READING PASSAGE 1

*You should spend about 20 minutes on **Questions 1–13**, which are based on Reading Passage 1 below.*

Dyes and fabric dyeing

When primitive people began using their hands to be creative, they began to add color to their lives. They used natural materials like ochre to stain animal hides, decorate shells and feathers, and paint on the walls of caves. Ochre is a naturally occurring brownish-yellow earth containing iron oxide. Scientists have been able to date the black, white, yellow and reddish pigments made from ochre, used in cave paintings, to over 15,000 BCE. With the development of fixed settlements and agriculture, around 7,000 to 2,000 BCE, people began to produce fabrics, and used natural substances such as ochre to color them.

Natural dyes, or dyes made from substances found in nature, can be broken down into two categories: substantive and adjective. Substantive, or direct dyes, become fixed to fibers without the aid of any other chemicals or additives. Adjective dyes require a mordant (usually a metal salt), which acts as a fixative and prevents the color from washing out or being bleached by sunlight. Most natural dyes are adjective dyes, and require the application of a mordant solution to the fibers at some point in the dyeing process.

Historically, three natural fibers were used in making fabrics: wool, silk and cotton. Wool fabric remains have been found in Europe dating back to 2,000 BCE. It was a common medieval fabric worn in both dyed and natural colors and was processed by both professional manufacturers and by people in their own homes. Silk was imported from China to Europe, and in the 14th to 16th centuries major silk manufacturing centers were set up in France, Spain and Italy. These silk production centers also became centers of dye technology, as most silk was dyed and required the highest quality dyes available. Cotton was considered a luxury fabric in Europe, as it was imported all the way from India and was dyed before it was shipped. Cotton was also valued because of the brightness and colorfastness of the dyes used to color it.

Dyes that gave fabrics a good bright color and were able to withstand washing and exposure to sunlight without losing their color were highly prized. The names of some of these valued and traded colors are still familiar today. The color known as Tyrian purple, for example, originated in the Mediterranean 2,000 years ago, and cochineal is the name given to the red dye from Latin America. Both of these colors came from animals; the mucus found in certain species of shellfish produced the deep, rich Tyrian purple and cochineal was extracted from insects. Two other natural sources of color were saffron and indigo. Saffron, the base of yellow dyes, comes from the flowers of a particular kind of crocus which is thought to have first been cultivated on Crete in the eastern Mediterranean. The leaves of a plant native to India were used to produce indigo, which was the main source of the color blue.

As societies developed over the centuries, the demand for dyes and dyed fabric grew, and by the 17th century a worldwide shipping and trading network was in place, allowing dyestuffs from all parts of the world to be brought to Europe. This meant that numerous dyestuffs could be blended to create a variety of colors for the rich and powerful. Fiber dyeing in the lower classes was a bit more restrictive. Without the money to buy exotic imported dyes, clothing in the countryside tended to be black, brown, grey and tan. Country people had some resources they could use to get a wider range of colors. They had always used local plants as food, and many of these plants were also used as medicines and in some cases as sources of dyes. Home dyers used any plants they could find that would give a good color. People who picked blackberries to make jam soon recognized this wild fruit as a source for a blue dye. Washing beehives in preparation for making mead (a popular drink containing honey) yielded a liquid that could be used as a yellow dye. The mosses which grow in many parts of Europe were used to produce green dye.

With the tremendous rise of interest in chemistry in the mid-19th century, several important innovations in dyeing came about. W. H. Perkin, a student of celebrated European scientist Wilhelm von Hofmann, accidentally discovered the first synthetic dye, later called mauve. The color was so popular that Perkin was able to open a factory of his own and went on to develop more synthetic dye colors. Synthetic dye production grew in Europe, and hardly a year passed until the end of the century without a new synthetic dye being patented.

Eventually, the old natural dyes lost popularity in favor of the newer synthetic ones, and now the use of natural dyes on a commercial scale only exists in a few remote areas where people have either little access to synthetic dyes or a vested interest in retaining their ancient dyeing customs.

Questions 1–8

Do the following statements agree with the information in Reading Passage 1?

In boxes 1–8 on your answer sheet, write:

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information about this*

1 Ochre was used in paintings before it was used in fabric dyes.

2 Natural dyes that need a mordant are rare.

3 In medieval times people sometimes wore fabric made of undyed wool.

4 Silk has always been more expensive than cotton and wool.

5 Cotton imported from India was dyed upon arrival in Europe.

6 Perkin became more famous than his teacher, von Hofmann.

7 Very few synthetic dyes were produced in Europe in the second half of the 19th century.

8 Today the commercial production of natural dyes is limited to a small number of isolated communities.

Questions 9–13

Complete the notes below.

