

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. EXERCISE AND SPORTS SCIENCE / M.Sc. MRP / M.Sc. MIT / M.Sc. HIM / M.Sc. HHIA / M.Sc. CLINICAL PSYCHOLOGY DEGREE EXAMINATION – JUNE 2017

SUBJECT: RESEARCH METHODOLOGY & BIOSTATISTICS / BIOSTATISTICS /
EPIDEMIOLOGY & BIOSTATISTICS / ADVANCED BIOSTATISTICS & RESEARCH
METHODOLOGY

Friday, June 02, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

1. **Define the following:**

- 1A. Any three measures of central tendency
- 1B. Qualitative and quantitative variables with examples
- 1C. Sampling errors and non-sampling errors
- 1D. Sampling frame, probability sampling and non-probability sampling

(3+2+2+3 = 10 marks)

- 2A. Write the properties of normal distribution. List any two applications of normal distribution.
- 2B. The mean rate of adenosine triphosphate among a sample of 30 insulin resistant children was found to be 6 $\mu\text{mol/g}$ of muscle/min with standard deviation of 2 $\mu\text{mol/g}$ of muscle/min. Find the 95% and 99% confidence intervals for the mean rate of adenosine triphosphate for the study population.

(5+5 = 10 marks)

- 3A. Define type I error, type II error, level of significance and power of a statistical test of significance.
- 3B. Hypothermia is a problem for extremely low birth weight infants. A study was conducted to investigate whether wrapping these infants in polyethylene bags in the delivery room and while they are being transferred to the neonatal intensive care unit affects the survival of babies. The results of the study conducted among 140 extreme low birth weight babies are given in the following table:

Warming treatment	Number of infants		Total
	Lived	dead	
Polyethylene bag	63	7	70
Traditional	61	9	70
Total	124	16	140

Test at 5% level of significance whether mortality among the extreme low birth weight infants is associated with the kind of warming treatment given. The table value for 5% level of significance is 3.84.

(4+6 = 10 marks)

4. Discuss independent sample t test and paired t test with an example.

(10 marks)

5. Explain case control study under the headings:

- i) design with the help of a flow chart
- ii) measure of strength of association
- iii) merits
- iv) demerits

(4+2+2+2 = 10 marks)

6A. Write a short note on randomization in clinical trials.

6B. A randomized controlled trial has been planned to compare the effects of low fat diet with the diet recommended by the American Diabetic Association. The outcome variable is the total cholesterol (in mg/dL). What is the minimum number of subjects required in each group to detect a difference in total cholesterol of 20 mg/dL between the two groups with 90% power and 5% level of significance? Based on the earlier experience the standard deviation of total cholesterol in the population is about 35 mg/dL. The table value for 90% power and 5% level of significance is 1.28 and 1.96 respectively.

(5+5 = 10 marks)

7. **Write short notes on:**

- 7A. Validity of diagnostic test
- 7B. Structure of research thesis
- 7C. Meta-analysis
- 7D. Logistic regression

(5 marks × 4 = 20 marks)



MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. H.H.I.A./M.Sc. HI/M.Sc. HIM DEGREE EXAMINATION – JUNE 2017

SUBJECT: MEDICAL LANGUAGE – II (MHI 604/MIN 608/MHIM 604)
(SPECIALIZATION: HEALTHCARE IT MANAGEMENT)
(CBS – 2015 / 2014 SCHEME/2016 SCHEME)

Wednesday, June 07, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

1. **Write down the correct explanation for following medical terms:**

- a) Hypercalcemia b) Claustrophobia c) Tachypnea d) Hemorrhage
e) Hypospadias f) Cardiomegaly g) Leukemia h) Adjuvant
i) Interleukins j) Allergy

(1 mark × 10 = 10 marks)

2. **Write down the correct expansion for following abbreviations:**

- a) BMR b) CVP c) ECT d) FSGS e) HHV
f) IBD g) INR h) LSD i) MMSE j) OPV
k) PPP l) SVR m) VAT n) RV o) OCD

(1 mark × 15 = 15 marks)

3. **Write short notes on:**

- a) Immunotherapy b) Renal calculi c) Fetishism d) Headache
e) Q fever f) Cryptorchidism g) Endometriosis h) Placenta previa
i) Pemphigus j) Chronic myeloid leukemia

(2½ marks × 10 = 25 marks)

4. **Answer the following:**

- 4A. Distinguish between the clinical features of Hyperthyroidism and Hypothyroidism.
4B. Give a brief account about characteristic features of Obsessive Compulsive disorder.
4C. Write down about the clinical features and management of Erythroblastosis fetalis.
4D. Write down briefly about Menier's disease.
4E. Give brief account of different types of cancer management modalities.

(6 marks × 5 = 30 marks)



Reg. No.										
----------	--	--	--	--	--	--	--	--	--	--

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. HI/M. Sc. HIM DEGREE EXAMINATION – JUNE 2017

SUBJECT: HOSPITAL ADMINISTRATION (MIN 606/MHIM 608)

(SPECIALIZATION: HEALTHCARE IT MANAGEMENT)

(2014 SCHEME)

Friday, June 09, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

Answer ALL the questions.

