



## ANGLAIS

### Brain circulation

1 Chinese researchers working in developed countries are coming back in droves, thus  
2 creating what is known as brain circulation. According to researchers, brain circulation is the third  
3 and last phase in the migration of highly qualified professionals back to their home countries, after  
4 brain drain and reverse brain drain.

5 The Chinese government's pro science policies are luring foreign-based Chinese  
6 researchers back to their homeland. More than 16.000 researchers have returned to China in  
7 recent years. But the highest number returnees, around 4.500 in 2007, were from the U.S. - nearly  
8 double the number who left in 2010, revealed a new study. The mobility of these researchers has  
9 led to collaboration between Chinese researchers and their host institutions in developed  
10 countries, boosting brain circulation, Caroline Wagner co-author of the study told CGTN.

11 In the 1990's, the country's brightest professionals started migrating to European countries  
12 and the U.S. But within a decade, reverse migration helped China improve research standards of  
13 its institutions. Many migration experts believe that reverse migration results in a net loss to  
14 developed countries who invested in Chinese researchers. However, a section of researchers  
15 differ. They argue that returnees are boosting transboundary research, helping both host  
16 institution and Chinese researchers.

17 In collaboration with host institutions, returning researchers publish excellent papers. "This  
18 establishes the Republic of Science where research goes beyond borders", Wagner said. The  
19 study in the journal **Science and Public Policy** found that nearly 12 percent of studies by the  
20 returnees were by **those** who had worked abroad. The Chinese researchers who returned to their  
21 country after working in developed countries also publish more high-impact research than local  
22 scientists, according to the study. "Returnees not only tend to publish more, but **they** are  
23 instrumental in linking China into the global network", mentioned the study. (...)

24 In order to sustain the phenomenon of brain circulation, it is crucial for countries involved  
25 in high-quality transboundary research projects to ensure an equal exchange of data and access  
26 to resources, **Wagner said:** "Research and researchers should be able to pursue knowledge free  
27 of excessive government oversight", **she said.**

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**Epreuve du 1<sup>er</sup> groupe**

**I. READING COMPREHENSION (8 marks)**

**A. Match in column C the words / groups of words in column A with their corresponding meanings in column B. (1.5 marks)**

Column A	Column B	Column C
1 - Reverse Brain drain	a - World-wide knowledge exchange follows the return home of highly qualified foreign-based professionals	1 - .....
2 - Brain drain	b - Highly qualified foreign-based professionals return back home	2 - .....
3 - Brain circulation	c - Highly qualified home based professionals leave for developed countries)	3 - .....
	d - The reverse migration of highly qualified Chinese researchers is a loss to Western institutions	

**B. For every statement, circle the option corresponding to the right meaning. (1.5 marks)**

4 - “Reverse migration results in a net loss to developed countries” (line 13-14) means...

- a – ...developed countries neither gain nor lose in reverse migration.
- b – ...developed countries lose in reverse migration.
- c – ...developing countries lose in reverse migration.

5 - “Researchers working in developed countries are coming back in droves” (line 1) means...

- a - ...researchers come back in vehicles they drive.
- b - ...researchers are coming back in large numbers
- c - ...researchers are coming back in small numbers.

6 - “Pro-science policies are luring foreign-based Chinese researchers” (line 5) means...

- a – ...the policies are attracting foreign-based Chinese researchers.
- b – ...the policies are a trap for foreign-based Chinese researchers.
- c – ...the policies are forcing foreign-based Chinese researchers to come back.

**C. Circle TRUE or FALSE for each statement and justify with reference to the text. (3 marks)**

7 - In the 1990’s, the most brilliant Chinese professionals started going back to China from Europe and the USA. **TRUE / FALSE**

.....

8 – Some in the text believe that reverse migration benefits both China and institutions in the West. **TRUE / FALSE**

.....

9 - According to the text, governments should not interfere in research. **TRUE / FALSE**

.....

**Epreuve du 1<sup>er</sup> groupe**

**D. Match four (4) of the five (5) titles in column A to their corresponding paragraphs in column B. (2 marks)**

Column A	Column B
10. (a) - Benefits of reverse brain drain	Paragraph 1 / ....
11. (b) - Controversy over reverse brain drain	Paragraph 2 / ....
12. (c) - Favoritism among Chinese researchers	Paragraph 3 / ....
13. (d) - Massive return home movement of Chinese researchers	Paragraph 4 / ....
15. (e) - Need for a win-win situation in brain circulation	Paragraph 5 / ....

**II. LINGUISTIC COMPETENCE (7 marks)**

**E. Fill in the following table with the right notions. (2 marks)**

PURPOSE - ADVICE - OBLIGATION - ADDITION – OPINION

Sentences	Notions
16. Researchers <b>should</b> pursue knowledge free of excessive government oversight.	.....
17-It's crucial for countries involved to ensure an equal exchange <b>in order to</b> sustain the phenomenon of brain circulation.	.....
18-Chinese researchers are boosting China's scientific endeavors <b>and also</b> triggering a wave of global knowledge.	.....
19-Researchers believe that brain circulation is the last phase in the migration of highly-qualified professionals.	.....

**F. Circle the letter a., b. or c. to indicate the sentence with the same meaning. (1.5 marks)**

20. Researchers explored the matter but could come up with answers.

- a – Researchers traveled to the matter but were not satisfied.
- a – Researchers looked all over for the matter but could find it.
- c – Researchers looked into the matter but did not find anything

21. The babysitter is in charge of the children when parents are absent.

- a – The babysitter looks for the children when parents are absent.
- b – The babysitter looks after the children when parents are absent.
- c – The babysitter looks into the children when parents are absent.

22. The program of study was so difficult that he abandoned.

- a. The program of study was so difficult that he gave up.
- b. The program of study was so difficult that he gave it a try.
- c. The program of study was so difficult that he a broke down.

**Epreuve du 1<sup>er</sup> groupe**

**G. Fill in the gap with the right form of the word in brackets. (1.5 marks)**

Chinese are said to be hardworking and (23)..... (resource) people. They are always trying to find out new things. More than fifty percent of what is produced in the world is their (24)..... (create). Incapacity is not Chinese. Can the world goes without them? Can any adversity constitute a (25)..... (hinder) to their determination?

**H. Put the verbs in brackets in the right tense or form. (2 marks)**

Before, Chinese seldom left their country. But, about thirty years ago, the brightest among their students and professionals (26) ..... (to start) to migrate to the West for training. Nowadays, after (27) ..... (to complete) of their training, more and more of them do (28).....(to return) to China, this in response to the pro-science policies (29) ..... (to adopt) by the authorities

**III. WRITING (5 marks)**

**Choose only ONE topic and write approximately 200 words.**

**Topic 1:** After training, many highly qualified Senegalese professionals prefer to stay abroad rather than come back to work locally. Write an article in in which you give the possible causes of this phenomenon and propose solutions.

**Topic 2:** You are a Senegalese scholar working abroad, and the Ministry of Higher Education asked you to return home to serve the country. Write a letter to give your answer together with your conditions.

**Topic 3:** You have brilliantly succeeded your Baccalaureate exam, but are not sure what kind of studies to undertake. You are discussing with an older schoolmate who is giving you advice. Write down your conversation.