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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF CHEMISTRY			
	EXAMINATION FOR SENIORS (FOURTH YEAR)			
COURSE TITLE:	CHEMISTRY OF DYES	COURSE CODE: CH4208		
DATE:	27 MAY, 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	TIME ALLOWED: 2 HOURS

1- Give short notes about the following: (20 Marks)

- a- Classification of dyes based on their origin.
- b- Preparation of different naphthol As.
- c- Careful control of the P_H of the medium in coupling diazonium salts with amines.
- d- Vat dyes.
- e- Protein Textile Dyes.

2- Complete the following sentences: (15 Marks)

- a- used to test the light fastness of the dyed fabric, while used to test the rubbing fastness of the dyed fabric.
- b- The color coordinates are: $L \rightarrow$ Whether the sample is or [$L=0$ (.....) to $L=100$ (.....)], $a^* \rightarrow$ if the sample is (+a) or (-a) and $b^* \rightarrow$ if the sample is (+b) or (-b).
- c- Azo-compounds that contain both an and a group can be utilized as indicators since the colors of the and the are different. Example is.....

3- Explain the following sentences (give examples) (15 Marks)

- a- Carriers generally swell the fibers in dyeing process by using disperse dye.
- b- The type of metal complex azodyes depends on number of dyes molecule.
- c- To improve the wash fastness of direct dyed fabrics, after treatments are applied to increase the size of the dye molecule.

EXAMINER	DR. HALA FAWZY RIZK
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 1989	TANTA UNIVERSITY FACULTY OF SCIENCE CHEMISTRY DEPARTMENT		
	FINAL EXAM FOR SENIOR STUDENTS (CHEM/BIO, CHEM/ZOO, CHEM/ENT)		
	COURSE TITLE:	PHYSICAL CHEMISTRY OF POLYMERS (CH4252)	TIME ALLOWED:
DATE: MAY 25, 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	2 HOURS

Question 1: Answer the following: (25 Marks)

- Explain the effect of steric hindrance and crosslinking density on chain flexibility of polymers. (give examples) (8 Marks)
- Describe the effect of strain rate and molecular weight of polymers on mechanical properties. (8 Marks)
- Explain the methods for determination the swellability of crosslinked polymers. (5 Marks)
- Describe the effect of chain flexibility on the polymer crystallinity. (4 Marks)

Question 2: Compare between each pair of the followings: (Structure + Reason + Behavior) (15 Marks)

- Polyethylene and cellulose (in glass transition temperature).
- Polystyrene and styrene-butadiene copolymer (in modulus).
- Syndiotactic and atactic polybutadiene (in crystallinity).
- Nylon-6,6 and Nylon 7,7 (in melting temperature)
- Polyacrylonitrile at ambient temperature and at high temperature (in rigidity).

Question 3: Write short notes on: (10 Marks)

- Ebulliometry.
- Microporous crosslinked polymers.

GOOD LUCK

Examiners:

Prof. Nehal A. Salahuddin

Dr. Wael A. Amer

	TANTA UNIVERSITY FACULTY OF SCIENCE CHEMISTRY DEPARTMENT		
	FINAL EXAM FOR SENIOR STUDENTS (ZOOLOGY AND DOUBLE MAJORS SECTIONS)		
	COURSE TITLE:	ENVIRONMENTAL CHEMISTRY (CH4224)	TIME ALLOWED:
DATE: MAY 30, 2015	TERM: SECOND	TOTAL ASSESSMENT MARKS: 50	2 HOURS

Question 1: Write briefly on the following:

(15 marks)

- Natural sources of hydrocarbons as organic pollutants.
- Show by equations sources and processes which cause entering aldehydes and ketones in atmosphere and showing its reactions.
- Formation of peroxide radicals and its reactions.
- Perfluorinated organic compounds (PFCs).
- Adsorption phenomenon.

Question 2:

(10 Marks)

- Write short account on chlorinated fluorocarbons (CFCs) as organic pollutants and draw the diagram indicating the formation of ozone Layer and the effect of CFCs compounds on it.
- Dyes consider as type of organic pollutants of water, show the methods which used for removal of dissolved dyes from industrial wastewater.

Question 3: Write short notes on:

(12 Marks)

- The photochemical processes that can occur in the atmosphere.
- Sources of arsenic as a water pollutant.
- Photochemical smog.

Question 4: Give reason(s):

(8 Marks)

- Water dissolves many ionic compounds and salts that do not dissolve in other liquids.
- Presence of low soluble Cd concentrations in the bottom layer of harbor water during periods of calm in the summer.
- Atmosphere is normally slightly acidic.
- The importance of the very high heat capacity of water than most of the other liquids or solids.

Question 5: Differentiate between each of the following pairs:

(5 Marks)

- Endogenic and exogenic cycles.
- Phenolphthalein alkalinity and the total alkalinity of water.

GOOD LUCK

Examiners:

Prof. El-Refaie S. Kenawy
Dr. Wael A. Amer

Dr. Abd El-Baset M. Shokr

 كلية العلوم	Tanta University - Faculty of Science - Botany Department			
	Examination for 4 th Level Students of Botany & Chemistry-Botany			
	COURSE TITLE	المجتمع النباتى	COURSE CODE	
June 2015	TERM: second	Total Assessment Marks:	TIME ALLOWED: 2 HOURS	

السؤال الأول (25 درجة)

- 1- ما الفرق بين الفلورة والكساء الخضرى؟
- 2- قارن بين الجماعة (Population) والمجتمع النباتى (Community)؟
- 3- ما المقصود بالمجتمع النباتى العينى والمجتمع النباتى التجريدى؟
- 4- أذكر الفرق بين كل من المفهومين الأمريكى والأوروبى للتكوين النباتى؟
- 5- يجب أن يفى الموقع المختار لدراسة الكساء الخضرى بأربعة خصائص، ماهى؟

السؤال الثانى (25 درجة)

إشرح بإيجاز كيفية استخدام المقارنة الجدولية كأحدى طرائق تقسيم مواقع الكساء الخضرى فى منطقة ما؟

السؤال الثالث (25 درجة) - عرف مايلى:

- 1- المساحة الصغرى للمجتمع النباتى
- 2- التنوع النباتى
- 3- التأثير الحافى للأطر المساحية
- 4- العائد النوعى
- 5- النبات وحيد المسكن الطلعى

السؤال الرابع (25 درجة) - قارن بين كل من:

- 1- التردد و التواجد كصفتين من صفات المجتمع النباتى؟
- 2- النباتات نصف المختفية والنباتات المختفية
- 3- شكلى الإنتثار البوغى والثقل
- 4- النبات الخنثى والنبات وحيد المسكن
- 5- النباتات الظاهرة والنباتات الحولية

الممتحن: دكتور كمال حسين شلتوت