

MASTER OF HOSPITAL ADMINISTRATION (MHA)
SEMESTER-II EXAMINATION, JUNE-2026
(2025 Batch)

(MHA127) MANAGEMENT INFORMATION SYSTEM IN HOSPITALS

[Time Allotted: 3:00 Hours]

[Max. Marks: 100]

Note: Read all the instructions carefully

Answer all questions in serial order, Draw suitable diagrams wherever necessary

Q. 1. Objective type questions: (Attempt All) **(10 x 02 = 20)**

(Very short/ Short answer/ MCQ/ One liners/ Fill in the blanks/ True/False)

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| a. What is MIS reporting in hospitals? | CO1 |
| b. Define ERP module. | CO1 |
| c. What is system conversion? | CO1 |
| d. Explain hospital database system. | CO1 |
| e. What is HRIS in hospitals? | CO1 |
| f. Define unit testing. | CO1 |
| g. What is parallel conversion method? | CO1 |
| h. What is patient data management? | CO1 |
| i. What is electronic health record (EHR)? | CO1 |
| j. What is decision support system (DSS)? | CO1 |

Q. 2. Short notes/ Short answer type questions (Attempt any Five) **(05 x 04 = 20)**

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|--|-----|
| a. Analyze the risks involved in system development projects in healthcare and suggest mitigation strategies. | CO2 |
| b. Discuss the criteria for selecting an ERP system for a hospital. | CO2 |
| c. Discuss ethical responsibilities of healthcare professionals in managing information systems. | CO2 |
| d. Define Hospital Information System (HIS). Explain its components and scope in modern hospitals. | CO2 |
| e. Describe different levels of hospital management and their information requirements. | CO3 |
| f. Explain the role of MIS reports in hospital decision-making. Provide examples of different types of reports. | CO3 |
| g. Explain the concept of Computer-Aided Software Engineering (CASE). Discuss its tools and benefits in hospital IT development. | CO3 |

Q. 3. Structured questions (Attempt any Three) **(03 x 10 = 30)**

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| a. Discuss the sequential (Waterfall) model of software development. Highlight its advantages and limitations in healthcare systems. | CO4 |
| b. Explain inventory management systems in hospitals. How do they improve efficiency and reduce costs? | CO4 |
| c. Describe the stages involved in System Analysis. Apply these stages to the implementation of a hospital information system. | CO4 |
| d. Explain the problem identification process in software development. Determine the various technique used for problem identification. | CO4 |

P.T.O.....

Q. 4. Long Answer/ Essay type questions (Attempt any Two)**(02 x 15 = 30)**

- a. Design the Corporate Hospital Information System; use various tools i.e entity relationship diagram, dataflow diagrams of various levels, table structure and analysis techniques etc. CO5

b. Case: OPD Overcrowding

CO5

A multi-specialty hospital is facing long waiting times in OPD. Patients complain about delays and lack of information about doctor availability. The hospital currently uses manual appointment registers.

Questions:

- i. Identify the key problems in the current system.
- ii. Suggest a MIS-based solution to improve OPD management.
- iii. What type of information system would you recommend and why

c. Case study

CO5

Molecular biology is one of two technologies that will shape how medicine will be practiced for future time (generation). Now-a-days, we diagnose on the basis of present symptoms which require immediate control & attention but future doctors will be able to spot the signs of any disease years before the disease actually occurs. But at the same time information is another important factor which will effect on healthcare.

Because of the vital importance & roll of information on healthcare, the number of healthcare websites in every country is increasing. In America, out of 90 mn. people with access to web more than two-third (majority) are reported to have used into it to search the health information, and as a result doctor-patient relationship has been turned upside-down. Because of the patient activism, which started in 1980 and with the help of the Internet, the role of doctors has been changing. With the help of Internet, the patients can form small groups and exchange their ideas, opinions, experience and can demand from society, doctors & pharma companies and can make independent decisions. This empowerment of consumers is one of the great benefits of electronic connectivity. As a result, patients will no longer accept medical paternalism, incompetence and arrogance and will become much more forceful about taking decisions related to their own care.

In India also because of the electronic technology break-thorough patients may demand drugs available in US. That would put pressure on Government to change their decisions on certain issues like raising the pharma budgets or allowing the patients to buy the drugs privately.

Now doctors also predict that patients will also be aware rebellion about extravagant and alarming variations in treatment procedures and will raise their voice. Doctors can't ignore & avoid the best clinical practice for treatment and rather they will forcefully have to make it standardized treatment procedure. Doctors of 2024 will have less excuses to deviate from standards, will be well equipped with latest, more sophisticated & reliable diagnostic information, data about a patient's genetic make-up and access to online guidelines & suggestions of best clinical practices, and even physician's-decision support software's will tell them what to do.

Questions:

- i. How the use & application of computers in medical science & research can improve the standard in medical research?
- ii. What is the importance of databases in modern medical research?
- iii. How different managers in the hospital management hierarchy will use the information for their own different purposes?