Done by:

Ahmed AlQrashi, Saad Isbaitah, Ahmed fawzi, Hassan Shehab, Hamad Buqamaz, Bandar AlShammari, Ahmed Bayati, Ali Bahbahani, Ahmed Burezq, Madhawi AlEnezi, Amna Almousa, Hessa AlShuraian, Hessa AlHazeem, Hoor AlSoomali, Madhawi AlAjmi, Atheer AlMathkour, Fatma AlShammari, Faner AlRaqum, Noura AlMutairi, Rudaina Ghanem, Zainab AlShamali, Sadan AlHajeri, Dana AlKhaldi, Fouz AlHaifi, Yasmeen AlDallal, Sara Ali, Khadeeja AlQallaf, Malak AlHendal

Specia l thanks to: Saad Isbai tah and H essa Al Shuraian

1-The compound that has a function opposite to prostaglandin:

a)TXA

b)ARA

c)LT

d)COX

2-What is the best test to use with this compound:

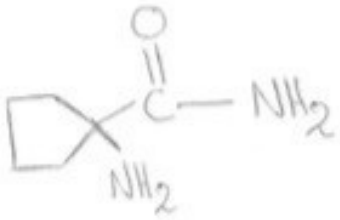
a)ferric chloride only

b)benedict only

c)ferric chloride and benedict

d)ferric chloride and ninhydrine

3-What is this compound called?

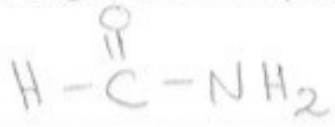


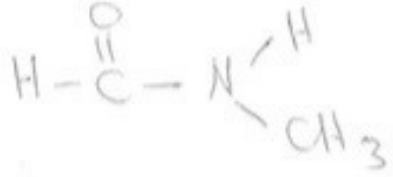
a) 1-aminocyclopentane-1-carboxamide
b) 2-cyclohexanamide
c) Pentane amine
d) Pentanone

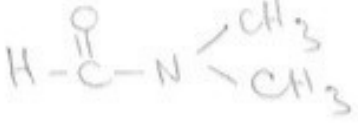
4-Which of the following has the lowest melting point?

a) C20:2
b) C22:1
c) C18:1
d) C18:3

5-Arrange these compounds from the highest to the lowest melting point:

a) 

b) 

c) 

d) 

6- What is the following structure? 

a)omega 3:18 Δ 9, 12, 15

b)omega 6:18 Δ 3, 6, 9

c)omega 3:18 Δ 3, 6, 9

d)omega 6:18 Δ9, 12, 15

7-Considering the following structures , which answer applies most appropriately?

a)all cis omega 6

b)all trans omega 9

c)all cis omega 9

d)all trans omega 6

8-What is the product of this reaction? 

a)N-methylanilinium bromide

b)N-cyclohexylmethylanilinium bromide

c)N-cyclopentylmethylammonium bromide

d)N-cyclohexyl methylammonium bromide

9-Which of the following lipids or lipid classes has a vital function in the regidity of the cellular membrane?

a)eicosanoids

b)leukotrienes

c)cholestrol

d)waxes

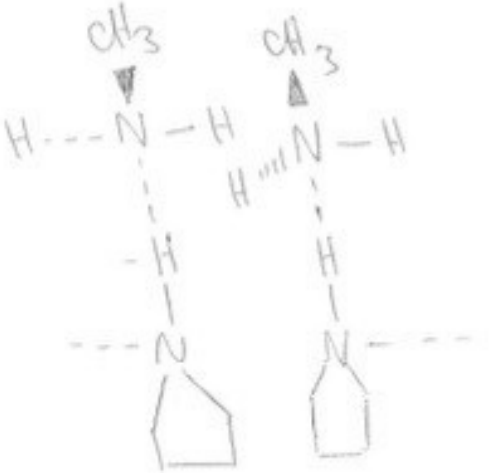
10-What compouds are used in Tollen's and Benedicts tests:

a)sucrose

b)paracetamol

c)glucose

d)acetone



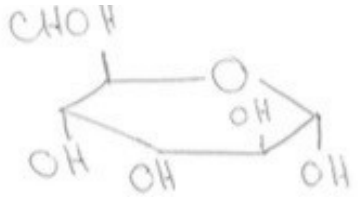
11-What are these compounds ?

a)primary amine only

b)primary and secondary amine

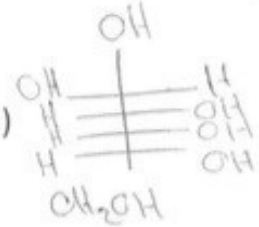
c)primary amine and secondary amide

d)tertary amide only

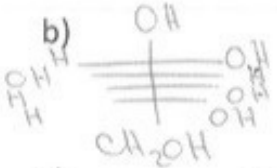


12-Which of the open chain sugars is presented in a cyclic form below?

