

TPO 27 – 1 Crafts in the Ancient Near East 古代近东的手工艺

高亮句【多选题】

Some of the earliest human civilizations arose in southern Mesopotamia, in what is now southern Iraq, in the fourth millennium B.C.E. In the second half of that millennium, in the south around the city of Uruk, there was an enormous escalation in the area occupied by permanent settlements. A large part of that increase took place in Uruk itself, which became a real urban center surrounded by a set of secondary settlements. While population estimates are notoriously unreliable, scholars assume that Uruk inhabitants were able to support themselves from the agricultural production of the fields surrounding the city, which could be reached with a daily commute. But Uruk's dominant size in the entire region, far **surpassing** that of other settlements, indicates that it was a regional center and a true city. Indeed, it was the first city in human history.

问题 1: 等价替换语句 (Sentences = which of the CHOICES)

问题 2: 询问单词意思 (**surpassing**);

问题 3: 询问陈述是真的 about the ancient settlement at Iraq; 【Except】

一些最早的人类文明是在公元前四千年前的南美索不达米亚出现的，现在这片区域处于南伊拉克。在后五百年，在乌鲁克城南方附近，被永久居留民占用的地域在大幅度增长。大部分的增长都发生在乌鲁克城内，使其成为了一个真正的中心城区，并被一些后续的定居点环绕着。虽然人口估计数通常是不可靠的，但学者们认为乌鲁克居民可以通过日常与周围地区的通勤，得到周围地区产的农业产品以自给自足。但乌鲁克在整个地区最大，远远超过了其它居民点，这说明它是这个地区的中心，是一个真正的城市。事实上，它是人类历史上的第一个城市。

第二句【多选题】

The vast majority of its population remained active in agriculture, even those people living within the city itself. But a small segment of the urban society started to specialize in nonagricultural tasks as a result of the city's role as a regional center. Within the productive sector, there was a growth of a variety of specialist craftspeople. Early in the Uruk period, the use of undecorated utilitarian pottery was probably the result of specialized mass production. In an early fourth-millennium level of the Eanna archaeological site at Uruk, a pottery style appears that is most characteristic of this process, the so-called **beveled-rim bowl**. It is a rather shallow bowl that was crudely made in a mold; hence, in only a limited number of standard sizes. For some unknown reason, many were discarded, often still **intact**, and thousands have been found all over the Near East. The beveled-rim bowl is one of the most telling diagnostic finds for identifying an Uruk-period site. Of importance is the fact that it was produced rapidly in large amounts, most likely by specialists in a central location.

问题 4: 询问单词意思 (**intact**);

问题 5: 询问 best description of **beveled-rim bowl**;

问题 6: 询问 **infer** from craft production; 【关键词没有定位准确+句子理解不清晰=犯错】

绝大部分人依然从事农业活动，甚至包括城市居民。但由于该城市是区域的中心，其中的一小部分人开始全心从事非农业工作。生产方面，专业工匠的多样性有了增长。在乌鲁克时期

早期，对未装饰的实用陶器的使用可能就是专业化大量生产的结果。在乌鲁克的发现的四千年前早期的 Eanna 考古遗址中，有一种陶器刻画了这种专业化生产过程的特征，即所谓的斜面边碗。这种碗相当的浅，是利用模具简单制作的；因此，只有有限的几种大小。由于一些未知原因，很多被丢弃的碗还是完整的保存下来了，而在近东的各地有上千件出土。这种碗是最好的判断乌鲁克时期遗址的发现之一。最重要的是这种碗被大量快速生产，最可能由中心位置的专业工匠制作。

【需细读】

整段&第4句【多选题】

A variety of documentation indicates that certain goods, once made by a family member as one of many duties, were later made by skilled artisans. Certain images depict groups of people, most likely women, involved in weaving **textiles**, an activity we know from later third-millennium texts to have been vital in the economy and to have been centrally administered. Also, a specialized metal-producing workshop may have been excavated in a small area at Uruk. It contained a number of channels lined by a sequence of holes, about 50 centimeters deep, all showing burn marks and filled with ashes. This has been **interpreted** as the remains of a workshop where molten metal was scooped up from the channel and poured into molds in the holes. Some type of mass production by specialists was involved here.

