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ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. / B. Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, NOV / DEC 2023

Common to Civil, Geoinformatics, Industrial, Material science and IT
VII Semester**BM5792 & Electronics in Medicine**
(Regulation 2019)

Time: 3hrs

Max.Marks: 100

CO 1	Apply different medical devices in the measurement of parameters related to cardiology
CO 2	Describe the various brain abnormalities and different techniques that are used to identify it
CO 3	Ability to comprehend the various aspects of hemodialysis and lithotripsy
CO 4	Measure various nonelectrical physiological parameters
CO 5	Elucidate the effectiveness of modern medical devices and technology that are used to tackle the various visual and auditory disorders.

BL – Bloom's Taxonomy Levels

(L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analysing, L5 - Evaluating, L6 - Creating)

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

Q. No	Questions	Marks	CO	BL
1	Differentiate between internal and external pacemakers.	2	1	4
2	Explain EECF technique.	2	1	2
3	Draw and label the international 10-20 lead system for EEG acquisition.	2	2	1
4	What is Polysomnography?	2	2	2
5	State the role of proportioning pumps in hemodialysis machine.	2	3	2
6	Explain the principle of dialysis in artificial kidney.	2	3	1
7	Define the purpose of oxygenators in Heart Lung Machine.	2	4	2
8	What is meant by korotkoff sound?	2	4	2
9	Mention any four applications of laser for eye related disorders.	2	5	1
10	What is Lithotripsy?	2	5	1

PART- B (5 x 13 = 65 Marks)
(Restrict to a maximum of 2 subdivisions)

Q. No	Questions	Marks	CO	BL
11 (a) (i)	Describe in detail the standard 12 leads of ECG acquisition system.	8	1	2
(ii)	Explain IABP in detail.	5	1	2
OR				
11 (b) (i)	Describe the different kinds of Prosthetic heart valves in detail.	8	1	2
(ii)	Write short notes on various cardiac abnormalities.	5	1	2
12 (a)	Compare and contrast Auditory and Visual sensory evoked response.	13	2	4
12 (b) (i)	Compare and contrast various imaging modalities used for Brain imaging.	13	2	4
13 (a)	Compare and contrast different types of dialyzers used in hemodialysis machine.	13	3	4

OR				
13 (b) (i)	Compare and contrast various types of lithotripsy.	13	3	4
14 (a) (i)	Compare and contrast auscultatory and oscillometric method of BP measurement	13	4	4
OR				
14 (b) (i)	Compare and contrast various types of blood flow meters.	13	4	4
15 (a)	With neat sketches explain the anatomy of eye and its abnormalities	13	5	2
OR				
15 (b) (i)	With neat sketches give a detailed description of Cochlear implant and hearing aid.	13	5	2

PART- C (1 x 15 = 15 Marks)
(Q.No.16 is compulsory)

Q. No	Questions	Marks	CO	BL
16.	Elaborate on ventilators.	15	4	2