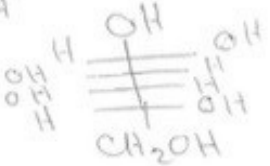
a)



b)



c)



d)

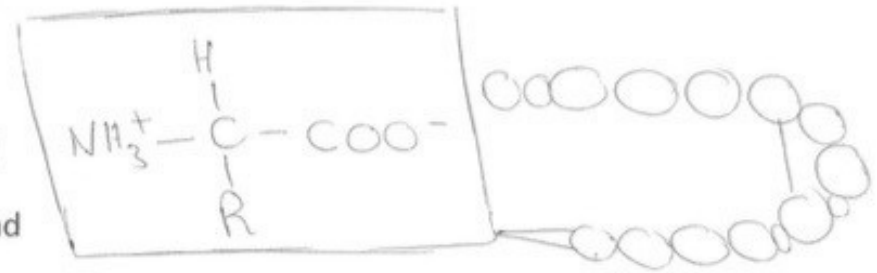
13-What is the open chain form of beta-D-glactose?

14-In the sceme below, what is the protein level and what is the type of bond that makes it possible?

a)primary covalent

b)secondary, h-bond

c)quaternary, s-s bond



15-Describe each reaction:

a) Eact of A>B, A is spontaneous
b) Eact of A<B, both are spontaneous
c) Eact of A>B, B is spontaneous
d) Eact of A>B, both are spontaneous

16-Hydrogenchloride may be formed by the reaction of hydrogen with chlorine in this reaction R=25X10... and ...H=44

$$H_2(g) + Cl_2(g) \rightleftharpoons 2HCl(g)$$

The reaction can be described as:

a)exothermic and the reaction favors products at equillibrum

b) exothermic and the reaction favors reactants at equillibrum

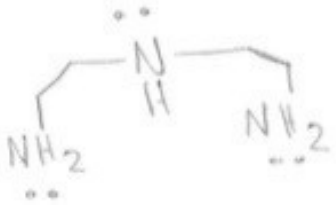
c)endothermic and the reaction favors products at equillibrum

d) endothermic and the reaction favors reactants s at equillibrum

17-Which main class does sythatase belong to:

a)lygase

18-What is the type of the following complexing agent?



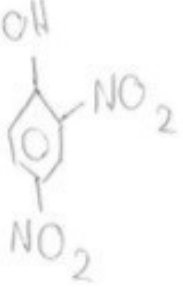
a)tridentate

19-Which one is the weakest acid?

a) 

b) 

c) 

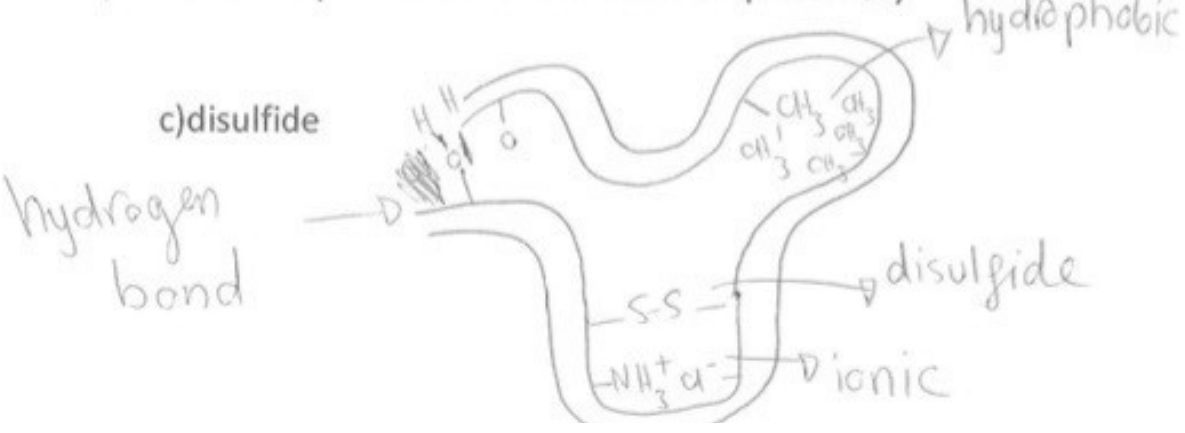
d) 

20-what changes when an enzyme catalysis a biochemical reaction?

a)activation energy **decreases**

21- In the sceme below, which bond prevents the formation of quaternary structure?

