

Tossups for Mad City Masters 2003  
Written by Chris Goheen and Victor Rosenberg

1. The settings of his works are varied, though the atmosphere is often similar. Sweden in England Made Me; South Africa in The Human Factor; Haiti in The Comedians and Switzerland in Doctor Fischer of Geneva or the Bomb Party. FTP, name this novelist who also featured the Congo in A Burnt-Out Case, Vietnam in The Quiet American, and Cuba in Our Man in Havana.

Ans: Graham Greene

2. In 1893, the sugar industry instigated the overthrow of Queen Liliuokalani and established the Republic of Hawaii in 1894. When the United States made Hawaii a territory in 1900, the first president of the Republic of Hawaii was named the first governor of the Territory of Hawaii. FTP, name this plantation owner who was also a major player in the pineapple industry.

Ans: Sanford B. Dole

3. There are salt marshes to its southeast and it is connected to the Nafud desert in the north by the Dalma corridor. It slopes from an altitude of 3300 feet in the west to sea level in the east. Because it occupies about 25% of the area of its country, its name means "empty quarter". FTP, name this oil-rich region of the Arabian peninsula?

Ans: Rub al Khali (prompt on early buzz-in of "empty quarter")

4. In his canvas "Isabella and the Pot of Basil", his subject is an Italian maiden who keeps her murdered lover's head in an urn where she grows the titular herb, based on a poem by Keats. In "The Awakening Conscience", a Victorian mistress rises and pushes away from her lover, who is reclining near a piano in a cluttered room. Two of his other works are "The Light of the World" at Oxford University and "The Triumph of the Innocents" in the Liverpool Gallery. FTP, name this artist who published "Pre-Raphaelitism and the Pre-Raphaelite Brotherhood" a few years before his death in 1910.

Answer: William Holman Hunt

5. The positive version encourages propagation amongst those with desirable characteristics, while the negative version discourages propagation among those deemed unfit. FTP, what term for the study and methods of improving the inherited characteristics of human beings was introduced by its chief founder, Francis Galton?

Answer: eugenics

6. As a rookie in 1938 with the Pittsburgh Pirates, he led the NFL in rushing with 567 yards. After studying at Oxford on a Rhodes scholarship, he played another two years for the Detroit Lions, where his coach said, "While the other guys were playing cards for five cents a round, he would get out his glasses, his pipe, and his law books and start studying." FTP, name this football star who later served on the United States Supreme Court.

Ans: Byron "Whizzer" White

(n.b.--that's correct--Pittsburgh Pirates football team)

7. This family of plastics and resins may be either thermosetting or thermoplastic. As a flexible foam they are used for furniture and automobile cushions, mattresses and carpet backings, and as a rigid foam they serve as excellent thermal insulators. The fiber Lycra is one type of these compounds, while other types can be used as glossy, hard and tough coatings or even adhesives. FTP, name these substances formed by polymerization of a diisocyanate with a diol or diamine.

Ans: polyurethanes (prompt on polyisocyanates)

8. It was fabled to have been brought from heaven by a falcon or by the daughters of the sun, and was itself personified as a god, a Hindu analog to the Greek Bacchus. This intoxicating drink was an important part of Vedic rituals and the hymns of the ninth book of the Rig Veda are dedicated to the diety associated with the drink. FTP, name this beverage of the gods, which lent its name to a drug in Brave New World.

Answers: soma

9. Recently, former Los Angeles homicide detective Steve Hodel discovered some photos in a family album which led to the implication of his late father George in a 1947 murder. FTP, by what name was the victim in this notorious case, actress Elizabeth Short, known?

Ans: The Black Dahlia

10. His 1937 autobiography was entitled "A Long Way from Home" and describes his experiences in the Caribbean, the United States, Europe and North Africa. His verse collections include Constab Ballads, Songs of Jamaica and Harlem Shadows. His novel Banjo features drifters on the Marseilles waterfront and Banana Bottom celebrates Caribbean popular culture from the point of view of a female protagonist. FTP, name this major figure of the Harlem Renaissance who wrote Home to Harlem.

Answer: Claude McKay

11. As children, she and her sister Tennesse Celeste Claflin traveled throughout Ohio giving spiritualist demonstrations. They later founded a namesake periodical in 1870 which was the first to publish an English translation of the Communist Manifesto. FTP, name this woman who ran for President in 1872 with Frederick Douglass as her running mate.

