



GL BAJAJ

Institute of Management & Research

Approved by A.I.C.T.E., Ministry of HRD, Govt. of India

Roll No.....

Plot No. 2, Knowledge Park-III, Greater Noida (U.P.)–201306

POST GRADUATE DIPLOMA IN MANAGEMENT (2020-22)

MID TERM EXAMINATIONS (TERM -I)

Academic Session- 2020-21

Subject Name : Information Technology for Managers

Time: 01.30 hrs

Sub. Code: PG05

Max Marks: 20

Note:

- 1. Writing anything except Roll Number on question paper will be deemed as an act of indulging in unfair means and action shall be taken as per rules.**
- 2. All questions are compulsory in Section A, B & C. Section A carries 1 Case Study of 8 marks. Section B carries 3 questions of 2 marks each and Section C carries 2 questions of 3 marks each.**

SECTION - A04+04 = 08 Marks

Q. 1: Case Study: Information Processing in Hospitals

Information flows are the key to functioning of any hospital. When a patient the details like treatments given, doctors attending, the facilities provided, the medicines, and the food given to him/her are amongst other things recorded in the hospitals. When the patient is about to leave the hospital, this information is used to prepare a bill and update records. Digital monitors and sensors collect information on the patient and relay them to appropriate persons or equipment, where this is used to decide on further action and care. Much of this information in most hospitals in India is recorded on paper, if it is recorded at all. The most that many modern hospitals do is record the essential details about the patient in central systems, and maintain paper records on the treatment given. As doctors, nurses, and staff have not been provided with digital equipment, and some find them cumbersome to use even if they have such tools, paper records are the best mode of creating and storing the information.

The SevenHills Health City hospital of Mumbai has invested in an unusual innovation – that of creating a paperless hospital. This innovation has ensured that the entire process of patient care, including all the workflows, is entirely completed digitally, as also all records are maintained and updated electronically.

When a patient enters the SevenHills hospital, a medical officer first collects details about the patient and creates a unique identity for the patient with a Unique Health Identification Number (UHID). This number acts as a primary key for the patient for the current and all subsequent visits, and all information pertaining to the patient is recorded and accessed using this number. As the patient assigned to a doctor is sent for testing to various departments, or is admitted to a section for treatment, all such activities are recorded on the systems available within the hospital using the UHID. Even the medications provided and the monitoring done on the patient during the course of the treatment are recorded by the system and made available to attending physicians and nurses. If a particular treatment of medication has to be given, this is recorded by the doctor on the system, and it automatically translates into an order to the pharmacy department who has the medication shipped to the patient's room. The doctor can also view the inventory status on medications, and if any is not available, the system prompts him about alternatives.

The information captured and stored in the systems helps the hospital not only with better and more efficient patient care, but also helps with managing the hospital. Availability and scheduling of rooms, surgical theatres, doctors, and nurses can be done efficiently with the available information. The inventory levels of required hospital equipment, consumables in particular, as well as drugs can be monitored and replenished as required. Billing can be efficient as all treatments and services provided are recorded live and made available at the time of

creating the bill, usually when the patient leaves the hospital.

Even the patient records that are maintained by doctors are now in digital form. As doctors do not like typing their notes, they are provided with digital recorders in which they can speak, and this is later converted to text. The doctor can speak out details about the treatment, the patient responses and history, consultation notes, and also read other notes left by other doctors. The system transcribes the digitally recorded voice to text that is easily indexed and accessible by the system.

The system has enabled strong efficiencies in the hospital administration. Owing to the automated nature of recording treatments, medication, services, etc., the billing is more efficient, error-free, and reduces slippage. The hospital estimates that it is saving Rs 50,000 (USD 1000) monthly owing to better capture of patient care details. Also, owing to the increased information about facilities available and doctors' schedules, the amount of time required to treat a patient overall has reduced from an average of 6 days to 4.5 days. The hospital is also saving on paper and the processes required to save, copy, distribute, store, and retrieve paper, and this amounts to about Rs 300,000 (USD 6000) per month.

This pioneering effort of SevenHills hospital has received national recognition and it received the "Best ICT-enabled Hospital of the Year" award at the *eIndia Awards* ceremony in December 2011. The CIO of SevenHills, Suresh Kumar, has developed a healthcare solution software package called SevenHills e-HealthCare Suite that it plans to market to other hospitals. This represents a significant business proposition for SevenHills as the need for IT in hospitals is very high; the hospitals spend considerable amounts of money on IT systems, and there are not many software solutions available in the market that are tailored for them.

Case Study Questions

- (i) Identify the important Information Systems being used at the Seven Hills Hospital. How they are important for the management decision?
- (ii) Do you think that the adoption of IT is being done by hospitals for any competitive advantage? Why or why not?

SECTION – B

02×03 = 06 Marks

Q. 2: Cite the difference between Information Technology and Information Systems. How are they important for business?

Q. 3: Discuss the reasons for large scale investments by businesses into IT based solutions in the troubled times like COVID19.

Q. 4: What is the importance of RAM in the functioning of computer systems?

SECTION - C

03×02 = 06 Marks

Q.5. Discuss the computer system architecture alongwith brief discussion on the important parts of this architecture.

Q. 6. Discuss the Modern Input and Output Devices for Smartphones, tablet and laptop. How these devices are better than the prior to (year 2005) olden days devices? Elaborate.