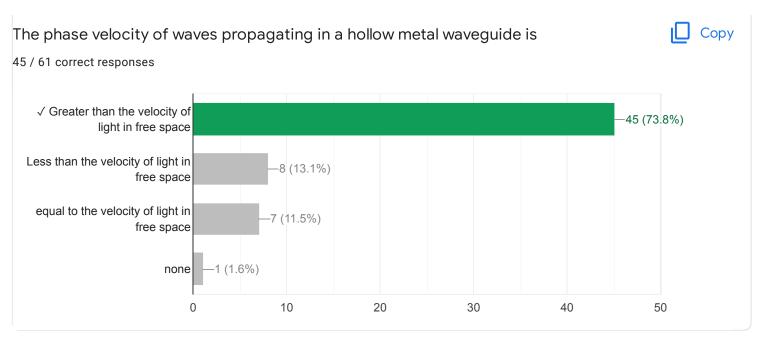
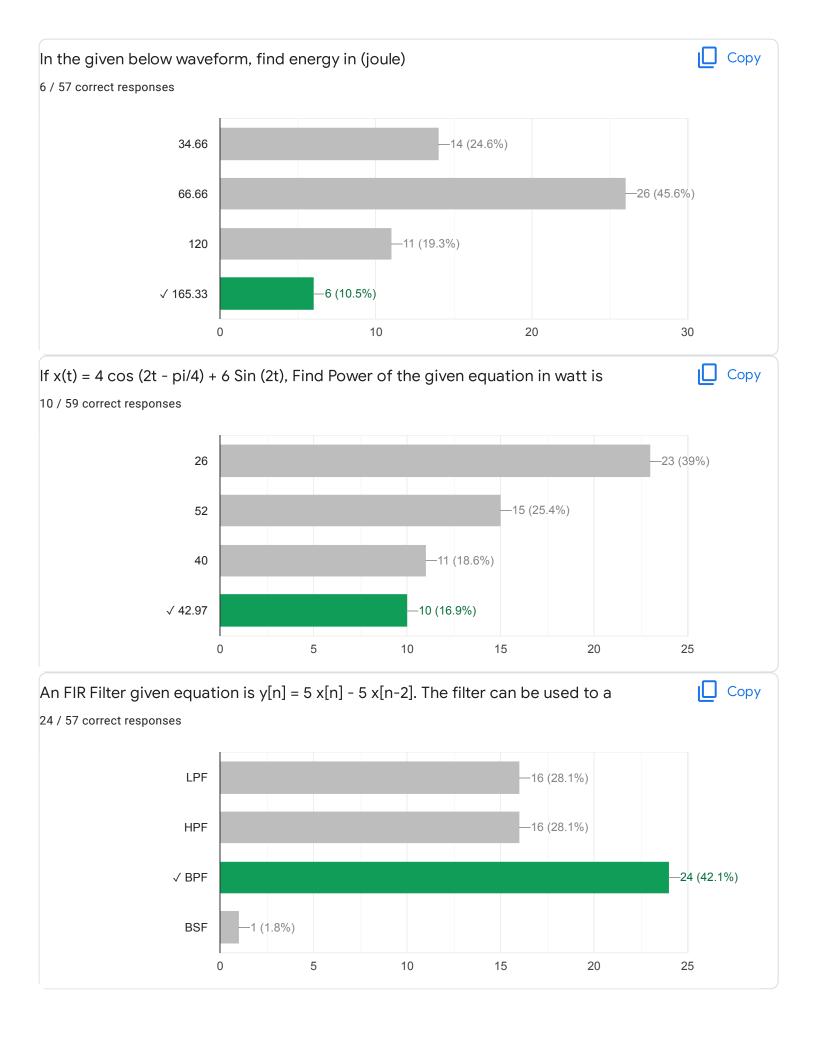
