

CH341/CH540, Exam 4 Key, Fall 2009

Name _____

This exam consists of several parts of unequal difficulty. Look over the whole exam right now, and start on something you know well. If you don't know something, skip it, and come back to it later. Use your time wisely.

Keep Your Eyes On Your Own Paper!

Grading Summary

Page 2. _____ (24)

Page 5. _____ (14)

Page 3. _____ (24)

Page 6. _____ (12)

Page 4. _____ (16)

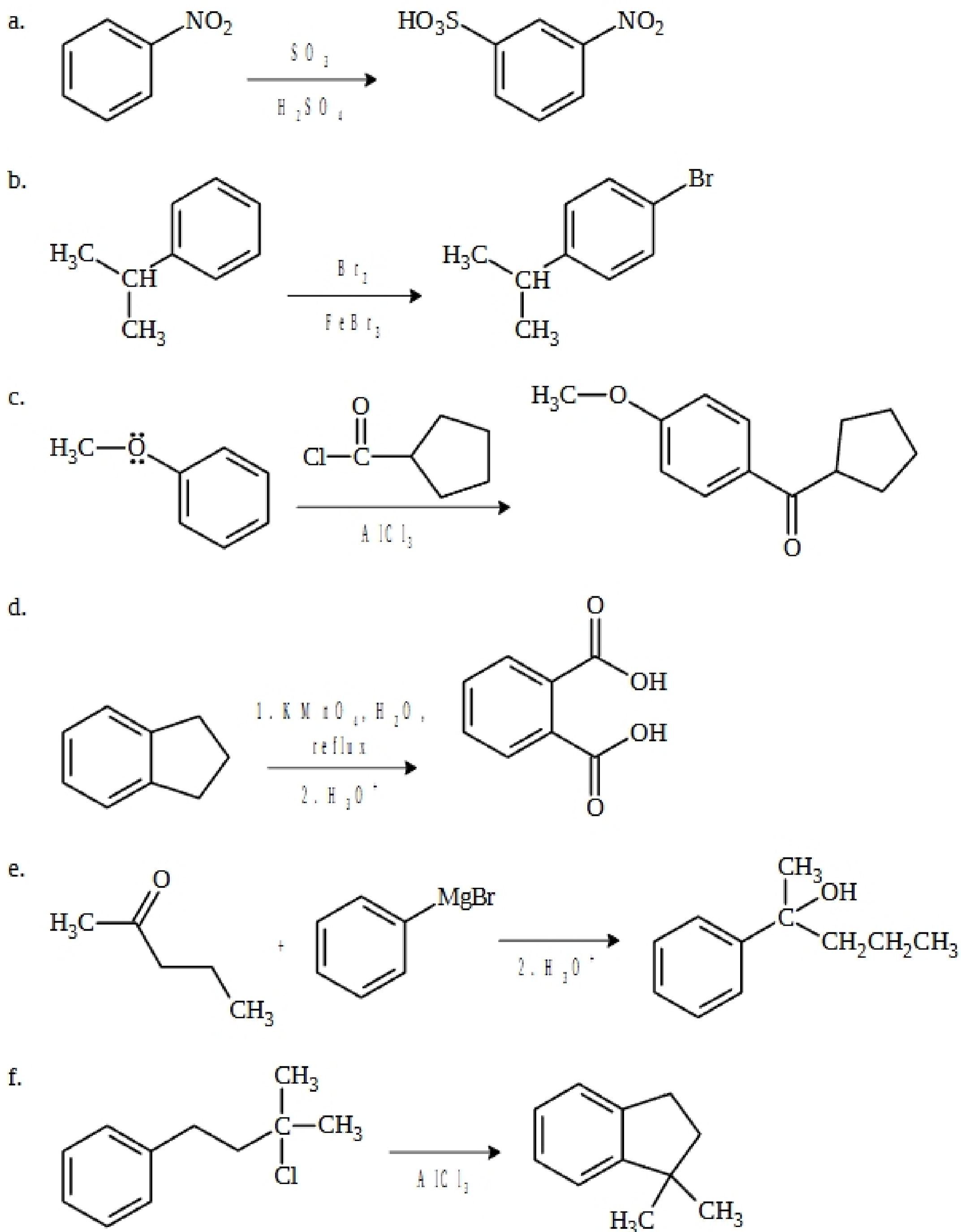
Page 7. _____ (10+)

