

Name: .....

ID:.....

Section: 1 (8:30pm)

2 (11:30pm)

3 (1:30)

1. (a) Fourier (5) \_\_\_\_\_

(b) Inverse Fourier (5) \_\_\_\_\_

...../10

2. (a)  $F_k$  (7) \_\_\_\_\_(b)  $F_{2k}$  (8) \_\_\_\_\_

...../15

3. (a)  $g, h$  (5) \_\_\_\_\_(b)  $G, H$  (5) \_\_\_\_\_(c)  $F$  (5) \_\_\_\_\_(d)  $F$  (butterfly) (5) \_\_\_\_\_

...../20

4. Edge Sharpening

...../15

5. train / bird

...../20

6. Image compression

...../20

Total: (100) \_\_\_\_\_