

Signature des surveillants

Ne rien écrire ici

Epreu
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 Institution d'origine :

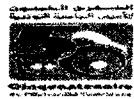
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Concours Nationaux d'Entrée aux Cycles de Formation d'Ingénieurs

Session : ... Juin 2009 Concours : Toutes options.....

Epreuve de : ANGLAIS (ANSWER SHEET).....

Total des doubles feuilles remises
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PART I :

1 mark

I - C - Opportunities offered by the convergence of life sciences with engineering and physical sciences ____

II -

	Period	Focal interest	Consequences
First revolution	1950s	Elucidation of DNA and subsequent discoveries in molecular and cellular biology	1. Development of recombinant DNA technology 2. The launching of biotechnology industry
Second revolution	Mid-1950s	Explosion of data from genomics and proteomics	Acceleration of life science innovation
Third revolution	21 st century	Convergence of the life sciences with engineering and physical sciences	_ New discoveries and applications in areas ranging from biomedicine to environmental science to energy technology_

4 marks

3 marks

III - *Scientific discoveries and breakthroughs are likely to be made within the current century provided that* _ educational research funding strategies are adapted _____
in order to _ take advantage of the possibilities emerging from the convergence of life scienc with the physical sciences and engineering._

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2 marks

IV - a) [TRUE] ___ Transport of cancer-fighting agents to tumor cells is selective. Thus, injury to healthy tissue is minimized

2 marks

[TRUE] _ The number of Ph.Ds awarded by US universities in this field went up from 2 in 1996 To 525 in 2006

3 marks

V - 1. Demands for analyzing increasingly large data sets in genomics_

2. _ understanding the complex network of molecular interaction in cells_

3. _ increasing resolution and accuracy in measuring and manipulating molecular and cellular events_

2 marks

VI - _ It is integrated and multidisciplinary_

2 marks

VII - b) it has grown more reliant on other fields_

4 marks

VIII - 1. _ Science and engineering students should get a broad and more integrated education

2. _ More effective ways should be found to evaluate and fund interdisciplinary research

3. _ The way in which grants are awarded and administered should be changed_

4. _ The public and the authorities should be convinced that multidisciplinary research is a vital investment_

4 marks

IX - a) the first and second revolutions_

b) ___ Relationships between biologists, mathematicians, engineers and physical scientists

c) ___ M.I.T.'s new Koch Institute for Integrative Cancer Research_

d) ___ Convergence of life sciences with engineering and physical sciences

4 marks

X- 1. ___ brought about_

2. ___ accuracy_

3. ___ soared

4. ___ above all

✕

PART II :

1.

1	what
2	around
3	∅
4	even though
5	as well as

6	what's more
7	Less
8	May
9	Because
10	Unlike

2.

1	is getting
2	have witnessed
3	leaves
4	is /are
5	creating

6	was tested
7	accounts
8	Poses
9	will stay
10	Falls

3.

1	controversial
2	fertilization

3	embryonic
4	physicists

5	Threaten
---	----------

4.

1. No significant results have been achieved to secure sustainable economic growth in sub-Saharan Africa
2. Unless we use a widely-proven method, our results will not be credible
3. Had renewable sources of energy been sufficiently developed, there would not have been an energy crisis _____
4. Many years ago, people used to read (much) more than they do now _____
5. In addition to being fully automated, our new assembly line is cost-effective _____

10 marks

10 marks

5 marks

5 marks

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