

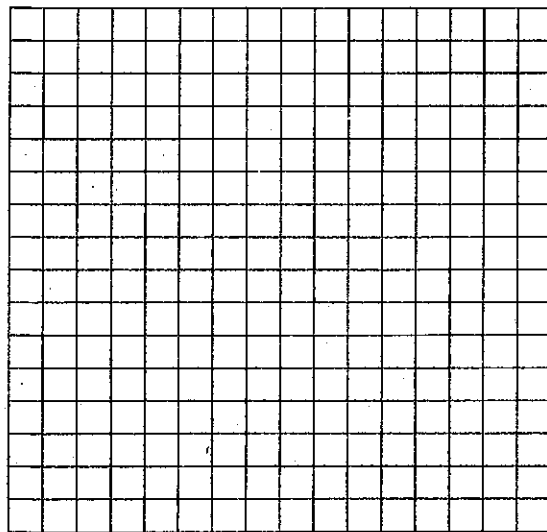


注意事項：

1. 答案依序書寫於答案卷上，不必抄題。
2. 答案卷不可書寫任何可辨別個人姓名或特殊標記，違者不予計算。
3. 請於試題紙上填寫准考證號碼，繳卷時「試題」、「答案卷」一併繳回。

一、According to the paper entitled “New pixel-decimation patterns for block matching in motion estimation”, please answer the following five questions.

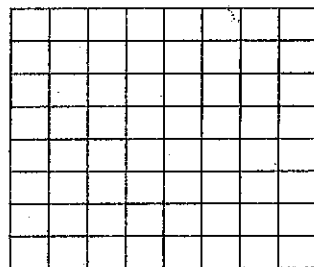
1. For a 16x16 block and $k=5$, draw its boundary-based pixel-decimation pattern.(10%)



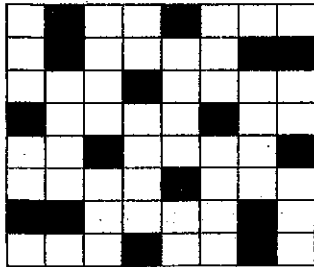
- no pixel decimation
- pixel decimation

2. As considering the answer of Question 1, calculate the value of SpeedUp Factor (SUF) and explain the meaning of its size changing. (10%)
3. In pixel-decimation approach, please compare the advantages and disadvantages of Full pattern, 4-queen pattern and 8-queen pattern. (For example: Figure 6 in the paper) (10%)
4. Please refer to the following “Chromosome A” and draw the corresponding 8x8 pixel-decimation pattern. (10%)

Chromosome A	2	6	9	12	15	18	26	35	39	48	50	52	54	57	61	64
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5. Compare the pattern which you draw in Question 4 with the following pattern to show which the best GA-based solution is, and give the reasons. (10%)



二、 According to the paper entitled “CCOA: Cloud Computing Open Architecture”, please answer the following five questions.

6. The authors claimed that there is currently no standard definition or specification for Cloud Computing. Please give the main contributions of this manuscript. (10%)
7. There are several types of resources in Cloud Computing can be provisioned and consumed over the Internet. Please show what they are and give examples. (10%)
8. Please give the purpose of virtualization. (10%)
9. Please show what will happen if no extensible service provisioning is provided in Cloud Computing system. (10%)
10. In this manuscript, seven architectural principles are given. Please give the main spirit of Principles 6 and 7 briefly. (10%)