

國立臺灣大學九十四學年度轉學生入學考試試題

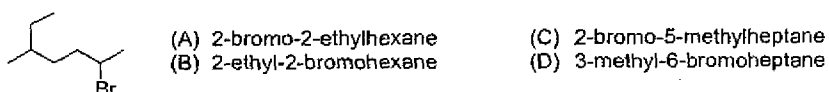
科目：有機化學

題號：55

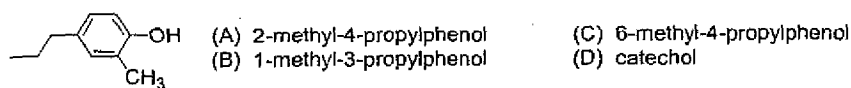
共 3 頁之第 1 頁

單選題 (90%) (不需抄題但請標明題號並依序作答)

1. What is the proper name of the following compound?



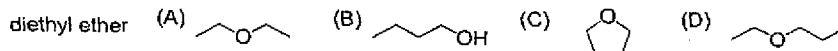
2. What is the proper name of the following compound?



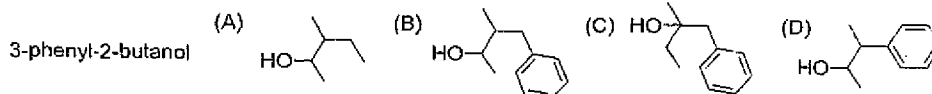
3. What is the proper name of the following compound?



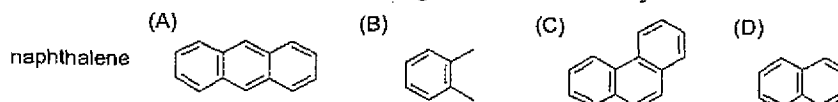
4. Which structure represents the following name more correctly?



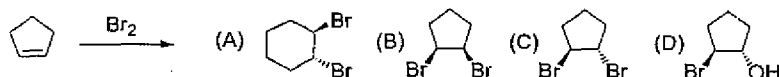
5. Which structure represents the following name more correctly?



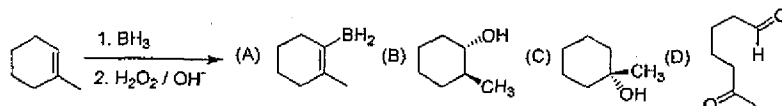
6. Which structure represents the following name more correctly?



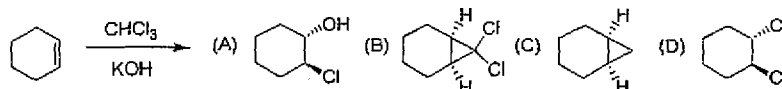
7. Which of the following compound is more likely to be the major product of the following reaction?



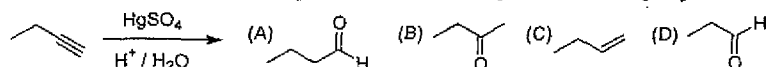
8. Which of the following compound is more likely to be the major product of the following reaction?



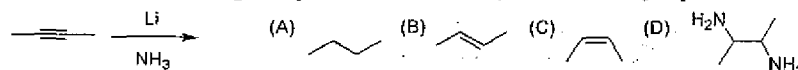
9. Which of the following compound is more likely to be the major product of the following reaction?



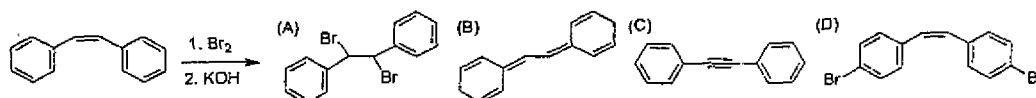
10. Which of the following compound is more likely to be the major product of the following reaction?



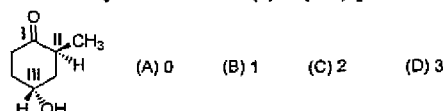
11. Which of the following compound is more likely to be the major product of the following reaction?



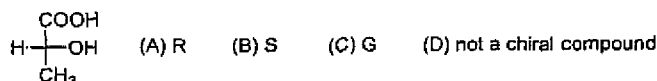
12. Which of the following compound is more likely to be the major product of the following reaction?



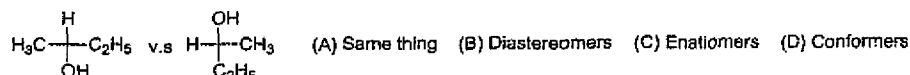
13. How many stereocenter(s) is(are) presented in the following compound?