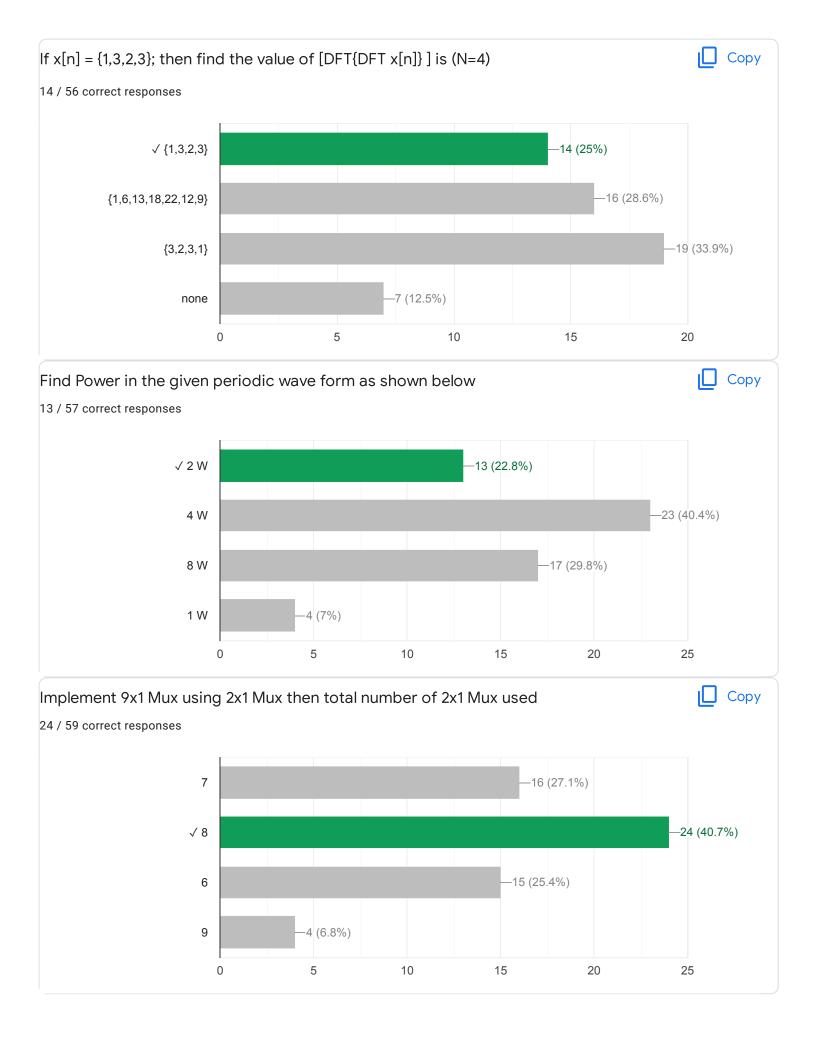
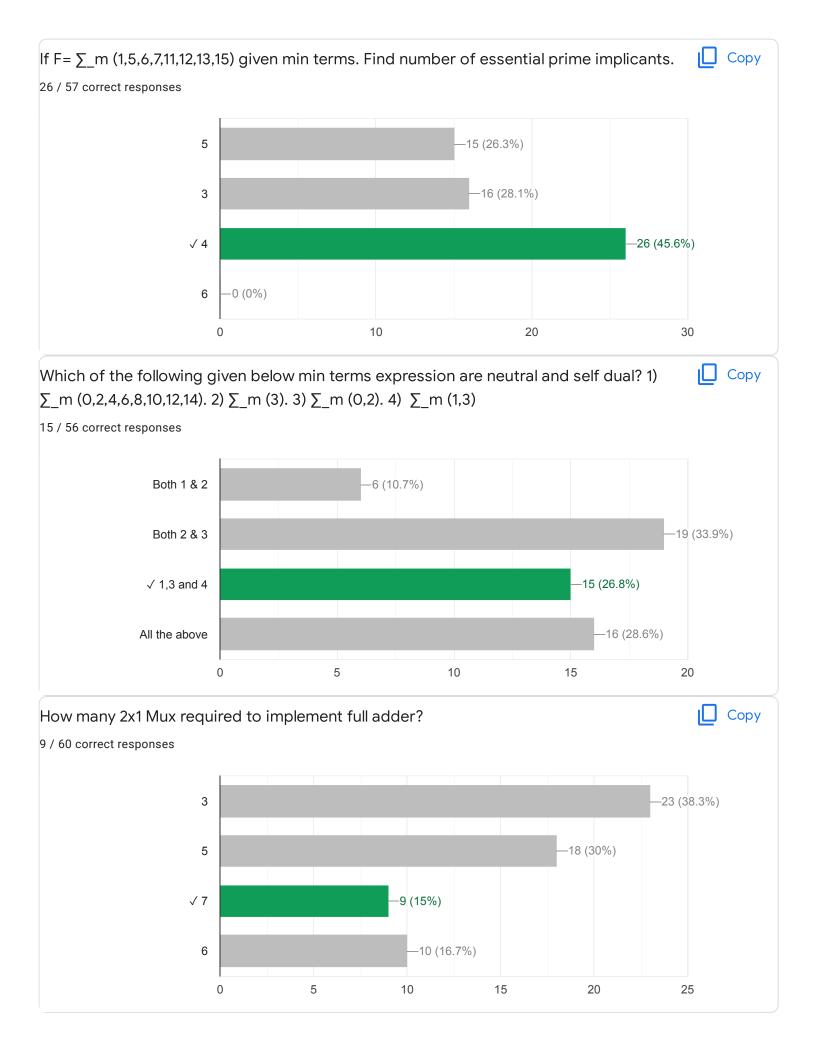


