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ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

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

April / May  
2024

BIOMEDICAL ENGINEERING  
II  
BM3202 & Anatomy and Physiology  
(Regulation 2023)

Time:3hrs

Max.Marks: 100

CO1	Describe basic structural and functional elements of human body
CO2	Explain gaseous exchange and fluid maintenance in the human body
CO3	Enlighten organs and structures involving in system formation and functions
CO4	Identify all systems in the human body
CO5	Elucidate special senses in the human body

**BL – Bloom's Taxonomy Levels**

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

**PART- A(10x2=20Marks)**

(Answer all Questions)

Q.No	Questions	Marks	CO	BL
1	How action potential is generated in a cell membrane?	2	CO1	L1
2	Draw and label components of a connective tissue.	2	CO1	L1
3	What is urinary reflex?	2	CO2	L2
4	Define respiration	2	CO2	L2
5	What is Frank-Starling Law?	2	CO3	L2
6	Define Hemotocrit	2	CO3	L2
7	Draw and label cross sectional view of skin	2	CO4	L1
8	List out different cartilages present in the joints	2	CO4	L2
9	Draw and label route of a spinal nerve	2	CO5	L1
10	List out neuroglial cells present in peripheral nervous system.	2	CO5	L2

**PART- B(5x 13= 65Marks)**

(Restrict to a maximum of 2 subdivisions)

Q.No	Questions	Marks	CO	BL
11 (a) (i)	Draw and explain extra nuclear cell organelles and its functions	13	CO1	L1
<b>OR</b>				
11 (b) (i)	Explain different types of muscles present in the human body with illustrative diagram based on anatomy and physiology.	13	CO1	L1
12 (a) (i)	Draw and explain Juxta Glomerular Apparatus and its role in controlling blood pressure and water regulation.	13	CO2	L2
<b>OR</b>				
12 (b) (i)	How respiratory mechanism is occurred in human body explain with diagram?	13	CO2	L2
13 (a) (i)	Enumerated detailed information about blood vessel structure, types and functions with diagram.	13	CO3	L3

**OR**

13 (b) (i)	Explain Cardiac out put with its calculation and factors controlling it.	13	CO3	L4
14 (a) (i)	Write an essay about organ of corti with diagram	13	CO4	L2

**OR**

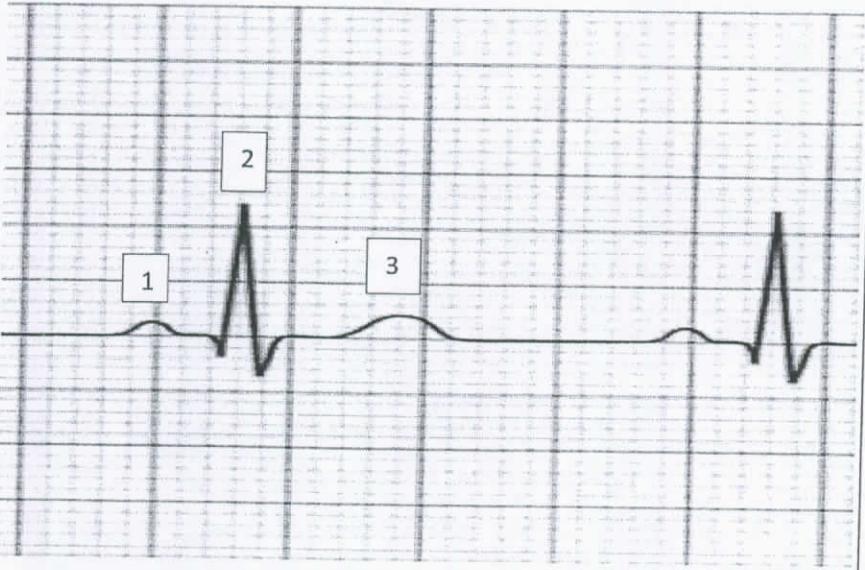
14 (b) (i)	How joints are classified based on anatomy and physiology explain with diagram?	13	CO4	L4
15 (a) (i)	How reflex mechanism occurs in spinal cord explain in detail with its importance and clinical relevance?	13	CO5	L4

**OR**

15 (b) (i)	Draw and explain different types of sulci, gyri and fissures present in brain its significance.	13	CO5	L2
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**PART- C(1x 15=15Marks)**

(Q.No.16 is compulsory)

Q.No	Questions	Marks	CO	BL
16.	<p>A)</p> <ol style="list-style-type: none"> <li>1. What does this picture represent?</li> <li>2. Find out waves representing 1,2 &amp; 3</li> <li>3. Explain 1,2 &amp; 3 waves.</li> <li>4. How to find out clinical conditions through these waves explain with one example?</li> </ol> 	2 Marks 2 Marks 5 Marks 6 Marks	CO5	L4,L5