Ans: Victoria Woodhull

12. Pencil and paper ready--or do the following calculation in your head: Double the following infinite product:  $2/1 \times 2/3 \times 4/3 \times 4/5 \times 6/5 \times 6/7 \times 8/7 \times 8/9$  and so on, formed by two of each positive even integer in the numerator and two of each positive odd integer in the denominator. FTP, what is the exact value of the result?

Ans: Pi (prompt for exact result if they give a numerical value starting 3.14 or equivalent on early buzz)

13. The name for this sacred object is derived from the Ojibwa language. Members of a clan group believe that this object represents the group, or is the ancestor of the group or has a relationship to the ancestor of the clan. Often the symbol of the object may be tattooed on the body, engraved on weapons, pictured in masks, or in the Pacific Northwest, carved on poles. FTP, what are these revered objects?

Answer: totem

14. In 1930, their original cost was 65 cents, \$1.30, and \$2.60. Now, aside from errors, they are the most valuable American airmail stamps. FTP, what rigid airship, named for its inventor, is pictured on them?

Ans: The Graf Zeppelin

15. He spent a lot of time and effort toward the end of his life trying to prove he was not of Jewish origin, because that would have disqualified him for the Order of Santiago, which he finally received in 1658. After he died in 1660, King Felipe (Philip) IV had the cross painted onto his portrait in Las Meninas. For 10 points, name this artist.

Ans: Diego Velazquez

16. He entered the UCLA film school in 1960. While earning a Master's degree, he worked in various capacities on several softcore porn films as well as projects for Roger Corman. While in Ireland in 1963 he directed his first feature, *Dementia 13*. In 1968 he directed his first big budget feature *Finian's Rainbow* and he received an Oscar for co-writing the screenplay for *Patton* in 1970. FTP, name this director of *Apocalypse Now* and the *Godfather* trilogy.

Ans: Francis Ford Coppola

17. This title character of an 1870<sup>15</sup> novel said, "Nations have revived. We may live to see a great outburst of force in the Arabs, who are being inspired with a new zeal." This zeal, unfortunately, would bring the Arabs into conflict with his own people, the Jews. FTP, name this hero of George Eliot's last novel.

Ans: Daniel Deronda

18. This process was discovered in 1895 by Hans Goldschmidt and is used in incendiary devices and welding apparatus. FTP, name this chemical reaction in which powdered aluminum and iron oxide are ignited to produce intense heat.

Ans: thermite

19. These two saints share a common name although they lived hundreds of years apart. One is the patron of aviators and foreign missionaries and was canonized in 1925, 28 years after her death. She is often pictured with an armful of roses. The other was born of a noble family and founded the Discalced Carmelites. She was one of the leading figures of the counter-reformation and was named the first female doctor of the church by Pope Paul VI. FTP, what is the common name?

Ans: Theresa (of Lisieux and Avila)

20. Their name was changed to the National Security Volunteers in the 1970's and they were officially disbanded in 1986. FTP, name this personal police force of Papa Doc Duvalier, whose name means bogeyman in Creole.

Ans: Tonton Macoutes

21. His works are typically satirical farces attacking capitalism, imperialism and corruption. He wrote, directed and co-starred in one of Italy's most popular television series, "Canzonissima", which was ultimately removed from the airwaves by the Italian government. For ten points, name this author of *Accidental Death of an Anarchist* and recipient of the 1997 Nobel Prize in Literature.

Ans: Dario Fo

22. His conception of the causes and treatments of epidemics and his description of gout, smallpox, malaria and scarlet fever established him as a founder of modern clinical epidemiology. He introduced the use of cinchona bark for treating malaria. FTP, name this 17th century physician known as the "English Hippocrates" whose namesake chorea usually appears in girls between the ages of 7 and 14.

Ans: Thomas Sydenham

23. The movie "Now Voyager," the song "Jeanine, I Dream of Lilac Time," Louis Adamic's book on immigrants called "A Nation of Nations," and the novel "A Passage to India" all took their titles from, FTP, what Walt Whitman work?

Ans: Leaves of Grass (accept Walt Whitman on early buzz)

24. Architects Robert de Cotte and Jacques Gabriel were associated with this style, which was pioneered in Germany and Austria by Francois de Corillies. Parisian tapestry weavers, cabinet makers and bronze workers in this style arranged motifs such as arabesque elements, scrolls, branches of leaves, flowers and shells. Its name derives from the French words for "rock" and "shell". FTP, name this artistic style practiced by painters Watteau, Boucher and Fragonard.