A)Hydrophobic c)disulfide

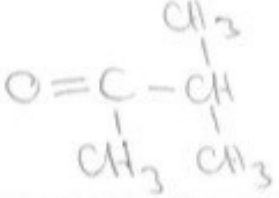


a) Hydrogen bond d)ionic

22-What is the strongest intermolecular force?

a)hydrogen bonds

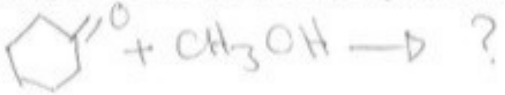
b)dipole dipole

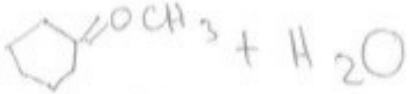


23-Another question was an example of an amino acid that undergoes phosphorylation

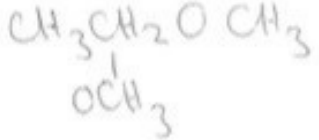
-serine

24-many questions about the cyclic and open chain forms of monosaccharides

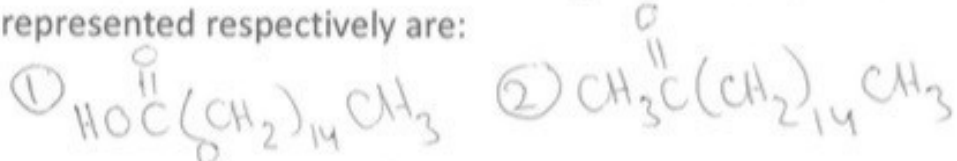
25- 

a) 

26-Which of these is an either?

a)  b)  c) 

27-Vegetable oil is a precursor of biofuel and soap, and the structure of the compound is represented respectively are:



a) 1 and 2
b) 2 and 3
c) 2 and 4
d) 1 and 3

28-What is the type of chromatography that can be used to separate amino acids from large polypeptide?

a) MSC
b) Ion exchange
c) GIC

29-Which one is a weak base in water?

a) CH3CH2CHOH
b) CH3CONH2
c) CH3CH2NH2

مو متأكده من الاجابات بس عموما كانوا ester, alcohol, amine , amide

30-Ion exchange chromatography is performed to analyze cationic amino acids from anionic amino acids in a sample using anionic stationary phase, what combination of conditions is correct?

conditions to separate ions	" " release ions	pH used to release ions
low ionic strength	high ionic strength	unchanged
low " "	high " "	increased (alkaloid)
high	low " "	acidic (decreased)
high	low " "	unchanged

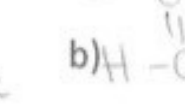
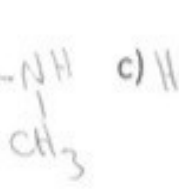
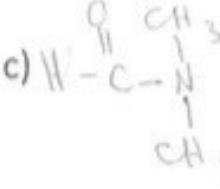
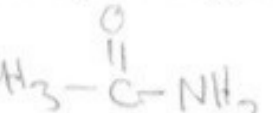
31-If an enzyme produces 100 micromole of product in 2 minutes, what is the enzyme activity?

a)50

32- What represents a quaternary structure?

-they put primary, secondary, tertary and quaternary structures and we should choose the quaternary.

33-Arrange the following compounds in order of the decreasing melting point

a)  b)  c)  d) 

34-Which of the following compounds has the lowest melting point?

a) C20:3
b) C18:3

c) C20:6

d) C18:6

35-[Cr(NH3)5Cl]Br and [Cr(NH3)5Br]Cl , what kind of isomers are these compounds?

a)linkage

b)coordination

c)optical

d)geometric

36-Which compound is anti-cancer ?