问题 7: 询问哪个是真的关于 **textiles production** after fourth millennium;

问题 8: 询问单词意思 (**interpreted**); **understand**

问题 9: 询问段落 **purpose**;

interpreted

英 [ɪn'tɜːprɪtɪd] 美 [ɪn'tɜːrprɪtɪd]

v. 理解; 解释 (interpret 的过去式和过去分词); 把...理解为; 演绎 (按自己的感觉演奏音乐或表现角色); 口译

多种文件记录说明，曾经作为义务被家庭制作的物品，在后来由熟练技工制作。一些图画描述了成群的人们，大部分是女人，正在编制纺织品。这种活动，从其后三千年的文献得知，是当时经济的重要部分，并且已被中央管理。并且一个专门从事金属制造的工厂可能也已经小区域的在乌鲁克地区开挖。它包括了一定数量的由一系列约 50 厘米深的洞连接的通道，它们都有燃烧的痕迹，也盛满了灰烬。这被认定是工厂的遗址，在这里融化的金属从隧道中聚集，然后倒入洞里的模具中。这里包括一些由专业人士进行的大量生产活动。

【需细读】

倒数第3句&整段【多选题】

Objects themselves suggest that they were the work of skilled professionals. In the late Uruk period (3500–3100 B.C.E.), there first appeared a type of object that remained characteristic for Mesopotamia throughout its entire history: the cylinder seal. 【】 This was a small cylinder, usually no more than 3 centimeters high and 2 centimeters in diameter, of shell, bone, faience (a glassy type of stoneware), or various types of stones, on which a scene was carved into the surface. 【】 When rolled over a soft material—primarily the clay of bullae (round seals), tablets, or clay lumps attached to boxes, jars, or door bolts—the scene would appear in relief a type of sculpture in which the subjects project from the background, easily **legible**. 【】 The

technological knowledge needed to carve it was far superior to that for stamp seals, which had happened in the early Neolithic period (approximately 10,000–5000 B.C.E.). 【】 From the first appearance of cylinder seals, the carved scenes could be highly elaborate and refined, indicating the work of specialist stone-cutters. Similarly, the late Uruk period shows the first monumental art, relief, and statuary in the round, made, with a degree of mastery that only a professional could have produced.

问题 10: 询问单词意思 (legible);

问题 11: 询问 cylinder seals 的重要性表明了 what;

问题 12: 询问 one of the achievements 是什么;

问题 13: 插入语的位置 → 【】;

产品的本身就说明了它们是由专业技工制作的。在乌鲁克时期末期首次出现了一种在其整个历史中象征美索不达米亚的物品：圆柱章。它是一个小的圆柱体，一般不高于 3 厘米，直径 2 厘米，材料为贝壳，骨头，陶器或是各种石头，在其表面刻着一个场景。当它滚过柔软的材料的时候---主要是被连接在箱子，罐子或是门栓上的粘土圆章，纪念碑，泥土块--- 这个场景就会清晰简单的出现在上面了。相对于新石器时期（大约是公元前 10000-5000 年前）的封章，这种雕刻技术依然是很先进的。从圆柱章的出现开始，被雕刻的图像就非常精致精美，这表现了石头切割者的专业技术。同样的，在乌鲁克时期晚期出现了第一个大师级别制作的永存的艺术和雕刻，这是只有非常专业的人才能做出的。

TPO 27 – 2 The Formation of Volcanic Islands 火山岛的形成

Earth's surface is not made up of a single sheet of rock that forms a crust but rather a number of "tectonic plates" that fit closely, like the pieces of a giant jigsaw puzzle. Some plates carry islands or continents; others form the seafloor. All are slowly moving because the plates float on a denser semiliquid mantle, the layer between the crust and Earth's core. The plates have edges that are **spreading ridges** (where two plates are moving apart and new seafloor is being created), **subduction zones** (where two plates collide and one plunges beneath the other), or **transform faults** (where two plates neither **converge** nor diverge but merely move past one another). It is at the boundaries between plates that most of Earth's volcanism and earthquake activity occur.

