



BALOCHISTAN UNIVERSITY OF ENGINEERING & TECHNOLOGY KHUZDAR

DEPARTMENT: BMED

EXAMINATION:

Mid Term 2024

SUBJECT: Basic Electrical Engineering

CODE NO:

EE-120

SEMESTER: B.E (1st Semester)

Max: Marks:

20

Time Allowed: 60 Minutes

Note: Attempt All questions

Q.NO	Description	Marking Scheme	CLO/PLO	Bloom
1.	(a) Define Kirchhoff's Law, Impedance, Inductive Reactance, Capacitive Reactance, and Power Triangle.	05	CLO-1 PLO-2	C-3
	(b) Apply a Maximum Power Transfer Theorem to calculate maximum power in the Circuit given below. The Value of supply voltage $V_s = 100\text{ V}$, source resistance $R_s = 25\text{ ohm}$, when the value of variable load resistance $R_L = 0, 5, 10, 15, 20, 25, 30, 40, 60$, and 100 volts . <div style="text-align: center;"> </div>	05	CLO-1 PLO-1	C-1
2.	(a) A series RLC circuit containing a resistance of 12Ω , an inductance of 0.15H and a capacitor of $100\mu\text{F}$ are connected in series across a 100V , 50Hz supply. Calculate the total circuit impedance, the circuit current, and power factor. <div style="text-align: center;"> </div>	05	CLO-1 PLO-1	C-1
	(b) Write Short Note on the following: <ol style="list-style-type: none"> Voltage Divider Rule and Current Divider Rule Resistance and Conductance. Charge, Voltage and Current Resonance Circuit. Power Factor. 	05	CLO-1 PLO-1	C-1