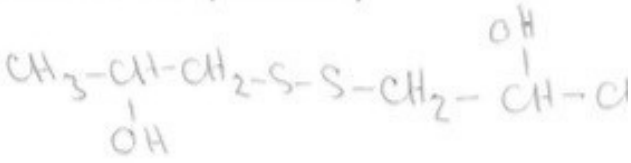
a)trans-pt(NH3)2Cl2

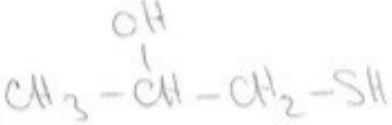
b)cis-pt(NH3)2Cl2

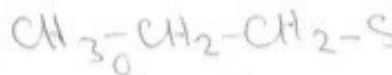
37-What is a coordinate covalent bond? -VERY IMPORTANT

a)*a bond that forms when both electrons are donated from the same atom*

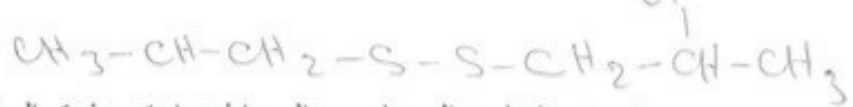
38-They put structures of protein and want us to choose the quaternary

39- The reduction of this compound would give 

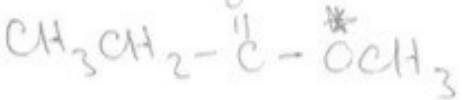
a) 

b) 

c) 

d) 

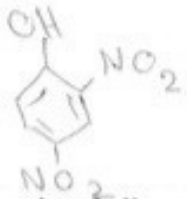
40-منجمه ويشوفون ال oفي سؤال حاطين استر وفوق ال o

وين راحت 

A) 

B) 

41- Which compound has the highest acidity?

a)  b)  c)  d) 

42-Number the following in decreasing boiling point:

a)alkene

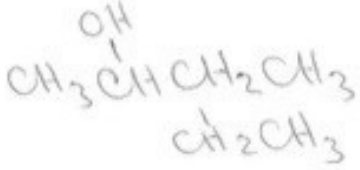
b)aldehyde

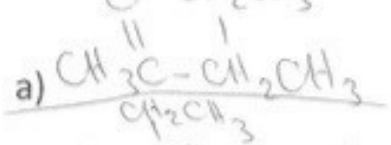
c)alcohol

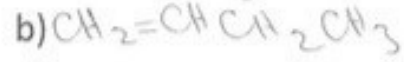
d)ether

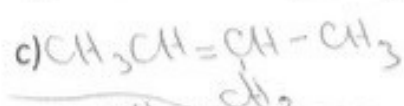
know the structures of the compounds above

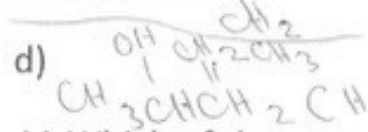
43-What is the major product of dehydration of the following compounds at high temperature (180)?



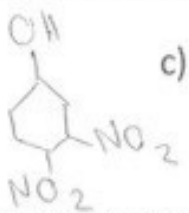
a) 

b) 

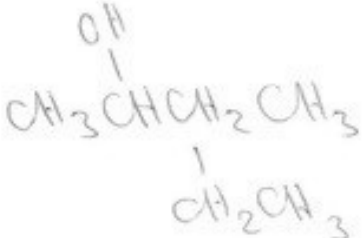
c) 

d) 

44-Which of these compounds is the weakest acid?

a)  b)  c)  d)

45-What is the major product of the dehydration of the following compounds at low temperature (140)?



a) *there was only one of the choices that had ether, the others were all ketones, the answer is ether

46-Which method is used to separate peptides from large amino acids?

a) Molecular sieve chromatography (not sure)

47-Arrange the following compounds in order of increasing reactivity with alcohol to form ester?

*structures of acyl chloride-acid anhydride-carboxylic acid-amide

48-*There was a question they put the structures of pyrine, purine and pyrimidine from neucleotides note and you should know that the double ring is purine and the single ring is pyrimidine*

49-*IUPAC naming of the amide structure*

50-What is the IUPAC name for :

51- Which one of these is a cyclic ether?

a) 

b) 

52-Which bond prevents the formation of a quaternary structure of the amine acid?

a) Disulfide bond

53-One of the carboxylic acid homework questions (slide 44 and 45)

54-They gave us a very complex structure and there were H-bonds between primary and secondary amines and he asked: The H-bonds in this structure are?

