



TEEGALA KRISHNA REDDY ENGINEERING COLLEGE
(UGC-Autonomous)

Approved by AICTE, Affiliated by JNTUH, Accredited by NAAC- 'A' Grade
Medbowli, Meerpeta, Balapur, Hyderabad, Telangana- 500097
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Department of Information Technology

EHC -UNIT WISE IMPORTANT QUESTIONS

SHORT ANSWERS

UNIT-I: Health care data, Information and Knowledge			
S.NO	Question	Marks	BTL
1	Define Data, information and knowledge	1	LEVEL-2
2	Distinguish between Informatics and Information	1	LEVEL-2
3	Define Informatics?	1	LEVEL-2
4	WHAT Clinical Data Warehouses	1	LEVEL-2
5	Describe the Relationship between informatics and computer science	1	LEVEL-2
6	What are the reasons Health IT Failures ?	1	LEVEL-2
7	What are the Challenges to Data Analytics	1	LEVEL-2
8	List application of analytics	1	LEVEL-2
9	What is the role of informatics?	1	LEVEL-2
10		1	
UNIT - II: Electronic Health Records			
S.NO	Question	Marks	BTL
1	What is the need of electronic health records ?	1	LEVEL-2
2	Electronic Health Records	1	LEVEL-2
3	List the Key Components of EHR?	1	LEVEL-2
4	List some examples of Electronic Health Record Examples	1	LEVEL-2
5	Describe the limitations of paper-based health records	1	LEVEL-2
6	Describe the benefits and challenges of computerized order entry and clinical decision support systems	1	LEVEL-2
7	What are methods used of Electronic Health Record Adoption	1	LEVEL-2
8	List the three methods in Implementing an EHR ?	1	LEVEL-2
UNIT- III: Patient Monitoring Systems			
S.NO	Question	Marks	BTL
1	List different blocks in the block diagram of THE diagram of bed side monitor	1	LEVEL-2
2	List Techniques used to calculate heart rate include:?	1	LEVEL-2
3	What is plethysmographs ?	1	LEVEL-2
4	What are The methods used for the detection of volume (pulse) changes due to blood flow ?	1	LEVEL-2
5	List any two Indirect Methods of Blood Pressure Measurement?	1	LEVEL-2
6	Describe the measurement of temperature in patient monitoring systems?	1	LEVEL-2
7		1	LEVEL-2



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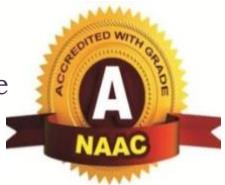
8	What is the basic function in measurement of respiration rate	1	LEVEL-2
9	List the methods used for the measurement of respiration rate	1	LEVEL-2
10	List the block in Typical instrumentation layout in a catheterization lab?	1	LEVEL-2
UNIT- IV: Biomedical Telemetry and Telemedicine			
S.NO	Question	Marks	BTL
1	Define WIRELESS TELEMETRY ?	1	LEVEL-2
2	List the single channel telemetry system suitable for the transmission of an electrocardiogram.?	1	LEVEL-2
3	Distinguish between Frequency-division multiplexing and Time-division multiplexing in multiplexing multi-channel radiotelemetry?	1	LEVEL-4
4	Define Multi-channel Wireless Telemetry Systems?	1	LEVEL-2
5	Explain about Multi-patient Telemetry ?	1	LEVEL-2
6	List the Telemedicine Applications?	1	LEVEL-2
7	What are the important Telemedicine Concepts?	1	LEVEL-2
8	Explain about Use of Internet Resource for Telemedicine	1	LEVEL-2
UNIT- V: Therapeutic devices			
S.NO	Question	Marks	BTL
1	What are the different Types of Pacemakers	1	LEVEL-2
2	What are the Types of Implantable Pacemakers ?	1	LEVEL-2
3	where Microprocessor-based anaesthetic equipment facilitates improves?	1	LEVEL-2
4	List some types of Pacemakers ?	1	LEVEL-2

LONG QUESTIONS



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UNIT-I: Health care data, Information and Knowledge

S.NO	Question	Marks	BTL
1	Define Data, Information, and Knowledge	10	LEVEL-2
2	Understand how vocabularies convert data to information	10	LEVEL-2
3	Describe methods that convert information to knowledge	10	LEVEL-2
4	Distinguish informatics from other computational disciplines, particularly computer science	10	LEVEL-2
5	Describe the differences between data-centric and information-centric technology	10	LEVEL-2
6	Discuss the difference between descriptive, predictive and prescriptive analytics	10	LEVEL-2
7	What characteristics of "Big Data"	10	LEVEL-2
8	What are the necessary skills for a worker in the data analytics field	10	LEVEL-2
9	Discuss the critical role electronic health records play in healthcare data analytics	10	LEVEL-2

