Konigsburg

2. Answer the following questions about the film "Airplane", FTPE:

1. Name the man who played Co-Pilot Murdoch, who revealed his true identity as an LA Lakers basketball player.

ANSWER: Kareem Abdul-Jabbar

2. Name the actor who played Dr. Rumack, easily identified in the film by the stethoscope he happened to be wearing at the time. This actor also starred in such films as "The Naked Gun"

ANSWER: Leslie Nielson

3. What food served on the plane poisoned the crew and many of the passengers?

ANSWER: fish

3. Just because no-one lives there doesn't mean it doesn't have a history. FTPE, answer these questions about the exploration of Antarctica.

A. He was the first explorer to cross the Antarctic Circle, reaching 71 degrees 10 minutes south in 1773. He is better known for his explorations in the Pacific.

Answer: [Captain] James Cook

rd 8-3

B. In 1843, this English explorer reached a record latitude of 78 degrees south, and reached the ice shelf that bears his name.

Answer: Sir James Clark Ross

C. In 1840, Jules Dumont d'Urville sailed along part of the Antarctic coast, giving that part of the continent and the penguins that live there this, the name of his wife

Answer: Adelie

4. FTPE, name these terms from the study of subatomic particles.

1. (10 points) First, name the subatomic particles which can be classified as up, down, top, bottom, charmed, and strange.

Answer: quarks

2. (10 points) Next, name the large class of elementary particles, composed of mesons and baryons, that interact by means of the strong force, and are formed by combinations of quarks.

Answer: Hadrons

3. (10 points) Finally, quarks are thought to be held together by these appropriately named hypothetical particles, which come in eight varieties.

Answer: gluons

5. This is a 30-20-10 bonus about rivers in Greek mythology, in which each clue will be about a different river. If you name the 30 point river, the question is over, but if your answer is wrong, you will hear a 20 point question about a different river, and a 10 point clues about a third river if necessary.

1. (30 points) This river, whose name means "river of sorrows", is one of the 5 rivers of the infernal regions. Phlegethon and Cocytus flow into it, and in the Divine Comedy it divides the borderland from Limbo.

Answer: Acheron

2. (20 points) One of the rivers of Hades, the souls of the dead must drink this river's waters so that they forget their pasts.

Answer: Lethe

3. (10 points) Charon ferries the dead across this sacred river of Hades.

Answer: Styx (moderator: please berate any player who mentions Mr. Roboto)

6. Answer these questions on the Civil War, for ten points each.

a. At 4:30 AM on April 12, 1861, this Confederate General Pierre Beauregard began the attack on this fort.

ANSWER: Fort Sumter

b. An unsuccessful Presidential candidate in 1856, this Union officer proclaimed emancipation in Missouri.

President Lincoln revoked the unauthorized action on September 11, 1861, however.

ANSWER: John Charles Fremont

c. After Winfield Scott was forced to retire, this man became commander of the U.S. Army. This man, known as the "Napoleon of the West", would go on to lose the 1864 Presidential Election to Lincoln.

ANSWER: George McClellan

7. Identify the authors of the following poems FTPE

1. Because I Could Not Stop for Death

ANSWER: Emily Dickinson

2. Old Ironsides

ANSWER: Oliver Wendell Holmes

3. Do Not Go Gentle Into that Good Night

ANSWER: Dylan Thomas

8. Only 3 films have swept the Oscars, winning Best Picture, Best Actor, Best Actress, Best Director and Best Screenplay.

FFPE, name the three films, one in 1935, one in 1975 and one in 1991.

(A: It Happened One Night, One Flew Over the Cuckoo's Nest, and Silence of the Lambs)  
FTP, name the director of Silence of the Lambs.

(A: Jonathan Demme)

For a final five points, name the actress who won an Oscar for her portrayal of Big Nurse in One Flew Over the Cuckoo's Nest.

(A: Louise Fletcher)

9. Answer these questions about neurological disorders for 10 points each.

A. Recent research indicated that patients in the later stages of these disease that some have claimed to be caused by an excess of aluminum in the brain lose their mental skills in the reverse order to that in which they were acquired. Its most famous sufferer is Ronald Reagan.

