

1993 PRINCETON INVITATIONAL  
**Duke University**  
TOSSUPS

[ 1 ]

He was a leading impressionist painter whose first submission to the Paris Salon in 1859, "Absinthe Drinker," was soundly rejected. In fact, early on, many of his works were rejected as controversial because of their erotic subject matter, harsh colors, and detached, impersonal style. Later in life his works lightened up, and were exemplified by lighter colors, conventional landscapes, and beach scenes. Name this French artist whose works include "Olympia", "Spanish Guitar Player", and "La Dejeuner sur l'herbe."

ANS: Edouard MANET

[ 2 ]

This first novel of Ayn Rand deals with the struggle of the individual against the state, exemplified by Kira, a woman demanding to live her own life in early communist Russia. Name this work, published in 1936, and claimed by Rand to be semi-autobiographical.

ANS: WE THE LIVING

[ 3 ]

Before he sold out and made movies like Hairspray and Cry Baby, John Waters defined the concept of shock value in cinema. Directing movies like Pink Flamingoes, Polyester, and Lust in the Dust, Waters broke every taboo with the graphic nature and repulsive sexual behavior typical of his early films. One actor starred in all but one of these movies, always portraying a female, sometimes even of the same name that he goes by in real life. What is the one-word name of this protege of John Waters?

ANS: DIVINE

[ 4 ]

This Russian mathematician/physicist contributed much to the study of nonlinear dynamics and chaos theory. He developed a method of testing for chaos by quantitatively measuring sensitive dependence upon initial conditions. As a result, the exponents used in this test are named after him. For ten points, name him.

ANS: Lyapunov

[ 5 ]

This is the term for a mixture of concentrated hydrochloric acid and nitric acid, containing three volumes of the former to one of the latter. It derives its name from its ability to dissolve the "noble" metals, particularly gold and platinum. For ten points, name it.

ANS: AQUA REGIA

[ 6 ]

It is a contract with an employer (no longer legal) in which an employee agrees not to join a labor union during his term of employment. Identify this colorful term.

ANS: YELLOW DOG contract

[ 7 ]

It was built from 1806 to 1836 and is 162 feet high and 147 feet wide. It is the

site of the tomb of France's unknown soldier. Inspired by a type of Roman architecture, it bears reliefs celebrating Napoleon's victories. Identify this monument in the Place Charles deGaulle at the end of the Champs Elysees.

ANS: ARC DE TRIOMPHE

[ 8 ]

This muscle group sounds like a common geometric polygon, but instead, is utilized during such activities as the upright standing row and the compound row. Name this muscle group, located at the back of the neck and adjacent to the deltoids.

ANS: Trapezius

[ 9 ]

Rough for Radio I and II, Play, Rockaby, Eh Joe, Footfalls, Catastrophe, Embers, Happy Days, Breath, Endgame, Waiting for Godot. Name the Irish playwright who penned these dramas for stage and radio.

ANS: Samuel Beckett

[ 10 ]

In Trafalgar Square in London rests the monument to Admiral Horatio Nelson, who led the British fleet in the 1804 Battle of Trafalgar. The monument consists of a column surrounded by large bronze lions. How many lions are there?

ANS: four

[ 11 ]

College Bowl sports buffs have always remembered the name of legendary Bears coach George "Papa Bear" Halas since he held the career record for wins as a coach in the NFL. But there's a new kid on the block and Halas's record has just been tied and will inevitably be broken in the next few weeks. Name the new heir to the title "Winningest Coach in NFL History."

ANS: Don Shula

[ 12 ]

What is the name given to the union of Austria with Germany effected in violation of the Versailles Treaty when the Nazi army entered Austria on March 12, 1938.

ANS: ANSCHLUSS

[ 13 ]

In C-G-S units, this physical constant is equal to the square of the fundamental charge, divided by Heisenberg's constant and the speed of light. For 10 points, name this constant, usually denoted by the letter alpha and almost exactly equal to  $1/137$ .

ANS: FINE STRUCTURE CONSTANT

[ 14 ]

The floods of the summer of 1993 were easily the most expensive in American history, but, for 10 points, what Pennsylvania city was the site of the deadliest American flood, in which over 2,000 people died on May 31, 1889?

ANS: JOHNSTOWN

[ 15 ]

This composition begins E--D sharp--E--D sharp--E, and the E--D sharp pattern appears frequently throughout, as often as five times consecutively. For 10 points, name this piano piece, perhaps Beethoven's most easily recognizable.

ANS: FUR EIISE

[16]

This law states that the sum of the voltages across the devices in a series circuit is equal to the total voltage applied to that circuit. For ten points, name it.

