P.S.R.ENGINEERING COLLEGE
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
INTERNAL ASSESSMENT TEST (IAT) – I

Department:	CSE	Programme:	B.E
Academic Year:	2024-2025	Year/Sem/Sec:	IV/ VII/ I &II
Course Code:	**191CS72**	Course Name:	**IMAGE AND VIDEO ANALYTICS**
Course Tutor:	**Dr.S.Singaravelan Prof./CSE** **Mrs.A.Ishwariya AP/CSE**		

UNIT-I

Q. No.	PART A	Marks	COs	BTL
1.	Which of the following is an example of Digital Image Processing? a) Computer Graphics b) Pixels c) Camera Mechanism d) All of the mentioned	**1**	**CO1**	**K1**
2.	Which of the following is the first and foremost step in Image Processing? a) Image acquisition b) Segmentation c) Image enhancement d) Image restoration	**1**	**CO2**	**K1**
3.	Which of the following image processing approaches is the fastest, most accurate, and flexible? a) Photographic b) Electronic c) Digital d) Optical	**1**	**CO1**	**K1**
4.	Which of the following tool is used in tasks such as zooming, shrinking, rotating, etc.? a) Filters b) Sampling c) Interpolation d) None of the Mentioned	**1**	**CO3**	**K1**
5.	The response for linear spatial filtering is given by the relationship ___ a) Difference of filter coefficient's product and corresponding image pixel under filter mask b) Product of filter coefficient's product and corresponding image pixel under filter mask c) Sum of filter coefficient's product and corresponding image pixel under filter mask d) None of the mentioned	**1**	**CO2**	**K1**
6.	How can we analyze and categorize image segmentation techniques? a.morphology b.set theory c.extraction d.recognition	**1**	**CO2**	**K1**
7.	What is the process of dividing an image into its individual object called? a.Division b.segmentation c.extraction d.recognition	**1**	**CO2**	**K1**
8.	How many bit RGB color image is represented by full-color image? a) 32-bit RGB color image b) 24-bit RGB color image c) 16-bit RGB color image d) 8-bit RGB color image	**1**	**CO2**	**K1**
9.	What techniques does facial recognition use to process and analyze facial data? a)Facial geometry b)Facial thermogram	**1**	**CO2**	**K1**

	c)Skin pattern recognition, smile d)All of the above			
10.				
	PART B			
1	List out the digital video standards.	**2**	CO1	K1
2	Define Frame-rate conversion.	**2**	CO1	K1
4	Compare Analog video and Digital video.	**2**	CO1	K2
5	Summarize Map estimation.	**2**	CO1	K2
6	List out the digital video standards.	**2**	CO1	K2
7	What is sampling? Describe video sampling and it's types?	**2**	CO2	K1
8	Recall Threshold and its type.	**2**	CO1	K2
9	Define Frame-rate conversion	**2**	CO1	K1
10	What is Motion compensated interpolation? 7.What is spatio temporal sampling structures?	**2**	CO1	K1
	PART-C			
1	Recall pure temporal and motion compensated interpolation methods.	**16**	CO2	K2
2	Outline about video acquisition in a camcorder image sensor types CCD &CMOS	**16**	CO2	K2
3	Explain in detail about video sampling method and its types.	**16**	CO2	K2
4	Explain sampling and reconstruction of continuous time varying Imagery with application in video systems	**16**	CO2	K2

UNIT-II

Q. No.	PART A	Marks	COs	BTL
1.	What was created as the follow-up to the successful JPEG compression? a) JPEG 50 b) JPEG 1000 c) JPEG 100 d) JPEG 2000	**1**	**CO2**	**K1**
2.	Which type of compression does GIF use? a) Data b) LZW (Lempel – Ziv – Welch) c) Lossy d) Energy	**1**	**CO2**	**K1**
3.	JPEG is not popular for web hosting of images. a) True b) False	**1**	**CO2**	**K1**
4.	Which of the following format of video compression was used for efficient coding of video sequence? a) MPEG – 1 b) MPEG – 2 c) MPEG – 3 d) MPEG – 4	**1**	**CO3**	**K1**
5.	In still images, the eye is attracted to regions of high contrast and jumps from word to word. a) True b) False	**1**	**CO2**	**K1**
	PART B			
1	Outline Motion estimation.	**2**	CO1	K1
2	Define Observation model 3.Describe Phase correlation	**2**	CO1	K1

3	Summarize Map estimation	**2**	CO2	K2
4	Define Notation and Preliminaries	**2**	CO1	K2
5	Define Motion Detection methods	**2**	CO2	K2
6	What is Temporal Motion models?	**2**	CO3	K1
	PART-C			
1	Expain Spatial Motion model , Temporal Motion and Region of Support Model.	**16**	CO3	K2
2	Describe Motion Detection Methods like hypothesis testing with fixed Threshold and Map variational formulation	**16**	CO3	K2
3	Categories different types of Motion estimation algorithm with details	**16**	CO3	K3
4	Recall Practical Motion estimation algorithm and Block matching algorithm	**16**	CO2	K2