Answer: Alzheimer's disease

B. This rare disorder, the human equivalent of mad cow disease, was responsible for the ban on British beef a few years back.

Answer: Creutzfeldt-Jacob disease

C. This genetic disease, named after the physician who described it in 1871, causes the cerebrum to deteriorate, leading to uncontrollable muscle movement in its victims.

Answer: Huntington's disease (or chorea)

10. 30-20-10 name the person.

30) Portrayed by Katherine Hepburn in the film The Lion in Winter, this Medieval woman is famous for her energy, her vigor, and her rebellions against her second husband.

20) She died in 1204 during the reign of her youngest son, John.

10) Name this woman who was married to both Louis VII of France and Henry II of England.

(A: Eleanor of Aquitaine)

11. The Golden Age of English opera began when – wait a second; there was no golden age of English opera. For 10 points each, identify these operas by English composers, none of whom were fortunate enough to live in a golden age.

A. The best known aria in this Henry Purcell (PURSE - ul) work is "When I am laid in earth," which is sung by the Queen of Carthage.

Answer: Dido and Aeneas

B. This John Gay work formed the basis for Kurt Weill's and Bertolt Brecht's The Threepenny Opera.

Answer: The Beggar's Opera

C. This opera by Benjamin Britten shares its title with a novella by Herman Melville.

Answer: Billy Budd

12. Name the leaders of these insurrections from American history, FTPE.

1. (10 points) After an attack against western Virginia settlers by Native Americans went without a response from the Virginia government, this farmer led a 1675-76 revolt that resulted in the burning of Jamestown.

Answer: Nathaniel Bacon

2. (10 points) This former captain in the American army led a 1786-87 insurrection in response to the impossible economic demands placed upon Massachusetts farmers.

Answer: Daniel Shays

3. (10 points) This slave planned an uprising in 1831 which led to the deaths of 50 whites and 100 slaves before it was crushed.

Answer: Nat Turner

13. Answer the following about the construction of the periodic table for 10 points each.

A. This Russian chemist's creation of the periodic table was considered important enough for element 101 to be named after him.

118-5

Answer: Dimitri Mendeleev

B. Mendeleev used the periodic law he described to predict the properties of this element that was at the time undiscovered. He made his prediction using the properties of aluminum, which is located directly above it on the table.

Answer: gallium

C. Mendeleev did not know that the intertransitional elements even existed when he composed his primitive form of the table. FFPE, give the common names of the two sets of intertransitional elements.

Answer: lanthanides and actinides

14. Important Battles in British History – Given the battle, name the war in which it was fought, FFPE

1. Battle of Dettingen

ANSWER: War of the Austrian Succession

2. Battle of Trafalgar

ANSWER: Napoleonic Wars or War of the Third Coalition

3. Battle of Agincourt

ANSWER: Hundred Years' War

4. Battle of Tewkesbury

ANSWER: Wars of the Roses

5. Battle of Blenheim

ANSWER: War of the Spanish Succession

6. Battle of Yorktown

ANSWER: War of the American Revolution or American Revolutionary War

15. Answer the following about cultures of Sub-Saharan Africa for 15 points each.

A. This people who founded this empire originated in the Dendi region of northwest Nigeria. The empire collapsed in 1591 when Moroccan troops attacked with firearms.

Answer: Songhai

B. Founded in the late 11th century by Tuareg Nomads, this Songhai trading post had a population of 40,000 during the 16th century.

Answer: Tombouctou

Equivalent: Timbuktu

16. 30-20-10, name the author from works.

1. (30 points) The Sufferings and Greatness of the Masters, Reflections of an Unpolitical Man, Mario and the Magician, Joseph and His Brothers, Tonio Kroger

(20 points) Confessions of Felix Krull: Confidence Man, Buddenbrooks

(10 points) Death In Venice, The Magic Mountain

Answer: Thomas Mann

17. Name the following constants which describe properties of materials in physics, FTP each:

a) This constant measures the ability of a material to withstand changes in length under the influence of a compressing force, and is equal to the stress divided by the strain.

