

Final Exam:	First Term	Course Code:	B1-9	Percentage	
Academic Year:	2018-2019	Academic Program:	Master	N. of Exam Paper	3
Level:	Master	Department:	Molecular Biology	Date:	
Course Name:	Chromosomes	Total score:	60	Time allowed:	3hr



Name:

Instructions of Exam:

- 1. Answer the obligatory questions.
- Use the blue pen and pencil in answer sheet
- 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

Answer the following questions:

1st question: (20 Marks)

- A. Compare between (Prokaryotic& Eukaryotic) Chromosomes. [5 Marks]
- B. List the main differences between Mitosis & Meiosis. [5 Marks]
- C. Mention the function of chromosome. [5 Marks]
- D. The cell cycle is controlled at three checkpoints (explain them). [5 Marks]

2nd question (20 Marks)

- A. Answer by (TRUE) or (FALSE) and correct the mistakes if there are: [4 Marks]
- 1- In Q-banding Technique patterns; the rich region in AT bases is the Euchromatin region.
- 2- R-banding technique used to identify X chromosome, while C-banding technique used to identify Y chromosome.
- 3- The most common cause of triploid is dispermy
- 4- Crossover is less likely between loci that are far apart on chromosomes than when they are close together.
- 5- The distance between loci can be expressed in centiMorgans, since 1 cM represents a recombination frequency of approximately 1%.

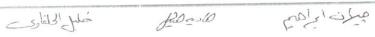
نموذج رقم: SQ000000F101002 الإصدار (۲۰) ۲۰۱۸/۰۱/۱۶ Page 1 of 3

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Name:												
B. Write the Scientific	Terms: [4 Marks]											
1- The branch of g chromosomes with	number,	and behavior of										
2- A photomicrograp sequence.	and arra	nged in a standard										
3- Multiple of haploi	3- Multiple of haploid number of chromosome set											
4- A chromosome th	no copies	of the other.										
C. Choose the correct answer: [7 Marks]												
I- Which of the following is NOT a usage for chromosome banding and karyotyping?												
 a- Using banding and karyotyping to tell whether someone has blue or brown eyes. b- Using banding and karyotyping to tell whether someone has an extra chromosome 21 c- Using banding and karyotyping to see an abnormally shaped chromosome. d- Using banding and karyotyping to see the similarities between your genes and a chimpanzee's. 												
2- Depending upon size and centromere position, the 46 chromosomes have been divided into a number of groups,												
a- 6	b- 5	c- 7		d- 10								
3- The following infor	mation is seen in a k	aryotype: (47, XX	K, +13). D	Describe the patient								
a- Female with Down's syndrome. b- Male with Down's syndrome. c- Male with Patau's syndrome d- Female with Patau's syndrome												
4- Which of the follow	ving is not true abou	it inversion?										
a- Inverted chromosb- Inversion can cauc- Two DNA strandd- Inversion including	se chromosome breas s with an inverted se	akage. egment will not pa	air. c.									
5- The polytene chromosomes were discovered for the first time in												
a- Chironomus	b- Drosophila	c- Fruit	fly	d- House fly								
	Pa	ge 2 of 3										



	Name:																								
	6- The l											of c	hror	nosc	mes	du	ring	mit	osis	is, o	or st	ructi	ire (of	
	a- Prophase b- Metaphase									c- Anaphase d- Telophase															
1	7- Lam	obr	ush	cl	TOT	nos	son	ies	are	e fo	und	insi	de												
a- Salivary glands of <i>Drosophila</i> b- Salivary glands of silk moth													mand leus d			te									
D.	Marich	ílic	aı	ren	CIS	í.	ı ü	lisū	rů	613	due	io i	du) K ARA	ai ch	įψ	uiost	ine	HH	nbe	. [2	IVI Z	i hs	ì	
		1) Turner syndrome														-	Triso								
	(2		Klinefelter syndrome										Trisomy of 13												
	(3		Normal Karyotype													46, XX or 46, XY									
	(4)	Down syndrome													45, XO									
																46, XXY									
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2	-	-	+	+	-	-		+	-	-	+	**	-	-	+	-	+	-		+		+	-	+	-
3		-	+	+	-	+	-	+		+	-	+	+	+	-	+		+	***	+	-		+	-	
4	-	+	-	+	-	-	-	+		-	-	+	+	-	+	да	+	-	+	+	+	+		-	-
5	-		+	+	+	-	+	-	-	-	+	-	-	+		0.0	+	rie	+	+	+	-	+	+	-
6	+	-	+	+		+	-	+	+	+	+	+	+	-	-		+	-	+	+		-	+	+	-
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P	rofessor o	of	Prof. Khalil El Halfawy												Course coordinator										
Staff Course Prof. Khalil El Halafawy Prof. Hadia Heikal Dr. Gehan Ibrahim								Department Head Prof. Samir El Masry										,							
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