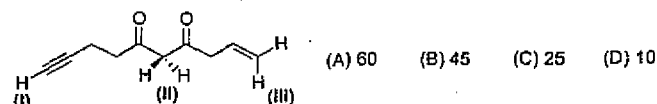
14. In the above compound (question 13), the absolute stereochemical configuration of carbon **II** is:  
 (A) R (B) S (C) G (D) not a chiral center
15. In the above compound (question 13), the absolute stereochemical configuration of carbon **III** is:  
 (A) R (B) S (C) G (D) not a chiral center
16. The absolute stereochemical configuration of the following compound is:



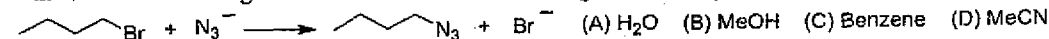
17. What is the relationship between the following two compounds?



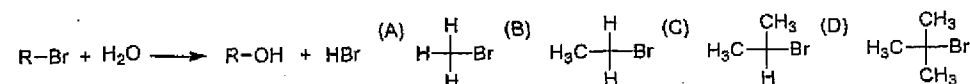
18. Which of the following number is the closest one to the  $pK_a$  value of protons **I** of the following compound?



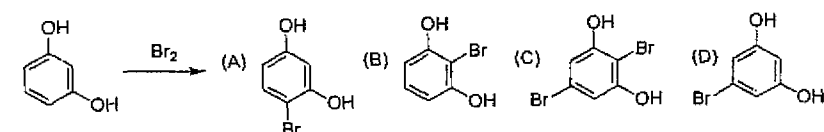
19. In the above compound (question 18), which of the following number is the closest one to the  $pK_a$  value of proton **II**?  
 (A) 60 (B) 25 (C) 45 (D) 10
20. In the above compound (question 18), which of the following number is the closest one to the  $pK_a$  value of proton **III**?  
 (A) 60 (B) 25 (C) 45 (D) 10
21. Which of the following solvent will allow the following reaction to pursue most rapidly?



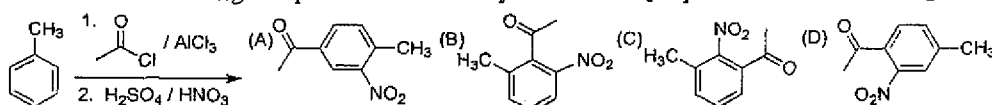
22. Which of the following alkyl halide will react most rapidly in the following reaction condition?



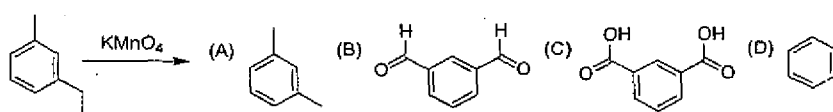
23. Which of the following compound is more likely to be the major product of the following reaction?



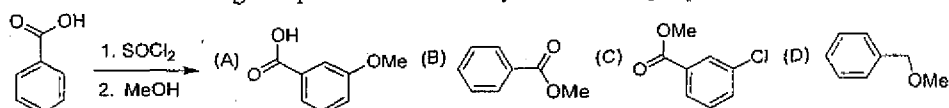
24. Which of the following compound is more likely to be the major product of the following reaction?



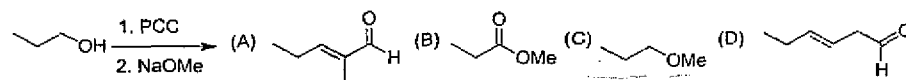
25. Which of the following compound is more likely to be the major product of the following reaction?



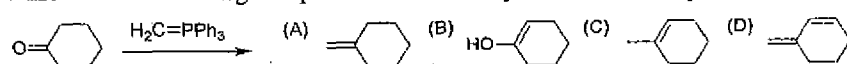
26. Which of the following compound is more likely to be the major product of the following reaction?



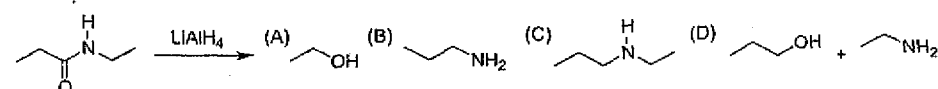
27. Which of the following compound is more likely to be the major product of the following reaction?



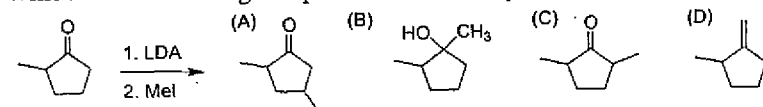
28. Which of the following compound is more likely to be the major product of the following reaction?



29. Which of the following compound is more likely to be the major product of the following reaction?



30. Which of the following compound is more likely to be the major product of the following reaction?



### 問答題

- 一. How many absorptions would you expect in the  $^{13}\text{C}$  NMR spectrum of "phenyl ethyl ether"? (5%)
- 二. A quartet signal is observed in the  $^1\text{H}$  NMR spectrum of "phenyl ethyl ether". Indicate the number of protons that this signal represented. (5%)