


Tanta University Faculty of Science Chemistry Department	Final Exam Chemistry of Petroleum		
	Level Four	Course Code: CH 4145	
		Total Assessment Marks: 50	
Double Major	Time allowed : 2 Hours	Date: 30/12/2017	

Answer the following questions:

1) Illustrate the inorganic theory which discusses the genesis of petroleum.

(10Marks)

2) Write short notes on the following: (10 Marks)

i- Pour point.

ii- sulfur compounds in petroleum.

iii- Kerosene zone in petroleum.

iv- Naphthenes or Cycloparaffins.

v- Aniline point.

3) Define each of the following with examples: (20 Marks)

i- Catalytic Cracking.

ii- Alkylation.

iii- Classification of Crude Oils

iv- Petrochemical from H_2S .

4) Show with equations how the following compounds could be prepared from petroleum and show its uses. (10 Marks)

1- Carbon black.

2- Adipic acid.

3- Teflon.

4- Ethylene glycol.

5- Hydrazine hydrate.

6- Acrylic acid.

7- Methyl methacrylate.

8- Ammonium nitrate fertilizer

9- Phenolic Resins.


10- Nylon 6, 6.

..... **Good Luck**

Prof. Abd-elbaset shokr

Assistant.Prof. Seham Abd-elatif

Handwritten Arabic text at the top of the page.

	TANTA UNIVERSITY FACULTY OF SCIENCE CHEMISTRY DEPARTMENT		
	FINAL EXAM FOR SENIOR STUDENTS (DOUBLE MAJORS)		
COURSE TITLE:	INDUSTRIAL CHEMISTRY (CH4155)		TIME ALLOWED:
DATE: JANUARY 01, 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 50	2 HOURS

Question 1:

- 1) Compare between each pair of the followings:** (9 Marks)
- a) Properties of diamond and graphite.
 - b) Commodity and fine chemicals (with examples).
 - c) SMR and POX.
- 2) Show with diagram only the extraction of sulfur.** (2 Marks)
- 3) Write the uses of hypochlorous acid.** (2 Marks)

Question 2:

- 1) Show only by equations:** (8 Marks)
- a) Synthesis of diamond.
 - b) Hydrogenation and oxidation steps for the manufacture of hydrogen peroxide.
 - c) Ostwald process.
 - d) Urea process for the synthesis of hydrazine.
- 2) Give reasons for the followings:** (4 Marks)
- a) Addition of carbon and silica during the manufacture of white phosphorous.
 - b) Addition of superheated water during the extraction of sulfur.

Question 3:

- 1) Give a brief account on the most common types of dyes with chemical structures of each kind.** (4 Marks)
- 2) Compare in a short notes between:** (4 Marks)
- a) Edible and inedible fats
 - b) Saponification value and iodine number

Please turn over 

Examiners: Prof. Ahmed Elbarbary Dr. Mohamed Sadek	Prof. Nadia Elwakeel Dr. Wael A. Amer
--	--

(C)



TANTA UNIVERSITY- FACULTY OF SCIENCE- DEPARTMENT OF ZOOLOGY
EXAMINATION for fourth year student's chemistry/ zoology

EXAMINERS: PROF. M. ABDELMONEIM HEGAZI AND PROF. MOHAMED BASYONY

COURSE TITLE: PHYSIOLOGY 2

COURSE CODE: ZO4

DATE: JANUAR, 2018

TERM: FIRST

TOTAL ASSESSMENT: 100 MARKS

TIME ALLOWED: 2 HR

Part one 50 marks

Part 1: (50 points)

1. Give an account on hemoglobin functions with special reference to:

- a. Oxygen and carbon dioxide transport in blood
- b. Buffering action of hemoglobin and chloride shift

Part 2 50 marks

Question 1 (15 Marks)

1. Identify the followings and give one example in each case
- a. Leukocytosis and leucopenia
 - b. T and R forms of Hb
 - c. Garnulocytosis and agranulocytosis
 - d. Lymphocytosis and lymphopenia
- Neutrophilia and neutropenia

Question 2: (25 Marks)

