✍   Answer ALL the questions.

1A.   Define standard deviation. Explain the computation with example.

1B.   What is systematic sampling? Explain the procedure with an example. List the advantages and disadvantages of this technique.

(5+5 = 10 marks)

2A.   Suppose the low-density lipoprotein (LDL) cholesterol level of women aged 30-40 years are approximately normally distributed with a mean of 130 mg/dL and a standard deviation of 6mg/dL. A woman has just come down for LDL test. What is the probability that the woman's LDL level is:

i)   Between the ages of 124 and 136 mg/dL?

ii)   Over 136 mg/dL?

2B.   Write a short note on Poisson distribution.

(5+5 = 10 marks)

3.   Define the following terms:

3A.   i)   Level of significance

      ii)   P-value

      iii)   Null and Alternative hypothesis

3B.   Describe with example the situation in which you would use independent sample t-test. What is the null hypothesis tested? List the assumptions.

((1+2+2)+5 = 10 marks)

4A.   Differentiate parametric and non-parametric tests. Explain the situation for Mann-Whitney U test.

4B.   Explain with example the computation procedure of Chi-square test statistic.

(5+5 = 10 marks)

5A.   A random sample of 80 adults of 50+ age group individuals from a population contained 20 subjects with hypertension. Construct 95% confidence interval for the population prevalence of hypertension. (Given Z $1-\alpha/2$=1.96).

5B.   Write a short note on logistic regression.

(5+5 = 10 marks)

6. Discuss Randomized Controlled trial under:

6A. Basic Design

6B. Basic features

6C. Basic steps

6D. Merits and demerits

(10 marks)

7. Explain the use and structure of a research protocol.

(10 marks)

8. **Write short notes on the following:**

8A. Cohort study

8B. Sensitivity and specificity of a diagnostic test

(5+5 = 10 marks)

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. H.H.I.A. / M.Sc. HI DEGREE EXAMINATION – JUNE 2015

SUBJECT: MEDICAL LANGUAGE – II (MHI 604/MIN 608)

(SPECIALIZATION: HEALTHCARE IT MANAGEMENT AND SOFTWARE DEVELOPMENT & MANAGEMENT)
(CBS-2013 SCHEME/2014 SCHEME)

Wednesday, June 17, 2015

Time: 10:00   13:00 Hrs.   Max. Marks: 80

✍ **All questions are compulsory.**

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

    a) Palliative   b) Zeusophobia   c) Haze   d) Immunity
    e) Lymphoma   f) Carcinophobia   g) Hallucination   h) Polyphagia
    i) Claudication   j) Cochlea

                                                                          (1 marks × 10 = 10 marks)

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

    a) BMD   b) CVS   c) EBV   d) FRC   e) HAV
    f) HDU   g) INO   h) LKM   i) MIC   j) OI
    k) PML   l) SIRS   m) TSH   n) TPN   o) BUN

                                                                          (1 mark × 15 = 15 marks)

3. **Write short notes on:**

    a) Radiotherapy   b) Hodgkin's lymphoma   c) Alkaptonuria
    d) Cerebral palsy   e) Measles   f) Dysthymia
    g) Phimosis   h) Pre eclampsia   i) Multiple sclerosis
    j) Tinnitus

                                                                          (2½ marks × 10 = 25 marks)

4. **Answer the following:**

4A. Write down about the clinical features and complications of Ovarian cyst.

4B. Distinguish between different types of Schizophrenia.

4C. Give a brief account about etiology and clinical features of Syphilis.

4D. What is Tetrology of Fallot? Write down the important characteristic features of Tetrology of Fallot.

4E. Distinguish between the clinical features of Scurvy and Pellagra.

