

平成28年度入学試験問題

英語 (前期日程)

医学部医学科

注意事項

- 1 試験時間は90分です。
- 2 試験開始の合図があるまで、この問題用紙の中を見てはいけません。
- 3 この問題用紙は表紙を除いて5頁あります。
- 4 解答用紙は4枚あります。
- 5 試験中に問題用紙及び解答用紙の印刷不鮮明、ページの落丁・乱丁及び汚れ等に気づいた場合は、手を挙げて監督者に知らせなさい。
- 6 解答用紙4枚すべてに、受験番号を記入しなさい。
- 7 試験終了後、問題用紙は持ち帰りなさい。

宮崎大学

1. Look at the 4 charts, graphs, and tables below and answer the questions that follow.

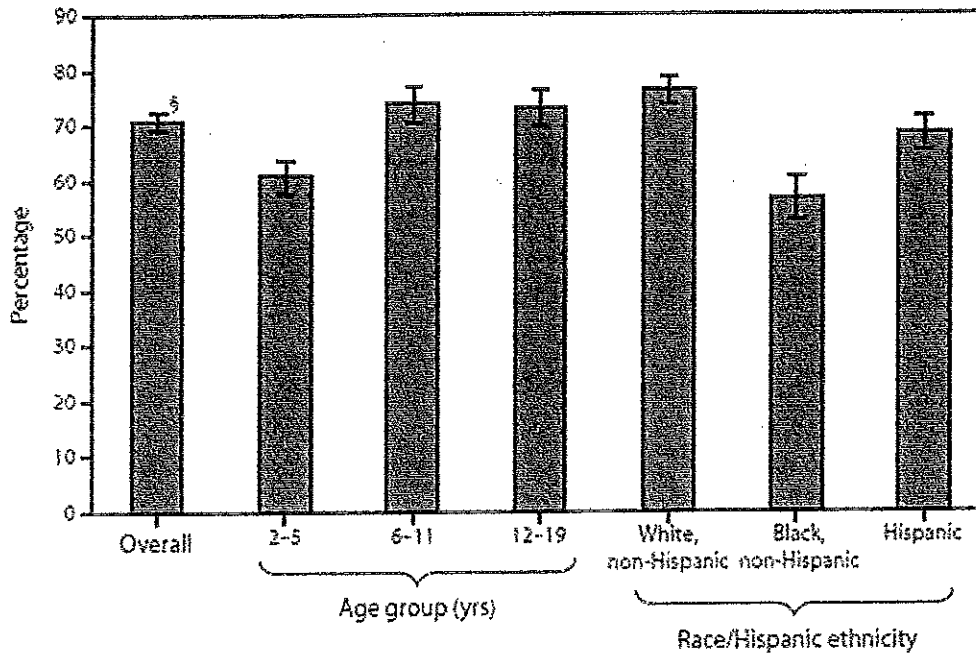
<Table 1> Ratio of Post high school education female to male ratio 2005-2009					
	2005	2006	2007	2008	2009
<u>Brunei Darussalam</u>	199	200	191	202	178
<u>Bulgaria</u>	116	122	124	132	133
<u>Burkina Faso</u>	45	46	46	49	48
<u>Burundi</u>	38	43			
<u>Cabo Verde</u>	108	113	126	131	135
<u>Cambodia</u>	46	47	49	51	56
<u>Cameroon</u>	66	72	79	79	79

From <http://data.worldbank.org/topic/health>

<Table 2> Health statistics: Nepal												
	a. For Nepal only				b. For low income countries				c. For South Asia			
	1990	2000	2010	2013	1990	2000	2010	2013	1990	2000	2010	2013
Literacy rate, adult total (% of people ages 15 and above)	33	49	57	57	51	58	60	..	46	58	61	..
Population growth (annual %)	2.4	2.2	1.1	1.2	2.7	2.4	2.2	2.2	2.2	1.8	1.3	1.3
Fertility rate, total (births per woman)	5.2	4.1	2.6	2.3	5.7	4.9	4.2	4.0	4.2	3.3	2.7	2.6
Life expectancy at birth, total (years)	55	62	67	68	53	56	61	62	59	63	66	67
Mortality rate, infant (per 1,000 live births)	99	60	36	32	105	86	59	53	92	69	50	45

