Exercise 20

Diamonds, an occasional component of rare igneous rocks called lamproites and kimberlites, have never been dated satisfactorily. However, some diamonds contain minute inclusions of silicate minerals, commonly olivine, pyroxene, and garnet. These minerals can be dated by radioactive decay techniques because of the very small quantities of radioactive trace elements they, in turn, contain. Usually, it is possible to conclude that the inclusions are older than their diamond hosts, but with little indication of the time interval involved. Sometimes, however, the crystal form of the silicate inclusions is observed to resemble more closely the internal structure of diamond than that of other silicate minerals. When present, the resemblance is regarded as compelling evidence that the diamonds and inclusions are truly cogenetic. (121 words)

1. The author implies that silicate inclusions were most often formed
(A) with small diamonds inside of them
(B) with trace elements derived from their host minerals
(C) by the radioactive decay of rare igneous rocks
(D) at an earlier period than were their host minerals
(E) from the crystallization of rare igneous material

2. Select the sentence in the passage that indicates a way to determine the age of silicate minerals included in diamonds.

阅读 1：

Q1：定位至原文，Usually, it is possible to conclude that the inclusions are older than their diamond hosts， 选 D；

Q2：由 determine the age 定位至 dated ， 即文中 These minerals can be dated by radioactive decay techniques because of the very small quantities of radioactive trace elements they, in turn, contain.

For some time scientists have believed that cholesterol plays a major role in heart disease because people with familial hypercholesterolemia, a genetic defect, have six to eight times the normal level of cholesterol in their blood and they invariably develop heart disease. These people lack cell-surface receptors for low-density lipoproteins (LDL's), which are the fundamental carriers of blood cholesterol to the body cells that use cholesterol. Without an adequate number of cell-surface receptors to remove LDL's from the blood, the cholesterol-carrying LDL's remain in the blood, increasing blood cholesterol levels. Scientists also noticed that people with familial hypercholesterolemia appear to produce more LDL's than normal individuals. How, scientists wondered, could a genetic mutation that causes a slow-down in the removal of LDL's from the blood also result in an increase in the synthesis of this cholesterol-carrying protein? Since scientists could not experiment on human body tissue, their knowledge of familial hyper- cholesterolemia was severely limited. However, a breakthrough came in the laboratories of Yoshio Watanabe of Kobe University in Japan in 1980. Watanabe noticed that a male rabbit in his colony had ten times the normal concentration of cholesterol in its blood. By appropriate breeding, Watanabe obtained a strain of rabbits that had very high cholesterol levels. These rabbits spontaneously developed heart disease. To his surprise, Watanabe further found that the rabbits, like humans with familial hypercholesterolemia, lacked LDL receptors. Thus, scientists could study these Watanabe rabbits to gain a better understanding of familial hyper-cholesterolemia in humans.

Prior to the breakthrough at Kobe University, it was known that LDL's are secreted from the liver in the form of a precursor, called very low-density lipoproteins (VLDL's), which carry triglycerides as well as relatively small amounts of cholesterol. The triglycerides are removed from the VLDL's by fatty and other tissues. What remains is a remnant particle that must be removed from the blood. What scientists learned by studying the Watanabe rabbits is that the removal of the VLDL remnant requires the LDL receptor. Normally, the majority of the VLDL remnants go to the liver where they bind to LDL receptors and are degraded. In the Watanabe rabbit, due to a lack of LDL receptors on liver cells, the VLDL remnants remain in the blood and are eventually converted to LDL's. The LDL receptors thus have a dual effect in controlling LDL levels. They are necessary to prevent oversynthesis of LDL's from VLDL remnants and

they are necessary for the normal removal of LDL's from the blood. With this knowledge, scientists are now well on the way toward developing drugs that dramatically lower cholesterol levels in people afflicted with certain forms of familial hypercholesterolemia.

3. In the passage, the author is primarily concerned with
(A) presenting a hypothesis and describing compelling evidence in support of it
(B) raising a question and describing an important discovery that led to an answer
(C) showing that a certain genetically caused disease can be treated effectively with drugs
(D) explaining what causes the genetic mutation that leads to heart disease
(E) discussing the importance of research on animals for the study of human disease

For the following question, consider each of the choices separately and select all that apply
4. The passage supplies information to answer which of the following questions EXCEPT?

A Which body cells are the primary users of cholesterol?
B How did scientists discover that LDL's are secreted from the liver in the form of a precursor?
C Where in the body are VLDL remnants degraded?