Answer: Young's modulus or modulus of elasticity

b) This constant, measured in units of force per unit area, is equal to the maximum load that a material can support without breaking divided by the material's cross-sectional area.

Answer: Tensile strength

c) This property of ferromagnetic materials refers to the temperature above which the material loses its ferromagnetic properties.

Answer: Curie point or Curie temperature

18. Sigmund Freud was a wacky guy. He identified five stages of human development, then gave them names that sound like fetishes. For five points each plus an extra five for putting them in order, name them.

Answers in order: ORAL, ANAL, PHALLIC, LATENT, GENITAL

(Note: The author swears he is not making this up!)

19. Answer these questions about the films and screenplays of American playwright David Mamet for 10 points each.

A. Levine, a Chicago real estate agent, is about to be fired in this 1984 play that was made into a film in 1992.

Answer: Glengarry Glen Ross

B. This 1992 play about a student bringing sexual harassment charges against her college professor is perhaps Mamet's most controversial.

Answer: Oleanna

C. Mamet also wrote the screenplay for this 1998 film starring Dustin Hoffman and Robert de Niro as two men working to restore the President's tarnished image.

Answer: Wag the Dog

20. Identify these American paintings, for ten points each.

This painting by the Quaker preacher Edward Hicks is based on a description found in Isaiah 11:6. In it a wide range of predatory animals rest with an array of herbivores.

Answer: the Peaceable Kingdom

This painting shows a woman sitting in a wooden chair facing left. Her hair is pulled back and she wears a dark dress and a white scarf and cap on her head. In the back there is a curtain and a small painting on drab wall. For ten points give the painting's title or name the artist for five points.

Answer: Arrangement in Grey and Black No. 1: The Artist's Mother or James Whistler

In this 1899 painting by Winslow Homer, a solitary black sailor in a small, disabled boat is beset by sharks and alone on a stormy sea.

Answer: Gulf Stream

**Berkeley's WIT 7: Packet by the University of Massachusetts and Boston University, courtesy of MIT Beaver Bonspiel**

**Tossups**

1. It is usually broken up into three suites: #1 in F Major with horns, #2 in D Major with trumpets, and #3 in G Major with flutes. The original manuscript of this work is now lost and many contemporary publications disagree about its original notation and orchestration, but most scholars agree that an edition published by Roger Fiske is probably canonical. FTP, identify this work by Handel which was written around 1717 for a planned royal boat trip down the Thames.

Answer: Water Music or Wassermusik

2. The biogenic type of this substance consists of minute organic remains of organisms such as diatoms and radiolaria. Non-biogenic types, such as red clay, consist of wind-blown volcanic ash, meteoric dust, and material carried by icebergs which eventually sink to the bottom of the ocean. FTP, identify the sludge-like material with a monosyllabic name which is deposited on the ocean floor far from land.

Answer: ooze

3. J.D. Barrow and F.J. Tipler adopt this term for a final state of the universe in which life-forms have engulfed absolutely everything. In transfinite mathematics, it denotes the smallest infinite ordinal. Teilhard deChardin (TAIL-hard DAY-shar-DAN) uses it to signify the end-point in history. FTP, identify this term and letter used to symbolically represent the omniscience of God in the book of Revelation, the last letter in the Greek alphabet.

Answer: Omega

4. In 1861 he was wrongly accused of abducting a rancher's child, and was arrested by the U.S. Army, but he soon escaped, beginning a personal protracted guerilla war against the United States that lasted over 10 years. In 1872, General Oliver Howard finally reached a peace settlement with him after promising his people a reservation on their native land. FTP, name this chief of the Chiricahua (CHEER-eh-cah-HOO-ah) Apache who died in 1874.

