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## MANIPAL UNIVERSITY

**THIRD SEMESTER BACHELOR OF CLINICAL OPTOMETRY/B.Sc. H.I.A./B.Sc. M.I.T.  
DEGREE EXAMINATION – JUNE 2017**

**SUBJECT: PATHOLOGY**

(BOP 209:GS – 2012 SCHEME/BHI 201:CBS – 2015 & 2014 SCHEME/MIT 203: 2014 SCHEME)

Thursday, June 15, 2017

Time: 10:00-11:30 Hrs.

Max. Marks: 40

**Answer ALL questions.**

1. Define shock. What are the various types of shock? Describe the pathogenesis of septic shock.

(1+2+5 = 8 marks)

2. Define neoplasia. Write the differences between benign and malignant tumours.

(1+6 = 7 marks)

3. **Write short notes on:**

3A. Thrombocytopenia

3B. Iron deficiency anaemia

3C. Lepromatous leprosy

3D. Phagocytosis

3E. Factors influencing thrombosis

(5 marks × 5 = 25 marks)



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## MANIPAL UNIVERSITY

### THIRD SEMESTER BACHELOR OF OPTOMETRY/CLINICAL OPTOMETRY/ B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: MICROBIOLOGY  
(BOP 209:GS – 2012 SCHEME/MIT 205:2014 SCHEME)

Saturday, June 17, 2017

Time: 10:00-11:30 Hrs.

Max. Marks: 40

 Draw diagrams wherever appropriate.

1. Classify hypersensitivity reactions. Explain the mechanism and mediators of hypersensitivity mediated by IgE.  
(2+4+2 = 8 marks)
2. Classify sterilization. Describe the working principle and applications of autoclave.  
(3+4 = 7 marks)
3. Write short notes on:
  - 3A. Humoral immune response
  - 3B. Virion structure
  - 3C. Investigation of hospital associated infections
  - 3D. Bacterial growth curve
  - 3E. Classification of fungi based on morphology(5 marks × 5 = 25 marks)



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## MANIPAL UNIVERSITY

THIRD SEMESTER B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: MIT 201T – ORTHOPEDICS  
(2014 SCHEME)

Tuesday, June 20, 2017

Time: 10.00-11.30 Hrs.

Max. Marks: 40

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✍ **Answer ALL the questions.**

1. Define Orthopaedics. Who is the father of Orthopaedics? Explain the symbol of Orthopaedics.

(10 marks)

2. **Short notes:**

2A. Anatomy of clavicle

2B. Role of External fixation in Orthopaedics

2C. Thomas Splint

2D. Definition and classification of osteoporosis

2E. Internal prostheses

2F. Perthes' disease

(5 marks × 6 = 30 marks)



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## MANIPAL UNIVERSITY

THIRD SEMESTER B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: MIT 209T – ENT  
(2014 SCHEME)

Thursday, June 22, 2017

Time: 10.00-11.30 Hrs.

Max. Marks: 40

✍ **Answer ALL questions.**

1. Write a note on chronic sinusitis: clinical features, complications and radiological assessment.

(3+3+4 = 10 marks)

2. Write short notes on the following topics, with emphasis on radiological evaluation:

2A. Epistaxis

2B. Chronic suppurative otitis media tubo tympanic type

2C. Nasal bone fractures

2D. Dysphagia

2E. Deviated nasal septum

2F. Acute suppurative otitis media

(5 marks × 6 = 30 marks)