问题 1: 询问为什么提这些 (**spreading**) & (**subduction**) & (**transform**);

问题 2: 询问单词意思 (**converge**);

地球的外壳并不是由单块岩石形成的，而是许多的"构造板块"严密的组合在一起的，就像是一个巨大的拼图。一些板块承载着岛屿或是大陆，其它的则形成海底。所有板块都在缓慢移动，因为它们都漂浮在密度更大的半液态的介于地壳和地核之间的地幔上。板块的边缘是扩张脊（两个板块分离，新的海底形成的地方），俯冲带（两板块碰撞，一个倾入到另一个下面），或者是形成断层（两板块既不聚集也不分散，但只是互相错位）。板块边界是地球上的火山和地震的高发地。

Generally speaking, the interiors of plates are geologically uneventful. However, there are exceptions. A glance at a map of the Pacific Ocean reveals that there are many islands far out at sea that are actually volcanoes-many no longer active, some overgrown with coral-that originated from activity at points in the interior of the Pacific Plate that forms the Pacific seafloor.

问题 3: 等价替换语句 (**Sentences** = which of the CHOICES)

一般地，板块内部在地质上是平静的。但也有例外。扫一眼太平洋的地图就知道那里有许多在大海深处的岛屿，它们其实都是火山，其中有许多已经不活动了，一些长满了珊瑚。这些火山都起源于当时太平洋板块内部一些部位在形成太平洋海底时的地质活动。

How can volcanic activity occur so far from a plate boundary? The Hawaiian Islands provide a very **instructive** answer. 【】 Like many other island groups, they form a chain. 【】 The Hawaiian Island Chain extends northwest from the island of Hawaii. 【】 In the 1840s American geologist James Daly observed that the different Hawaiian Islands seem to share a similar geologic evolution but are progressively more **eroded**, and therefore probably older, toward the northwest. 【】 Then in 1963, in the early days of the development of the theory of plate tectonics, Canadian geophysicist Tuzo Wilson realized that this age progression could result if the islands were formed on a surface plate moving over a fixed volcanic source in the interior. Wilson suggested that the long chain of volcanoes stretching northwest from Hawaii is simply the surface expression of a long-lived volcanic source located beneath the tectonic plate in the mantle. Today's most northwestern island would have been the first to form. Then,

as the plate moved slowly northwest, new volcanic islands would have formed as the plate moved over the volcanic source. The most recent island, Hawaii, would be at the end of the chain and is now over the volcanic source.

问题 4: 询问单词意思 (**instructive**);

问题 5: 询问单词意思 (**eroded**);

问题 6: 询问 Daly 和 Wilson 两人的科学贡献之间的关系;

为什么火山活动发生在离板块边缘这么远的地方呢? 夏威夷群岛提供了一个非常有启发性的答案。就像其它的群岛一样, 它们形成了一个岛链。夏威夷群岛链从夏威夷岛向西北扩张。在十八世纪 40 年代, 地质学家 James Daly 观察到不同的夏威夷岛屿看起来经历了相似的演变过程, 但它们所受腐蚀一个比一个严重, 所以越往西北方向的岛屿形成时间可能越早。1963 年, 在大陆板块理论的早期, 加拿大的地质学家 Tuzo Wilson 意识到岛屿年龄的增加可能是因为这些岛屿是板块表面从一个板块内部的固定火山源上方移动的结果。Wilson 解释说, 夏威夷向西北延伸的火山长链只是一个长期存于板块下、地幔中的火山源在板块表面的表现。现今最靠西北的岛屿可能是最先形成的。当板块缓慢向西北移动, 新的火山岛会随着板块的移动在火山源处形成。最年轻的岛屿, 夏威夷岛, 应该是在岛链的末端, 现在应该在火山源上。

