	Reg. No. :										
	Question Pape	er Co	de: 59	9409							
B.E. /	B.Tech. DEGREE E	XAMI	NATIO	DN, N	JOV	<i>v</i> 201	9				
	Elec	ctive		,							
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15	5UEC909– DIGITAL	IMAC	BE PRO	OCES	SIN	IG					
	(Regulat	tion 20	15)								
tion: Three hours	Answer AL	L Que	stions		Ma	axim	um:	100	Mar	ks	
	PART A - (5	x 1 = 5	5 Marks	s)							
A continuous image i	s digitized atpoints	5.								CO	1- F
(a) Random	(b) Vertex	(c) Conto	our		((d) S	amp	ling		
Which of the followi filter function?	ng low pass filters is	/are co	overs th	ne ran	ige	of ve	ery s	harp		CO	2- F
(a) Ideal low pass filt	ers	(b) Butte	erwor	th lo	ow p	ass f	ilter			
(c) Gaussian low pass	s filter	(d	l) All o	f the	abo	ve					
Purpose of restoration	n is to gain									CO2	2- R
(a) Degraded image	(b) Original image	e (c) Pixel	S		((d) C	oord	inat	es	
Opening and closing	are each others									CO	3- F
(a) Neighbours	(b) Duals	(c) Cente	ers		((d) C	orne	rs		
Erosion followed by a	dilation is									CO	3- F
(a) Opening	(b) Closing	(c) Blurr	ing		((d) T	rans	latio	n	
	PART – B (5 :	x 3= 1:	5 Mark	s)							
Differentiate photopic	e and scotopic vision.									CO	1- L
Compare Spatial domain and Frequency domain in Image Enhancement.								CO	2- U		
List the steps involved in frequency domain filtering.								CO	2- L		
How the derivatives are obtained in edge detection during formulation.									~~	а т	
	B.E. / I 15 15 tion: Three hours A continuous image i (a) Random Which of the followi filter function? (a) Ideal low pass filt (c) Gaussian low pass Purpose of restoration (a) Degraded image Opening and closing (a) Neighbours Erosion followed by o (a) Opening Differentiate photopic Compare Spatial dom List the steps involve	Reg. No. : Question Pape B.E. / B.Tech. DEGREE E Ele Electronics and Comm 15UEC909– DIGITAL Itom: Three hours Answer AL PART A - (5 A continuous image is digitized atpoints (a) Random (b) Vertex Which of the following low pass filters is filter function? (a) Ideal low pass filters (a) Ideal low pass filters (c) Gaussian low pass filter Purpose of restoration is to gain (a) Degraded image (a) Neighbours (b) Original image Opening and closing are each others (a) Opening (a) Opening (b) Closing PART – B (5) Differentiate photopic and scotopic vision. Compare Spatial domain and Frequency domain List the steps involved in frequency domain	Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Reg. No. : Image: Constraint of the steps involved in frequency domain filter Regulation 20 Image: Constraint of the steps involved in frequency domain filter Regulation 20 Image: Constraint of the following low pass filters is/are constraints in the steps involved in frequency domain filter Reg. 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DEGREE EXAMINATION ElectiveElectronics and Communication End 15UEC909– DIGITAL IMAGE PRODUCTION (Regulation 2015)tion: Three hoursAnswer ALL Questions PART A - (5 x 1 = 5 Marks A continuous image is digitized atpoints.(a) Random (b) Vertex (c) ContectWhich of the following low pass filters is/are covers the filter function?(a) Ideal low pass filters(b) Butter (c) Gaussian low pass filter(d) All oPurpose of restoration is to gain(a) Degraded image (b) Original image (c) Pixel Opening and closing are each others (a) Neighbours (b) Duals (c) Center Erosion followed by dilation is (a) Opening (b) Closing (c) Blurr PART – B (5 x 3 = 15 Marks Differentiate photopic and scotopic vision.Compare Spatial domain and Frequency domain filtering.	Reg. No. : Question Paper Code: 59409 B.E. / B.Tech. DEGREE EXAMINATION, N Electronics and Communication Engines 15UEC909– DIGITAL IMAGE PROCES (Regulation 2015) tion: Three hours Answer ALL Questions PART A - (5 x 1 = 5 Marks) A continuous image is digitized atpoints. (a) Random (b) Vertex (c) Contour Which of the following low pass filters is/are covers the rar filter function? (a) Ideal low pass filters (b) Butterword (c) Contour Which of the following low pass filters is/are covers the rar filter function? (a) Ideal low pass filters (b) Butterword (c) Contour Which of the following low pass filters is/are covers the rar filter function? (a) Ideal low pass filters (b) Butterword (c) Contour Which of the following low pass filters is/are covers the rar filter function? (a) Ideal low pass filters (b) Duals (c) Pixels Opening and closing are each other	Reg. No. :Question Paper Code: 59409B.E. / B.Tech. 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DEGREE EXAMINATION, NOV 2019 Elective Elective Elective Electronics and Communication Engineering 15UEC909– DIGITAL IMAGE PROCESSING (Regulation 2015) tion: Three hours Maximum: Answer ALL Questions PART A - (5 x 1 = 5 Marks) A continuous image is digitized atpoints. (a) Random (b) Vertex (c) Contour (d) S Which of the following low pass filters is/are covers the range of very sifilter function? (a) Ideal low pass filters (b) Butterworth low pass filter (a) Ideal low pass filter (d) All of the above Purpose of restoration is to gain (a) Degraded image (b) Original image (c) Pixels (d) C (a) Neighbours (b) Duals (c) Centers (d) C C Elective (a) Neighbours (b) Duals (c) Centers (d) C Opening (b)	Reg. No. : Question Paper Code: 59409 B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019 Elective Electronics and Communication Engineering 15UEC909– DIGITAL IMAGE PROCESSING (Regulation 2015) tion: Three hours Maximum: 100 Answer ALL Questions PART A - (5 x 1 = 5 Marks) A continuous image is digitized atpoints. (a) Random (b) Vertex (c) Contour (d) Sampi Which of the following low pass filters is/are covers the range of very sharp filter function? (a) Ideal low pass filters (b) Butterworth low pass filter (d) All of the above Purpose of restoration is to gain (a) Degraded image (b) Original image (c) Pixels (d) Coord (a) Neighbours (b) Duals (c) Centers (d) Corne Erosion followed by dilation is (a) Opening (b) Closing (c) Blurring (d) Transi PART – B (5 x 3= 15 Marks) PART – B (5 x 3= 15 Marks) Differentiate photopic and scotopic vision. Compare Spatial domain and Frequency domain filtering.	Reg. No. : Question Paper Code: 59409 B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019 Elective Electronics and Communication Engineering 15UEC909– DIGITAL IMAGE PROCESSING Maximum: 100 Mar Answer ALL Questions PART A - (5 x 1 = 5 Marks) A continuous image is digitized atpoints. (a) Random (b) Vertex (c) Contour (d) Sampling Which of the following low pass filters is/are covers the range of very sharp filter function? (a) Ideal low pass filters (b) Butterworth low pass filter (c) Gaussian low pass filter (d) All of the above Purpose of restoration is to gain (a) Degraded image (b) Duals (c) Centers (d) Coordinate Opening and closing are each others (a) Neighbours (b) Duals (c) Centers (d) Corners Erosion followed by dilation is (a) Neighbours (b) Duals (c) Centers (d) Corners Erosion followed by dilation is (a) Neighbours (b) Closing <th< td=""><td>Reg. No. : </td></th<>	Reg. No. :