ANS: KIRCHHOFF's voltage law

[17]

What is the probability of rolling an 11 or higher with a pair of fair six-sided dice?

ANS: 3/36 or 1/12

[18]

Born in 1578, this man received his medical degree in Padua, Italy, before returning to England, where he was chief physician for several kings. For 10 points, name this father of modern physiology, best known for conclusively demonstrating that blood circulates through the heart.

ANS: William HARVEY

[19]

This ancient Greek astronomer was considered the founder of the field; his theory was the cornerstone of cosmology for over 14 centuries until the Copernican Revolution in the 15th century. For 10 points, can you name the author of "The Almagest"?

ANS: PTOLEMY

[20]

This Dutch artist of the 17th century was relatively obscured by many of his contemporaries. He is today well-known for his dramatic use of light in his works. For ten points, name the artist of such works as "Woman Holding a Balance" and "The Letter."

ANS: Jan VERMEER

[21]

This is the property of a force by which it produces changes in rotation. The amount of this property depends on the magnitude of the force applied, but also on the direction of the force and point of application. Name this property, measured in newton-meters.

ANS: TORQUE

[22]

He stated as his first principle "What is, is, and necessarily is; what is not, is not, and necessarily is not." From this, he is able to show that the universe is an infinite, unchanging, unmoving, unseparable unity. He therefore denies perception is trustworthy and relies wholly on reason to guide him. His influence on later philosophers is tremendous, as Empedocles, the atomists, Plato, and even Aristotle address his arguments. Name this ancient Greek philosopher who appears as the title character in one of Plato's later dialogues.

ANS: Parmenides

[23]

The topological spaces that bear his name are the central focus of functional analysis, and his "nullstellensatz" is one of the major theorems in algebra, but

this mathematician may be best known for a paper which contained no new results. For 10 points, name the man whose 1900 presentation to an international conference helped shape the course of mathematics in the 20th century.

ANS: David HILBERT

[24]

Tormented, City Limits, Mitchell, The Beatniks, Beginning of the End, Attack of the Giant Leeches, Teenagers from Space, and Hercules and the Moon Men are all movies that have appeared (or will soon appear) on what Comedy Central program?

ANS: MYSTERY SCIENCE THEATER 3000

[25]

October 15, 1783, is a very important date in history. On this day, Francois Pilatre de Rozier accomplished a first for mankind with the help of a creation of Joseph and Etienne Montgolfier. What did Rozier accomplish on this date?

ANS: First ascent in a hot-air balloon, or first human flight

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BONUS QUESTIONS

[1] (25 points)

For five points apiece, satisfy Big Brother by answering the following questions about George Orwell's 1984.

A. Who is the protagonist, whose activities lead him out of favor with the Party?

ANS: WINSTON SMITH

B. Who is Winston Smith's lover who he formerly hated vehemently for being patriotic?

ANS: JULIA

C. What is the name of the place where Winston encounters the ultimate torture and finally begs, "Do it to Julia!"?

ANS: ROOM 101

D. What is the Newspeak term for the type of government established in Oceania?

ANS: INGSOC

E. Who is Winston's truly patriotic deceased ex-wife?

ANS: KATHERINE

[2] (30 Points)

For ten points apiece, given the buildings, name their architect.

A. Carson Pirie Scott and Company Store, Chicago; Wainwright Building, St. Louis

ANS: Louis SULLIVAN

B. Larkin Company Administration Building, Buffalo; Robie House, Chicago

ANS: Frank Lloyd WRIGHT

C. Fagus Factory, Alfeld-an-der-Leine, Germany; Pan-Am Building, Chicago

ANS: Walter GROPIUS

[3] (30 Points)

30-20-10 Name this historical figure.

(30 points) She came to the New World in 1634 with her husband and 12 children following Puritan minister John Cotton.

(20 points) She drew crowds at her Boston house, teaching women as well as men the doctrine of "grace". However, many male authority figures felt that in doing so she was undermining clerical power.

(10 points) In 1638 she was tried and excommunicated for heresy. However, time has shown that this action was taken because she overstepped the boundaries defined for her as a woman.

ANS: Anne HUTCHINSON

[4] (30 Points)

For five points apiece, name these people dubbed "Necromantic Love Icons" by James Park's book "Icons".

A. This American artist saw art in multiple Jackie Onassis and piles of Brillo boxes.

ANS: Andy WARHOL

B. This rock musician performed "The Ceremony of the Lizard King."

ANS: Jim MORRISON

C. One of the biggest necromantic love icons, this actor died in a car crash shortly after making a commercial for road safety.

