Mechatronics:Elective

Id	01
Question	The basic function of the spring in a control valve is to
A	Oppose the diaphragm so as to position the valve
B	Characterize flow
C	Close the valve if air failure occurs
D	Open the valve if air failure occurs
Answer:	A

Id	2
Question	_____ is the curve plotted between input and output by giving known inputs to an instrument and obtaining corresponding outputs.
A	characteristic curve
B	accuracy curve
C	sensitivity curve
D	calibration curve
Answer:	D

Id	03
Question	Which of the following is/are characteristic/s of mechatronic products and systems?
A	Functional interaction between mechanical, electronic and information technologies
B	Special interaction of subsystems in one physical unit
C	Intelligence related to the control functions of the mechatronics system
D	All of the above
Answer:	d

Id	04
Question	A system containing sensor, a signal conditioner and a display system combines to form a
A	Control system
B	Feedback system
C	Mechanical systems
D	Measurement System
Answer	D

Id	5
Question	Process of replacing non computer system with actual hardware is known as
A	Modeling
B	Proto-typing
C	Deployment
D	All of these
Answer	B.

Video Engg

Id	01
Question	The signals sent by the TV transmitter to ensure correct scanning in the receiver are called
A	Sync
B	chroma
C	luminance
D	video
Answer	A

Id	02
Question	H-sync pulse is separated from V-sync pulse by employing the circuit :
A	Multiplier
B	Integrator
C	Sutractor
D	Differentiator
Answer:	D

Id	03
Question	The main purpose of interlacing in television scanning is to
A	Reduce flicker
B	Brighten the TV picture
C	Sharpen picture outline
D	Increase channel bandwidth
Answer:	A

Id	04
Question	As CCIR- B standards, aspect ratio is ….
A	3:4
B	4:3
C	8:5
D	16:9

Answer	B

Id	05
Question	If there are 625 lines per TV picture, then lines per field are
A	1250
B	312.5
C	625
D	2500
Answer:	B

Digital Image Processing

Id	01
Question	How does sampling get accomplished with a sensing strip being used for image acquisition?
A	The number of sensors in the strip establishes the sampling limitations in one image direction and Mechanical motion in the other direction
B	The number of sensors in the sensing array establishes the limits of sampling in both directions
C	The number of mechanical increments when the sensor is activated to collect data
D	None of the mentioned
Answer	A

Id	02
Question	Black and white images have only
A	2 levels
B	3 levels
C	4 levels
D	5 levels
Answer	A

Id	03
Question	To convert a continuous image f(x, y) to digital form, we have to sample the function in _____

A	Coordinates
B	Amplitude
C	All of the mentioned
D	None of the mentioned
Answer	C

Id	04
Question	Area Array is also called as
A	Line Array
B	Matrix Array
C	Cross Array
D	None of Above
Answer	B

Id	05
Question	What is the first and foremost step in Image Processing?
A	Image restoration
B	Image enhancement
C	Image acquisition
D	Segmentation
Answer	C

Wireless and Mobile Communication

Id	01
Question	Effective aperture of the antenna
A	$G=(4\pi Ae)/\lambda 2$
B	$G=(4\pi \lambda 2)/Ae$
C	$G=4\pi Ae$
D	$G=Ae/\lambda 2$
Answer	A

Id	02
Question	Which of the following mechanism do not impact propagation in mobile communication system?
A	Reflection
B	Diffraction
C	Scattering
D	Refraction
Answer:	D

Id	03
Question	Large scale fading refers the attenuation in
A	Amplitude
B	Phase

C	Signal power
D	None of the mentioned
Answer	C

ID	04
Question	Which of the following relates the incident and reflected & transmitted wave?
A	Fresnel transmission coefficient
B	Scattering coefficient
C	Diffraction coefficients
D	Fresnel reflection coefficient
Answer:	D

Id	05
Question	Small scale propagation model is also known as _____
A	Fading model
B	Micro scale propagation model
C	Okumura model
D	Hata model
Answer	A