Ans: \_rococo\_

25. Soap molecules have a hydrophilic polar head group and a hydrophobic hydrocarbon tail. When placed in a polar solvent, such as water, these molecules tend to form clusters where the polar heads face outward and the hydrocarbon tails inward. This allows for non-polar molecules such as fats or oils to be trapped inside the structure, the basis of the detergent action of soap. FTP, what are these colloidal aggregates of amphiphilic molecules called?

Ans: \_micelles\_

26. The first reigned from 1059-1108, but his practice of simony and a disputed marriage brought him into conflict with the Pope. The third ruled from 1270-1285 and secured Auvergne, Poitou and Toulouse for France, gaining the nickname the Bold. The fourth instigated the Babylonian captivity and was known as the Fair. The fifth invoked the Salic law to bring about the succession of the sixth and disputes over this action led to the Hundred Years War. The greatest was known as Augustus and established France as a European power. FTP, what is the common name of these French kings?

Answer: \_Philip\_

27. Also known as Jabal or Rahm, it's the name of a granite hill in Mecca which pilgrims circle. It's also the last name by which Abdurrahman al-Husseini is known. FTP, give the name shared by this pilgrimage site and the middle eastern leader with the distinctive head covering and beard stubble.

Ans: \_Arafat\_

Bonuses for Mad City Masters 2003  
Written by Chris Goheen and Victor Rosenberg

1. Answer these questions about Alaskan geography for the stated number of points.

[5] This port is the largest city in Alaska.

Ans: Anchorage

[10] This arm of the Pacific Ocean has Anchorage at its head and is named for the English mariner who explored it in 1778.

Ans: Cook Inlet (prompt on Cook)

[15] This peninsula lies between Cook Inlet and Prince William Sound.

Ans: Kenai peninsula

2. FTP each, answer these questions about Chilean independence.

a. The son of a Spanish colonial administrator born in Ireland, he ruled from 1818 until his exile to Peru in 1823.

Ans: Bernardo O'Higgins

b. The first phase of the war for independence last from 1810 until the defeat of O'Higgins' army at which 1814 battle?

Ans: Rancagua

c. After the loss at Rancagua, O'Higgins fled to Argentina and hooked up with another revolutionary leader. Name this leader who crossed the Andes in 1817 with O'Higgins and liberated Chile the next year, before moving on to liberate Peru in 1821.

Ans: Jose de San Martin

3. In the "Story of Philosophy", Will Durant shows a table of philosophic affiliations. Identify these philosophers on a 10-5 basis, given first Durant's affiliations and then some clues about the philosopher's life and work.

[10] His box connects to Lucretius above and to Locke and Hobbes below.

[5] He lived from 1561 to 1626 and is known for his works "The Advancement of Learning" and "Novum Organum".

Ans: Francis Bacon

[10] His box is connected to Hume above, Comte slightly above and to the right, and Spencer and James below.

[5] His father was one of the founders of the Utilitarian Society. His philosophy was somewhat more humanistic and idealistic. He published "The Subjection of Women" in 1869.

Ans: John Stuart Mill

[10] His box is connected to Spinoza above, Kant slightly above and to the right, and Schopenhauer below.

[5] The major works of this German romantic are Of the World-Soul from 1798 and System of Transcendental Idealism from 1800.

Ans: Friedrich Wilhelm Joseph von Schelling

4. Answer these physics questions for the stated number of points.

a. For 5 points, what name is given for the tendency of particles in a condensed phase to stick together, particularly for molecules of the same material?

Ans: \_cohesion\_ or \_cohesive\_ force

b. Similar to cohesion, this is the term for the attractive force between molecules of different materials. For 5 points, name it.

Ans: \_adhesion\_ or \_adhesive\_ force

c. For 5 points, what name is given to the cohesive force that causes droplets of a liquid to bead up due to a net attraction of molecules at the interface towards the interior?

Ans: \_surface tension\_

d. For 5 points, what name is given to the effect whereby a liquid rises in a thin tube due to adhesive and cohesive forces balancing against gravity?