Total _____ (100)

A Partial Periodic Table of the Elements

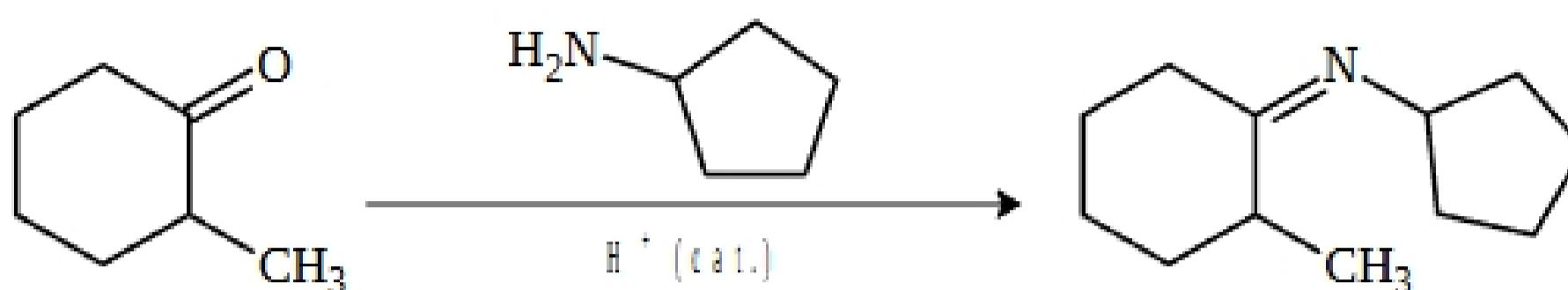
1A	IIA	IIIB	IVB	VB	VIB	VII B	VIII			IB	IIB	IIIA	IVA	VA	VIA	VII A	VIII A
1 H 1.01																	2 He 4.00
3 Li 6.94	4 Be 9.01											5 B 10.8	6 C 12.0	7 N 14.0	8 O 16.0	9 F 19.0	10 Ne 20.2
11 Na 23.0	12 Mg 24.3											13 Al 27.0	14 Si 28.1	15 P 31.0	16 S 32.1	17 Cl 35.5	18 Ar 40.0
19 K 39.1	20 Ca 40.1	21	22	23	24	25	26	27	28	29	30	31 Ga 69.7	32 Ge 72.6	33 As 74.9	34 Se 79.0	35 Br 79.9	36 Kr 83.8
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53 I 127	54

1. Give the major organic product of each of the following reactions. If no reaction will occur, write "No Reaction". If a mixture of ortho and para products would form, draw only the para.