Answer: Cochise

5. Only hydrogen does not exhibit this effect, and it can be felt during the escape of air through a valve of an inflated bicycle tire. Simply put, it is the fall in temperature of a gas as it expands adiabatically through a narrow jet. FTP, identify this effect which is the basic principle behind most refrigerators, named for the two British scientists who gave their names to the SI units of work and temperature.

Answer: Joule-Kelvin Effect or Kelvin-Joule Effect or Joule-Thomson effect

6. Its highest point is Mount Orohena, and if you flew to this island in the South Pacific, you would probably land at Faa International Airport. Once on the ground you could visit a monument to Captain Cook at Venus Point, or sail about 10 miles west to the island of Moorea. FTP, name this French Polynesian island whose administrative capital is Papeete.

Answer: Tahiti

7. He produced a report on Santa Fe which was influential in encouraging expansion into lands which would eventually become New Mexico and Western Texas, and he served as a brigadier general in the War of 1812, during which he was fatally wounded during the attack on York in Canada. FTP, name this man who is best known for exploring the Arkansas and Red river systems as well as a mountain near Colorado Springs, Colorado which now bears his name.

Zebulon Pike

8. A movie version of this novel featured a young Hugh Grant, and because of its homosexual theme, the novel was published only after the its author's death. It is a tale of the coming of age of a Cambridge University student and his growing acceptance of his homosexuality as he as he takes as his lover Alec Scudder, the gamekeeper on the estate of his friend, Clive. FTP, identify this novel by E.M. Forster.

Answer: Maurice



18. Writing in the 12th Century, her work includes fables, visions of purgatory, and *lais* [lay] – short narratives about romantic adventures usually involving magical circumstances. The longest of her *lais* [lay] is *Eliduc* [Eil-ee-dook], a tale about a man with two wives. FTP, name this Anglo-Norman poet, the first known woman to write poetry in French, who wrote at the court of Henry II.

Answer: Marie de France or Mary of France

19. This law guaranteed that its subjects could keep so-called "*places de sûreté*" for eight years, and it created a *Chambre de l'Édit* to deal with any disputes that it would create. Its political clauses were nullified by the Peace of Alès, and it was completely revoked in 1685 by Louis XIV, resulting in an emigration of some 400,000 Protestants. For 10 points, name this 1598 edict defining the rights of Huguenots.

Answer: Edict of Nantes (Édit de Nantes)

20. This roughly 10-inch-long organ has a horseshoe shape. It can be divided into 4 parts: the superior, the descending, the horizontal, and the ascending. Ducts from the pancreas and gallbladder enter in the descending part, and work on food and gastric juices that enter the superior part from the pylorus of the stomach. FTP, what is this shortest part of the small intestine, which is followed by the jejunum and the ileum?

Answer: Duodenum (do not prompt on "small intestine")

21. "*A un dottore dell mia sorte*", sung by Dr. Bartolo. "*Una voce poco fa*", sung by Rosina. "*Il vecchiotto cerca moglie*," sung by Berta. "*La Calunnia*", sung by Don Basilio. All of these arias, as well as "*Ah, il piu lieto*," sung by Count Almaviva, can be found FTP in what opera, along with the aria "*Largo al factotum*", sung by Figaro?

Answer: The Barber of Seville or Il Barbiere Di Siviglia

b) In 1856, this Englishman patented converter which uses cold air to convert pig iron into steel.

Answer: Henry Bessemer

c) This paleontologist at the Academy of Natural Sciences in Philadelphia became the first American to identify dinosaur fossils.

Answer: Joseph Leidy

7. Identify the architects of the following American buildings FTP each.

a) The Allegheny County Courthouse in Pittsburgh, PA

Answer: Henry Hobson Richardson

b) St. Patrick's Cathedral in New York City

Answer: James Renwick

c) The White House

Answer: James Hoban

8. Identify the following two people associated with the Oxford Movement for 15 points each.

a) This man's sermon "National Apostasy", was considered to mark the beginning of the movement. A college at Oxford is named for him.

Answer: John Keble

b) This man, made a Cardinal in 1879, is most famous for his *Apologia Pro Via Sua*.

