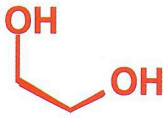
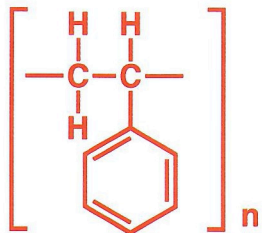
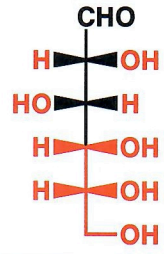
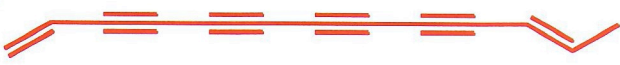
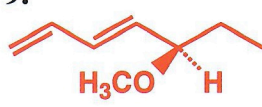
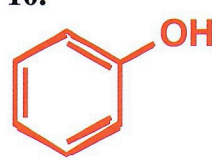


Print Last (Family) Name	First Name	Signature	ID Number (if known)	Leave Blank (Score) 200 points
KEY				


Section I.A. page 2	1. 	2. 	3. 	4. Z-2-chloro-1,3-difluoro-2-butene
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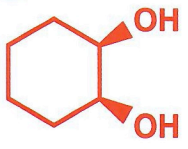
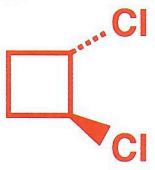


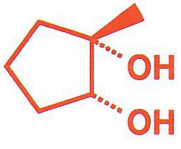
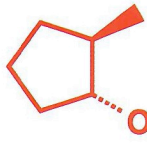
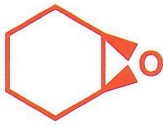



Section I.A. p2	5. Z (or cis)-11-eicosen-1-ol or Z-eicos-11-en-1-ol
page 2	6. S-3-methyl-1-octene or S-3-methyloct-1-ene
page 3	7. Teflon or polytetrafluoroethylene

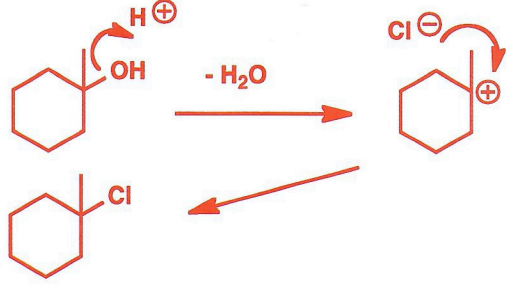
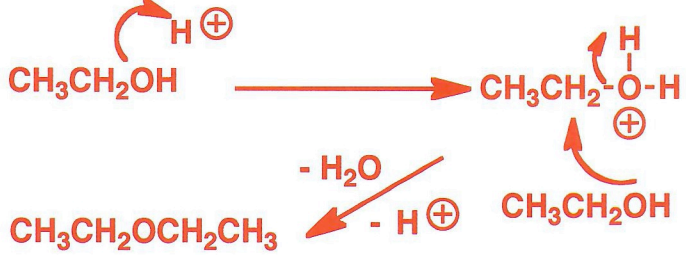
Section I.A. page 3	8. 	9. 	10. 
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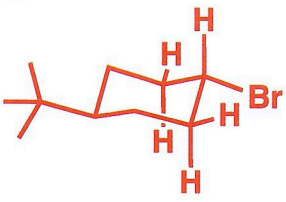
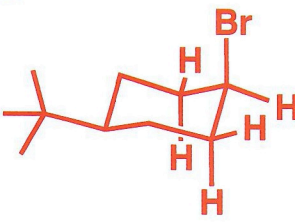
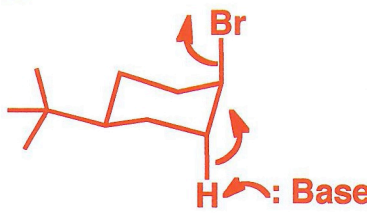
Section I.B. p4	11. enantiomers	12. diastereomers	13. identical	14. identical	15. enantiomers
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Section IC. p5	16. 16	17. 28	18. F	19. F	20. T	21. T	22. T	23. T	24. F	25. T	26. T	27. F
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Section IIA p6	1. T	2. F	3. T	4. F	5. T	6. T	7. T	8. T	9. T	10. T	
Section IIA p6 IIB p7	11. F	12. T	13. T	14. F	15. T	16. F	17.  any 1,4 equatorial - axial with correct substituents				
Section IIC p7	18. rubber		19. testosterone		20. cellulose						

Section IIIA page 8	1. 	2. 	3. 	4. 	5. 	
Section IIIA page 9	6. 	7. 	8. 	9. 	10. 	
Section IIIB Page 10	11. H_2 / Pd or Pt or Ni	12. Strong acid e.g. H_2SO_4	13. Strong acid e.g. H_2SO_4	14. Br_2 and H_2O	15. CH_3OH and acid e.g. H_2SO_4	
Section IIIC Page 11	16. 			17. four	18. two	19. one

Section IVA Page 12	1. 	2. 
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Section IVB Page 13	3. B	4. 	5. 	6.  key feature antiperiplanar removal of axial hydrogen (E2 favoured)
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