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MANIPAL UNIVERSITY
THIRD YEAR B.O.T. DEGREE EXAMINATION – JUNE/JULY 2017
SUBJECT: BIO-ENGINEERING
(2011 SCHEME)

Saturday, July 01, 2017

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ **Answer ALL the questions.**

✍ **Draw diagrams and flow charts wherever appropriate.**

✍ **Long questions:**

1. Explain in detail various parts of Below Elbow prosthesis.

(10 marks)

2. What is C.T.E.V.? Explain in detail clinical features and orthotic management of C.T.E.V.

(10 marks)

3. Explain various types of mechanical ankle joint.

(5 marks)

4. **Write short notes any THREE of the following:**

4A. Boston Brace

4B. Four Poster Collar

4C. Check out of Below Knee prosthesis

4D. Factors considered before prosthetic prescription

(5 marks × 3 = 15 marks)



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**THIRD 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./
FOURTH YEAR B.O.T./B.P.T. DEGREE EXAMINATION – JUNE 2017**

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

Thursday, June 01, 2017

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

1. List and define different types of variables.

(6 marks)

2. **Classify the following into the four different scales of measurement:**

2A. Stages of cancer

2B. Blood group

2C. Pain score (mild/moderate/sever)

2D. Age

(4 marks)

3. Thirty seven persons were examined for haemoglobin level in their blood (mg per dl). Construct a frequency polygon for the data.

Hb (mg/dl)	11 - 12	12 - 13	13 - 14	14 - 15	15 - 16	16 - 17
No. of persons	5	10	15	4	2	1

(4 marks)

4. Compute 65th percentile and standard deviation for the following data regarding weight of infants (in kg.).

2.32 2.36 2.89 3.03 3.86 2.90 4.01 3.69 3.07 2.87

(10 marks)

5. Data below shows the number of colonies of bacteria grown on ten agar plates. Calculate median and interquartile range.

60 70 100 160 140 80 110 95 130 115

(10 marks)

6. **Define the following:**

6A. Perinatal mortality rate

6B. Crude birth rate

(2+2 = 4 marks)

7. Describe correlation using scatter plots.

(6 marks)

8. The amount of weight gained during pregnancy was assessed and was found to be approximately normally distributed with a mean weight gain of 12 kgs and a standard deviation of 4 kgs. Calculate the proportion of pregnant mothers who gained weight:
- 8A. Less than 20 kgs
 - 8B. Between 12 to 16 kgs
 - 8C. At least 8 kgs

(2 marks \times 3 = 6 marks)

9. **Write short notes on:**

- 9A. Reliability
- 9B. Epidemiology and its aims
- 9C. Systematic sampling
- 9D. Characteristics of good hypothesis
- 9E. Disease Registries
- 9F. Case reports

(5 marks \times 6 = 30 marks)



MANIPAL UNIVERSITY**THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE/JULY 2017****SUBJECT: ORTHOPAEDICS & RHEUMATOLOGY/CLINICAL ORTHOPAEDICS & RHEUMATOLOGY
(2008 REGULATION/2011 SCHEME)**

Thursday, June 15, 2017

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

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

SECTION “A”: ORTHOPAEDICS/CLINICAL ORTHOPAEDICS: 40 MARKS

1. Describe the principles of fracture management. Enumerate five complications of fractures.
(10 marks)
2. What are the clinical and radiological features of osteoarthritis of the knee joint? Add a note on operative management of osteoarthritis of the knee joint.
(10 marks)
3. **Write short notes on:**
 - 3A. Classification of bone tumours
 - 3B. Saturday night palsy
 - 3C. Clinical features of rickets
 - 3D. Periarthritis of the shoulder

(5 marks × 4 = 20 marks)

SECTION “B”: RHEUMATOLOGY: 40 MARKS

1. **Write short notes on any FOUR of the following FIVE questions.**
 - 1A. Enumerate the ACR criteria for diagnosis of rheumatoid arthritis.
 - 1B. Describe the clinical features of gout and a brief note on its treatment.
 - 1C. Write a brief note on etiopathogenesis, and clinical features of polyarthritis nodosa.
 - 1D. Describe clinical features and treatment of Temporal arthritis.
 - 1E. Mention four causes of polyarthritis. Brief note on clinical features of psoriatic arthritis

(5 marks × 4 = 20 marks)

✍ **Answer any TWO FULL questions out of Question No. 2, 3 and 4:**

- 2A. Mention Three complications of rheumatoid arthritis.
- 2B. Briefly describe features of rheumatoid arthritis.
- 2C. Mention four classes of anti rheumatoid drugs with one example for each.