ANS: James DEAN

D. This soul singer recorded "Dock of the Bay".

ANS: Otis REDDING

E. After this person's plane crashed, U Thant became Secretary-General of the United Nations.

ANS: Dag HAMMARSKJOLD

F. He was the first president of Belgian Congo when it gained its independence, but rebels deposed and killed him in a land dispute.

ANS: Patrice LUMUMBA

[5] (30 Points)

Name these bridges for fifteen points each:

I. This bridge in Prague connects the Old Town to the New Town, and the statues of forty martyrs line the rails. The bridge is famous for the many artists and vendors which populate it.

ANS: Charles Bridge

II. This bridge across the Arno has many shops along its rails. A Florentine ruler required the shops to sell only gold so that he could be dazzled as he traversed the bridge.

ANS: PONTE VECCHIO

[6] (30 Points)

The answers to these three questions are all plays of Tom Stoppard.

I. For 5 pts., name the play that explores the lives of two Shakespearean characters/actors both on and off stage.

ANS: ROSENCRANTZ AND GUILDENSTERN ARE DEAD

II. For 10 pts., name Tom Stoppard's most recent play, now playing at the National Theatre in London.

ANS: ARCADIA

III. Stoppard also writes plays for radio. For 15 pts., name this radio play about an idealist who finds solace in painting, only to have the object of his passion collapse at the end of the play.

ANS: ALBERT'S BRIDGE

[7] (30 Points)

This is a question to see how often you leave your safe and quiet college microcosm and road trip out into the USA. For 5 points apiece, name the US city located at the intersection of the Interstate highways given.

I-40 and I-15	ANS: Barstow, CA
I-80 and I-25	ANS: Cheyenne, WY
I-10 and I-95	ANS: Jacksonville, FL
I-77 and I-85	ANS: Charlotte, NC
I-90 and I-29	ANS: Sioux Falls, SD
I-20 and I-55	ANS: Jackson, MS

[8] (30 Points)

The Baseball Hall of Fame was founded in 1936. The original plan was to induct 10 players that first year, five from pre-1900 baseball and five from post-1900. However, the committees could only agree on the recent players, so only 5 players were inducted that first year. For five points each, and a bonus 5 for all five, name them.

ANS: Ty COBB, Walter JOHNSON, Christy MATTHEWSON, Babe RUTH, Honus WAGNER

[9] (30 Points)

Identify the following Israelite kings for 10 points each.

A. The only pre-exilic king whose name appears in the title of a biblical book.

ANS: SOLOMON

B. While he only appears for 14 verses in I Kings, excavation of the Moabite Stone has revealed that he was a great conqueror; the Assyrians referred to Israel by his name for hundreds of years.

ANS: OMRI

C. The son of Omri, he is famous primarily because of the conflict between Jezebel and Elijah during his reign.

ANS: AHAB

[10] (30 Points)

Since a pretty high fraction of classical composers are dead, they're not around to tell us things like "play this part a little faster." Instead, they left Italian words in their sheet music. For 10 points each, identify the words used to indicate the following.

A. playing at a steady speed, this comes from the word for "walking."

ANS: ANDANTE

B. gliding from note to note, this comes from the word for "slide."

ANS: GLISSANDO

C. slightly swaying the tempo, this comes from the word for "robbed."

ANS: RUBATO

[11] (30 Points)

The first question is 10:5, the next two are for 10 each. The Secretary of the Interior uses his connections to gain control of U.S. naval oil reserves, which he then leases to his cronies for about \$100,000 a pop.

A. For 10: Name the Wyoming oil reserve he leased.

For 5: Named for its distinctive shape, it became synonymous with this scandal, the worst of the Harding administration.

ANS: TEAPOT DOME

B. Name the Secretary of the Interior, who later became the first cabinet member to go to prison.

ANS: Albert FALL

C. Name the California oil reserve that Fall also leased out to those cronies.

ANS: ELK HILL

[12] (30 Points)

The universal gas constant is 8.31441 joules per mole-kelvin. With the exception of Mole, these units are named for people. Given a calculation, name the person or his corresponding SI unit in which the answer of the calculation should be represented.

Mass times Acceleration      ANS: NEWTON

Length divided by Conductivity      ANS: OHM

Charge divide by Time      ANS: AMPERE

Current times Resistance      ANS: VOLT or VOLTA

Capacitance times Voltage      ANS: COULOMB

Force times distance      ANS: JOULE

[13] (30 Points)

For 15 points each, name the horses of Alexander the Great and Napoleon Bonaparte.

