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Roll No

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

M.TECH

FIRST YEAR (SEMESTER-II) THEORY EXAMINATION (2020-2021)

(Objective Type)

Subject Code: AMTCSE0213

Subject: Digital Image Processing

Max. Mks. : 40

Time : 70 Minutes

General Instructions:

All questions are compulsory.

Question No- 1 to 5 are objective type question carrying 2 marks each.

Question No- 6 to 20 are also objective type/Glossary based question carrying 2 marks each.

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
1	Digitizing the coordinate values is called		Single Choice Questions	Single Choice Questions	2	Single Choice	Brilliant	Sampling	Quantization	Sampling	Zooming	Shrinking
2	What is the sum of all components of a normalized histogram?		Single Choice Questions	Single Choice Questions	2	Single Choice	Brilliant	1	None of these	1	-1	0
3	Discrete cosine transforms (DCTs) express a function or a signal in terms of___		Single Choice Questions	Single Choice Questions	2	Single Choice	Brilliant	Sum of cosine functions oscillating at different frequencies	Sum of cosine functions oscillating at different frequencies	Sum of cosine functions oscillating at same frequencies	Sum of cosine functions at different sampling intervals	Sum of cosine functions oscillating at same sampling intervals
4	Replacing the object from its origin referred to as____		Single Choice Questions	Single Choice Questions	2	Single Choice	Brilliant	translation	reflection	compression	decompression	translation
5	Full color images have at least _____		Single Choice Questions	Single Choice Questions	2	Single Choice	Brilliant	3 components	2 components	3 components	4 components	5 components
6	The output of Low Level Process in Image processing is _____		Glossary I	Glossary I	2	Single Choice	Brilliant	Image	Image	Attributes	Understanding	
7	The output in Mid Level Process in Image processing is _____		Glossary I	Glossary I	2	Single Choice	Brilliant	Attributes	Image	Attributes	Understanding	
8	The output in High Level Process in Image processing is _____		Glossary I	Glossary I	2	Single Choice	Brilliant	Understanding	Image	Attributes	Understanding	
9	What is the equation used for calculating G value in terms of HSI components__		Glossary II	Glossary II	2	Single Choice	Brilliant	3I-(R+B)	1-3/(R+G+B) [min (R,G,B)]	1/3(R+G+B)	3I-(R+B)	
10	What is the equation used to obtain I(Intensity) component of each RGB pixel in RGB color format_____		Glossary II	Glossary II	2	Single Choice	Brilliant	1/3(R+G+B)	1-3/(R+G+B) [min (R,G,B)]	1/3(R+G+B)	3I-(R+B)	
11	What is the equation used to obtain S component of each RGB pixel in RGB color format_____		Glossary II	Glossary II	2	Single Choice	Brilliant	1-3/(R+G+B) [min (R,G,B)]	1-3/(R+G+B) [min (R,G,B)]	1/3(R+G+B)	3I-(R+B)	
12	What is a valid response when we apply a second derivative_____		Glossary III	Glossary III	2	Single Choice	Brilliant	Zero crosses the edges	Zero in flat segments	Nonzero response at onset of gray level step	Zero crosses the edges	
13	What is the valid response when we apply a first derivative_____		Glossary III	Glossary III	2	Single Choice	Brilliant	Zero in flat segments	Zero in flat segments	Nonzero response at onset of gray level step	Zero crosses the edges	
14	What is not a valid response when we apply a second derivative_____		Glossary III	Glossary III	2	Single Choice	Brilliant	Nonzero response at onset of gray level step	Zero in flat segments	Nonzero response at onset of gray level step	Zero crosses the edges	
15	Formula for image Rotation is_____		Glossary IV	Glossary IV	2	Single Choice	Brilliant	S(u) e jq	S(u)	S(u) e jq	c S(u)	

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
16	Formula for image scaling is_____		Glossary IV	Glossary IV	2	Single Choice	Brilliant	c S(u)	S(u)	S(u) e jq	c S(u)	
17	Formula for image identity is_____		Glossary IV	Glossary IV	2	Single Choice	Brilliant	S(u)	S(u)	S(u) e jq	c S(u)	
18	Technique that is used to reconstruct or recover an image based on prior knowledge_____		Glossary V	Glossary V	2	Single Choice	Brilliant	Image restoration	Spatial Domain	Image Enhancement	Image restoration	
19	_____Technique that is used to reconstructed or recover an image?		Glossary V	Glossary V	2	Single Choice	Brilliant	Image Enhancement	Spatial Domain	Image Enhancement	Image restoration	
20	_____Technique based on direct manipulation of pixels in an image?		Glossary V	Glossary V	2	Single Choice	Brilliant	Spatial Domain	Spatial Domain	Image Enhancement	Image restoration	