5. The passage implies that if the Watanabe rabbits had had as many LDL receptors on their livers as do normal rabbits, the Watanabe rabbits would have been
(A) less likely than normal rabbits to develop heart disease
(B) less likely than normal rabbits to develop high concentrations of cholesterol in their blood
(C) less useful than they actually were to scientists in the study of familial hypercholesterolemia in humans
(D) unable to secrete VLDL's from their livers
(E) immune to drugs that lower cholesterol levels in people with certain forms of familial hypercholesterolemia

6. The passage implies that Watanabe rabbits differ from normal rabbits in which of the following ways?
(A) Watanabe rabbits have more LDL receptors than do normal rabbits.
(B) The blood of Watanabe rabbits contains more VLDL remnants than does the blood of normal rabbits.
(C) Watanabe rabbits have fewer fatty tissues than do normal rabbits.
(D) Watanabe rabbits secrete lower levels of VLDL‘s than do normal rabbits.
(E) The blood of Watanabe rabbits contains fewer LDL‘s than does the blood of normal rabbits.

迄今为止已有相当一段时间，科学家们相信胆固醇（**cholesterol**）在诱发心脏病这方面起着甚为重要的作用，因为带有家族性高胆固醇血症（**familialhypercholesterolemia**）——一种基因缺陷——的人，其体内的胆固醇含量是正常含量的六至八倍，而这些人毫无例外地患有心脏病。他们缺乏低密度脂蛋白（**low-density lipoproteins**，简称 **LDL's**）的细胞表面受体（**cell-surface receptors**），而低密度脂蛋白则是血胆固醇的基本载体，将血胆固醇转送至需要使用胆固醇的人体细胞。如果没有充分数量的细胞表面受体将 **LDL's** 从血液中去除掉，则携带 **LDL's** 的胆固醇会留在血液中，从而增加胆固醇的含量。此外，科学家们还注意到，患有家族性高胆固醇血症的人所产生的 **LDL's** 似乎要高于常人。科学家感到纳闷，致使 **LDL's** 从血液中被去除掉的速度趋于滞缓的基因突变（**genetic mutation**），何以也会导致这种携带着胆固醇的蛋白质合成的增加呢？

由于科学家无法对人体组织进行实验，因此，他们有关家族性高胆固醇血症的知识严重不足。然而，在 **1980** 年，在日本神户大学（**Kobe University**）渡边吉雄（**Yoshio Watanabe**）的实验室里，研究取得了突破性进展。渡边君注意到，在他养殖的鼠群中，有一只雄性老鼠在其血液中所带的胆固醇含量是正常含量的十倍。通过恰当的繁殖，渡边君获得了一类拥有极高胆固醇含量的老鼠。这些老鼠自发地患有心脏病。令其惊讶的是，渡边君进一步发现，这些老鼠如同患有家族性高胆固醇血症的人类那样，缺乏 **LDL's** 受体。因此，科学家们可以对这些渡氏老鼠进行研究，以获取一种对人体内部家族性高胆固醇血症的更好理解。

在神户大学的科研突破之前，科学家已经发现，**LDL's** 是一种前体（**precursor**）的形式从肝脏中分泌出来的，这一前体被称为极低密度脂蛋白（**very low-densitylipoproteins**，简称 **V LDL's**），并携带着甘油三酯（**triglycerides**）以及相对少量的胆固醇。甘油三酯被脂肪和基它组织从 **V LDL's** 中去除掉。所剩下的是一残留微粒，必须从血液中去除掉。通过对渡氏老鼠的研究，科学家所了解到的是，**VLDL** 残留物的去除需要 **LDL** 受体。正常情况下，绝大多数 **VLDL** 残留物会来到肝脏，在这里与 **LDL** 受体结合并降解。在渡氏老鼠身上，由于肝脏细胞上缺乏 **LDL** 受体，**VLDL** 残留物会滞留于血液中，并最终被转为 **LDL's**。因此，**LDL** 受体具备一种控制 **LDL** 含量的双重作用。对于防止 **LDL's** 从 **VLDL** 残留物中进行过分合成，**LDL** 受体起着必不可少的作用；而对于 **LDL's** 从血液中正常的去除，**LDL** 受体亦起着不可或缺的作用。具备了这些知识，科学家现在早已开始着手研究药物，可戏剧性地减少那些患有某种形式的家族性高胆固醇血症的病人的胆固醇含量。

Q3：文章的 main idea？
解析：提出一个问题：How, scientists wondered, could a genetic mutation that causes a slowdown in the removal of LDL‘s from the blood also result in an increase in the synthesis of this cholesterol-carrying

protein? ' {, O$ v) C(N3 J5 p t 描述进展：However, a breakthrough came in the laboratories of Yoshio Watanabe of Kobe University in Japan in 1980. 正确答案 B；

Q4：以下哪个文章中没有提供 answer？
Normally, the majority of the VLDL remnants go to the liver where they bind to LDL receptors and are degraded.
所以 C 有 answer，选 AB；