Although this idea was not immediately accepted, **the dating of lavas in the Hawaiian (and other) chains showed that their ages increase away from the presently active volcano**, just as Daly had suggested. Wilson's analysis of these data is now a central part of plate tectonics. Most volcanoes that occur in the interiors of plates are believed to be produced by **mantle plumes**, columns of molten rock that rise from deep within the mantle. A volcano remains an active "hot spot" as long as it is over the plume. The plumes apparently originate at great depths, perhaps as deep as the boundary between the core and the mantle, and many have been active for a very long time. The oldest volcanoes in the Hawaiian hot-spot trail have ages close to 80 million years. Other islands, including Tahiti and Easter Island in the Pacific, Reunion and Mauritius in the Indian Ocean, and indeed most of the large islands in the world's oceans, owe their existence to mantle plumes.

问题 7: 询问作者为什么提供信息 (**the dating of lavas...**);

问题 8: 询问关于 **mantle plumes** 的陈述;

虽然这个理论并没有被很快接受, 夏威夷和其它群岛岩浆的年龄测试表明了它们的年龄都从活跃的火山开始依次增加, 正如 Daly 所说。Wilson 对数据的分析已经成为了板块构造论的核心部分。大多数的发生在板块内部的火山爆发都是由地幔柱造成的; 地幔柱是从地幔深处涌出的熔岩柱体。只要火山在一个地幔柱上面, 它就是一个活动的“热点”。地幔柱很显然是起源于很深的地方, 很可能位于地核和地幔的交界处, 并且已经活跃了很久。由夏威夷热点形成的最老的火山已经有近 8 千万年的时间了。其它的岛屿, 包括太平洋的塔希提岛和东部群岛, 印度洋留尼汪岛和毛里求斯群岛, 实际上, 多数世界上大洋中大岛都是由地幔柱的扩展形成的。

整段【多选题】

The oceanic **volcanic islands** and their hot-spot trails are thus especially useful for geologists because they record the past locations of the plate over a fixed source. They therefore permit the reconstruction of the process of seafloor spreading, and consequently of **the geography of continents** and of ocean basins in the past. For example, given the **current** position of the

Pacific Plate, Hawaii is above the Pacific Ocean hot spot. So the position of the **Pacific Plate** 50 million years ago can be determined by moving it such that a 50-million-year-old volcano in the hot-spot trail sits at the location of Hawaii today. However, because the ocean basins really are short-lived features on geologic time scales, reconstructing the world's geography by backtracking along the hot-spot trail works only for the last 5 percent or so of geologic time.

问题 9: 询问 **volcanic islands** 可以帮助科学家干嘛;

问题 10: 询问从 **Pacific Plate** 可以 inferred what; 【注意: 关键词定位直接找同义替换, 不要被下文迷惑】

问题 11: 询问单词意思 (**current**);

问题 12: 询问为什么 geologist 不能推断出 the geography of continents 从 hot-spot trail; 海洋火山岛和它们的热点轨迹对于地质学家尤其有用, 因为它们记录了过去的板块在固定地点之上的位置。他们因此可以重现海底扩张的过程, 以及大陆和大洋盆地过去的地理位置发展过程。比如, 根据太平洋板块现在的位置, 夏威夷岛在太平洋热点上面。所以太平洋板块 5 千万年前的位置可以通过移动太平洋板块使得一座有 5 五千万年历史的岛屿位于夏威夷岛现在所在的热点上以获得。但是, 由于海洋盆地在地质年代上是相对短命的, 用热点追踪的方法重建世界的地形只适用于最近的百分之五左右的地质时间。

TPO 27 – 3 Predator-Prey Cycles 捕食者-猎物周期

整段【多选题】

How do predators affect populations of the prey animals? The answer is not as simple as might be thought. **Moose** reached Isle Royale in Lake Superior by crossing over winter ice and multiplied freely there in isolation without predators. When **wolves** later reached the island, naturalists widely assumed that the wolves would play a key role in controlling the moose population. Careful studies have demonstrated, however, that this is not the case. The wolves eat mostly old or diseased animals that would not survive long anyway. In general, the moose population is controlled by food availability, disease, and other factors rather than by the wolves.