UNIT - II: Electronic Health Records

S.NO	Question	Marks	BTL
1	State the definition and history of electronic health records (EHRs)	10	LEVEL-2
2	Describe the limitations of paper-based health records	10	LEVEL-2
3	Identify the benefits of electronic health records	10	LEVEL-2
4	List the key components of an electronic health record	10	LEVEL-2
5	Describe the ARRA-HITECH programs to support electronic health records	10	LEVEL-4
6	Describe the benefits and challenges of computerized order entry and clinical decision support systems	10	LEVEL-2
7	State the obstacles to purchasing, adopting and implementing an electronic health record	10	LEVEL-2
8	Enumerate the steps to adopt and implement an HER	10	LEVEL-2



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9	What are the three methods in Implementing an EHR ?		LEVEL-2

UNIT- III: Patient Monitoring Systems

S.NO	Question	Marks	BTL
1	Describe About Cardiac Monitor ?	10	LEVEL-2
2	Describe the Different Parts In Cardiac Care Units ?	10	LEVEL-4
3	DRAW THE diagram of bed side monitor AND explain about each block?	10	LEVEL-2
4	Explain about the different methods used for the detection of volume (pulse) changes due to blood flow ?	10	LEVEL-4
5	Difference between systolic pressure and diastolic pressure in blood pressure measurement?	10	LEVEL-4
6	Explain about the methods used for the measurement of respiration rate?	10	LEVEL-4
7	Explain about the measurement of temperature in patient monitoring systems?	10	LEVEL-4
8	Give the details about in Catheterization Laboratory Instrumentation.	10	LEVEL-2
9	With neat diagram explain Typical instrumentation layout in a catheterization lab?	10	LEVEL-4

UNIT- IV: Biomedical Telemetry and Telemedicine

S.NO	Question	Marks	BTL
1	Explain about single channel telemetry system ?	10	LEVEL-2
2	Explain about multi-channel wireless telemetry systems?	10	LEVEL-2
3	Explain the two basic methods for multiplexing multi-channel wireless telemetry systems?	10	LEVEL-2
4	explain about IMPLANTABLE TELEMETRY SYSTEMS	10	LEVEL-2
5	Define telemedicine? What are Telemedicine Applications?	10	LEVEL-2
6	Explain about Telemedicine Applications?	10	LEVEL-2



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7	Explain about Telemedicine Concepts and Essential Parameters for Telemedicine?	10	LEVEL-4
8	Explain about Telemedicine Technology?	10	LEVEL-4
9	Explains about transmission of analog physiological signals over telephone ?	10	
10	What is telemedicine?list some Telemedicine Applications?	10	

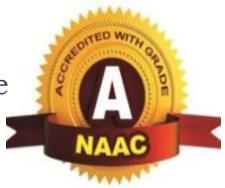
UNIT- V: Therapeutic devices

S.NO	Question	Marks	BTL
1	Explain the Need for Cardiac Pacemaker?	10	LEVEL-4
2	Explain about external pacemakers?	10	LEVEL-4
3	Explain about any two Types of Implantable Pacemakers?	10	LEVEL-4
4	What is implantable pacemakers>explain about its features	10	LEVEL-2
5	Explain the need for a defibrillator?	10	LEVEL-4
6	Explain about DC Defibrillator?	10	LEVEL-4
7	Explain about Electronics in the Anaesthetic Machine?	10	LEVEL-4



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Assignment/Tutorial Question(s)

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6	Discuss the difference between descriptive, predictive and prescriptive analytics
7	What characteristics of "Big Data"
8	What are the necessary skills for a worker in the data analytics field
9	Discuss the critical role electronic health records play in healthcare data analytics

UNIT - II: Electronic Health Records

S.NO	Question
1	State the definition and history of electronic health records (EHRs)
2	Describe the limitations of paper-based health records



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3	Identify the benefits of electronic health records
4	List the key components of an electronic health record
5	Describe the ARRA-HITECH programs to support electronic health records
6	Describe the benefits and challenges of computerized order entry and clinical decision support systems
7	State the obstacles to purchasing, adopting and implementing an electronic health record
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