Q5：该题比较阴险，To his surprise, Watanabe further found that the rabbits, like humans with familial hypercholesterolemia, lacked LDL receptors. Thus, scientists could study these Watanabe rabbits to gain a better understanding of familial hypercholesterolemia in humans. 逆其道而推知，正确答案 C；

Q6：What scientists learned by studying the Watanabe rabbits is that the removal of the VLDL remnant requires the LDL receptor. 因为他们 LDL 接收器少，所以它们血液中应该有更多的 VLDL 剩余物 所以正确答案 B。

Discussion of the assimilation of Puerto Ricans in the United States has focused on two different factors: social standing and the loss of national culture, depending on whether the commentator is North American or Puerto Rican. Many North American social scientists consider Puerto Ricans as the most recent in a long line of ethnic entrants to occupy the lowest rung on the social ladder. Such a —socio-demographic approach tends to regard assimilation as a benign process. In contrast, the —colonialist approach of island-based writers tends to view assimilation as the forced loss of national culture in an unequal contest with imposed foreign values. There is, of course, a strong tradition of cultural accommodation among other Puerto Rican thinkers, like Eugenio Fernandez Mendez. But the Puerto Rican intellectuals who have written most about the assimilation process in the United States all advance cultural nationalist views, advocating the preservation of minority cultural distinctions and rejecting what they see as the subjugation of colonial nationalities. (162 words)

7. It can be inferred from the passage that a writer such as Eugenio Fernandez Mendez would most likely agree with which of the following statements concerning members of minority ethnic groups?
(A) It is necessary for the members of such groups to adapt to the culture of the majority.
(B) The members of such groups generally encounter a culture that is static and undifferentiated.
(C) Social mobility is the most important feature of the experience of members of such groups.

(D) Social scientists should emphasize the cultural and political aspects of the experience of members of such groups.
(E) The assimilation of members of such groups requires the forced abandonment of their authentic national roots.

8. In the context in which it appears, "subjugation" in the last sentence most nearly means
○A accommodation
○B subjection
○C assimilation
○D incorporation
○E defeatism

阅读 2：仍旧是老 G 文章改写。

先上背景知识！

有关在美国的波多黎各人（**Puerto Ricans**）的同化问题，这方面的探讨一直侧重于两个因素：社会地位以及民族文化的丧失。普遍而言，人们过分强调其中一个因素而偏废另一个因素，取决于评论者到底是北美人还是波多黎各人。许多北美的社会科学家，诸奥斯卡"汉德林（**OscarHandlin**）、约瑟夫"菲茨帕特里克（**JosephFitzpatrick**）、以及奥斯卡"刘易斯（**Oscar Lewis**），将波多黎各人视作一长串少数民族入境者中的最近一批，占据着社会阶梯中的最低梯级。这样一种“社会人口学”方法倾向于将同化视作一良性过程，将经济优势的增加以及在一个所谓平等的环境中不可避免的文化一体化视为理所当然。然而，这一研究方法没能考虑到波多黎各实例中的殖民地性质，因为，与其欧洲前辈移民们所不同的是，该群体来自一个在政治上隶属于美国的国家。即使是对这一主流研究模型的“激进”批评，诸如《分裂的社会》（**Divided Society**）一书中所提出的那种批判，亦将少数民族同化问题过分机构地与经济和社会移动性的因素联系起来，因此无从阐明波多黎各人作为一个殖民地少数民族的文化从属关系。

与此相反，诸如爱德华"赛德—波尼拉（**Eduardo Seda -Bonilla**）、玛纽埃尔"马尔杜那多—丹尼斯（**Manuel Maldonado-Denis**），以及路易斯"尼维斯—法尔贡（**LuisNieves-Falcon**）等以波多黎各岛为基地的作家们所采用的“殖民论”方法，倾向于将同化视作民族文化的被迫丧失，因为民族文化处于一种与被强加的外来价值的不公平竞争之中。毋庸置疑，在其他波多黎各思想家之间，存在着一种强烈的文化融合的传统。尤金尼奥"菲尔南德兹"孟德兹（**Eugenio Fernandez Mendez**）的著作显然例证着这一传统，而许多波多黎各自治政体地位（**commonwealth status**）的支持者亦分享着与此相同的世界化倾向。但是，那些对美国少数民族同化过程论述得最多的波多黎各知识分子无不提出某些文化民族主义观点，提倡保存少数民族文化的特色，摈弃他们心目中那种殖民地少数民族的屈从地位。