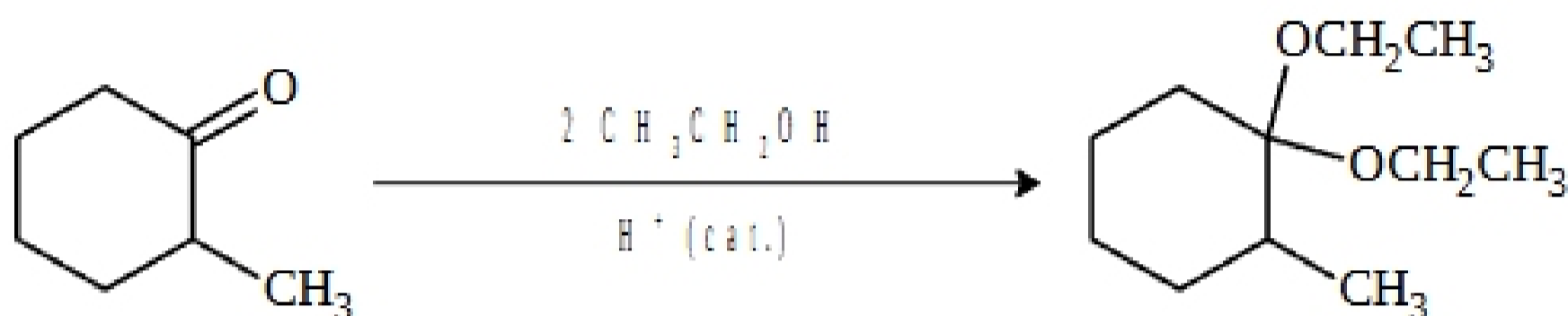


2. Fill in the needed reagents and conditions over the arrows. An arrow may require more than one step.

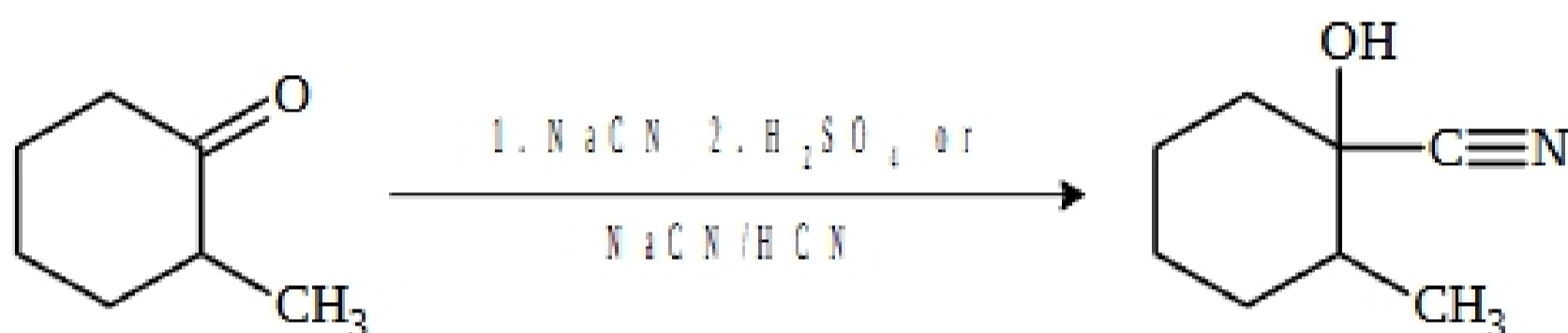
a.



b.

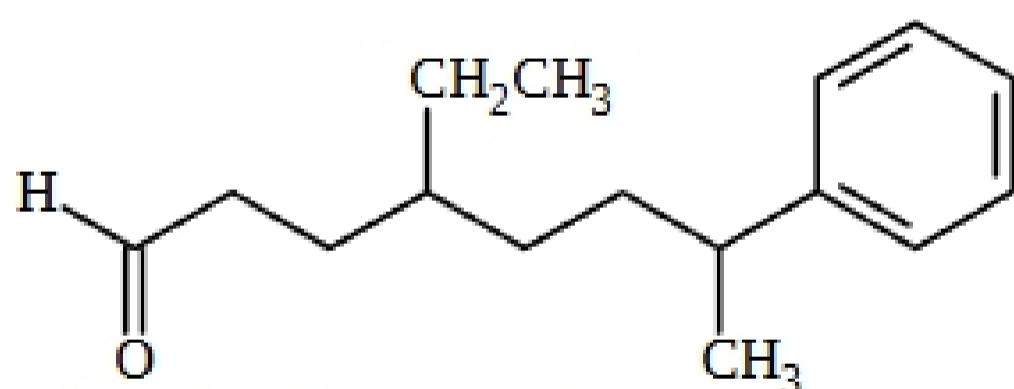


c.



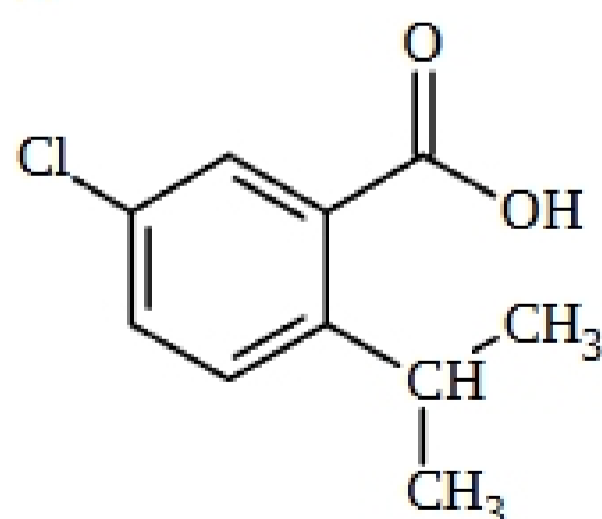
3. Give IUPAC names for the following structures.

a.



4-ethyl-7-phenyloctanal

b.



5-chloro-2-isopropylbenzoic acid