



Index No.

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Name:.....

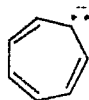
THE OPEN UNIVERSITY OF SRI LANKA
B.Sc Degree Programme and
Stand Alone Courses in Science - 2004/2005
CHU 2221/CHE 4221 - Organic Chemistry
ASSIGNMENT TEST III

Ques No	Max	Marks
1-12	50	
13	12	
14	18	
15	20	
Total	100	

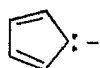
Date: Saturday, 24th February 2007

Time: 11.30 – 1.00 p. m.

1. Giving a reason state whether each of the following compounds/ions are aromatic or not.



A



B



C

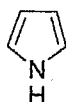


D

	Whether aromatic or not	Reason
A		
B		
C		
D		

(8 Marks)

2. Three of the following compounds are aromatic. What are they?



A



B



C



D

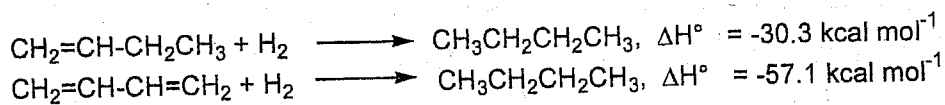


E

(3 Marks)

3. Heats of hydrogenation of 1-butene and 1,3-butadiene are given below.

(3 Marks)



Calculate the extra stability in 1,3-butadiene due to conjugation.

4. Consider the following.

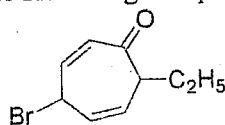
- (a) Typical reactions of benzene are electrophilic, because benzene is electron rich.
 (b) Structure of benzene is represented as,



- (c) Benzene reacts with Br_2 at 25°C to give 1,2-dibromobenzene.
 (d) Benzene reacts with H_2 in the presence of Ni catalyst under pressure to give cyclohexane.

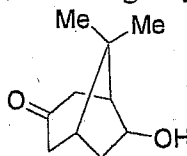
Two of the above statements are correct. What are they? (2 Marks)

5. (a) Give the IUPAC name of the following compound?



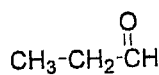
(3 Marks)

(b) Give the IUPAC name of the following bicyclic compound.

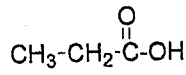


(3 Marks)

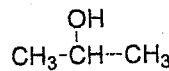
6. Which of the following compounds can form intermolecular H-bonds in their pure state?
 (Marks will be deducted for wrong answers)



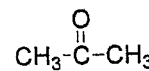
A



B



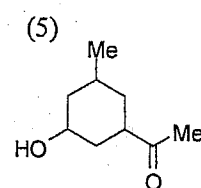
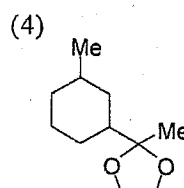
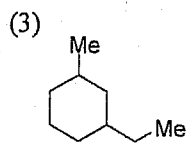
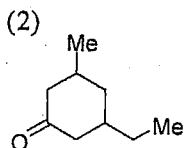
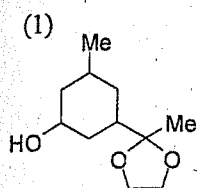
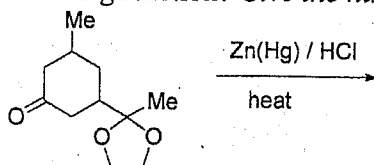
C



D

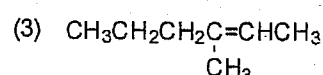
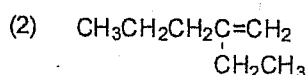
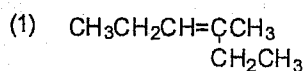
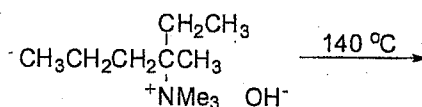
(4 Marks)

7. What is the product of the following reaction? Give the number of the structure.



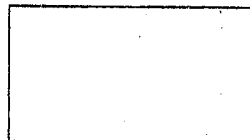
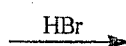
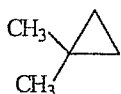
(2 Marks)

8. What is the product of the following reaction? Give the number of the structure.



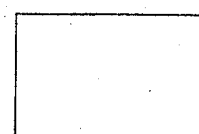
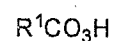
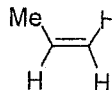
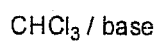
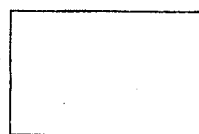
(2 Marks)

