



University of Technology
Department of Applied Sciences
Final exam 2016-2017



Subject: Principle of Biotechnology
Branch: Biotechnology
Examiner: Dr. Nehia Neama Hussein

Class: 1 class
Time: 3 hours
Date: 2016/2017

(ملاحظة الاجابة عن اربعة اسئلة فقط)

Q1:- Define the following:- (5 Only) (12.5 Mark)

- 1-Medical biotechnology 2- Bioprocessing 3- A stem cell .
4- Tissue engineering. 5- Tissue culture 6- Industrial microbiology .
7- Fermentation. 8-Environmental biotechnology.

Q2:- (12.5 Mark)

A- Which technology in medical biotechnology do you feel is/will be the most effective/helpful? Why?.

B - What is HPLC used for?.

Q3:- *only one Q* (12.5 Mark)

A- How is a sample actually put into an LC system in HPLC, and give the Columns Types in this techniques .

B- Tissue culture, both plant and animal has several critical requirements list it .

Q4:- (12.5 Mark)

A- What's the benefit of Plant Tissue Culture?

B- How can we see the DNA sample as we load it into the gel?

Q5:- Explain for two only :- (12.5 Mark)

A- The microbiologist in an industrial establishment does not function by himself.

B- The microbiologist or biotechnologist has a central and key role in his organization.

C- Steps that making (mAb).

D-Purpose of Gel Electrophoresis.



University of Technology
Department of Applied Sciences
Final Examination 2016/2017
graduate Studies



Subject: Molecular Biology

Branch: Biotechnology

Examiner: Prof.Dr.Abbas A.Mohammad

Class: First class

Time: 3 hours

Date: 29 \ 5\ 2017

Note : Answer only 5.

Q1: Draw and describe of Transposone ?

Q2: Give the properties of plasmids which used in genetic engineering?

Q3: A: What are difference between transcription and replication ?

B: Describe this figure

3' → 5' ?
5' ← 3'

Q4: Briefly define , explain or identify (only 7)?

Red biotechnology , nanobiology , nucleoside , oligonucleotide ,
complementary strand DNA , D-form of DNA , Genome size , Genotype ,
Hybridization , conservative synthesis .

Q5: What are the agents which caused DNA damage ?

Q6: Give one important function for each of the following ? (only 7)?

Karyotype , replicon , topoisomerases II,I , primases , dna B ,
dna E , Telomere , DNAPolymerase I .