

MANIPAL UNIVERSITY

**THIRD/FOURTH YEAR B.Sc. R.R.T. & D.T./B.Sc. C.V.T./B.Sc. M.R.T/B.Sc. R.T./
B.Sc. M.L.T./B.O.T./B.P.T. DEGREE EXAMINATION – JUNE 2015**

**SUBJECT: BIOSTATISTICS & RESEARCH METHODOLOGY/RESEARCH
METHODOLOGY & STATISTICS/BIOSTATISTICS/BASIC BIOSTATISTICS &
RESEARCH METHODOLOGY/RESEARCH METHODOLOGY AND BIOSTATISTICS**

Monday, June 01, 2015

Time: 10:00-13:00 Hrs.

Max. Marks: 80

☞ Answer ALL the questions.

1. Define statistics and list its role in health sciences. (5 marks)

2. Describe Validity and Reliability. (5 marks)

3. Give the difference between nominal and ordinal variables with examples. (5 marks)

4. Classify the following into different scales of measurements (Nominal, Ordinal, Interval and Ratio).

a) Temperature ($^{\circ}F$)	b) City	c) Age
d) Gender	e) Stage of disease (I/II/III/IV)	

(5 marks)

5. Briefly describe Probability and Non Probability sampling. (5 marks)

6A. In a study of 126 patients admitted in a hospital, it was assessed whether patients were 'Current smoker', 'Past smoker' or 'Never smoker'. The frequencies of these categories are shown in table below. Represent the data with the help of a pie chart.

Smoking status	Frequency
Current smoker	42
Past smoker	21
Never smoker	63

6B. The data gives the intelligence quotient (I.Q) of 36 children. Construct frequency table along with relative frequencies using the class intervals, less than 90, 90 – 100, 100 – 110, and so on.

99	103	112	118	109	76	110	101	98	100	116	113
139	105	120	106	113	121	99	103	98	117	109	130
95	105	120	93	108	65	85	94	98	101	117	115

(5+5 = 10 marks)

7A. Why do we use coefficient of variation? How is it different from standard deviation? Explain with an example.

- 7B. Compute the median, range and inter-quartile range for the following data:
SBP (mmHg): 120 125 121 123 125 127 122 128 123 126 122
(5+5 = 10 marks)
8. It was observed that the incubation period in days of patients with infectious hepatitis follows normal distribution with a mean of 20 days and standard deviation of 4 days. What percentage of the patients have incubation period:
- 8A. Below 12 days
8B. Between 24 and 28 days
(5 marks)
9. What is Karl-Pearson's correlation coefficient? List its properties.
(5 marks)
10. Write a note on health information system and its requirements.
(5 marks)
- 11A. Explain the terms prevalence and incidence with examples.
11B. Define crude birth rate and infant mortality rate.
(6+4 = 10 marks)
12. Define epidemiology. Enumerate its uses. Describe case series analysis.
(10 marks)



MANIPAL UNIVERSITY

THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2015

SUBJECT: ORTHOPAEDICS & RHEUMATOLOGY/CLINICAL ORTHOPAEDICS & RHEUMATOLOGY
(COMMON FOR OLD & 2008 REGULATION/2011 BATCH)

Tuesday, June 16, 2015

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

✍ **Answer SECTION “A” and SECTION “B” in two separate answer books.**

SECTION “A”: CLINICAL ORTHOPAEDICS: 40 MARKS

1. Classify the fractures of spine based on mechanism of injury. Write notes on management of a patient with paraplegia. (10 marks)

2. What do you mean by ‘gout’ and ‘pseudogout’? Discuss the clinical features and management of “Gouty Arthritis”. (10 marks)

- 3A. Claw hand
- 3B. Nutritional rickets
- 3C. Genu varum
- 3D. Frozen shoulder (20 marks)

SECTION “B”: RHEUMATOLOGY: 40 MARKS

1. **Write short notes on any FOUR of the following five questions:**
 - 1A. Clinical features of Sarcoidosis
 - 1B. Etiology and clinical features of Pseudo gout
 - 1C. Wegners granulomatosis
 - 1D. Feltys syndrome
 - 1E. Raynauds phenomenon(5 marks × 4 = 20 marks)

✍ **Answer any TWO full questions out of the following three questions:**

- 2A. Define Osteoporosis.
- 2B. Discuss the etiology and pathophysiology of Osteoporosis.
- 2C. What are the basic investigations to be ordered in a patient with Osteoporosis?
- 2D. Enumerate the drugs used in the management of osteoporosis. (1+4+3+2 = 10 marks)

- 3A. Discuss the diagnostic criteria of SLE.
- 3B. Enumerate drugs used in the management of SLE and its complications.
- 3C. Add a note on ANA.

