Bearys Institute of Technology Mangaluru

BEARYS INSTITUTE OF TECHNOLOGY

Bearys Knowledge Campus, Lands End, Innoli,
Near Mangalore University, Mangalore - 574153

1st IA QUESTION PAPER SCHEME (2022-23)

Class : IV ECE | **Max. Marks: 50**
Subject: DSP | **Subject code: 21EC42**
Date : 06.07.2023 | **Faculty Name: Abdul Jabbar**

Question number		Explanation	Mark split up		Total marks
1	a	Proof for sampling of Fourier transform of a sequence x(n) results in a N point DFT using which both the sequence and the transform can be reconstructed.	10	10	20
	b	X(K)= { 10,2+j2, -2, 2-j2} H(K) = { 7, 1+j2, -1, 1-j2} X(K).* H(K) ={ 70,-2+j6,2,-2-j6 } y(n)= { 17,14,19,20}	03 03 01 03	10	
2	a	X(K)= {6, -0.707-j1.707, 1-j, 0.707+j0.293, 0, 0.707-j0.293, 1+j, -0.707+j1.707} Magnitude Spectrum Phase Spectrum	08 01 01	10	20
	b	X(K)= { 6, -4, 6, -4} H(K) = { 6, -1-j5,-4, -1+j5} X(K).* H(K) ={ 36, 4+j20, -24, 4-j20 } y(n)= { 5,5,1,25}	03 03 01 03	10	
3	a	(i) X(0)= 13 (ii) X(6)= -13 (iii) 36 (iv) -48 (v) 1500	01 01 02 03 03	12	30
	b	Ans: y(n)={ -4, 20, 0, -19} (i) Concentric circle method (ii) Matrix method	 04 04	08	
	c	$DFT[a^n]= (1-a^N) / (1-ae^{-j2\pi k/N})$ DFT{cos[$2\pi k_o n/N$}}	05 05	10	

1st IA QUESTION PAPER SCHEME (2022-23)

4	a	(i)s(n)= $x((n+3))_6$ = {3,4,0,0,1,2} (ii)y(n)=1/2[x(n)+$x((-n))_6$] ={0,0.5,3,3,3,0.5} (iii)z(n)= (1/2j)[x(n)-$x((-n))_6$] ={0,(1/2j),j,0,j, (-1/2j)}	04 03 03	10	30
	b	X(k)=X*(N-k)=X*((-k))N K1 = 86; K2 = 189; K3 = 386; K4 = 487	02 08	10	
	c	Statement of any five properties Each Property carries 2 Marks	10	10	

Course Coordinator

HOD

HOD
(Dept. of Electronics & Communication Engg.)
Bearys Institute of Technology
Land End, Innoli, Boliyar Village
Near Mangalore University
MANGALORE - 574 153

BEARYS INSTITUTE OF TECHNOLOGY

(Approved by AICTE, Recognized by Govt. of Karnataka, Affiliated to VTU, Belagavi.)
(Accredited by NAAC with 'B+' Grade)

Bearys Knowledge Campus, Lands-End, Innoli, Near Mangaluru University,
Mangaluru - 574 199, Karnataka, India

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CONTINUOUS INTERNAL EVALUATION (CIE) TEST BOOK

NAME OF THE STUDENT : Avinash Bankur

SEM / ACADEMIC YEAR : 5th sem BRANCH : ECE SECTION : A

UNIVERSITY SEAT NUMBER : 4BP22EC005

SUBJECT : Digital Signal Processing SUBJECT CODE: BEC502

	DATE	MAX. MARKS	MARKS OBTAINED	TEACHER'S INITIAL	REMARKS
FIRST TEST	29/10/2024	50	43		- Satisfactory -
SECOND TEST	18/12/2024	50	38		- Satisfactory -
THIRD TEST					

AVERAGE TEST MARKS (15)	AVERAGE ASSIGNMENT MARKS (10)	~~ACTIVITY MARKS~~ Practical (05)	
12	10	25	= 47/50

FINAL MARKS AWARDED	IN FIGURE	IN WORDS
	47	Fourty Seven only

Student Staff HOD

VISION

To be a premier institution in engineering education and research, fostering innovation, societal responsibility, and ethical leadership for a sustainable future.

MISSION

1. Promote innovation and cutting-edge research to develop sustainable engineering solutions for real-world and global challenges.
2. Cultivate ethical leadership and technical excellence among students to become responsible and leading engineering professionals.
3. Encourage active societal engagement and industry collaboration to drive inclusive growth and environmental responsibility.

DEPARTMENT: Electronics & Communication Engg

VISION AND MISSION OF THE DEPARTMENT

Vision

To be a centre of excellence in Electronics and Communication Engineering, advancing research, innovation, ethical practice, and sustainable solutions for societal transformation.

Mission

1: Foster innovation and research in Electronics and Communication Engineering, to create sustainable solutions addressing real-world and technological challenges.
2: Inculcate technical excellence and ethical values to develop competent graduates who contribute as professionals and leaders.
3: Promote industry collaboration and community engagement to ensure inclusive development and environmentally conscious engineering practices.

CIE MARKS TABLE

CIE I	PART A	CO1	CO1	CO1	CO1 TOTAL	CO1	CO1	CO1	CO1 TOTAL	TOTAL
		1a	1b	1c		2a	2b	2c		
		NA	NA	NA	NA	07	07	NA	14	14
	PART B	CO2	CO2	CO2	CO2 TOTAL	CO2	CO2	CO2	CO2 TOTAL	TOTAL
		3a	3b	3c		4a	4b	4c		
		09	10	10	29	NA	NA	NA	—	29

$= \frac{43}{50}$

CIE MARKS TABLE

CIE II	PART A	CO4	CO4	CO5	CO4 TOTAL	CO4	CO4	CO5	CO TOTAL	TOTAL
		1a	1b	1c		2a	2b	2c		
		9	NA	NA	09	NA	NA	NA	—	09
	PART B	CO3	CO3	CO3	CO3 TOTAL	CO3	CO3	CO3	CO3 TOTAL	TOTAL
		3a	3b	3c		4a	4b	4c		
		09	10	10	29	NA	NA	NA	—	29

$= \frac{38}{50}$