

Code: 17BA1T7

**I MBA - I Semester-Regular/Supplementary Examinations  
December 2018**

**MANAGEMENT INFORMATION SYSTEM**

Duration: 3 hours

Max. Marks: 60

**SECTION-A**

**1. Answer the following:**

**5 x 2 = 10 M**

- a) What do you mean by Control System?
- b) Brief out on system analysis.
- c) Explain the term 'BPR'.
- d) What is a firewall?
- e) Explain data processing.

**SECTION – B**

**Answer the following:**

**5 x 8 = 40 M**

2. a) Explain the steps in development process of Management Information System.

(OR)

- b) Explain the impact of MIS on the business in changing business environment.

3. a) What is the need for System Analysis? Explain the role of a system analyst.

(OR)

- b) Differentiate between structured system Analysis and Object Oriented Analysis.

4. a) Expand the steps in effective Business Process Reengineering.

(OR)

b) Differentiate Decision Support System vs Knowledge Management System.

5. a) What is a network? Explain the advantages and disadvantages of having a unified communication network in today's business world.

(OR)

b) Write a brief note on the following

i) Spyware

ii) Cyber terrorism

iii) Hacking

6. a) Write a brief note on characteristics of Data Base Management System.

(OR)

b) Explain various data models and also elucidate on the use of data models in management.

## SECTION-C

### 7. Case Study

**1 x 10 = 10 M**

PP Infotech Ltd. has developed a core package – Hospital Management System (HMS) that addresses all major functional areas of Hospital. The development environment ensures that PP HMS has the portability and connectivity to run on virtually all standard hardware platforms, with stringent data security and easy recovery in case of a system failure. PP HMS provides the benefits of streamlined operations, enhanced administration and control, improved response to patient care, cost control, and increased profitability.

Some of the Subsystem Modules in PP HMS:

**Reception:** The reception module handles various enquiries about the patient's admission and discharge details, bed census, and the patient's

movements within the hospital. The system can also handle fixed-cost package deals for patients as well as Doctor Consultation and Scheduling, Doctor Consultancy Fees and Time Allocation. **OPD, IPD Registration and Admission:** This module helps in registering information about patients and handling both IPD and OPD patient's query. A unique ID is generated for each patient after registration. This helps in implementing customer relationship management and also maintains medical history of the patient. **Administration:** This module handles all the master entry details for the hospital requirement such as consultation detail such as doctor specialization, consultancy fee, and service charges. **Security:** This module handles multi level security of PP HMS so that every admission and transaction can be traced with the help of user ID.

**Pharmacy Store:** This module deals with all medical items. This module helps in maintaining Item Master Maintenance, Receipt of Drugs/consumables, issue handling of material return, generating retail bills, stock maintenance. It also helps in fulfilling the requirements of both IPD and OPD Pharmacy. **Purchase:** This module helps in raising purchase orders, maintaining purchase details and other purchase related details. **Laboratory:** This module enables the maintenance of investigation requests by the patient and generation of test results for the various available services, such as clinical pathology, X-ray and ultrasound tests. Requests can be made from various points, including wards, billing, sample collection and the laboratory receiving point. The laboratory module is integrated with the in-patient/ outpatient registration, wards and billing modules. **Emergency:** The development of this module keeps in mind the criticality of this department. Every care has been taken to ensure that minimum of time is taken to register the patient, so as to reduce the tension of the already stressed out relatives. Neither any detailed contact information of the patient is required nor any information about the payment type is solicited. **OT Management:** This module deals with operation theatre activities such as equipment used detail, resource ordering, drug order, gynecology detail recording, laboratory order and reports transfer requisition, patient monitoring, blood request, new born baby detail and details of delivery.

**Blood Bank:** The blood bank module provides information on the collection and storage of blood, results of blood tests, cross-matching identifications, and transfusion reactions. It also enables the maintenance of donor mailing lists and donation ledgers. It would also provide online stock of blood available in three blood banks (GTB, LNJP and DDU) **Ward Management:** The ward management module takes care of medical equipment, doctor visit, vitals recording, patient case sheet, diet ordering, blood requisition,

transfer intimation and discharge intimation etc. It also deals with the maintenance of the wards, inter- and intra-ward transfers. **OPD and IPD Billing:** The billing module facilitates cashier and billing operations for different categories of patients and automatic posting of charges for different services such as lab tests, medicines supplied, consulting fees, food and beverage charges, etc. It enables credit party billing through integration with the financial accounting module. **Intensive Care Unit (ICU):** This module caters to scheduling, maintaining ICU Record, drug orders, consultant details, specific blood requests etc.

**Food and Beverages:** This module facilitates collection of information regarding various diet routines of patients and identifies the resources required to satisfy diet orders. Depending on the diet orders and other requests from canteen, the kitchen order plan can be prepared to decide the menu for the day. Analysis of the consumption patterns helps in better and efficient management of the kitchen. **Discharge Summary:** The module helps in generating patient's discharge summary, which includes patient's health at the time of discharge, medical history, various diagnosis and drug prescriptions, history of present illness and course in hospital.

**Financial Accounting:** This module deals with cash/bank, receipts/payments, journal vouchers, etc. Various books of accounts, such as cashbook, bankbook and ledgers, can be generated and maintained using this module. It can also generate trial balance, balance sheet, and profit and loss statements. **Marketing Module:** This module ensures that the hospital gets maximum exposure to the general public and vice versa. This module keeps track of the enquiries made at the reception and follows the lead. **Doctor's Module:** This module helps the doctors to keep a track of the entire medical history of a particular patient. Details such as the medicines prescribed, general medical records, previous consultations are all available to the doctor. **HR Management:** Various MIS Reports are generated on the above modules for the smooth functioning of the hospital management so that checks can be made on any irregularity done in the hospital.

### **Questions :**

- a) Elucidate the conceptual plan for implementation of the Hospital Management System.
- b) You are hired as a System Analyst, advice on the following :
  - (i) Networking requirements
  - (ii) Database model requirements