(5+3+2 = 10 marks)

- 4A. Enumerate four spondyloarthropathies
- 4B. List the salient features of seronegative spondyloarthropathies
- 4C. Enumerate types of Psoriatic arthritis
- 4D. Add a note on clinical features of Reiter's syndrome

(1+4+2½+2½ = 10 marks)



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THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2015

SUBJECT: NEUROSCIENCES/NEUROLOGICAL SCIENCE
(OLD & 2008 REGULATION/2011 BATCH)

Thursday, June 18, 2015

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

✍ Answer any FOUR questions. Each question carries TWENTY marks.

1. Classify epilepsy. Enumerate investigations and management of epilepsy.
2. Write short notes on:
 - 2A. Alzheimer's disease
 - 2B. Guillian Barre Syndrome
 - 2C. Organophosphate poisons
 - 2D. Creutzfeldt Jacob disease
3. Write short notes on:
 - 3A. Epidural hematoma
 - 3B. Hydrocephalus
 - 3C. Carbon monoxide poisoning
 - 3D. Optic neuritis
4. Enumerate clinical features of complete transaction of spinal cord at T10 level. Add note on the management of Paraplegia.
5. Myasthenia Gravis:
Etiology, clinical features, management



MANIPAL UNIVERSITY**THIRD YEAR B.P.T. DEGREE EXAMINATION – JUNE 2015****SUBJECT: PHYSIOTHERAPY IN NEUROSCIENCES
(COMMON FOR 2008 & OLD REGULATION)**

Saturday, June 20, 2015

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

✍ Answer ALL questions.**1. Essay Questions:**

1A. Describe the clinical features of patient with Amyotrophic Lateral Sclerosis (ALS). Explain the Physiotherapy assessment and treatment in ALS. (10 marks)

1B. Write the assessment and treatment for 25 year old male with acute inflammatory Demyelinating polyneuropathy in post ICU stage. (10 marks)

2. Write short answers:

2A. Physiotherapy management of circumduction gait in hemiplegia

2B. What is spastic diplegia and explain the clinical characteristics.

2C. What is Tabes Dorsalis and describe its management.

2D. How would you manage knee hyper extension due to spastic plantar flexors?

2E. Management for fascioscapulo humeral muscular dystrophy

2F. Enumerate the clinical presentation of multiple sclerosis

2G. Acute stage management for bell's palsy

2H. Physiotherapy management to reduce retropulsion in a stroke patient

(5 marks × 8 = 40 marks)

3. Write briefly on:

3A. Orthosis used for L-1 level spinal cord injury

3B. Four important clinical characteristics of autism

3C. Receptors for vestibular system

3D. Any four clinical features of cerebellar lesion

3E. Gait in Parkinson's disease

3F. Bedside clinical features of hypotonia

3G. What is autonomic dysreflexia?

3H. Types of rigidity

3I. Define dyslexia

3J. Common sites for syringomyelia

(2 marks × 10 = 20 marks)



MANIPAL UNIVERSITY**THIRD YEAR B.P.T. DEGREE EXAMINATION – JUNE 2015****SUBJECT: PHYSIOTHERAPY IN ORTHOPAEDICS AND RHEUMATOLOGY
(OLD & 2008 REGULATION)**

Tuesday, June 23, 2015

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

✍ Answer ALL questions.**1. Essay Questions.**

- 1A. Mention the types of brachial plexus injury. Explain the role of physiotherapy in traumatic brachial plexus injury at Erb's point.
- 1B. Explain the rehabilitation of ankle sprain in different phases.