a) Primary amines only

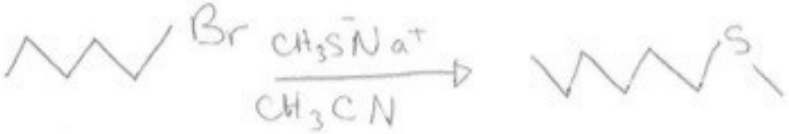
b)primary and secondary amines

c)secondary amines

d)tertary amines

55-Arrange the following compound from the lowest to the highest boiling point:

(and he have us an alcohol and carboxylic acid(he mixed more than one functional group)and we should know the arrangement

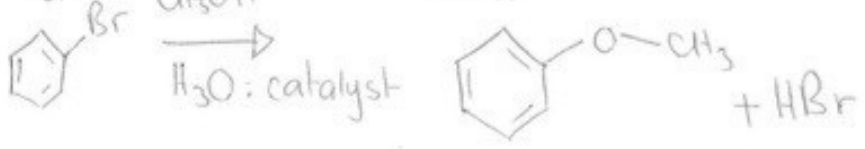
56- 

a) SN_1

C) SN_2

b) E_1

d) E_2

57- 

a) SN_1

b) E_1

c) SN_2

d) E_2

58-naming coordination compounds

59-[Cr(Nh3)5SO4]Br and [Cr(NH3)5Br]SO4 what type of isomers are these compounds?

a)coordination isomers b)geometric isomers

c)linkage isomers d)optical isomers

60-Which one of these is used as a treatment for Atherosclerosis or lead poisoning?

*Athersclerosis: treated by Na2[Mg(EDTA)]

Lead Poisoning: treated by Na2[Ca(EDTA)]

61-The question was about oxyhemoglobin ?

-(low spin or diamagnetic) but both are right

62-The question is in lipids note, and it was about the type of lipid used in cell membrane that makes it tough or hard

-Answer is: *cholesterol*

63-Naming lipids (omega 3 and omega 6)

- C(number of carbons): (number of double bonds)....(position of bonds)
- Example: C:18:3...9,12,15)

64-A Type of eicosanoids that have the opposite function of PGI?

a)LT b)PG

c)TXA *they are vasocontractors*

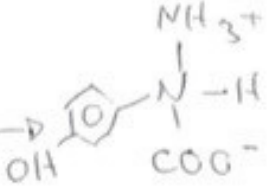
d)COX

65-I think there was a question about lipoproteins , they have **polar** surface and **nonpolar core**

(or the question might be about the cellular membrane im not sure)

Answers:

1-A

2-D →  } compound from Q. 2

3-A

4-D

5-D , A , B ,C

6-A

7-A

8-?

9-C

10-C

11-B

12-?

13-?

14-A

15-C (THE UP ACCESS WAS LABELLED ΔG)

16-B (THE QUESTION HAD ΔH= -44 (ΔH = -44)

17-A) LYGASE

18-A) TRIDANTATE

19-C

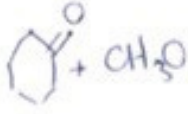
20-A) ACTIVATION ENERGY **DECREASES**

21-C (DISULFIDE BONDS)

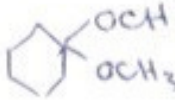
22-B) DIPOLE DIPOLE

23-SERINE

24-?

25-A → correction to the question  + CH_3OH → ?

26-B

a)  + H_2O (Acetal)

27-?

28-A (MOLECULAR SEIVE CHROMATOGRAPHY)

29-AMINE (C)

30-D → correction to question bind on ↑ ion released pH

31-A) 50

32-COPY PASTE FROM NOTES

33- DABC

34-D

35-B

36-B

37-A BOND THAT FORMS WHEN BOTH ELECTRONS ARE DONATED FROM THE SAME ATOM

38-same as notes

39-A

40-B

41-A

42-CBDA

43-C

44-D

45-ETHER

46-A

47-A

48-?

49-?

50- 3 Bromo Cyclo Pentane carbaldehyde

51-b

52-a

53-

54-b

55-

56) C

57) A

58) A

59) B

60) -

61) -

62) cholestrol

63)

64) TXA(c)

65) -

66) Calculate the Normality of HCl solution if 20ml of it requires 25ml of 0.25 M of Na_2CO_3 solution for complete neutralization

$2HCl + Na2CO_3 \longrightarrow 2NaCl + CO_2 + H_2O$

a) 0.31 b) 0.63)

c) 0.96 d) 1.26