## Online Test for Guest Lecturer (Electronics Engineering)

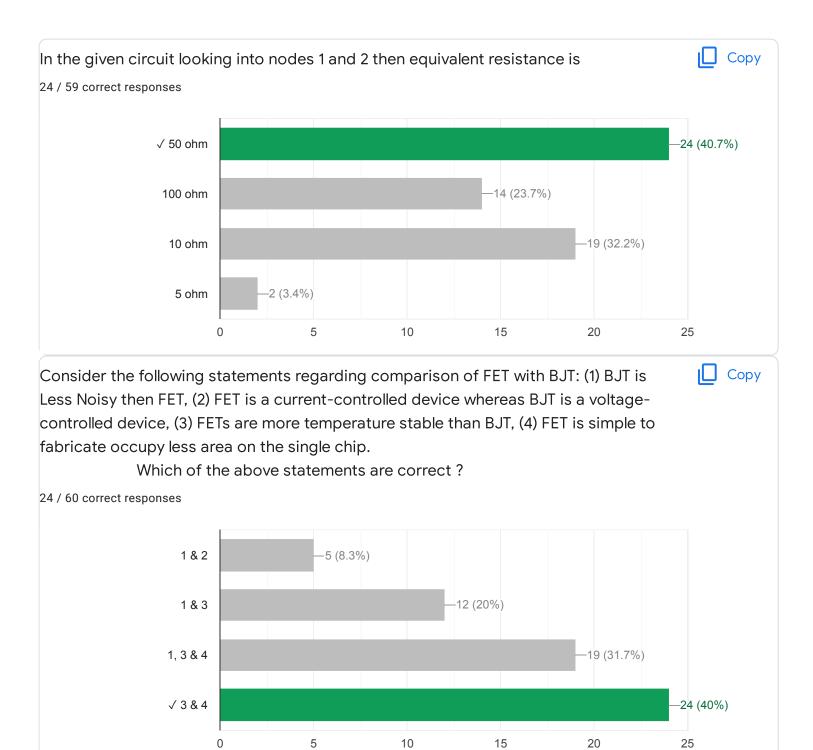


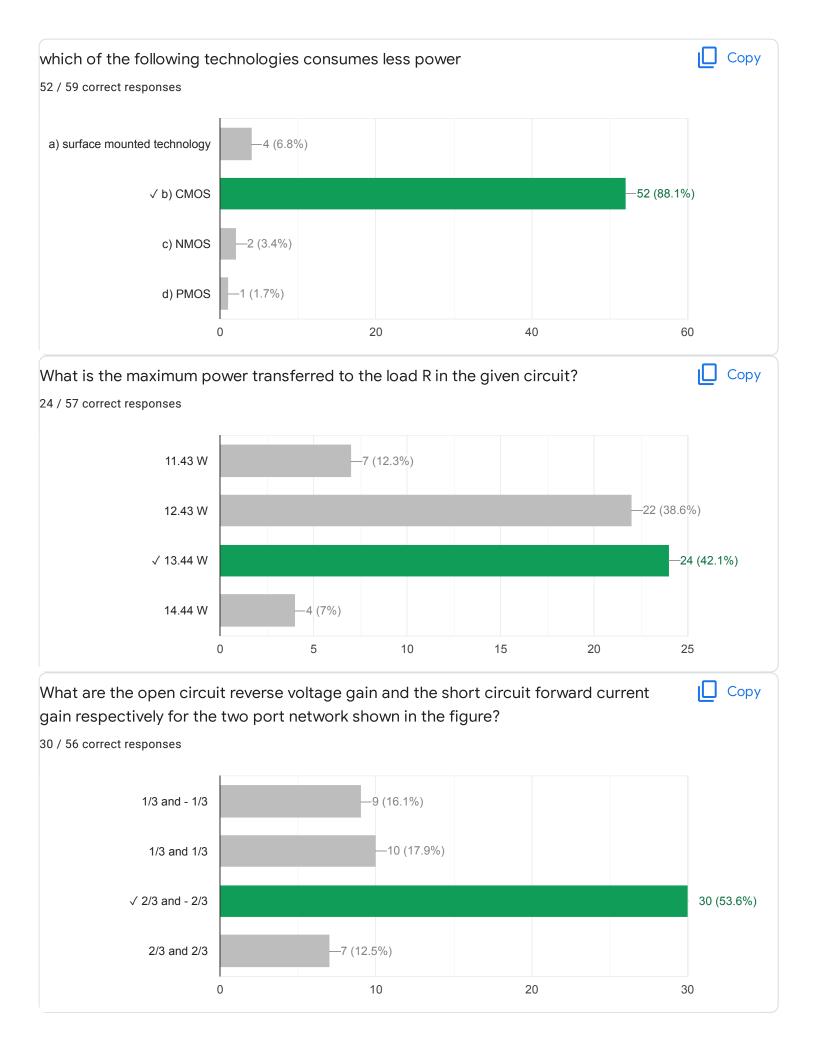


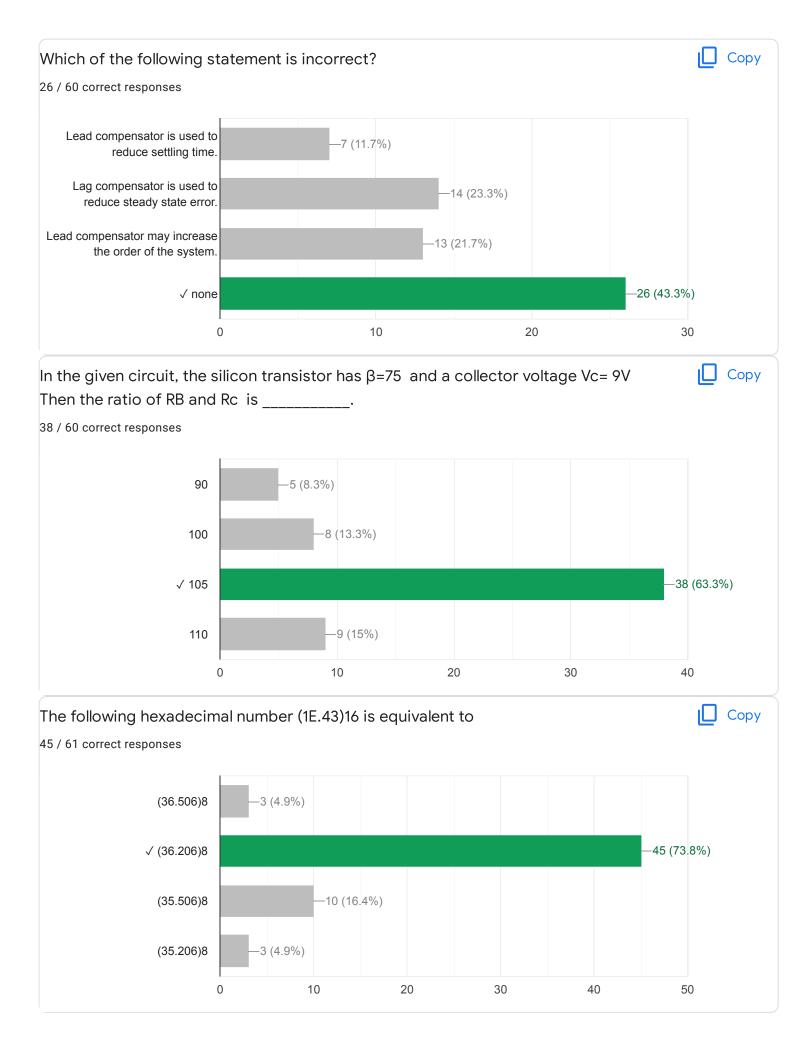












## Online Test for Guest Lecturer (Electronics Engineering)

Common Test for Government Polytechnic, Katihar, Khagaria and Bhagalpur Date of Test- 31-05-2022, Timing- 11:00 AM to 11:30 AM (Duration= 30 min), Full Marks: 20