From <http://data.worldbank.org/topic/health>

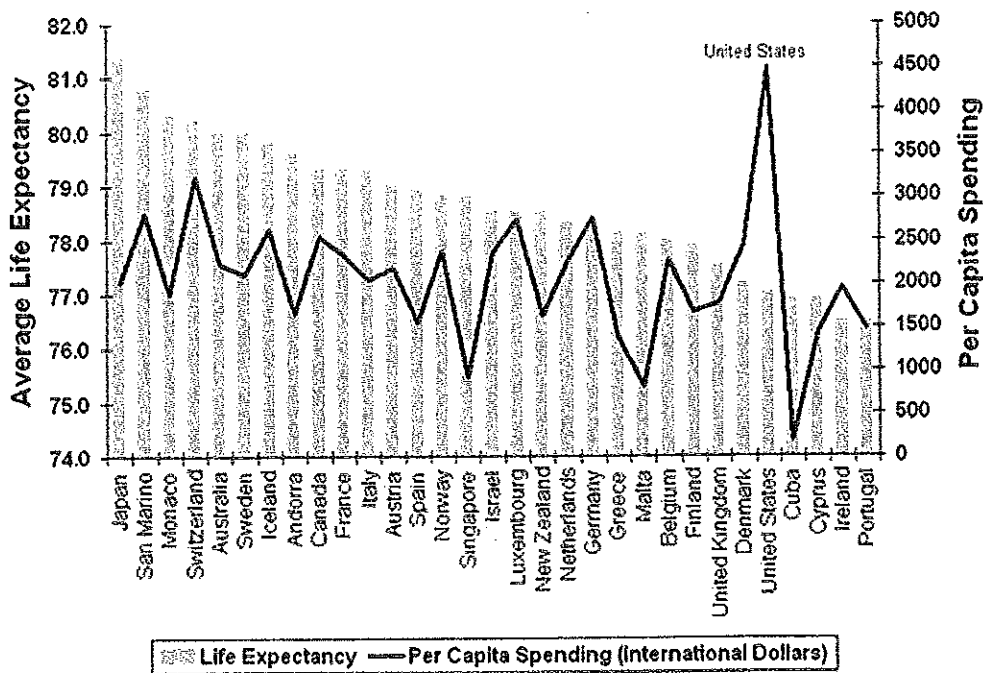
<Graph 1> Percentage of Persons Aged 2–19 Years Who Consumed Caffeine from Food or Beverages, by Age Group and Race/Hispanic Ethnicity, in the United States, 2009–2012. Dietary intake information was collected using 24-hour dietary recall interviews.



From <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6410a8.htm>

<Graph/Chart 2> The Cost of a Long Life

The Cost of a Long Life



From <http://ucatlas.ucsc.edu/spend.php>

Questions (There are three questions connected to each chart/ graph/ table.)

- 1) If we use a ratio of \$200 for every increased year of life, which country is the most cost effective?
- 2) How many years difference average life expectancy is there between Canada and Japan? Choose the closest number: 1 2 3 4 5
- 3) Which three countries showed the greatest increase in the percentage of females getting a post high-school education between 2005-2009?
- 4) Which country has shown the smallest change in female post high school education between 2005-2009?
- 5) By what percentage has Nepal's population growth decreased between 1990 and 2013?
- 6) Which American ethnicity had the lowest rate of caffeine consumption for ages 2-19?
- 7) Which age group listed in the U.S. consumes the most caffeine?
- 8) (a) Which country has the 2nd highest per capita spending for health care?
(b) By what percentage is U.S. per capita spending higher than (a) above? Choose the closest answer.
(1) 10% (2) 25% (3) 50% (4) 80%
- 9) Over how long a period of time was the caffeine consumption data collected?
- 10) Choose the best answer for (1) and (2) from (a) to (c) below.

Twenty-six years ago the mortality rate for infants in Nepal was (1) the South Asian average. In 2013 it was (2) the South Asian average.

(a) higher than (b) lower than (c) the same as

- 11) By how much has the fertility rate in Nepal decreased between 1990 and 2013?
- 12) In the years 2005-2006, how much post high-school education did women in Brunei Darussalam receive, on average, compared to men? Write an appropriate word in (a) below.

(a) as much

- 13) Write about any data above that you find surprising or interesting. Explain the data, and why you find it interesting or surprising in about 40 words in English.

2. Read the article below and answer the questions that follow it.

Cutting the umbilical* cord is a momentous event in a baby's life. For nine months, the developing fetus is attached to its mother by the cord. Then, moments after birth, that cord is cut. Now, research suggests there may be benefits to keeping mother and baby attached a few minutes longer. Those benefits, researchers say, likely have to do with iron⁽¹⁾. Waiting a few minutes before clamping the umbilical cord allows more iron-rich blood from the placenta* to reach the newborn baby.