这种文化的和政治的强调不可谓不恰当，但殖民论思想家们矛头指向却失之偏颇，对波多黎各和北美历史中起着作用的阶级关系视而不见。他们将民族文化的碰撞设定为一种绝然的两极对立，每一种文化都被理解成静态和无差异的。然则，无论是波多黎各传统还是北美传统，均遭到来自其自己社会内诸文化力量的持续不断的挑战，这些力量可能会以某些方式相互趋近，而这些方式则绝不能被一概而论地描述成为纯粹的“同化”。例如，不妨考虑一下波多黎各文化中土著的以及非洲—加勒比的传统，以及它们是如何影响其它加勒比文化和美国的黑人文化，并又是如何反被这些文化影响的。强制与不平等这两种因素——按殖民论思维模式是文化交流中如此之不可避免——在同一

社会阶层内的这种不同的民族与种族因素的趋同过程中，根本不起任何作用。

Q7：

由 EFM 定位至文章倒数第二句话，EFM 是 other Puerto Rican thinkers 的代表，而普通 Puerto Rican thinkers 的想法是文章最后一句 But the Puerto Rican intellectuals who ... as the subjugation of colonial nationalities. 将该句取反可得，正确答案 A；

Q8：

subjugation 征服， 选 B。

9. When cut, the synthetic material fiberglass, like asbestos, releases microscopic fibers into the air. It is known that people who inhale asbestos, fibers suffer impairment of lung functions. A study of 300 factory workers who regularly cut fiberglass showed that their lung capacity is, on average, only 90 percent of that of a comparable group of people who do not cut fiberglass.
The statements above, if true, most strongly support which of the following hypotheses?

(A) People who work with fiberglass are likely also to work with asbestos.
(B) Fiberglass fibers impair lung function in people who inhale them.
(C) Fiberglass releases as many fibers into the air when cut as does asbestos.
(D) Coarse fibers do not impair lung function in people who inhale them.
(E) If uncut, fiberglass poses no health risk to people who work with it.

Simone de Beauvoir‘s work greatly influenced Betty Friedan‘s----indeed, made it possible. Why, then, was it Friedan who became the prophet of women‘s emancipation in the United States? Political conditions, as well as a certain anti-intellectual bias, prepared Americans and the American media to better receive Friedan‘s deradicalized and highly pragmatic The Feminine Mystique, published in 1963, than Beauvoir‘s theoretical reading of women‘s situation in The Second Sex. In 1963 when The Second Sex first appeared in translation in the United States, the country had entered the silent, fearful fortress of the anticommunist McCarthy years (1950-1954), and Beauvoir was suspected of Marxist sympathies. Even The Nation, a generally liberal magazine, warned its readers against —certain political leanings of the author. (120 words)

For the following question, consider each of the choices separately and select all that apply

10. It can be inferred from the passage that which of the following is a factor in the explanation of why The Feminine Mystique was received more positively in the United States than was The Second Sex?

A By 1963 political conditions in the United States had changed.
B Friedan's approach to the issue of women's emancipation was less radical than Beauvoir's.
C Readers did not recognize the powerful influence of Beauvoir's book on Friedan's ideas.

阅读 1：文章很短，我翻译一下吧~
当被切割时，合成材料如玻璃纤维，像石棉一样，会将微观纤维释放到空气中。据了解，人如果吸入石棉纤维将会损害肺功能。300 个定期切玻璃纤维工人的研究表明，他们的肺活量，平均而言，只有不切玻璃纤维组的 90%。

Q9：文章 strongly 支持哪个假设？
解析：切割纤维玻璃的工人吸入了纤维，所以导致肺功能受损！选 B；

阅读 2：
来段翻译吧！
西蒙•德•波伏娃的作品极大地影响了贝蒂•弗里丹的创作——事实上，没有前者，后者也就不可能出现。
那么，为什么是弗里丹成为了美国妇女解放运动的先声呢？
因为比起波伏娃写的那本关于妇女状况的理论读物《第二性》，政治环境以及某种反智的成见使美国人以及美国媒体更容易接受弗里丹发表于 1963 年的《女性的奥秘》，它不那么咄咄逼人，而且非常实际。
1953 年，当《第二性》首次翻译出版时，美国正经历一个肃杀战栗的麦卡锡反共时期（1950-1954），波伏娃被怀疑是马克思主义的同情者。
连大体上持自由派立场的《国家》杂志也警告它的读者要提防作者的"某些政治倾向"。
公开承认妇女压迫的现实对于五十年代的美国过于激进了。而波伏娃认为，改善妇女处境的基本因素在于改变妇女的经济地位。尽管这一论断就其本身来说不够充分，但它特别与世相忤。

Q10：文章最先给出问题，然后从两个方面进行解释，所以掐指一算，这个题应该有两个选项~
定位至两本书的修饰语部分，一个 deradicalized highly pragmatic, 一个 theoretical reading of women's situation. 所以 B 选项显而易见；再定位至 In 1963 when The Second Sex first appeared in translation in the United States, the country had entered the silent, fearful fortress of the anticommunist McCarthy years (1950-1954)，所以选 A；正确答案 AB。