1. Discuss the salient features of the Biomedical Waste (Management & Handling) Rules -1998.
(22 marks)
2. Discuss the planning of the out-patient services for a 750 bedded teaching hospital. Add a note on the management of the common problems faced in the OPD.
(22 marks)
3. **Short notes:**
 - 3A. Classification of Intensive Care Units
 - 3B. Safety issues in Laboratories
 - 3C. Inventory Management Techniques

(12 marks × 3 = 36 marks)



Reg. No.

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. H.H.I.A./M.Sc. HEALTH INFORMATION MANAGEMENT
DEGREE EXAMINATION – JUNE 2017

SUBJECT: HEALTH INFORMATICS (MHI 610/MHIM 610)
(2015/2014 SCHEME)/(CBS-2016 SCHEME))

Monday, June 12, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

1. Define clinical decision support system. Write the characteristics of it. Explain briefly on potential barriers involve in implementing clinical decision support system.
(1+4+7 = 12 marks)
2. Discuss in brief about strategic and tactical planning of health information system.
(1+11 = 12 marks)
3. Write the need of telemedicine in India. Explain briefly on various telemedicine services.
(3+9 = 12 marks)
4. List the international standard committees involve in developing technical standards for healthcare informatics. Discuss briefly on telecommunication standards for healthcare informatics application.
(2+10 = 12 marks)
5. Discuss on various approaches for predicting the future state of healthcare informatics.
(5+7 = 12 marks)
6. **Write short notes on:**
 - 6A. Development of health informatics during 1990s
 - 6B. Key capability of electronic health records
 - 6C. Challenges in implementing eHealth application
 - 6D. Dimension of performance in protection of health information(5 marks × 4 = 20 marks)



MANIPAL UNIVERSITY
SECOND SEMESTER M.Sc. HEALTH INFORMATICS
DEGREE EXAMINATION – JUNE 2017

SUBJECT: MIN 602 – ADVANCED HEALTH INFORMATICS
(SPECIALIZATION: HEALTHCARE IT MANAGEMENT)
(CBS-2014 SCHEME)

Monday, June 12, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

1. What is eHealth? Explain briefly on various strategies for the successful implementation of eHealth applications.

(1+11 = 12 marks)

2. Discuss the future trends and various approaches in predicting the future of health informatics.

(4+8 = 12 marks)

3. Discuss the changes took place in professional practice and management roles due to the advances in healthcare informatics. Discuss.

(12 marks)

4. Write the general principles of health informatics ethics. Briefly discuss the duties of health informatics professionals towards the profession and society.

(4+4+4 = 12 marks)

5. What is a knowledge base system? Discuss the various methods for representing the knowledge in the knowledge base expert system.

(2+10 = 12 marks)

6. **Write short notes on:**

6A. mHealth benefits

6B. Legal and policy implication in protecting health information

6C. Current scenario of health informatics in India

6D. Clinical Decision Support System

(5 marks × 4 = 20 marks)



MANIPAL UNIVERSITY**SECOND SEMESTER M.Sc. HIM DEGREE EXAMINATION – JUNE 2017****SUBJECT: HEALTH INFORMATION MANAGEMENT - II (MHIM 616)
(2016 SCHEME)**

Wednesday, June 14, 2017

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

✍ **Answer the following questions:**

1. What is scope of qualitative and quantitative analysis of health records? Illustrate with suitable examples.
(10 marks)
2. Discuss the bottle neck problems faced by HIM professional in implementation of EMR in developing countries.
(10 marks)
3. Which are the various types of reports generated in MRD? Write in detail about the causes, sources of poor quality statistical data and methods to improve.
(10 marks)
4. What is the role of audits in data quality improvement? Discuss.
(10 marks)
5. In telemedicine practice what are the differences between point to point and point to multipoint system? Discuss the factors affecting the future development of Telemedicine in India.
(20 marks)
6. **Write short notes on the following:**
 - 6A. SNOMED
 - 6B. Minimum Data Set
 - 6C. Vital Statistics
 - 6D. Interface

(5 marks × 4 = 20 marks)



Reg. No.									
----------	--	--	--	--	--	--	--	--	--

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. HIM DEGREE EXAMINATION – JUNE 2017

SUBJECT: MHIM 618 – QUALITY MANAGEMENT
(CBS-2016 SCHEME)

Friday, June 16, 2017

Time: 10:00 – 12:00 Hrs.

Max. Marks: 50

1. Explain in detail about six domains of quality intervention and its relevance for a health care organization with suitable examples.
(20 marks)
2. Discuss in detail about how factual approach to decision making can enhance the outcome of quality measures in a healthcare facility.
(10 marks)
3. Briefly discuss about the principles essential for quality improvement of care in a hospital.
(10 marks)
4. **Write short notes:**
 - 4A. Pareto Chart
 - 4B. Components of data quality

(5 marks × 2 = 10 marks)

