

1998 Questions on the Crum
Packet by Swarthmore and USC

1. Among his lesser-known works is the 1965 children's story "The Boy Who Found Christmas," whose religious message might well have shocked the ancestors of the Quaker woman who found him on her doorstep soon after his birth. His first novel, published when he was over 40, won the Pulitzer Prize, and when asked the secret of his success, he said "Get your first novel turned into an Oscars and Hammerstein musical." FTP, identify this 1929 Swarthmore alum, the author of lengthy historical novels like The Source and Hawaii

Answer: James MICHENER

2. It was discovered by the secretary of the Smithsonian Institution, Charles Doolittle Walcott, on August 30, 1909, on the ridge connecting Mount Field and Mount Wapta; it is less than a city block long and only ten feet high. Nevertheless, it contains a wealth of rare fossils of soft bodied organisms, dating from just after the Cambrian explosion, making it one of the most important sites in paleontology. FTP, name this limestone quarry, the subject of Stephen Jay Gold's book *Wonderful Life*.

Answer: the BURGESS SHALE

3. The second prize in the contest to design it went to Eliel Saarinen, the father of the designer of the gateway arch; the winner was the American Burley Griffin, who made his plans in Chicago using the government's application kit and had no knowledge of the actual site on the Molonglo River. Construction began in 1911, but was delayed when Griffin found the Outback less hospitable than he had imagined; in 1927, however, the Capital Territory was completed and the parliament was transferred from Melbourne. FTP, name this capital of Australia.

Answer: CANBERRA

4. Among its causes was concern with the 150 pounds in daily pay allotted to members of the local assembly, anger at the clout of local plantation magnates, and concern that the Indians were preparing for war. Soon, the colonists took matters into their own hands and attacked the Indians, which led Governor Berkeley to declare the action a rebellion. Before long, however, the rebels had taken over most of Virginia-- but the revolt ended when its namesake died at the height of his power. FTP, name this 1676 colonial revolt.

Answer: BACON's REBELLION

5. Soon before his death in 1897, he burned most of his papers in a depressed fit, possibly including his Second Violin Concerto and his love letters to Clara Schumann. He began his career by playing the piano for sailors in rough seaside inns, and in 1853 his Piano Sonata in C Major won

the praise of Robert Schumann. Passed over as conductor of the Hamburg Philharmonic, he moved to Vienna in 1863, where he published four symphonies, several piano quartets and concertos, and Variations on a Theme by Haydn. FTP, name this romantic German composer, best known for Ein Deutsches Requiem.

Answer: Johannes _BRAHMS_

6. "Never talk to strangers," advises the title of its first chapter, in which the black-clad, beret-wearing professor of black magic Woland meets an atheist editor and predicts his impending decapitation. Soon the writer Ivan Homeless traverses Moscow in his underwear, before meeting an unhappy artist in an insane asylum and learning of the adventures of the black cat Behemoth and the demon Azazel, who accompany Woland and one of the title characters to a devil's ball. FTP, identify this 1940 work by Mikhail Bulgakov.

Answer: _THE MASTER AND MARGARITA_ or _MASTER I MARGARITA_

7. The 1822 suicide of this man so shocked his depression-prone nephew Robert FitzRoy that he decided to bring Charles Darwin along for company aboard his ship the Beagle. His life had nearly ended once before, when he fought a duel with his arch-rival, Foreign Minister George Canning; the two men disagreed strongly on issues of war and peace in Napoleonic Europe. FTP, name this long-time British foreign minister, the chief British negotiator at the Congress of Vienna.

Answer: Robert Stewart, Viscount _CASTLEREAGH_

8. The Bohr model of the atom was based, in part, on observations of this series, which are produced by transitions involving the second energy level of a hydrogen atom and which produce the only hydrogen spectral lines visible with the naked eye. FTP, name this series of spectral lines, intermediate between the Lyman and Paschen series.

Answer: _BALMER_ series

9. This Fortune 500 company has been in the news twice recently. Yesterday it announced that it would replace the Westinghouse Corporation as the sponsor of a prominent high-school science competition, and later the same day, its CEO announced his retirement. FTP, name this computer manufacturer, which hopes to continue making profits now that Time Man of the Year Andy Grove is retiring.

Answer: _INTEL_ Corporation.

10. Its name comes from the word for "wool," probably because its earliest adherents were ascetics who wore rough woolen clothing. The movement arose during the seventh century AD, when certain Muslims objected to the

worldliness of the Umayyads and emphasized the tariqah, or path, and the haqiqah, or goal, as an alternative to the Islamic holy law. FTP, name this mystical Islamic sect which emphasizes personal experience of Allah.