Ans: \_capillarity\_ or \_capillary\_ action

e. This weak attractive force is caused by induced dipoles caused by fluctuations in electron density. FTP, what is this force, named for a 20th century German-American physicist?

Ans: \_London\_ dispersion force (prompt on dispersion)

5. For 5 points each, name these Booker Prize winners from the year and the name of the winning work.

a. 1989 \_The Remains of the Day\_

Ans: Kazuo \_Ishiguro\_

b. 2000 \_The Blind Assassin\_

Ans: Margaret \_Atwood\_

c. 1991 \_In a Free State\_

Ans: V.S. \_Naipaul\_

d. 1978 \_The Sea, The Sea\_

Ans: Iris \_Murdoch\_

e. 1986 \_The Old Devils\_

Ans: Kingsley \_Amis\_

f. 1974 \_The Conservationist\_

Ans: Nadine \_Gordimer\_

6. The FDA recently approved the over-the-counter sale of a popular prescription medication for heartburn and acid reflux disease. Answer the following questions FTP each.

a. What is the brand-name for the prescription drug omeprazole, which is similar to such medications as Nexium, Prevacid, Protonix and Aciphex?

Ans: \_Prilosec\_

b. What pharmaceutical firm manufactures prilosec and its cousin Nexium?

Ans: \_AstraZeneca\_

c. In 2002 the FDA approved over-the-counter sales of a popular allergy medication from Schering-Plough. What is the brand name for this drug, loratidine?

Ans: \_Claritin\_



7. Identify these operas on a 10-5 basis. The 5 point clue is the name of the composer.

[10] It premiered on January 14, 1900 and the text was by Giacosa and Illica adapted from a play by Sardou. In Act I the tenor Cavaradossi sings the aria "Recondita armonia" or "Strange Harmony". In Act III the title character sings "O dolci mani" or "O gentle hands" after killing the villain.

[5] Giacomo Puccini.

Ans: Tosca

[10] It premiered on January 19, 1853 and is set in 15th century Aragon and Biscay. Leonora, a lady-in-waiting to the Princess of Aragon is in love with Manrico, a leader of insurgents. Azucena is the mezzo-soprano gypsy who poisons herself to escape burning at the stake under orders of Count di Luna.

[5] Giuseppe Verdi

Ans: Il trovatore or The Troubador

[10] This opera premiered on January 21, 1904 and is set in 19th century Moravia. The composer also wrote the text based on a play by Preissova. A recurrent theme in the opera is the tinkling sound of a mill wheel created by a xylophone. Major characters are Grandmother Buryjovka, the mill owner; Steva, who has impregnated the title character; and Kostelnicka, the stepmother of the title character and aunt to Steva.

[5] Leos Janacek

Ans: Jenufa or Jeji Pastorkyna or Her Stepdaughter

8. For 10 points each, name these Italian families:

a. The first prominent member was a condottiere named Muzio Altendolo whose son became Duke of Milan in 1450. They ruled the duchy of Milan until 1535.

Ans: Sforza

b. This prominent Florentine family produced Popes Leo X, Clement VII and Leo XI and two queens of France.

Ans: Medici

c. Their name is derived from the title received by 12th century members of the family. They ruled Milan from the 13th century until 1447. The last heiress married Francesco Sforza to help found a new dynasty.

Ans: Visconti

9. FTP, answer these questions about psychology.

a. According to Wilhelm Reich, the universe is permeated with this primal mass-free energy and failure to repeatedly discharge this energy through natural sexual release leads to neurosis. In 1942 he founded an institute for the study of this phenomenon and later invented a box that was claimed to restore energy. FTP, what term did Reich use for this energy, his institute and the medical device he invented?

Ans: orgone

b. This American psychiatrist, along with his teacher William Alanson White, helped extend Freudian psychoanalysis to the treatment of severe mental illness such as schizophrenia. He considered satisfaction and security the two primary motivators and his Self System described the good-me, the bad-me and the not-me. FTP, who is this author of Interpersonal Theory of Psychiatry and Schizophrenia as a Human Process?

Ans: Harry Stack Sullivan

c. The modern term for this is conversion disorder and it afflicts women twice as frequently as men. Because of this gender imbalance, the classic name comes from the Greek word for womb. FTP, what is this term for a somatoform disorder which can include limb paralysis, blindness or seizure?

Ans: hysteria

10. Name the novels with the following opening lines for the stated number of points:

[5] It is a truth universally acknowledged that a single man in possession of a good fortune must be in want of a wife.