                                                                          (6 marks × 5 = 30 marks)

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. H.H.I.A. DEGREE EXAMINATION – JUNE 2015

SUBJECT: PHARMACOLOGY (MHI 602)
(2013 SCHEME)

Friday, June 19, 2015

Time: 10:00 – 11:30 Hrs.   Max. Marks: 40

1.   Describe the following terms with an example:

1A.   Drug

1B.   First pass metabolism

1C.   Chemoprophylaxis

$$(2 \text{ marks} \times 3 = 6 \text{ marks})$$

2.   Mention two drugs belonging to following groups and list two uses of any one of them:

2A.   Benzodiazepines

2B.   Beta-2 agonists

2C.   Fluoroquinolones

2D.   Corticosteroids

$$(2 \text{ marks} \times 4 = 8 \text{ marks})$$

3.   List two uses of following drugs:

3A.   Atropine

3B.   Adrenaline

3C.   Morphine

3D.   Chloroquine

3E.   Metoclopramide

$$(1 \text{ mark} \times 5 = 5 \text{ marks})$$

4.   Explain the mechanism of action of the following:

4A.   Aspirin

4B.   Omeprazole

$$(2 \text{ marks} \times 2 = 4 \text{ marks})$$

5.   Mention two drugs used in the following conditions and list two adverse effects of any one of them:

5A.   Epilepsy

5B.   Diabetes mellitus

$$(2 \text{ marks} \times 2 = 4 \text{ marks})$$

6. Mention three drugs belonging to following class:

6A. Anticancer drugs

6B. Antitubercular drugs

6C. Antithyroid drugs

6D. Antiretroviral drugs

(1½ marks × 4 = 6 marks)

7A. Explain superscription and inscription parts of a prescription.

7B. List two parenteral routes of drug administration with an example of drug given through each route.

(3+2 = 5 marks)

8. What these abbreviations stand for?

8A. HS

8B. OD

8C. TID

8D. BID

(½ mark × 4 = 2 marks)

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. HEALTH INFORMATICS DEGREE EXAMINATION – JUNE 2015

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

Monday, June 22, 2015

Time: 10:00 – 13:00 Hrs.   Max. Marks: 80

✍ **Answer ALL the questions.**

1. What is Telemedicine? Mention various applications of Telemedicine. What are the bottlenecks for the growth of Telemedicine in India? Explain.

    (1+2+9 = 12 marks)

2. What is an expert system? List the components of expert systems. How the knowledge is represented in an expert system? Explain with suitable example.

    (1+1+10 = 12 marks)

3. Enumerate the general principles of health informatics ethics. Write the subject centered duties of a health informatics professional.

    (4+8 = 12 marks)

4. Discuss the changes in professional practice due to advances in healthcare informatics. Write impact of health informatics on sociocultural environment of healthcare.

    (7+5 = 12 marks)

5. Discuss the current scenario of health informatics in India, including need, technology, market, standards and regulation.

    (2+2+1+3+4 = 12 marks)
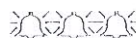
6. **Write short notes on:**

6A. Trends influencing health informatics
6B. Dimension of performance for the protection of healthcare information
6C. Clinical Decision Support System
6D. mHealth benefits

    (5 marks × 4 = 20 marks)

MANIPAL UNIVERSITY

SECOND SEMESTER M.Sc. H.H.I.A. / M.Sc. HI DEGREE EXAMINATION – JUNE 2015

SUBJECT: HOSPITAL ADMINISTRATION (MHI 608/MIN 606)
(SPECIALIZATION: HEALTHCARE IT MANAGEMENT AND SOFTWARE DEVELOPMENT & MANAGEMENT)
(CBS-2013 SCHEME/2014 SCHEME)

Wednesday, June 24, 2015

Time: 10:00 – 13:00 Hrs.   Max. Marks: 80

☞   Answer ALL questions.

✍   Long Essays

1A.   Discuss the recent trends in organization and management of Medical Records Department of a 1000 bedded hospital

(22 marks)

1B.   Discuss the operational planning of a Hospital Pharmacy

(22 marks)

Short notes:

2A.   Healthcare Waste Disposal

2B.   TSSU

2C.   Quality Control in Hospital Laboratories

(12 marks × 3 = 36 marks)