

Introduction to IT-ITeS Industry

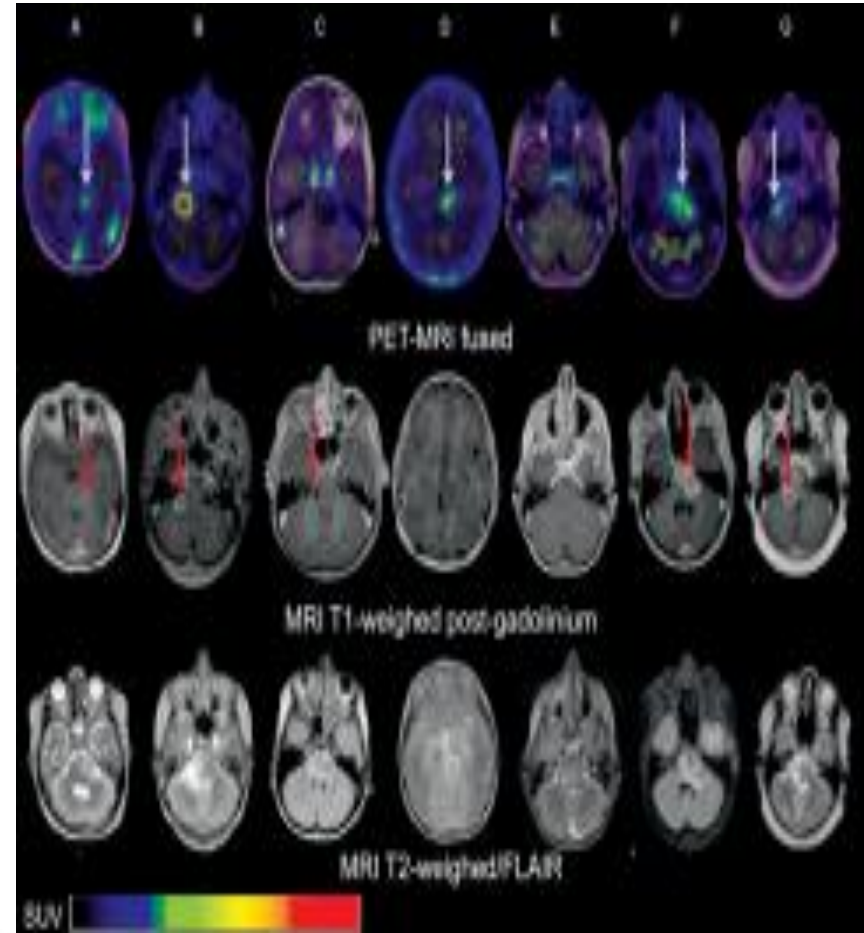
Class IX , Ch-1(IT #402)
Period 5

CHANGING YOUR TOMORROW

IT in health care

- ICT is used in the health sector in numerous ways. Hospital Management System is used to maintain and manage patients' records as well as various activities pertaining to hospital administration.
- The computerised machines are used for ECG, EEG, Ultrasound and CT Scan. The variety of measuring instruments and surgical equipment are used to monitor patients' conditions during complex surgery. Expert system is used for diagnosis.
- Health care manufacturing companies use computers to aid the production of diagnostic tools and instruments. Computers are an integral part of laboratories and dispensaries. They are used in scanning and diagnosing different diseases.

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(a) Use of ICT in diagnosis

- With the advancements in computer hardware and software technology, various high-tech machines are used in the diagnosis and treatment of critical diseases. Using expert system, diseases can be diagnosed at the early stages and the patients can be given treatment accordingly. Some of these machines are:

(i) Computerised Axial Tomography Machine (CAT): Using this machine three-dimensional (3D) images of different parts of the body can be made. These images are helpful in the diagnosis of diseases

(ii) MRI (Magnetic Resonance Imaging Machine):

MRI machines are used to give the digital impression of internal organs of the body by using strong magnetic fields and radio waves. The digital images are very helpful in the detection and in deciding the treatment of diseases.

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- **iii) Electrocardiogram (ECG) Machine:** The ECG machine is used to monitor the heartbeat. When the heart pumps blood to different parts of the body some electrical impulses are produced. This machine records the electrical impulses and shows it in the form of a graph.
- **(iv) Cardiac Screening Machine:** This machine displays the physiology of the heart and it displays the movements inside the heart. Through this machine it is possible to diagnose problems of the heart, such as thinning of veins and then recommend treatment.

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- **(v) EEG (Electro - encephalography) Machine:** This machine is used to record the activities of the brain.
- The small electrical probes attached to the head receive the electrical impulses of the brain and display them on a computer screen.
- This device can retrieve the data in both states where a patient is awake or asleep.
- **(vi) Blood Sugar Testing Machine:** This device analyses a sample of blood and determines the blood glucose level.
- **(vii) Blood Pressure Measuring Machine:** This device which is worn as a wrist band can measure the blood pressure of a person at rest or when he/she is involved in some physical activity.

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IT in the government and public service

- The government uses large-scale computer applications in its daily operations and is actively encouraging e-governance practices.
- Digital India and e-governance initiative of Government of India are best examples of this.
- Government and Non-Governmental Organisations (NGOs) as well as International Government Agencies use ICT applications to communicate and provide various services to the people and is called as e-governance.
- There are various official web portals of the Government of India for e-governance.

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Home Assignment(long questions)

- . Which are the different areas of healthcare where IT is used? And how?
- . List any 5 websites of the Indian government which provide IT enabled services to the people.

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