Answer: _SUFISM_ or _SUFIISM_

11. His 1866 work *The Toilers of the Sea* is set on the island of Guernsey, where he spent 15 years writing novels and poetry on a rooftop study in the town of Saint Peter. During the 1830s and 1840s, he wrote several romantic plays with wooden characters (such as *Hernani* and *Ruy Blas*), but he became best known in his own time for lyrical poetry in the tradition of Chateaubriand and for his support of republicanism and opposition to Napoleon III. FTP, name this French Romantic writer, best known today for novels such as *The Hunchback of Notre Dame*.

Answer: Victor _HUGO_

12. A native of North Oxford, Massachusetts, she founded one of the first free schools in New Jersey and in 1857 became one of the first female clerks at the U.S. Patent Office. In 1865, she rose still higher, becoming the first woman appointed to head a U.S. Government Bureau, where she made connections that proved helpful when she lobbied Congress to ratify the Geneva Convention in the early 1880s. FTP, name this "Angel of the Battlefield" who headed the Missing Soldiers Bureau and founded the American Red Cross.

Answer: Clara _BARTON_ (accept : Clarissa Harlowe _BARTON_)

13. According to the fundamental law of welfare economics, if a market takes prices as given and operates under perfect competition, this state will emerge under the right conditions. It will then be impossible to make any one person better off without harming someone else. FTP, identify this state, named for a 19th century Italian economist.

Answer: _PARETO OPTIMALITY_ or _PARETO EFFICIENCY_

14. He won the Prix de Rome in 1801 and developed a sensual style at odds with the strict neoclassicism of his mentor David. Acclaimed for pencil portraits like _Paganini_ and for his draughtsmanship, he drew criticism for his voluptuous portrait of Mme. Riviere. FTP, name this French artist of such works as *Jupiter and Thetis*, *The Apotheosis of Homer*, and *the Turkish Bath*.

Ans: Jean-Auguste Dominique _INGRES_

15. It helps explain what happens when light or other waves encounter a barrier or pass into another medium, and it states that every point on a wave front of light may be considered to be the source of secondary waves that radiate from their centers with the same frequency, velocity, and

wavelength as their parent. For ten points, identify this principle that developed the wave theory of light, proposed by a 17th century Dutch scientist for whom it is named.

Answer: _HUYGENS'_ Principle

16. Her real name was Lucila Godoy Alcaliga, but she adopted her pseudonym to safely enjoy her career as an educator and diplomat. Born in 1889, her later works included *Desolacion* and *Talar*. FTP, name this Chilean, whose works such as *Tala* and *Sonnets of Death* won her the Nobel Prize for literature in 1945.

Ans: Gabriela MISTRAL

17. Legend says that a swarm of bees settled on his mouth when he was born. A powerful orator, he was honored in 1605 by Cardinal Federigo Borromeo who established a library in his honor in Milan. He excommunicated emperor Maximus for executing a heretic and he imposed a fine on Emperor Theodosius I for ordering a massacre in Thessalonica. FTP, identify this 4th century bishop and saint, whose symbol is a scourge, for his chopping at the Arian heresy.

Ans: _AMBROSE_

18. British physicist Francis William Aston developed the first model in 1919. In his instrument, a thin beam of positively charged ions was deflected by an electric field and then deflected in the opposite direction by a magnetic field. Today, scientists use this instrument to analyze the contents of complex mixtures like petroleum products and to establish the linear sequences of amino acids. For ten points, name this device that converts molecules into ions and then separates the ions according to their mass-to-charge ratio.

Answer: _MASS SPECTROMETER_

19. He won a reputation as America's favorite East Bloc leader by opposing the 1968 Soviet invasion of Czechoslovakia and for improving relations with China. A nepotist who gave important perks to his children and his wife Elena to whom he credited the invention of popcorn, he was said to believe in "Socialism in one family." He is perhaps best known, however, for his incompetent planning of the economy and for persecuting his country's Magyar and Gypsy minorities. FTP, name this Stalinist Romanian leader, overthrown in a bloody revolution in December, 1989.

Answer: Nicolae _CEAUCESCU_

20. At Oxford, he was a student of Walter Pater. In 1866, he became a Roman Catholic and two years later he became a Jesuit and destroyed all the poetry he had already written. In 1884, he became a professor of Greek at

Dublin where he befriended Coventry Patmore who edited his poems which appeared in one volume, twenty years after his death. His techniques included elliptical phrasing and compound metaphor. FTP, identify this poet who created "sprung rhythm".

Ans: Gerard Manley HOPKINS

21. This diplomat and statesman was Secretary of Foreign Affairs under the Articles of Confederation. This frustrating experience led him to become an advocate of the Constitution. FTP, name this man, a negotiator with Franklin of the 1783 Treaty of Paris, who wrote "Concerning Dangers from Foreign Force and Influence," in the second, third, fourth, and fifth of the Federalist Papers.

answer: John Jay

Software and USC

Boni

1. Identify these terms from theory of computation, FTPE:

A) This is a theoretical machine; the basic form has one tape, one read/write head, and the head can move one cell left, one cell right, read one cell, or write one cell on each command.