Ans: Pride and Prejudice

[10] Under certain circumstances there are few hours in life more agreeable than the hour dedicated to the ceremony known as afternoon tea.

Ans: The Portrait of a Lady

[5] All happy families are alike; every unhappy family is unhappy in its own way.

Ans: Anna Karenina

[10] Many years later, as he faced the firing squad, Colonel Aureliano Buendia was to remember that distant afternoon when his father took him to discover ice.

Ans: One Hundred Years of Solitude or Cien Anos de Soledad

11. FTP each, answer these questions about shows from "The Simpsons" first season.

a. In "The Crepes of Wrath", Bart is an exchange student in France. The Simpsons host another exchange student, who turns out to be a spy from which country?

Ans: Albania

b. In the episode "Some Enchanted Evening", which actress and director is the guest voice for the Babysitter Bandit?

Ans: Penny Marshall

c. What is the name of the episode exploring Lisa's childhood angst, in which she first meets "Bleeding Gums" Murphy?

Ans: Moaning Lisa

12. FTP each, answer these questions about Japanese history.

a. According to Shinto doctrine, the first emperor of Japan was descended from the sun goddess and is the ancestor of the current emperor. Who is this first recorded emperor of Japan, from 660 B.C.?

Ans: Jimmu

b. In the 12th century the Minamoto clan defeated their rivals, the Taira, and Yoritomo established a shogunate which lasted from 1192 until 1333. What is the name of this shogunate, taken from their capital city?

Ans: Kamakura

c. Which political party, founded by the merger of two other parties in 1954, controlled both houses of the Diet until influence peddling scandals led to their loss of the upper house in 1989?

Ans: Liberal Democratic Party or LDP

13. FTP each, name the following muscles from their translations into English:

a. widest of the back

Ans: latissimus dorsi

b. three-headed

Ans: triceps

c. belly of the leg

Ans: gastrocnemius

14. For 5 points each, name the event these athletes won at multiple Olympic games:

a. Victor Saneyev      Ans: triple jump

b. Al Oerter      Ans: discus

c. Bob Mathias      Ans: decathlon

d. Roger Kingdom      Ans: 110 meter hurdles (prompt on hurdles)

e. Alberto Tomba      Ans: Giant Slalom (prompt on skiing or alpine; don't accept Super-G)

f. Dawn Fraser      Ans: 100 meter freestyle (prompt on swimming or freestyle)



15. For 10 points each, identify these Greek plays given a brief description.

a. In this play, written by Euripedes around 413 BC, the title character has been rescued from sacrifice by Artemis and is serving the goddess in her temple in Thrace. Her brother, Orestes, is ordered to obtain a statue from that temple, and when he is brought to the temple for sacrifice she recognizes and assists him.

Ans: Iphigenia in Tauris or Iphigenia Among the Taurians

b. In this tragedy by Sophocles, the title character is another sister of Orestes, with whom he plots to kill their mother and her lover in revenge for killing their father. Euripedes wrote a play with the same title in 418 BC.

Ans: Electra

c. This play was the third in Aeschylus' Oresteia trilogy. In it, Orestes journeys to Athens to stand trial for matricide, and when he is acquitted by Athena's vote, the Furies turn their resentment on the city itself. Athena persuades them to put aside their vengeance in return for a cult and a home where they can reside as the "Kind Goddesses".

Ans: Eumenides

16. FTP each, identify the following 5 syllable words which begin with the letter "P":

a. Word play, especially a pun.

Ans: paronomasia

b. The right of the eldest son to inherit the entire estate of his parents.

Ans: primogeniture

c. Inability of the eye to focus sharply on nearby objects.

Ans: presbyopia

17. For ten points each, identify these documents of the American Revolution.

a. After the early battles at Lexington and Concord and the capture of Fort Ticonderoga and Crown Point, the Second Continental Congress named Washington commander-in-chief. On July 5, 1775, they also approved and sent to King George this document drafted by John Dickinson. What was this appeal to end all military action and resolve the conflict peacefully?

Ans: Olive Branch Petition

b. The first of these sixteen pamphlets was written by Thomas Paine in 1776 and contains the phrase "These are the times that try men's souls". Washington ordered it read to his troops on the eve of the battle of Trenton. Name this pamphlet or the series of pamphlets written between 1776 and 1783.