ANS: BUCEPHELUS and MARENGO

[14] (30 Points)

For five points each, translate the following German, French, Spanish, or Russian



numbers into English. [Reader: accented syllables are in caps]

DreiZWANzig           ANS: 23  
OchENTa y nuEva       ANS: 89  
CATre                ANS: 4  
ShestNAHDsets        ANS: 16  
CinQUENTa y uno       ANS: 51  
Zwolf                 ANS: 12

[15] (30 Points)

When people don't know the answer to a college bowl question, a common guess is Smith. Well, we've decided to make it easier for you by telling you that it is the answer to all parts of this bonus. However, you must also supply the first name of the following Smiths for ten points each.

A. As leader of a white minority government he declared unilateral independence from Britain in 1965 and made Rhodesia a republic in 1970. A decade of civil strife ended in 1980 with the formation of a black regime in Northern Rhodesia which was renamed Zimbabwe. Identify this Rhodesian prime minister.

ANS: IAN Smith

B. She performed with many leading musicians including Louis Armstrong and Benny Goodman. Identify this US jazz singer, perhaps the greatest blues singer, known as the "Empress of the Blues".

ANS: BESSIE Smith

C. He established that similar sedimentary rock strata in different places may be dated by identifying the fossils each level contains. Identify this father of stratigraphy.

ANS: WILLIAM Smith

[16] (30 Points)

30-20-10. Identify the filmmaker.

(30 points) His early films included "Stray Dog" in 1949, a love story between a detective and his gun, and "Living" in 1952, about a terminally ill patient's attempts to save a playground.

(20 points) His more recent films included the epics "Uzala" in 1975 and "Ran" in 1985. He also won a lifetime achievement award at the Oscars a few years ago.

(10 points) He is most famous for making the movie upon which "The Magnificent Seven" is based, "The Seven Samurai", in 1954.

ANS: Akira Kurosawa

[17] (30 Points)

Identify these things having to do with the great state of Connecticut for the stated number of points.

(5 points) A religious exile from England, he came to Massachusetts via Holland in 1633, and became minister at the New Town settlement which is now Cambridge. But conflict with the Massachusetts leaders drove him and his congregation to Connecticut where he founded Hartford.

ANS: Thomas HOOKER

(10 points) In 1639, Thomas Hooker wrote the constitution for the various settlements in the area. Identify this document considered to be the world's first constitution.

ANS: The FUNDAMENTAL ORDERS of Connecticut

(15 points) The Connecticut colony was granted a royal charter in 1662. The charter was exceptionally liberal and fostered a government based upon the Fundamental Orders. When governor, Edmund Andros tried to seize the charter in 1687, it was hidden in a tree. Identify the tree.



ANS: The CHARTER OAK (The Hartford Oak, commemorated in Charter Oak Place)

[18] (30 Points)

For the stated number of points, name the Harlem Renaissance writers given some works.

(5 points) Tell My Horse, Mules and Men, Jonah's Gourd Vine

ANS: Zora Neale HURSTON

(10 points) Quicksand, Passing

ANS: Nella LARSEN

(15 points) Banana Bottom, Banjo, Home to Harlem

ANS: Claude McKAY

[19] (30 Points)

You may remember the conic sections from high school, but how well do you know their 3-dimensional analogues? For 10 points each identify the type of surface described by the following formulas.

1.  $x^2 + y^2 + 2z^2 = 1$ .

ANS: ELLIPSOID

2.  $x^2 + y^2 - z^2 = 1$ .

ANS: HYPERBOLOID (of 1 sheet)

3.  $x^2 + y^2 - z^2 = 0$ .

ANS: Circular CONE

[20] (30 Points)

Given the musical work, name the composer. 5 points each.

Jupiter Symphony

ANS: Mozart

New World Symphony

ANS: Dvorak

Water Music

ANS: Handel

Cuban Overture

ANS: Gershwin

Boris Gudonov

ANS: Mussorgsky

[21] (30 Points)

There are six strong acids which are universally thought of as the most common. For five points apiece, give the chemical formula for these six acids.

ANS: HCl, HBr, HI, HClO<sub>4</sub>, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>

[22] (30 Points)

(30-10) If you answer this riddle without a secondary clue, you will receive 30 pts. If you need the clue to answer it correctly, you will receive 10 pts.

Here's the riddle:

If you take the name of an animal which ends in the letter "l" and replace the "l" with the letters "ss," you get the name of another animal. What two animals make this statement true?

(allow 10 seconds before prompting)

Secondary clue: Both animals are mammals. (allow 10 seconds)

ANS: jackal and jackass