

NOC24-EE57: Medical Image analysis Week 0 Assignment Solution

1. Ans: (c) 24 KB
2. Ans: (b) Shift invariant and separable
3. Ans (c) Checkerboard effect, false contouring
4. Ans (a)

$$s(a) \frac{1}{4} \begin{pmatrix} 1 & -1 & 1 & -1 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{pmatrix}$$

5. Ans: (b) $F1$ is F rotated by θ
6. Ans: (a) impulse noise, unbiased noise
7. Ans: (b) Mean filter
8. Ans: (b) When it is captured under variable illumination.
9. Ans: (a) enhances the high frequencies and suppresses the low frequencies.
10. Ans: (c) Only P
11. Ans: (d) All of the above.
12. Ans: (b) amplitude and distance from source of sound waves.
13. Ans: (d) travelling medium and its temperature.
14. Ans: (c) Gamma rays, X-rays, ultraviolet, microwave, radio waves.
15. Ans: (b) moving charges.
16. Ans: (c) the field in which all lines of magnetic flux are parallel and equidistant.
17. Ans:(a) $E(H_1) = E(H_2) = 0$
18. Ans: (c) does retain the semantic information content in the image.
19. Ans: (a) zero frequency component of its DFT.
20. Ans: (a) constant energy, varying momentum.