10.	Diff	erentiate structural and spectral approach.	CO3- U									
PART – C (5 x 16= 80 Marks)												
11.	(a)	Explain the properties of 2D Fourier Transform.	CO1- U	(16)								
Or												
	(b)	Describe the elements of visual perception.	CO1- U	(16)								
12.	(a)	Explain the types of gray level transformation used for image enhancement.	CO2- U	(16)								
Or												
	(b)	Explain the algebra approach in image restoration.	CO2 -U	(16)								
13.	(a)	Illustrate the steps involved in histogram equalization.	CO2- U	(16)								
		$I = \begin{bmatrix} 4 & 4 & 4 & 4 & 4 \\ 3 & 4 & 5 & 4 & 3 \\ 3 & 5 & 5 & 5 & 3 \\ 3 & 4 & 5 & 4 & 3 \\ 4 & 4 & 4 & 4 & 4 \end{bmatrix}$										
		Or										
	(b)	Explain model of image degradation/restoration process with a block diagram.	CO2- U	(16)								
14.	(a)	Discuss about the importance of Hit-or-Miss morphological transformation operation on a digital binary image with examples.	CO3- U	(16)								
Or												
	(b)	Explain the various methods of thresholding in detail.	CO3- U	(16)								
15.	(a)	Discuss about region based image segmentation techniques. Compare with threshold based segmentation techniques.	CO3- U	(16)								

Or

(b) Explain image segmentation in detail. CO3- U (16)