Answer: John Henry Newman

9. 30-20-10, name the author.

a) (30) The first person in his family to leave his village for the city in several hundred years, he claims the biggest impression on him as a child were the stories told to him by his grandmother and two banned books given to him by his mother: *The Adventures of Huckleberry Finn* and *The Strange Adventures of Nils Holgersson*.

b) (20) His first novel was 1958's *Nip the Buds Shoot the Kids*. His 1964 novel, *A Personal Matter*, was borne out of decision to have his son operated on as an infant for a herniated brain.

c) (10) His son, Hikari, is a well-regarded pianist, while he won the 1994 Nobel Prize for Literature.

Answer: Kenzaburo Oe

10. Identify the following deserts from clues FTPE.

a) Much of it has no sand, but is bare rock. With a name translating to "waterless place", its high elevation makes it the coldest desert in the world outside of Antarctica.

Answer: Gobi Desert

b) This desert, along with the Great Basin desert to the north, the Sonoran desert to the south, and the Chihuahuan desert, together comprise what is sometimes known as the North American desert.

Answer: Mojave Desert

c) This Australian desert is home to the country's largest nature reserve. It lies between the Great Sandy and Great Victorian deserts, and is named after an anthropologist who died there in search of water.

Answer: Gibson Desert

11. Name these leaders of 20th century Poland, for 10 points each:

a) He proclaimed an independent Polish republic in 1918 and served as premier for much of the 1920s, but soon became military dictator.

Answer: Jozef Pilsudski

b) When he became General Secretary in 1981, declared martial law and banned Solidarity. He ruled until 1989.

Answer: Wojciech Jaruzelski

c) This head of the Solidarity union was imprisoned by Jaruzelski but was elected president in 1990.

Answer: Lech Walesa

12. Name these physical chemists, for 10 points each:

a) He bombarded uranium with neutrons in 1938 to find the first chemical evidence of nuclear fission products.

Answer: Otto Hahn

Answer: Augustin Jean Fresnel (pronounced "freh-neh!")

18. Identify these islands 10 points each:

a) Discovered by Abel Tasman and visited by Capt. James Cook, this independent republic is comprised of about 320 islands and is a member of the Commonwealth. Its largest islands are Viti Levu, which holds its capital Suva.

Answer: Fiji

b) French and Malagasay are the official languages in this country. It is separated from the mainland by the Mozambique Channel and is the world's fourth largest island

Answer: Madagascar

c) One of the world's most densely populated regions, it accommodates nearly two-thirds of the population of Indonesia, along with its capital.

Answer: Java

19. Identify the following techniques used in DNA sequencing, FTP each:

1. The method developed in 1983 by Kary Mullis which was the first technique to make numerous copies of a segment of DNA quickly and accurately and involves the use of DNA polymerase.

Answer: Polymerase Chain Reaction

2. The technique in which, after fragments of DNA have been separated using restriction enzymes and gel electrophoresis, a radioactive probe is used to recognize specific DNA sequences. This technique is considerably more sensitive than PCR.

Answer: Restriction-Fragment Length Polymorphism blot

3. The process in which DNA segments are moved from an agarose gel to a nitrocellulose filter paper sheet using capillary action, and are then investigated using radioactive probes. This process was the first of a group of four techniques with related names to be invented.

Answer: Southern blot

20. Identify the following early kings in Great Britain or Ireland, FTPE:

a) The king of Kent from 560-616 who issued the first extant code of Anglo-Saxon laws, converted to Christianity, and whose kingdom ultimately included all of England south of the Humber.

Answer: Ethelbert I

b) The king of Wessex from 802-839 who pulled Wessex out of the Mercian confederation and became accepted as king in Kent, Sussex, Essex, and Surrey. His reign was a turning point in English history because it destroyed Mercian ascendancy and established Wessex as the strongest English kingdom.

Answer: Egbert

c) The high king of Munster from 976 and of Ireland from 1002-1014 who defeated Maelsechlainn II and was hacked to death by Northmen from Dublin after the battle at Clontarf.

Answer: Brian Boru