Please select the correct answer in the followings choices

1.	Which of the following cell type has the highest percentage in W.B.Cs?.....			
	A). Basophil	B). Monocytes.	C). Neutrophils	D). lymphocytes
3.	Which of the following is not lymphocyte cells			
	A). Mast cells	B). CD4 T-cells	C). T-reg cells	D). CD8- Tcells
4.s another name for a.....			
	A). red cell	B). white cell	C). platelet	D). NK cells
5.	Which of the following are likely to increase in quantities when the body is under attack from bacteria?			
	A). leucocytes	B). erythrocytes	C). platelets	D). plasma
6.	The life span of lymphocytes is			
	A). one day	B). one week	C). one month	D). one year
7.	Which type of white blood cell contains nucleus with three lobes			
	A). Neutrophil	B). Basophil	C). Monocyte	D). Lymphocyte
8. Hb binds O2 is called			
	A). oxyHb	B). deoxyHb	C). carboxy-Hb	D) CarboaminoHb
9.	B-cells are differentiated in			
	A). Bone marrow	B). Spleen	C). Thymus	D). the liver
10.	CD3 T-cells are differentiated in.....			
	A). thymus	B). bone marrow	C). Liver	D). spleen
11.	CTL, terms refer to			
	A). CD4	B). CD8	C). B-cell	D). NK cells
12.	Helper T-cells is			
	A).CD8 cells	B). Treg cells	C). CD4 cells	D). B-cells
13.	When monocytes left the blood and enter the tissue changed into.....			
	A). Macrophage	B). Neutrophils	C). Basophils	D). T-cells
14.	List two causes of monocytosis?.....			



TANTA UNIVERSITY - FACULTY OF SCIENCE - MATHEMATICS DEPARTMENT

EXAMINATION For 4TH LEVEL (CHM-ZOOLOGY/ENTOMOLGY)

COURSE TITLE: Biostatistics (ST4107)

TIME ALLOWED: 2 Hours

DATE: 14 January 2018

TERM: First

TOTAL ASSESSMENT MARKS: 50

Answer the following questions:

Q1: A national company owns a chain of laboratories at which routine chemical tests are carried out. A junior analyst is employed at one of these laboratories. In order to check his accuracy the senior analyst retested 6 samples chosen at random from amongst those analyzed by this junior. The results were as follows:

Sample	1	2	3	4	5	6
Senior	8.51	14.70	3.59	7.63	5.55	4.57
Junior	8.62	13.97	4.07	7.97	5.83	4.62

Test at 5% level of significance, whether there is a difference between the sets of results. (12 Mark)

Q2: A researcher believes that in recent years women have been getting taller. She knows that from many years ago the average height of young adult women living in her city was 63 inches. She randomly samples 8 young adult women currently residing in her city and measures their heights. The following data are obtained:

64	66	68	65	60	67	65	63
----	----	----	----	----	----	----	----

Do you think that the researcher is correct in her believe? Use $\alpha = 0.05$. (12 Mark)

Q3: Consider the contingency table below of observed values in a sample of 50 individual. Test at $\alpha = 0.05$, is there a dependency between the gender and blood type (13 Mark)

	A	B	AB	O
Male	10	10	15	5
Female	15	5	5	35

Q4: Three detergents Tide, Oxi, Persil in the process of cleaning action on the basis of cleaning degree are compared and the following data are collected: Use $\alpha = 0.05$,

Tide	77	81	71	76	80
Oxi	72	58	74	66	70
Persil	76	85	82	80	77



Are the differences among the means of the three detergents significant? (13 Mark)

You may use:

$$F_{0.05,2,9} = 4.26, F_{0.05,7,11} = 3.01, F_{0.025,7,11} = 3.76, F_{0.025,12,8} = 4.20, t_{0.025,5} = 2.571, t_{0.05,7} = 1.895, \chi^2_{(0.05,2)} = 5.991, \chi^2_{(0.05,3)} = 7.81, F_{0.05,2,12} = 3.89, t_{0.05,5} = 2.015$$

WITH ALL MY BEST WISHES

DR. WAFAA ANWAR

EXAMINERS

DR. WAFAA ANWAR ABD EL-LATIF

PROF. MOHAMED MOHAMED EZZAT