问题 1: 询问 why 作者讨论了 **Moose & wolves**;

捕食者是怎样影响被捕食者的数量呢？答案并不是想象中那么简单。麋鹿通过穿越冬天的冰层到达了在苏必略湖的罗亚尔岛，并由于没有捕食者而自由繁殖。当狼在晚一点的时候到达那座岛时，自然学家都认为，狼对控制麋鹿的数量将起到关键作用。但是，严密的研究说明并不是这样。狼吃掉的大部分是年老的，或生病的动物，他们本身就不会存活很久。一般地，麋鹿的数量是由食物、疾病、和其它的一些条件，而不是狼控制的。

整段【多选题】

When experimental populations are set up under simple laboratory conditions, the predator often exterminates its prey and then becomes extinct itself, having nothing left to eat. However, if safe areas like those prey animals have in the wild are provided, the prey population drops to low levels but not to extinction. Low prey population levels then provide inadequate food for the predators, causing the predator population to decrease. When this occurs, the prey population can **rebound**. In this situation the predator and prey populations may continue in this cyclical pattern for some time.

问题 2: 询问单词意思 (**rebound**);

问题 3: 询问实验环境意味着哪个陈述;

在简单的实验条件下，捕食者经常吃掉了所有的实验设定的被捕食者，然后因为食物缺乏而自己灭绝。但是，如果能给被捕食动物提供如同在野外的安全的区域，被捕食动物的数量会降低到很低的数值，但不会灭绝。被捕食者的数量的降低造成了捕食者的食物不足，使捕食者的数量下降。此时，被捕食者的数量又会反弹。这样，一定时间内捕食者和被捕食者的数量会持续地循环。

整段【多选题】

Population cycles are characteristic of some species of small mammals, and they sometimes appear to be **brought about by** predators. Ecologists studying hare populations have found that the North American snowshoe hare follows a **roughly** ten-year cycle. Its numbers fall tenfold to thirtyfold in a typical cycle, and a hundredfold change can occur. Two factors appear to be **generating** the cycle: food plants and predators.

问题 4: 询问经过 **Population cycles** 的小哺乳动物能 infer 什么;

【特别注意：答题时，两段要结合着一起看，选项顺序可能会乱】

问题 5：询问单词意思（**roughly**）；

问题 6：询问单词意思（**generating**）；

这种数量的循环是小型哺乳动物的特性，有时候这种循环是由捕食者带来的。生态学家对野兔数量的研究发现，北美白靴兔一直遵守着大约以十年为周期的循环。在一个典型的循环中，其数量会以十倍到三十倍的减少，甚至会出现一百倍的变化。有两种因素会导致这种循环：食物和捕食者。

The preferred foods of snowshoe hares are willow and birch twigs. As hare density increases, the quantity of these twigs decreases, forcing the hares to feed on low-quality, high-fiber food. Lower birth rates, low juvenile survivorship, and low growth rates follow, so there is a corresponding decline in hare abundance. Once the hare population has declined, it takes two to three years for the quantity of twigs to recover.

问题 7：询问 food 的陈述；【**Except**】

白靴兔比较喜欢的食物是柳木和桦树树枝。野兔的密度增加时，这些树枝的数量就减少，迫使野兔去吃一些低质量的，高纤维食物。随之而来的是低生育率，低成活率，低生长率，所以野兔数量随之减少。一旦野兔数量减少，树枝的数量需要两到三年恢复。

A key predator of the snowshoe hare is the Canada lynx. The Canada lynx shows a ten-year cycle of abundance that parallels the abundance cycle of hares. As hare numbers increase, lynx numbers do too, rising in response to the increased availability of lynx food.