*Choose **ONE WORD ONLY** from the passage for each answer.*

Write your answers in boxes 9–13 on your answer sheet.

The history of some dyes

Highly valued dyes

- Tyrian purple
  - mucus from **9** _____ found in the Mediterranean
- cochineal (a red dye)
  - made from **10** _____ found in Latin America
- saffron (a yellow dye)
  - nitially made from crocuses found on the island of Crete
- indigo (a blue dye)
  - made from plant leaves from India

17th-century Europe

dyes made by country people:

- **11** _____ had two uses
  - jam
  - blue dye
- liquid from cleaning **12** _____ had two uses
  - making mead
  - yellow dye

19th-century Europe

- progress in study of **13** _____ led to synthetic dyes

判断题（Questions 1–8）

题号	题干翻译	答案	定位句（段落/原文关键处）	详细解释
1	赭石在被用于织物染色之前就已用于绘画。	**TRUE**	第1段："...pigments made from ochre, **used in cave paintings**, to over 15,000 BCE... people began to produce fabrics ... and **used natural substances such as ochre to color them** (7,000–2,000 BCE)."	时间线清晰：洞穴绘画（约公元前15,000年）早于织物出现与染色（公元前7,000–2,000年）。因此"先画后染"为真。
2	需要媒染剂的天然染料很少见。	**FALSE**	第2段："**Most natural dyes are adjective dyes**, and **require** the application of a **mordant** ..."	文中说"多数（Most）天然染料需要媒染剂"，与"很少见（rare）"相反，故为假。
3	中世纪人们有时穿未染色的羊毛织物。	**TRUE**	第3段："It was a common medieval fabric worn in **both dyed and natural colors** ..."	"natural colors"=未染色；"both ... and ..." 说明两者并存，故"有时穿未染色"成立。
4	丝绸一直都比棉和羊毛更昂贵。	**NOT GIVEN**	第3段提到丝绸来源与生产中心；又说"**Cotton was considered a luxury fabric** in Europe..."。	文中没有对丝绸与棉/羊毛的**恒久价格对比**与"always"这种强限定的证明；只说棉被视为奢侈、羊毛常见，未比较丝绸"始终更贵"，故信息缺失。
5	从印度进口的棉布在到达欧洲后才被染色。	**FALSE**	第3段："Cotton ... **was dyed before it was shipped**."	明确写在运往欧洲**之前**已染色，题干与原文相反。
6	珀金（Perkin）比他的老师霍夫曼更有名。	**NOT GIVEN**	第6段："W. H. Perkin, **a student of celebrated** ... Wilhelm von Hofmann ..."	仅说明老师"著名/受推崇（celebrated）"，并未比较两者名气大小，故信息缺失。
7	19世纪后半叶欧洲生产的合成染料非常少。	**FALSE**	第6段："Synthetic dye production **grew** in Europe, and **hardly a year passed** ... **without a new synthetic dye being patented**."	几乎年年有新专利，数量多；与"very few"相反。
8	现今天然染料的商业化生产仅限于少数偏远社区。	**TRUE**	第7段："**now the use of natural dyes on a commercial scale only exists in a few remote areas** ..."	与题干同义改写："few remote areas"="small number of isolated communities"。

填空题（Questions 9–13）

（每空 **ONE WORD ONLY**）

题号	题干翻译（关键词）	答案	定位句（段落/原文关键处）	详细解释
9	提尔紫：来自地中海的……的黏液	**shellfish**	第4段："the **mucus** found in certain species of **shellfish** produced the deep, rich Tyrian purple"	询问"mucus from ___"，与原文直接对应为shellfish。
10	胭脂红（红染料）：来自拉丁美洲的……	**insects**	第4段："cochineal ... **was extracted from insects**."	"made from ___ found in Latin America" 对应"extracted from insects"。
11	17世纪乡间：既能做果酱又能制蓝色染料的东西	**blackberries**	第5段："People who picked **blackberries** to make jam soon recognized this wild fruit as a source for a **blue dye**."	题干的两种用途（果酱/蓝染）与原文一一对应。
12	清洗……所得液体：既做蜂蜜酒又作黄色染料	**beehives**	第5段："**Washing beehives** ... for making **mead** ... yielded a liquid that could be used as a **yellow dye**."	"liquid from cleaning ___"=洗蜂箱所得液体。
13	19世纪：对……研究的进步导致合成染料	**chemistry**	第6段："With the tremendous rise of interest in **chemistry** ... several important innovations ... the first **synthetic dye** ..."	明确是化学的发展催生了合成染料。