
 University of Sadat City	Final Exam:	First term	Course Code:	B2-23	Percentage	60%	 GEBRI
	Academic Year:	208-2019	Academic Program:	Master	N. of Exam Paper	One	
	Level:	Master	Department:	Microbial Biotechnology	Date of exam	16/1/2019	
	Course Name:	Special studies (Practical approaches in PCR. C- 101 )	Total score:	60	Time allowed:	3hours	

#### Instructions of Exam:

1. Answer the obligatory questions.
2. Use the blue pen and pencil in answer sheet
3. Allow one sheet answer for every student
4. Is not allowed to borrow the tools (pen, pencils, drawing tools, calculator ...etc)
5. Is not allowed to use the cell phone or any of its application during the time of exam

#### First question: question

**Total score (15)**

1- What is the DNA-based marker and its advantages? (5 marks)

2- Write a short report about one of PCR based markers. (10 marks)

#### Second question:

**(15 marks)**

To minimize the risk of contamination, there are general considerations and precautions must be taken in PCR laboratory, explain

#### Third question

**Total score (15)**

A- Mark true (T) or false (F) for the following statements. (7.5 marks)

3- The primer in living cells is RNA as the primer in PCR. ( )

4- PCR provides a method for obtaining large quantity of specific DNA sequences from degraded DNA. ( )

5- Humans cannot eat DNA. ( )

6- There is one conformation of DNA ( )

7- Danger of contamination comes from three sources ( )

B- Complete the following statements (7.5 marks)

1- The concept of the PCR was first introduced by .....

2- The melting temperature of this primer (3' AGG TAT CGC TCG AGT AAC CCT' is ..... while the annealing temperature is .....

#### Fourth question

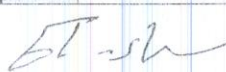
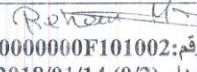
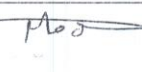
**Total score (15)**

A- Compare between:

**(5 marks each)**

- RT-PCR and multiplex PCR
- Primers characters used for Nested PCR and RAPD
- PCR and thermal cycler

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