ANSWER: TURING machine

B) This computational device consists of a finite number of states, some of which are designated as "final" states, and a transition diagram determining how to move between states depending on input.

ANSWER: FINITE AUTOMATON

C) This is the class of problems for which solutions can be verified in polynomial time, but not necessarily found in polynomial time.

ANSWER: NP (or Nondeterministic Polynomial. DO NOT ACCEPT: NP-Complete)

2. Identify the following alleged Clinton mistresses FTPE:

a) This former business partner of the president was convicted of embezzling from the cellist Zubin Mehta, and is currently serving jail time for contempt of court for refusing to cooperate with the Whitewater investigation.

Answer: Susan MCDUGAL

b) She claims to have had a relationship with Clinton off and on for 30 years, since they went to high school together in Hot Springs, Arkansas. She even has a web page: <<http://www.deardolly.com>>

Answer: Dolly Kyle BROWNING

c) Depositions in the Paula Jones case claim that this former Miss America had an affair with Clinton, but both deny it.

Answer: Elizabeth WARD

3. 30-20-10. Identify the element.

30) German chemist Clemens Alexander Winkler discovered it in the silver-sulfide ore argyrodite in 1866.

20) Dimitri Mendeleev predicted its chemical properties in 1871 before he knew it existed and called it ekasilicon.

10) It is a greyish-white semi-metallic element with atomic number 32 and atomic weight 72.59.

Answer: GERMANIUM

4. For the stated number of points, identify the following people who established Franco-American relations in the 1780's.

5 pts) He succeeded Benjamin Franklin and was U.S. Minister to France from 1785-1789.

Answer: Thomas JEFFERSON

10 pts) This leader of the French National Guard worked closely with Jefferson to find a means of promoting Franco-American commerce.

Answer: Marquis de LAFAYETTE

15 pts) This man was France's foreign minister during Jefferson's ministry.

Answer: Comte de VERGENNES

5. For ten points apiece, name these scientific effects.

a) This effect is the absorption or emission of gamma rays without loss of energy due to a nuclear recoil.

Answer: MOSSBAUER effect

b) This is the change in wavelength of scattered radiation due to a loss of energy.

Answer: COMPTON effect

c) This is the splitting of energy levels in the presence of a magnetic field.

Answer: ZEEMAN effect

6. On a 10-5 basis, name these Latin American authors.

10: Six Problems for Don Isidro Parodi; A Universal History of Infamy
5: Labyrinths, Fictions

Answer: Jorge Luis BORGES

10: Betrayed by Rita Hayworth
5: Kiss of the Spider Woman

Answer: Manuel PUIG

10: Canto General
5: Twenty Love Stories and a Poem of Despair

Answer: Pablo _NERUDA_

7. For ten points apiece, name these Nobel Prize-winning economists.

a) In 1969, this economist shared the Nobel with Ragnar Frisch. In the 1930s he served as an economic advisor to the League of Nations Secretariat and pioneered the science of econometrics.

Answer: Jan _TINBERGEN_

b) From 1931 to 1950, he taught statistics and economics at the University of London. In 1944, he wrote _The Road to Serfdom_ which argued that governments should not intervene to control inflation or other economic matters.

Answer: Friedrich August von _HAYEK_

c) In 1974, he shared the Nobel with Friedrich Hayek. He led the United Nations Economic Commission for Europe for a decade and in 1968 he published _Asian Drama: An Inquiry into the Poverty of Nations_.

Answer: Gunnar _MYRDAL_

8. Answer the following questions about prime numbers, FTPE:

A) This mathematician's "Little Theorem" states that if p is prime and a is relatively prime to p , then a^{p-1} is congruent to 1 mod p .

ANSWER: _FEMAT_

B) These are primes of the form $2^p - 1$, where p is prime. There is currently a distributed computing effort on the net to find more of these.

ANSWER: _MERSENNE_ primes

C) These numbers actually aren't prime, but Fermat's Little Theorem holds true for them as well. The smallest one, 561, was discovered in 1910.

ANSWER: _CARMICHAEL_ numbers

9. 5-10-15. Identify these failed Supreme Court nominees.

5 pts) The Senate rejected the nomination of this federal judge and former Yale law professor to replace Lewis Powell on the Supreme Court in 1987.

Answer: Robert _BORK_

10 pts) Senator Roman Hruska of Nebraska defended this man's nomination to the court in 1970, declaring that "Mediocrities deserve representation on the court too."

Answer: G. Harold _CARSWELL_

15 pts) This North Carolina judge was the first failed nominee of the century. He was rejected in 1925 because of opposition from organized labor.