(10 marks × 2 = 20 marks)

2. Brief Questions:

- 2A. Write the Zones of extensor tendon injury of the Hand.
- 2B. Explain the biomechanical changes associated with thoraco lumbar scoliosis.
- 2C. Explain the causes for shoulder impingement syndrome.
- 2D. Explain clinical features and management of piriformis syndrome.
- 2E. Explain rehabilitation of tendon transfer for wrist drop.
- 2F. Define concave convex rule. Explain joint play motions of Knee Joint.
- 2G. Do and Don'ts in spondylolysis
- 2H. Explain complications of femoral shaft fracture.

(5 marks × 8 = 40 marks)

3. Short Answers:

- 3A. Write the features of pronator Teres syndrome.
- 3B. Explain straight leg rise test with its modifications.
- 3C. What is snapping hip syndrome?
- 3D. Explain any two special tests for meniscal injury of the knee.
- 3E. What are the stages Periarthritis of the shoulder?
- 3F. What is trigger finger?
- 3G. Mention factors responsible for development of tennis elbow.
- 3H. What is mallet finger? What are the causes?
- 3I. Mention stages of Pertheis disease.
- 3J. Explain one test to diagnose carpal tunnel syndrome.

(2 marks × 10 = 20 marks)



MANIPAL UNIVERSITY**THIRD YEAR B.P.T. DEGREE EXAMINATION – JUNE 2015****SUBJECT: ETHICS/ADMINISTRATION AND TEACHING SKILLS
(2008 REGULATION)**

Thursday, June 25, 2015

Time: 10:00-11.30 Hrs

Maximum Marks: 40

✍ **Answer ALL questions.**

✍ **Essay question:**

1. What are the principles of ethics? Elaborate the rules of ethics laid down by the World Confederation of Physical Therapists (WCPT)

(10 marks)

2. **Short notes:**

- 2A. Describe the process involved in procuring new equipment for the department.
2B. Mention the methods by which you will maintain records of patients attending your physiotherapy clinic.
2C. Mention the importance of public relations in physical therapy.
2D. What are the requirements for obtaining affiliation with the IAP for a BPT course?

(5 marks × 4 = 20 marks)

3. **Brief answers:**

- 3A. What ethical issues arise while treating mentally challenged patients?
3B. Write on the importance for an appropriate staff: patient ratio
3C. What ethical principles govern those involved in academics?
3D. Mention any two salient features of the Consumer Protection Act.
3E. Highlight two important problems faced by therapists in independent practice.

(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY**THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2015**
SUBJECT: COMMUNITY MEDICINE & SOCIOLOGY/SOCIAL & PREVENTIVE
MEDICINE AND SOCIOLOGY
(2008 REGULATION/2011 BATCH)

Saturday, June 27, 2015

Time 10:00-13:00 Hours

Maximum Marks: 80

- ✍ Answer ALL questions.
- ✍ Answer SECTION 'A' and SECTION 'B' in TWO separate answer books.

SECTION 'A': COMMUNITY MEDICINE/SOCIAL AND PREVENTIVE MEDICINE : 40 MARKS

✍ **Essay Question:**

1. Classify Blood Pressure based on JNC – 7 criteria. Discuss about epidemiology and prevention of Hypertension. (10 marks)

2. **Short Answers:**

- 2A. What are the components of Community Based Rehabilitation (CBR)? Enumerate the functions of CBR workers.
- 2B. Discuss the signs of Vitamin A deficiency.
- 2C. Mass approach in health communication.
- 2D. Classify different Epidemiological Study Designs.
- 2E. Write a note on high risk pregnancy.
- 2F. What are the types of HIV epidemics? Describe the pattern of epidemic in India. (5 marks × 6 = 30 marks)

SECTION 'B': SOCIOLOGY : 40 MARKS

1. What is sociology? Enumerate concepts of sociology and explain its uses. (2+3+5 = 10 marks)
2. Name the causes of social change and explain its factors. (3+7 = 10 marks)
3. Explain the factors of group life, enumerate the characteristics of primary and secondary groups. (5+5 = 10 marks)
4. **Write short notes on the following:**
- 4A. Social factors affecting health status
- 4B. Maternity benefit Act (5+5 = 10 marks)