## IMPORTANT INSTRUCTIONS:-

- 1. Test consists of 20 questions carrying 1 mark each.
- 2. Test consists of Multiple Choice Questions (MCQ) as well as Multiple Select Questions (MSQ); a question may have one correct choice or multiple correct choices.
- 4. Attempt all questions. There is NO negative marking in any types of questions.
- 5. Candidates can SUBMIT only 1 Response.
- 6. Candidates are advised to SUBMIT test on or before 11:30 AM. After that test will be closed

С	closed.				
* Re	quired				
1.	Email *				
2.	Name of the college applied for *  Mark only one oval.  Government Polytechnic, Katihar  Government Polytechnic, Khagaria  Government Polytechnic, Bhagalpur				
3.	Name of Candidate *				
4.	Father's/Husband's Name *				

5.	Date of Birth *	
	Example: January 7, 2019	
6.	Gender *	
	Mark only one oval.	
	Male	
	Female	
7.	Category *	
	Mark only one oval.	
	UR	
	EWS	
	BC	
	EBC	
	SC ST	
	31	
		Common Test for Government Polytechnic, Katihar, Khagaria and Bhagalpur Date of Test- 31-05-2022, Timing- 11:00 AM to 11:30 AM (Duration= 30 min), Full Marks: 20
	Online Test for	IMPORTANT INSTRUCTIONS:-  1. Test consists of 20 questions carrying 1 mark each

**Guest Lecturer** (Electronics Engineering)

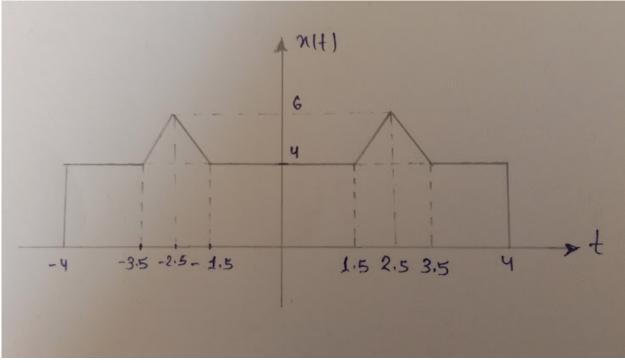
- 2. Test consists of Multiple Choice Questions (MCQ) as well as Multiple Select Questions (MSQ); a question may have one correct choice or multiple correct choices.
- 4. Attempt all questions. There is NO negative marking in any types of questions.
- 5. Candidates can SUBMIT only 1 Response.
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8. The phase velocity of waves propagating in a hollow metal waveguide is

Mark only one oval.

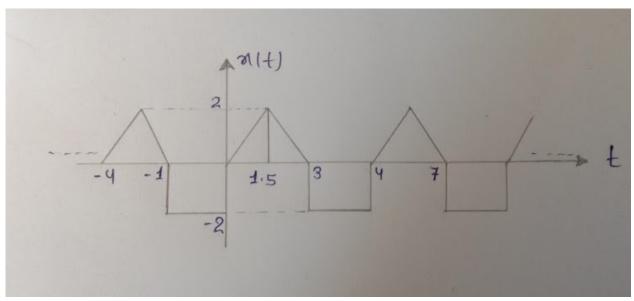
- Greater than the velocity of light in free space
- Less than the velocity of light in free space
- equal to the velocity of light in free space
- none
- 9. In the given below waveform, find energy in (joule)

1 point



- 34.66
- 66.66
- 120
- 165.33

10.	If $x(t) = 4 \cos(2t - pi/4) + 6 \sin(2t)$ , Find Power of the given equation in watt is	1 point
	Mark only one oval.	
	26	
	52	
	40	
	42.97	
11.	An FIR Filter given equation is $y[n] = 5 x[n] - 5 x[n-2]$ . The filter can be used	1 point
	to a	
	Mark only one oval.	
	LPF	
	HPF	
	BPF	
	BSF	
12.	If $x[n] = \{1,3,2,3\}$ ; then find the value of [DFT{DFT $x[n]$ }] is (N=4)	1 point
	Mark only one oval.	
	<b>(1,3,2,3)</b>	
	{1,6,13,18,22,12,9}	
	{3,2,3,1}	
	none	



Mark only one oval.