问题 9：询问 Canada lynx 的 abundance cycle 特点；

白靴兔的主要捕食者是加拿大山猫。加拿大山猫的数量呈现了平行于野兔的十年为周期的循环。野兔数量下降时，山猫的食物供给减少，数量也随之减少。

What causes the predator-prey oscillations? Do increasing numbers of hares lead to overharvesting of plants, which in turn results in reduced hare populations, or do increasing numbers of lynx lead to overharvesting of hares? Field experiments carried out by Charles Krebs and coworkers in 1992 provide an answer. Krebs investigated experimental plots in Canada's Yukon territory that contained hare populations. When food was added to these plots (no food effect) and predators were excluded (no predator effect) from an experimental area, hare numbers increased tenfold and stayed there-the cycle was lost. However, the cycle was retained if either of the factors was allowed to operate alone: if predators were excluded but food was not added (food effect alone), or if food was added in the presence of predators (predator effect alone). Thus, both factors can affect the cycle, which, in practice, seems to be generated by the **conjunction** of the two factors.

问题 8：询问单词意思（**conjunction**）；

问题 10：询问关于 experiment 哪一个是真；【晕晕乎乎】

conjunction

英 [kən'dʒʌŋkʃn] 美 [kən'dʒʌŋkʃn]

n. 结合；[语] 连接词；同时发生

什么造成了捕食者和被捕食者的周期波动呢？是野兔数量的增长使得植物被过度采食，随之

导致了野兔的减少还是山猫的增加导致了野兔被过度捕食？在 1992 年，Charles Krebs 和其合作者的野外试验提供了答案。Krebs 研究了在加拿大 Yuhon 地区有野兔种群的试验田。当食物被加到这片试验田（没有食品因素影响）并且将捕食者移去（也没有捕食者因素影响），野兔数量成十倍增加，并且之后保持稳定——不再循环了。但是，在任意一个因素单独存在时，循环都会出现：不管是捕食者被移除，食物不添加（也就是只有食物影响）；还是食物在捕食者存在的条件下被添加（也就是只有捕食者影响）。因此，两个因素都可以影响这个循环，即在现实中，循环是两个因素同时作用的结果。

整段【多选题】

Predators are an essential factor in maintaining communities that are rich and diverse in species. Without predators, the species that is the best competitor for food, shelter, nesting sites, and other environmental resources tends to dominate and exclude the species with which it competes. 【】 This phenomenon is known as "**competitor exclusion**." 【】 However, if the community contains a predator of the strongest competitor species, then the population of that competitor is controlled. 【】 Thus even the less competitive species are able to survive.

【】 For example, sea stars prey on a variety of bivalve mollusks and prevent these bivalves from monopolizing habitats on the sea floor. This opens up space for many other organisms. When sea stars are removed, species diversity falls sharply. Therefore, from the standpoint of diversity, it is usually a mistake to eliminate a major predator from a community.

问题 11: 询问 sea star 的 effect characteristic;

问题 12: 询问关于 **competitor exclusion** 现象哪个是真的；【关键词定位，描述在前】

问题 13: 插入语的位置→【】: **monopolize**

monopolize

英 [mə'npələɪz] 美 [mə'nɑ:pələɪz]

vt. 垄断；独占；拥有…的专卖权

捕食者是保持群体多样性和数量的必要条件。没有捕食者时，那种在对食物、庇护所、筑巢点和其它环境资源的争夺中胜出的竞争者，趋向于统治，并且灭绝与其竞争的其它物种。这种现象被称作“驱逐竞争者”。但是，如果种群中的具有最强竞争力的物种存在天敌，那这一物种数量就被控制。因此，竞争力比较弱的物种都会得以生存。比如，海星捕食各种双壳的软体动物，防止这些双壳动物垄断海底。这使得其它的很多生物有了生存空间。海星被移除后，物种多样性大幅度降低。因此，从多样性的角度说，从一个种群中消除一个主要捕食者通常是错误的决定。