Answer: John _PARKER_

10) Riots are a popular subject for bad British novels. Answer the following questions for 15 points each:

a) This 1841 Dickens novel tells of a half-wit who takes part in the 1809 Gordon riots so he can carry a flag and wear a blue bow.

Answer: _BARNABY RUDGE_

b) This Walter Scott work begins with a description of the 1736 Porteous riots, and concerns the seduction of Effie Deans by George Staunton. Effie is convicted of murdering her illegitimate child, but her sister wins her a pardon by walking to London and George is killed by the child (who somehow survived after all.)

Answer: _THE HEART OF MIDLOTHIAN_

11. Answer the following questions about leaders of the movement for womens' suffrage FTPE:

a) This Quaker woman helped found Swarthmore College, was a leading abolitionist, and (with Elizabeth Cady Stanton) announced the Seneca Falls convention.

Answer: Lucretia _MOTT_

b) A graduate of Oberlin College, this suffragist helped found the American Woman Suffrage Association in 1869 and took the revolutionary step of keeping her maiden name.

Answer: Lucy _STONE_ (Accept Lucy Stone Blackwell; prompt on Lucy Blackwell)

c) This husband of Lucy Stone was an abolitionist and suffragist leader in his own right.

Answer: Henry _BLACKWELL_

12. The author of this question traveled to Athens over his winter break. Don't you wish you had, too? Answer the following questions about the Acropolis FTPE:

a) The holiest temple on the Acropolis wasn't the Parthenon, but this temple, which derived its name from that of an early king.

Answer: the _ERECHTHEUM_

b) These statues of women adorn the Erechtheum.

Answer: the _CARYATIDS_

c) This was the ceremonial gate to the Acropolis.

Answer: the _PROPYLAEIA_

13. Given the nineteenth century religious leader, name the religious group with which he is associated.

a) William Miller Answer: the Seventh Day Adventists

b) Francis Asbury Answer: the Methodists

c) Nathaniel Taylor Answer: Congregationalism

14. Name these cyberpunk movies sharing a similar theme for the stated number of points.

5: This 1990 Arnold Schwarzenegger bloodfest focused on the implantation of memories into someone's head, and was based on the Philip K. Dick story We Can Remember it for you Wholesale.

Answer: Total Recall

10: This movie centered, again, on an ex-detective, who peddles devices that allow you to replay others' memories, and was set at the end of the millennium, hence the title.

Answer: Strange Days

15: This 1983 film, Natalie Wood's last, also focused on the development of technology to record thoughts.

Answer: Brainstorm

15. I'm sure you know the 3 R's, but do you know the 3 C's? Of topology, that is... For ten points apiece, identify

a) A set such that every convergent sequence in that set converges to a point in that set.

ANSWER: _COMPLETE_

b) A set such that every cover has a finite sub-cover.

ANSWER: _COMPACT_

c) A set that cannot be written as the union of two disjoint non-empty open sets.

ANSWER: _CONNECTED_

16. Name the following poets from works for the stated number of points.

A. F5P, _I Sing the Body Electric_

Answer: Walt _Whitman_

B. FTP, _Helen_

Answer: _H. D._ or Hilda _Doolittle_

C. F15P, _For Ethel Rosenberg_

Answer: Adrienne _Rich_

17. Swarthmore may be an arboretum, but here's one tree we don't have: the tree that the Norse view as the center of the universe.

FTP, what is the name of this tree?

answer: YGGDRASIL or MIMAMEITHR

This tree has extensive roots, in fact three of them. For five points each.

answers: NIFLHELM (prompt on underworld)
JOTUNHEIM (prompt on land of giants)
ASGARD (prompt on land of gods)

For five more points, what name is given to the three goddesses who sit at the roots of the tree?

answer: NORNS

18. Name the chemists from clues on a 5-10-15 basis.

5- He made urea from an ammonium cyanate.

Answer: Friedrich _Wohler_

10- This Italian showed the validity of Avogadro's Law in 1858.

Answer: Stanislao _Cannizzaro_

15- This British chemist discovered that the temperature of melting ice remains constant at

zero degrees Celsius while it absorbs a fixed amount of heat.

Answer: Joseph _Black_

19. Jesus, Joseph, Jehovah, all these Biblical names start with J. See if you're a Bible J-nius, and answer the following questions:

5 for 2, 10 for 4, 15 for 5, 20 for all six, name the six books of the Protestant old testament which start with J.

JOSHUA, JUDGES, JOB,
JEREMIAH, JOEL, JONAH

For 10 points, name the queen of Israel, and wife of Ahab, who shares her name with a woman who lured Christians to fornication and idolatry.

Answer: JEZEBEL

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a) For five points, the Senate rejected the nomination of this federal judge and former Yale law professor to replace Lewis Powell on the Supreme Court in 1987.

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