Ans: The Crisis or The American Crisis

c. This document was informally adopted by the Second Continental Congress less than two months after the Saratoga victory, but not formally ratified by all thirteen states until 1781. It remained in force only until 1788.

Ans: Articles of Confederation

18. Given a description of an order of mammals, give the Latin name of the order, for five points each.

a. This order includes moles, shrews and hedgehogs, and is named after their primary dietary source.

Ans: \_insectivora\_

b. This order of fin-footed mammals includes seals, sea lions and walruses.

Ans: \_pinnipedia\_

c. Dugongs and manatees comprise this order.

Ans: \_sirenia\_

d. Bats belong to this order.

Ans: \_chiroptera\_

e. This order includes even-toed hoofed animals, such as giraffes, deer, cattle, sheep and camels.

Ans: \_artiodactyla\_

f. Aardvarks belong to this order.

Ans: \_tubulidentata\_

19. Answer the following questions for ten points each.

a. In 1760, he published \_Fragments of Ancient Poetry Collected in the Highlands of Scotland, and Translated from the Gallic or Erse Language\_. Who was this Scottish poet?

Ans: James \_Macpherson\_

b. Macpherson later published \_Fingal, An Ancient Epic\_ and \_Temora, An Epic Poem\_, which were also supposed to be translations from the Gaelic writings of a third century bardic hero. Who was he?

Ans: \_Ossian\_

c. Macpherson's forgeries had been inspired by poems Ossian really had written about the Scottish hero who founded the Fenians. Who was this semimythical Irish hero who inspired the Fingal of Macpherson?

Ans: \_Finn mac Cumhail\_ or \_Fionn mac Cumhail\_ or \_Finn MacCool\_

20. Music critic Henri Collet gave them their collective name in an article entitled "The Russian Five, The French Six, and Erik Satie." Everyone can name the Russian Five, but for 5 points each, who were the French Six?

Ans: Francis \_Poulenc\_

Darius \_Milhaud\_

Arthur \_Honegger\_

Germaine \_Tailleferre\_

Louis \_Durey\_

Georges \_Auric\_

21. Answer these questions about Ghana for the stated number of points:

a. For 5 points each, what three countries border Ghana?

Answer: \_Ivory Coast\_ or \_Cote d'Ivoire\_

\_Burkina Faso\_

\_Togo\_

b. When Ghana gained its independence in 1957, it was created by combining a British mandate and a British colony. For 5 points each, name them.

Answer: British \_Togoland\_ and the \_Gold Coast\_

c. The world's largest artificial lake was created in 1964 when what major river of Ghana was dammed?

Answer: \_Volta\_

22. 30-20-10, name this person.

(30) In 1913 he was named Plumian professor of astronomy at Cambridge and soon after became the director of their observatory.

(20) In 1924 he presented his theories on the implications of the mass-luminosity relationship of stars. Briefly, the more massive a star is, the hotter it must be inside to generate enough pressure to hold up against gravitational collapse.

(10) In 1919 he organized an expedition to view a total solar eclipse and his observations of bright objects near the sun helped confirm the prediction of general relativity that a strong gravitational field can bend light rays.

Ans: Arthur Eddington

23. Give the middle name (patronymic) of the following Russian authors:

a. Lev (or Leo) Tolstoi

Ans: Nikolaevich

b. Fyodor Dostoevsky

Ans: Mikhailovich

c. Ivan Turgenev and Alexander Pushkin

Ans: Sergeevich

d. Nikolai Gogol

Ans: Vasilevich

e. Boris Pasternak

Ans: Leonidovich

f. Alexander Solzhenitsyn

Ans: Isaevich

24. Name the lead male actor for each of the following silent films for the stated number of points:

[5] The Mark of Zorro (1920)

Ans: Douglas Fairbanks (do not accept Jr.)

[5] City Lights (1931)

Ans: Charlie Chaplin

[10] Safety Last (1923)

Ans: Harold Lloyd

[10] Riders of the Purple Sage (1925)

Ans: Tom Mix

25. Name the chemist, 30-20-10:

30--The illegitimate son of a Georgian father, he did important research on aldehydes.

20--In 1872 he helped found medical courses for women.

10--Better known for his hobby of music, his On the Steppes of Central Asia and Prince Igor led to his getting a posthumous Tony Award for Kismet.

Ans: Alexander Borodin