



INTERNATIONAL INSTITUTE OF
HEALTH MANAGEMENT RESEARCH

**Post Graduate Diploma in Management (Hospital & Health Management)
PGDM – 2021-23 Batch**

Term – III: Term End Examination

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|--------------------------|--|-------------------|-------------|
| Course & Code | : Requirements Management & HIT 703 | Reg. No. | : |
| Term & Batch | : III, 2021-23 | Date | : |
| Duration | : 3 Hrs. | Max. Marks | : 70 |

Instructions:

- Budget your time as per the marks given for each question and write your answer accordingly.
 - Don't write anything on the Question Paper except writing your Registration No.
 - Mobile Phones are not allowed even for computations.
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Part A: Q. 1 to Q.10 (10 questions*1 marks = 10 marks).

1. Which two requirements are given priority during Requirement Management of a product?

- a) User and Developer
- b) Functional and Non-functional
- c) Enduring and Volatile
- d) All of the mentioned

2. Why is Requirements Management Important? It is due to the changes

- a) to the environment
- b) in technology
- c) in customer's expectations
- d) in all the mentioned.

3. Requirements Management is a prerequisite for Quality-Oriented Development.

- a) True
- b) False

4. Requirements traceability is one of the most important part requirement management. It may also be referred to as the heart of requirement management.

- a) True
- b) False

5. Requirements Management has a high initial start-up cost but does not need ongoing funding throughout a project.

- a) True
- b) False

6. Which of the following is a requirement management activity?

- a) Investigation
- b) Design
- c) Construction and Test
- d) All of the mentioned

7. According to a statistical report: “over 30% of all software projects are cancelled before completion and over 70% of the remainder fail to deliver expected features”. What must be the reason for such a situation?

- a) Poor change management
- b) Poor requirements management
- c) Poor quality control
- d) All of the mentioned

8. The Unified Modeling Language (UML) has become an effective standard for software modeling many different notations does it have?

- a) Three
- b) Four
- c) Six
- d) Nine

9. Which model in system modelling depicts the dynamic behavior of the system?

- a) Context Model
- b) Behavioral Model
- c) Data Model

d) Object Model

10. Which model in system modelling depicts the static nature of the system?

- a) Behavioral Model
- b) Context Model
- c) Data Model
- d) Structural Model

Part B: Q.11 to Q.15 (4 questions *5 Marks =20 Marks) Attempt any four.

Short Notes

- 11. Write in brief about the SDLC.
- 12. What is traceability? Brief about the matrix used in traceability.
- 13. Compare Waterfall model with Spiral Model

ALFRED is a virtual butler, designed to be of significant use to assist those with age related dependencies: providing a reminder for medication, scheduling an appointment with their doctor, helping the person to go home, etc. The performance of these tasks should be simple and safe for the users inside and outside home.

- 14. Develop a user story from the perception of an old customer.
- 15. What tools will you use for gathering requirements for the above.

Part C: Q.16 to Q.21 (4 questions *10 Marks =40 Marks) Attempt any four.

Long Notes

- 16. Agile methodology most widely used in software development process. Why?
- 17. Explain in detail about the utilisation of documents writing for analysing the requirements. Justify

A 42-year-old primigravida female at 34 weeks gestation was brought to the obstetric emergency at midnight with complaints of severe headache, blurry vision, and right upper quadrant pain for the last five to six hours. The patient noted gradually increasing lower extremity oedema and facial swelling. She has a history of gestational hypertension and was prescribed labetalol 200 mg twice a day, one week previously. At the time of presentation, the blood pressure was 190/110 mm Hg on two separate occasions, five minutes apart. She had gained two kilograms since her last antenatal check-up in the clinic one week previously.

The patient was diagnosed with severe pre-eclampsia. The senior obstetric resident ordered a loading dose of magnesium sulphate to prevent imminent seizure. The hospital protocol used the IV and IM regimen where the patient receives a four-gram (20% concentration) intravenous solution bolus and 10-gram intramuscular dose (50% concentration), five gram in each buttock. The senior resident provided the order for magnesium sulphate administration to the junior resident verbally, who subsequently verbally communicated the order to the nurse.

This magnesium sulphate dosing regimen is complex with multiple doses in different locations and was incorrectly prepared by the nurse who felt rushed in an urgent situation. A chart displaying magnesium sulphate's preparation in the drug preparation room had become faded and was supposed to be replaced but was delayed. Therefore, the nurse prepared the medication relying on her memory. Before administering the medicine to the patient, as a part of the protocol, she repeated the dose strength aloud to another nurse who cross-checked it from a printed chart and picked up the error in time. The senior resident also identified the error as the dose was communicated aloud and stopped administering the drug.

Magnesium sulphate is on the list of high alert medications by the Institute of Safe Medication Practices. The drug has a serious risk of causing significant patient harm when used in incorrect dosages and concentrations. Accidents and adverse outcomes continue to occur with magnesium sulphate in obstetrics because of the complex dosing regimen and preparation. It is worthwhile to review important safety procedures that can minimize risk. It is advisable to use premixed solutions prepared by the pharmacy for the bolus rather than requiring nurses to mix high-risk medications on the unit.

Read the above case and answer the following

18. A CDSS is planned to be implemented to avoid future issues due to such medication administration. Draw an activity diagram to show how the digital process will work
19. Identify 5 functional requirements for the above solution
20. Draw Use case diagram for the above. If any assumption is made regarding the actors kindly mention the same.