	- )	2	11/
(	- )	_	vv

- )	4	۱۸
	4	٧V

14. Implement 9x1 Mux using 2x1 Mux then total number of 2x1 Mux used

1 point

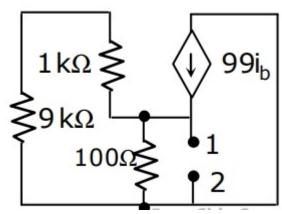
_	_	
		_
/	- 1	
	,	

$$\bigcirc$$
 6

15.	If $F = \sum_{m}$ (1,5,6,7,11,12,13,15) given min terms. Find number of essential prime implicants.	1 point
	Mark only one oval.	
	<ul><li>5</li><li>3</li><li>4</li><li>6</li></ul>	
1.6		
16.	Which of the following given below min terms expression are neutral and self dual? 1) $\sum_{m}$ (0,2,4,6,8,10,12,14). 2) $\sum_{m}$ (3). 3) $\sum_{m}$ (0,2). 4) $\sum_{m}$ (1,3)	1 point
	Mark only one oval.	
	Both 1 & 2	
	Both 2 & 3  1,3 and 4	
	All the above	
17.	How many 2x1 Mux required to implement full adder?	1 point
	Mark only one oval.	
	3	
	<u> </u>	
	7	
	<u> </u>	

18.	If a 7 bit hamming code word received by a receiver is (1011011). Assume the even parity and check whether the received code is correct.	1 point
	Mark only one oval.	
	True	
	False	
19.	If a left-handed circularly polarized wave is incident normally on a plane perfect conductor, then the reflected wave will be	1 point
	Mark only one oval.	
	Right-handed circularly polarized	
	left-handed circularly polarized	
	Horizontally polarized	
	none	

is



Mark only one oval.

	50	ohm
	วบ	OHIII

(	)	1	00	$\sim$	nm
(	- /	- 1	υu	OI	1111

21. Consider the following statements regarding comparison of FET with BJT: 1 point (1) BJT is Less Noisy then FET, (2) FET is a current-controlled device whereas BJT is a voltage-controlled device, (3) FETs are more temperature stable than BJT, (4) FET is simple to fabricate occupy less area on the single chip.

Which of the above statements are correct?

Mark only one oval.

1 & 2

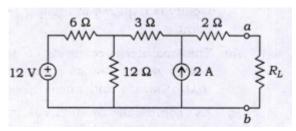
( )1&3

1,3 & 4

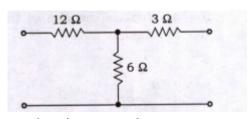
3 & 4

Mark only one oval.

- a) surface mounted technology
- b) CMOS
- c) NMOS
- d) PMOS
- 23. What is the maximum power transferred to the load R in the given circuit? 1 point



- 11.43 W
- 12.43 W
- 13.44 W
- 14.44 W



Mark only one oval.

	1/3	and	- 1	/3
--	-----	-----	-----	----

- 1/3 and 1/3
- 2/3 and 2/3
- 2/3 and 2/3

25. Which of the following statement is incorrect?

1 point

- Lead compensator is used to reduce settling time.
- Lag compensator is used to reduce steady state error.
- Lead compensator may increase the order of the system.
- none

26.	In the given circuit, the silicon transistor has $\beta$ =75 and a collector voltage Vc= 9V Then the ratio of RB and Rc is	1 point
	Mark only one oval.	
	90	
	100	
	105	
	110	
27.	The following hexadecimal number (1E.43)16 is equivalent to	1 point
	Mark only one oval.	
	(36.506)8	
	(36.206)8	
	(35.506)8	
	(35.206)8	

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