	pages) No. : 20335 E		No. :	2.	4 11	e spatial coordinate	es of a d	ligital image (x, y) are	e
	oue	No. : 20333 E		Sub. Code: AMCS 64		(a)	Position	(b)	Brightness	
	F	3.Sc. (CBCS) DEG	REE	EXAMINATION,		(c)	Contrast	(d)	Noise	
NOVEMBER 2023 Sixth Semester				3,	1 11	The range of values spanned by the gray scale is				
						cal	led ———	1	a by the gray boate i	
IN	TROD	Computer :		ce – Core IMAGE PROCESSING		(a)	Dynamic range	(b)	Band range	
		For those who join				(c)	Peak range	(d)	Resolution range	
Tir		ree hours	ied in	Maximum: 75 marks	4.	***	nich of the followin	g is the	e primary objective o	of
PART A — $(10 \times 1 = 10 \text{ marks})$						sh	sharpening of an image?			
		Answer AI				(a)	Blurring the ima	ige		
	Cho	ose the correct an	-			(b)	Highlight fine de	etails ir	the image	
1.				sampled to form a		(c)	Increase the brig	ghtness	of the image	
	(a)	Fourier series				(d)	Decrease the bri	ghtnes	s of the image	
	(b) Fourier transform				5.					
	(c)	Fast Fourier seri	es					4.		•
	(d)	Digital image				(a)		(b)	Hue	
						(c)	Brightness	(d)	Intensity	
•							Pa	ige 2	Code No. : 20335]	E
					-					
6	What	is nival?	•				DADED (F			
6.		is pixel?	nts of	a digital imaga		Anou	PART B — (5			
6.	(a)	Pixel is the eleme					ver ALL questions,	choosin	ng either (a) or (b).	
6.	(a) 1 (b) 1	Pixel is the eleme	nts of	an analog image	11.	E	ver ALL questions, ach answer should	choosin	ng either (a) or (b). eed 250 words.	•
6.	(a) 1 (b) 1 (c) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste	nts of r of a	an analog image digital image	11.	E	ver ALL questions, ach answer should	choosin not exc finition	ng either (a) or (b).	1
	(a) 1(b) 2(c) 1(d) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste	nts of r of a r of aı	an analog image digital image n analog image	11.	E	ver ALL questions, ach answer should What are the de image processing	choosin not exc finition	ng either (a) or (b). eed 250 words.	I
 7. 	(a) 1 (b) 1 (c) 1 (d) 1 The n	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste tumber of grey va	nts of r of a r of aı	an analog image digital image	11.	E	ver ALL questions, ach answer should What are the de image processing C	choosing not exce finition (?	ng either (a) or (b). eed 250 words.	
	(a) 1 (b) 1 (c) 1 (d) 1 The n	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste	nts of r of a r of an alues : (b)	an analog image digital image n analog image are integer powers of	11.	Ea (a)	ver ALL questions, ach answer should a What are the de image processing C Describe the z	choosin not exc finition ?? or	ng either (a) or (b). eed 250 words. of image and digita	f
	(a) 1 (b) 1 (c) 1 (d) 1 The n (a) 4 (c) 8	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste tumber of grey va	nts of r of a r of an alues : (b) (d)	an analog image digital image n analog image are integer powers of		(a) (b)	ver ALL questions, ach answer should a What are the de image processing C Describe the z digital image.	choosing not exception finition finitio	ng either (a) or (b). eed 250 words. of image and digital and shrinking of	f
7.	(a) 1 (b) 1 (c) 1 (d) 1 (d) 1 (e) 2 (e) 2 (f) 1 (f) 1 (f) 1 (f) 2	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste tumber of grey va 4 8 er region of object e is	nts of a r of a r of ar alues : (b) (d)	an analog image digital image n analog image are integer powers of 2 1 xtured then approach		(a) (b)	What are the de image processing Describe the z digital image. Elaborate the transformation.	choosin not exc finition ?? Or cooming be be	ng either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level	f l
7.	(a) 1 (b) 1 (c) 1 (d) 1 (d) 1 (e) 1 (e) 1 (f) 1 (e) 1 (f) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste Rumber of grey va 4 8 er region of object e is ———————————————————————————————————	nts of a r of a r of a lues : (b) (d) (is te:	an analog image digital image n analog image are integer powers of 2 1 xtured then approach similarity	12.	(a) (b) (a) (b)	What are the de image processing Describe the z digital image. Elaborate the transformation. Currently of the control of th	choosin not exc finition ?? or cooming e ba	ng either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level	f l
7.	(a) 1 (b) 1 (c) 1 (d) 1 (d) 1 (e) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste umber of grey va 4 8 er region of object e is discontinuity extraction	nts of a r of a r of a lues : (b) (d) (is te: (b) (d)	an analog image digital image n analog image are integer powers of 2 1 xtured then approach		(a) (b) (a)	What are the de image processing Describe the z digital image. Elaborate the transformation. Currently of the control of th	choosin not exc finition ?? or cooming e ba	ng either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level	f l
