BALOCHISTAN UNIVERSITY OF ENGINEERING & TECHNOLOGY
KHUZDAR

DEPARTMENT:	Biomedical Engineering	EXAMINATION:	Mid Term Spr 2025
SUBJECT:	Biomedical Signal Processing	CODE:	BME-355
SEMESTER:	B.E (5th Semester)	Max: Marks: 20	Time Allowed: 60 Minutes

Note: Attempt All questions

Q.NO	Description	CLO	Bloom-Tax	PLO	Marking Scheme
1	a) **Differentiate** between various types of biomedical signals?	CLO2	C-4	2	2
	b) **Outline** the main challenges in acquiring biomedical signals				2
	c) **Illustrate** the Nyquist-Shannon sampling theorem and its significance in ECG signal acquisition				2
2	a) An electromyogram (EMG) signal contains maximum frequency components up to 500 Hz. **Calculate** the minimum sampling frequency required to avoid aliasing.	CLO2	C-4	2	4
	b) **Distinguish** between discrete-time systems and continuous-time systems.				3
3	b) **Compute** the inverse Z-Transform of the following $$H(z) = \frac{z^2 + 3z}{z^2 - 5z + 3}$$	CLO1	C-3	1	7

THE END