Iron deficiency occurs in about one in six American babies, and it's more common among those clamped quickly, said Ola Andersson, a pediatrician at Uppsala University in Sweden, who led a study published in *JAMA Pediatrics*. Babies who are anemic* often appear tired and pale. His previous research has shown that babies whose cords were clamped a few minutes later than usual were 90% less likely than others to have iron-deficiency anemia when they were 4 months old. The benefits of those extra few minutes may last a long time⁽²⁾.

In the new study, Andersson found that healthy, full-term* newborn babies whose umbilical cords were left attached for three extra minutes was associated with higher scores in tests of fine motor skills when they reached preschool than those clamped immediately⁽³⁾. Some 4-year-old boys who were clamped later appeared to have better social skills.

Iron is essential to the developing brain, he said, and deficiencies during early months — perhaps linked to early clamping — could affect nerve and muscle control, making it harder for the child to later control a pen or interact comfortably with others.

Andersson's study marks the first time researchers have followed children to see whether the clamping makes a difference later in life. In 2011, he published a study of 400 healthy, full-term babies showing that those clamped later fares better; the new study of 263 of those children extends those findings by nearly four years. Boys showed more benefit than girls, probably because they are more likely to be iron-deficient, Andersson said.

Immediate clamping started about 70 years ago out of concern that leaving the delivered infant attached to the placenta could rob the mother of too much blood. But those doctors overestimated the benefit to the mother and didn't look at the impact their change had on the babies⁽⁴⁾, said Heike Rabe, a researcher in the United Kingdom, who wrote an editorial accompanying the study. For babies born at full-term, "We should trust nature more than we do now," she said. Rabe has published reviews showing that delaying clamping for 30 seconds, or squeezing the umbilical cord to get the blood out faster, is also better for premature babies.

Many countries and professional organizations, including the American Congress of Obstetricians and Gynecologists*, have called on obstetricians to delay cord clamping in premature babies when possible. There was not enough evidence before to extend that recommendation to full-term babies, but Rabe thinks this study should tip the balance in favor of delay⁽⁵⁾.

Kjersti Aagaard, vice-chair of obstetrics and gynecology at Texas Children's Hospital, is more skeptical. She said the decision about when to clamp should be made between the doctor and parents, depending on the delivery, the health of the baby and the mother's condition. "The most important thing for parents to be talking with their caretakers about is how we will adapt to the delivery as the baby emerges⁽⁶⁾," she said.

(Adapted from: *'Waiting a few minutes to cut umbilical cord helps baby'*
by Karen Weintraub, Special for USA TODAY 11 a.m. EDT May 26, 2015)

註 (本文中*の付いた語句) : umbilical cord へその緒 placenta 胎盤 anemic 貧血の full-term 臨月の Obstetricians and Gynecologists 産婦人科医

Questions

- 1) Translate the underlined passages marked (3), (4), and (6) into Japanese.
- 2) Explain the underlined passages marked (1), (2), and (5) in Japanese.
- 3) Based on the article, three of the following six statements are **false**. Which three are they?
 - (a) Dr. Aagaard agrees that doctors should always delay clamping.
 - (b) Delaying clamping in certain cases is already an accepted practice in some places.
 - (c) One researcher believes that previous doctors didn't consider the negative effect of immediate clamping upon the babies.
 - (d) According to Andersson's study, delayed clamping has had the same long-term effect upon both boys and girls.
 - (e) According to the article, Andersson's research proves that delayed clamping helps babies' development.
 - (f) The number of subjects in Andersson's second study was slightly less than two-thirds of the first study.
- 4) Find the word or phrase in the following list that best matches the meanings of each of the six underlined single words in the article.

perform, advanced, increase, disbelieving, violate, opposite of full-term, hospital official, very important, child doctor, cutting, controlling.

- 5) In about 50 words in English, summarize the benefits of delayed clamping as mentioned in this article.

3. Translate the following email, from a student to a professor, into English.

スミス教授

お忙しいところ、すみません。医学科3年のこばやしたろうです。
体調不良のため、今週月曜に行われたテストを受けることができず、すみませんでした。それで、先生に来週火曜に再テストをしていただけることになっていたのですが、体調の方がいっこうによくならず、病院で診断を受けたところ扁桃腺炎ということで、1週間ほど宮崎の中央病院に入院することになってしまいました。ですので、火曜に予定して下さっていた再テストに行くことができなくなってしまいました。せっかく先生が作ってくださった機会を活かせず、申し訳ないです。
また退院したら、すぐに先生の部屋にテストの件などのご相談に行かせていただきます。もし、先生からの僕への連絡がございましたら、この携帯も一日に数回電源を入れてメールをチェックしておりますので、よろしかったらご連絡下さい。よろしくお願いいたします。