7.	(a) 1 (b) 2 (c) 1 (d) 1 (d) 2 (e) 8 (final we use (a) (c) 6 (Approximately 10 (d) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste Rumber of grey va 4 8 er region of object e is discontinuity extraction each to restoration	nts of a r of a	an analog image digital image n analog image are integer powers of 2 1 xtured then approach similarity recognition	12.	(a) (b) (a) (b)	What are the de image processing Describe the z digital image. Elaborate the transformation. Cummarize the transform and its Write down the processing.	choosing not exc finition ?? or coming e ba or one of invers advant	ng either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level dimensional Fourier ee. tages of color image	f l
7.	(a) 1 (b) 1 (c) 1 (d) 1 (d) 1 (d) 1 (e) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste umber of grey va 4 8 er region of object e is discontinuity extraction	nts of a r of a r of a r of a lues : (b) (d) (is tested)	an analog image digital image n analog image are integer powers of 2 1 xtured then approach similarity recognition spike filtering	12. 13.	(a) (b) (a) (b) (a)	What are the de image processing Describe the z digital image. Elaborate the transformation. Consummarize the transform and its Write down the processing. O Discuss the purpose	choosing or one of sinvers advantages of co	ng either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level dimensional Fourier ectages of color image	f l
7.	(a) 1 (b) 1 (c) 1 (d) 1 (d) 1 (e) 1 (e) 1 (e) 1 (f) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste Pixel is the cluste Rumber of grey va 4 8 er region of object e is discontinuity extraction each to restoration inverse filtering black filtering meement of differ	nts of a r of a r of a r of a lues: (b) (d) (is testes (b) (d) (d)	an analog image digital image n analog image are integer powers of 2 1 xtured then approach similarity recognition spike filtering ranking	12.	(a) (b) (a) (b) (a)	What are the de image processing Describe the z digital image. Elaborate the transformation. Consummarize the transform and its Write down the processing. O Discuss the purpose	choosing or one of sinvers advantages of co	ng either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level dimensional Fourier ee. tages of color image	f l
7. 8.	(a) 1. (b) 2. (c) 1. (a) 4. (c) 4. (c) 4. (c) 4. (d) 4. (d) 4. (e) 4. (e) 4. (e) 4. (f) 4. (f	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste Pixel is the cluste Pixel is the cluste Pixel is of grey va 4 8 er region of object e is discontinuity extraction each to restoration inverse filtering black filtering neement of differ on the principle o	nts of a r of a	an analog image digital image n analog image are integer powers of 2 1 xtured then approach similarity recognition spike filtering ranking between images is	12. 13.	(a) (b) (a) (b) (a)	ver ALL questions, ach answer should. What are the desimage processing. Describe the z digital image. Elaborate the transformation. Output Summarize the transform and its Write down the processing. Output Discuss the purpose Explain the difference of the purpose of the	choosing not except finition of except type of correct type of	age either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level dimensional Fourier ee: tages of color image blor segmentation. ypes of compression	f l
7. 8.	(a) 1 (b) 1 (c) 1 (d) 1 (d) 1 (d) 1 (e) 1	Pixel is the eleme Pixel is the eleme Pixel is the cluste Pixel is the cluste Pixel is the cluste Rumber of grey va 4 8 er region of object e is discontinuity extraction each to restoration inverse filtering black filtering meement of differ	nts of a r of a r of a r of a lues: (b) (d) (is testes (b) (d) (d)	an analog image digital image n analog image are integer powers of 2 1 xtured then approach similarity recognition spike filtering ranking	12. 13.	(a) (b) (a) (b) (a)	ver ALL questions, ach answer should. What are the desimage processing. Describe the z digital image. Elaborate the transformation. Output Summarize the transform and its Write down the processing. Output Discuss the purpose Explain the difference of the purpose of the	choosing not except finition of except type of correct type of	ng either (a) or (b). eed 250 words. of image and digital and shrinking of asic gray level dimensional Fourier ectages of color image	f l

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15. (a) Bring out the general features of an image.

Or

(b) What are the attributes of features? Explain.

PART C — $(5 \times 8 = 40 \text{ marks})$

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

 (a) Examine the techniques of image acquisition with diagram.

Or

- (b) Draw and explain the architecture of simple image model.
- (a) Outline the image enhancement using arithmetic and logical operation.

Or

- (b) Formulate the basic frequency domain filters.
- (a) Determine the pseudo color image processing with diagram.

Or

(b) Evaluate the functions of color transformation.

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 (a) Discuss the image compression model with diagram.

Or

- (b) Explain the dilation and erosion in morphological image processing.
- 20. (a) Demonstrate the complete process of feature extraction.

Or

(b) Illustrate the methods of region based segmentation.

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