UNIT-III

Q. No.	PART A	Marks	COs	BTL
1.	What does the term "resolution" refer to in image editing? a) The clarity of an image b) The size of an image in pixels c) The color balance of an image d) The number of layers in an image	**1**	**CO3**	**K1**
2.	Which tool in image editing software is used to select and remove the background of an image? a) Brush tool b) Clone stamp tool c) Magic wand tool d) Crop tool	**1**	**CO2**	**K1**
3.	Which file format is commonly used for images with a transparent background in image editing? a) JPEG b) GIF c) PNG d) BMP	**1**	**CO3**	**K1**
4.	Which video editing tool is used to smooth transitions between video clips by gradually blending them together? a) Cut tool b) Crossfade c) Split tool d) Text overlay	**1**	**CO3**	**K1**
5.	What does the term "rendering" refer to in video editing? a) Exporting the final video b) Trimming video clips c) Adding audio effects d) Adjusting color balance	**1**	**CO2**	**K1**
	PART B			
1	Outline Aircraft detection in frequency domain	**2**	CO3	K1
2	Define Video enhancement	**2**	CO3	K1
3	Define Video inpainting	**2**	CO3	K2
4	What is Spatio temporal Noise filtering?	**2**	CO3	K2
5	Recall Coding artifact reduction	**2**	CO2	K2
6	Define Blotch detection	**2**	CO3	K1
	PART-C			
1	Outline about some processing steps in the removal of various video artifact	**16**	CO3	K2
2	Summarize Spatio temporal noise filtering techniques?	**16**	CO3	K2

3	Expain Blotch Detection and motion vector repair interpolating corrupted intensites?	**16**	CO3	K2
4	Summarize video inpainting and Restoration in conditions of difficult object motion	**16**	CO4	K2

UNIT-IV

Q. No.	PART A	Marks	COs	BTL
1.	What is "green screen" or "chroma key" used for in video editing? a) Adding sound effects to a video b) Creating custom transitions c) Replacing a green background with another background d) Adjusting color temperature	**1**	**CO4**	**K1**
2.	In image editing, what does "dodging" and "burning" refer to? a) Adjusting the image's color balance b) Applying special effects to an image c) Enhancing or reducing the exposure of specific areas of an image d) Creating a transparent background	**1**	**CO4**	**K1**
3.	Which image editing tool is used to create smooth transitions between colors or tones in an image? a) Gradient tool b) Crop tool c) Text tool d) Blur tool	**1**	**CO4**	**K1**
4.	What is "motion tracking" used for in video editing? a) Creating slow-motion effects b) Adding text captions to videos c) Tracking and following the movement of an object or subject in a video d) Adjusting the video's aspect ratio	**1**	**CO4**	**K1**
5.	Which video editing effect is commonly used to create a fast-forward effect in a video? a) Time-lapse b) Speed ramping c) Freeze frame d) Reverse motion	**1**	**CO4**	**K1**
	PART B			
1	Define Scene change detection	**2**	CO3	K1
2	What is temporal integration?	**2**	CO4	K1
3	What are the types of Rigid object tracking?	**2**	CO5	K2
4	What is Multiple motion segmentation?	**2**	CO4	K1
5	Define Performance evaluation of video segmentation 5.What are the types of Rigid object tracking?	**2**	CO4	K1
6	Define Motion Tracking	**2**	CO4	K1
7	What is semantic video object segmentation?	**2**	CO4	K1
8	Define ID modelling	**2**	CO4	K2
	PART-C			
1	Explain multiple motion segmentation.	**16**	CO4	K2
2	Discuss about the Spatio temporal change detection.	**16**	CO4	K2
3	Detail and explain about the Rigid object tracking.	**16**	CO4	K2
4	Explain in detail on Articulated object tracking.	**16**	CO5	K2

UNIT-V

Q. No.	PART A	Marks	COs	BTL
1.	What is the standard form of YOLO? a.You Only Look Once b. You Once Look Only **c.** You Look Once d. None of the above	**1**	**CO5**	**K1**
2.	What is the range of compression achieved with no visible difference? a) 50 % to 90 % b) 40 % to 80 % c) 10 % to 30 % d) 30 % to 60 %	**1**	**CO5**	**K1**
3.	In which of the following compression data upon decompression doesn't lose its detail? a) Lossy b) JPG c) Lossless d) BMP	**1**	**CO6**	**K1**
4.	In which of the following compression the data is lost and miss out minor details? a) Lossy b) Lossless c) BMP d) Energy	**1**	**CO6**	**K1**
5.	What is the full form of JPEG? a) Joint Pressure Expert Group b) Joint Photographic Expert Group c) Joint Picture Expert Group d) Join Pic Expert Group	**1**	**CO5**	**K1**
	PART B			
1	What is Video compression techniques?	**2**	CO5	K1
2	Recall Quantization?	**2**	CO6	K1
3	Detail about Video enconding standards?	**2**	CO5	K2
4	What is Basic Transform video coding?	**2**	CO5	K2
5	Define Motion estimation and compensation	**2**	CO6	K2
6	Outline of spatial resolution reduction	**2**	CO6	K2
7	Define Video compression	**2**	CO6	K2
8	What is Digital video signals?	**2**	CO6	K1
	PART-C			
1	Elaborate about digital video compression and its applications	**16**	CO6	K3
2	Discuss the details or digital video signal and its formats	**16**	CO6	K2
3	Detail and explain about MPEG 1 , MPEG 2 video standards	**16**	CO6	K2
4	Summarize the untitled fireworks for video indexing and explain its retrieval	**16**	CO5	K2

Prepared by **Approved by**

(Course Tutor) **Dept. HOD)**