Enrolln	nent No: _	~ ~		
		C.U.SHAH	UNIVERSITY	
		Summer Ex	amination-2022	
Subject	Name: B	asic Instrumentation Skill	ls	
Subject Code: 4SC06BIS1			Branch: B.Sc. (Physics)	
Semeste	er: 6	Date: 09/05/2022	Time: 02:30 To 05:30	Marks: 70
, ,		ns written on main answer b t diagrams and figures (if no	•	
(3) (4)	Draw nea Assume s Attemp	t diagrams and figures (if no uitable data if needed. of the following questions:	ecessary) at right places.	of 0 001.
(3) (4) 1 a)	Attemp If the le	t diagrams and figures (if no uitable data if needed. of the following questions: ngth of a metal piece is meanually you represent the final	asured to be 4.75 cm with an error or result?	of 0.001;
(3) (4) 1 a) b)	Attemp If the le How we Define	t diagrams and figures (if no uitable data if needed. of the following questions: ngth of a metal piece is meanually you represent the final the term 'precision'. What is	asured to be 4.75 cm with an error or result?	of 0.001;
(3) (4) 1 a) b) c)	Attemp If the le How we Define What is	t diagrams and figures (if no uitable data if needed. of the following questions: ngth of a metal piece is meaning the term 'precision'. What is the function of a rectifier?	asured to be 4.75 cm with an error or result? s its significance?	of 0.001;
(3) (4) 1 a) b) c) d)	Attemp If the le How we Define What is Write a	t diagrams and figures (if no uitable data if needed. It the following questions: ngth of a metal piece is mean ould you represent the final the term 'precision'. What if the function of a rectifier? pplications of distortion me	asured to be 4.75 cm with an error of result? s its significance?	of 0.001;
(3) (4) 1 a) b) c) d) e)	Attemp If the le How we Define What is Write a	t diagrams and figures (if no uitable data if needed. In the following questions: ngth of a metal piece is meaning the term 'precision'. What is the function of a rectifier? pplications of distortion meaning quantity corresponds to the	asured to be 4.75 cm with an error of result? s its significance? ter. x-axis (base) of the CRO?	of 0.001;
(3) (4) 1 a) b) c) d) e) f)	Attemp If the le How we Define What is Write a Which e	t diagrams and figures (if no uitable data if needed. In the following questions: ngth of a metal piece is mean ould you represent the final the term 'precision'. What is the function of a rectifier? pplications of distortion mequantity corresponds to the the function of universal control of the process.	asured to be 4.75 cm with an error of result? s its significance? ter. x-axis (base) of the CRO? counters?	of 0.001;
(3) (4) 1 a) b) c) d) e)	Attemp If the le How we Define What is Write a Which e What is Mention	t diagrams and figures (if no uitable data if needed. In the following questions: ngth of a metal piece is meaning the term 'precision'. What is the function of a rectifier? pplications of distortion meaning quantity corresponds to the	asured to be 4.75 cm with an error of result? s its significance? ter. x-axis (base) of the CRO? counters?	of 0.001;
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(3) (4) (4) (a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k)	Attemp If the le How we Define What is Write a Which What is Mention Give th What is Mention What do Mention	t diagrams and figures (if no uitable data if needed. In the following questions: Ingth of a metal piece is mean ould you represent the final the term 'precision'. What is the function of a rectifier? In the function of distortion mean quantity corresponds to the the function of universal contact the difference between a defended of the function of the contact of the function of the difference between a defended of the function of the function of the difference of a function general any one significance of a contact of the contact of the function is used in the screen material is used in the screen contact of the difference of a function general the function is used in the screen contact of the functio	asured to be 4.75 cm with an error of result? s its significance? ter. x-axis (base) of the CRO? bunters? digital and an analog signal. rator? digital voltmeter. n of a CRO to visualize the wave for ge oscilloscope? nic distortion.	

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Q-2		Attempt all questions	(14)
	a)	Explain in detail the working of amplifier-rectifier millivoltmeter.	7
	b)	Write a short note on delay line.	7
Q-3		Attempt all questions	(14)
	a)	Elaborate on the principle of measurement of ac current using a multimeter.	`7
	b)	Explain in detail digital to analog converter with necessary diagram.	7
Q-4		Attempt all questions	(14)
	a)	Write a note on the functioning of a digital storage oscilloscope.	7
	b)	Explain the working of a CRO with necessary diagram.	7
Q-5		Attempt all questions	(14)
-	a)	With necessary block diagrams, explain the working of pulse generators.	7



	b)	Explain the working principle of the Q-meter.	7
Q-6		Attempt all questions	(14)
	a)	A 3 ½ digit voltmeter is used for measuring voltage	7
		(i) Find resolution of the instrument.	
		(ii) How would a voltage of 14.53 V be displayed on a 10 V scale?	
		(iii)How would a reading of 14.53 be displayed on a 100 V scale?	
	b)	Explain the uses of CRO in measuring various quantities of a wave pattern.	7
Q-7		Attempt all questions	(14)
	a)	Write short notes on (1) function generator, (2) RF and microwave generator	7
	b)	What is the significance of LCR meter?	4
	c)	Differentiate between analog and digital instruments.	3
Q-8		Attempt all questions	(14)
	a)	What is a time base generator? Explain its basic principle in detail.	6
	b)	Write a short note on the working of a digital multimeter as a digital voltmeter	Q