9. What is the product of the following reaction?



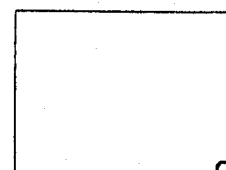
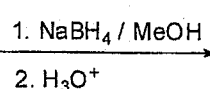
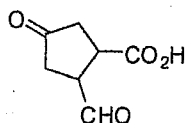
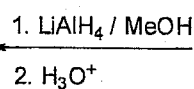
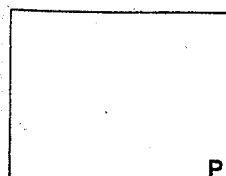
(4 Marks)

10. Give the products of the following reactions.



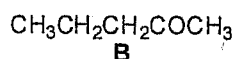
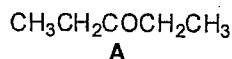
(6 Marks)

11. Give the structures of P and Q of the following two reactions



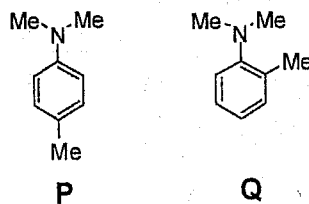
(6 Marks)

12. How would you distinguish the following two compounds using a chemical test?



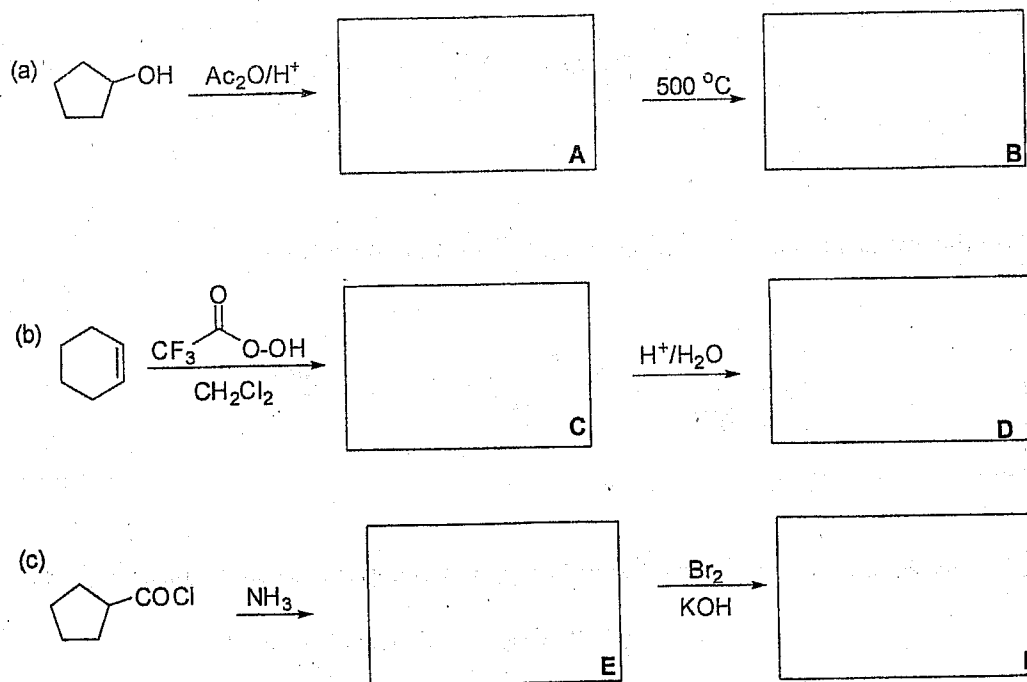
(4 Marks)

13. Giving reasons state which of the following two compounds is more basic.



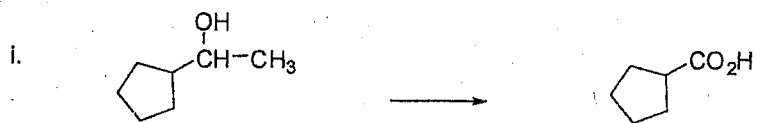
(12 Marks)

14. Give the structures of compounds A – F of the following reaction schemes.



(18 Marks)

15. Giving appropriate reagents and conditions show how you would carry out the following conversions.



(10 Marks)



(10 Marks)