(3+3+4 = 10 marks)

- 3A. Describe briefly pathogenesis of ankylosing spondylitis.
- 3B. Brief note on clinical features of ankylosing spondylitis.
- 3C. Brief note on management of ankylosing spondylitis.

(2+4+4 = 10 marks)

- 4A. Etiopathogenesis of reactive arthritis
- 4B. clinical features of Reactive arthritis
- 4C. Management of Reactive arthritis

(3+3+4 = 10 marks)



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THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE/JULY 2017

**SUBJECT: NEUROSCIENCES
(2008 REGULATION/2011 SCHEME)**

Saturday, June 17, 2017

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

- ✍ Answer any **FOUR** questions.
- ✍ Each question carries **20** marks.

1. Enumerate the following cranial nerve disorder:

- 1A. Optic Neuritis
- 1B. Bells palsy
- 1C. 3rd Nerve palsy
- 1D. Trigeminal Neuralgia
- 1E. Hemifacial spasm

2. Multiple Sclerosis

- 2A. Etiopathogenesis clinical features
- 2B. Management

3. Motor Neuron Disease

- 3A. Clinical features
- 3B. Investigations and management

4. **Short notes:**

- 4A. Akinetic rigid syndrome
- 4B. Chronic fatigue syndrome
- 4C. Lateral medullary syndrome
- 4D. Wernickes Aphasia
- 4E. Peripheral Neuropathy

- 5A. Cerebral palsy
- 5B. Alcohol toxicity
- 5C. Wilson disease



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THIRD YEAR B.O.T. DEGREE EXAMINATION – JUNE/JULY 2017

SUBJECT: OCCUPATIONAL THERAPY IN ORTHOPAEDICS AND SURGICAL CONDITIONS
(2011 SCHEME)

Tuesday, June 20, 2017

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ Answer ALL the questions

✍ Draw the diagram wherever necessary.

✍ Long questions:

1. Describe any five indications and contraindications for arthroplasty. Explain occupational therapy intervention for total hip replacement.

(5+5+10 = 20 marks)

2. Describe the process of orthopedic evaluation and explain the evaluation process of any two performance components.

(10+10 = 20 marks)

3. Write short notes on:

3A. Describe activities of daily living retraining principles for a person with muscle weakness.

(10 marks)

3B. Define rheumatoid arthritis and write home program for the same.

(2+8 = 10 marks)

3C. Draw a labelled diagram of above elbow prostheses and describe any one functional training with body power prosthesis.

(5+5 = 10 marks)

3D. Explain positioning of burn patient.

(10 marks)



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THIRD YEAR B.O.T. DEGREE EXAMINATION – JUNE/JULY 2017

SUBJECT: OCCUPATIONAL THERAPY IN NEUROLOGICAL, GERIATRIC AND
MEDICAL CONDITIONS
(2011 SCHEME)

Thursday, June 22, 2017

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ Answer ALL the questions.

✍ Long questions:

1. Describe the ontogenetic motor pattern according to Rood's approach.
(20 marks)
2. Impact of Amyotrophic Lateral Sclerosis on client's occupational performance and explain occupational therapy management for the same.
(8+12 = 20 marks)
3. Write short notes on:
 - 3A. Functions of different lobes of brain.
 - 3B. Explain facilitation process of hemiplegic arm.
 - 3C. Explain modifications suggested to clients with Parkinson's disease for any two basic activities of daily living.
 - 3D. Breathing techniques for chronic obstructive pulmonary disease.
(10 marks × 4 = 40 marks)



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THIRD YEAR B.O.T. DEGREE EXAMINATION – JUNE/JULY 2017

SUBJECT: OCCUPATIONAL THERAPY IN REHABILITATION
(2011 SCHEME)

Saturday, June 24, 2017

Time: 10:00-13:00 Hrs.

Max. Marks: 80

- ✍ Answer ALL the questions.
- ✍ Draw diagram wherever necessary.

✍ **Long questions:**

1. Explain the primary effects of superficial heat agents. Describe indication, contraindication and clinical application of whirlpool baths.
(8+12 = 20 marks)
2. Describe hospice care and explain the role of occupational therapy in the same.
(5+15 = 20 marks)
3. **Write short notes on:**
 - 3A. Social attitude towards people with disability
 - 3B. Components of wheel chair with a neat and labeled diagram
 - 3C. Gait pattern with conventional walker
 - 3D. Factors influencing occupational therapy intervention in rehabilitation settings
(10 marks × 4 = 40 marks)



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THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION –JUNE 2017

SUBJECT: COMMUNITY MEDICINE & SOCIOLOGY/SOCIAL & PREVENTIVE
MEDICINE AND SOCIOLOGY
(2008 REGULATION/2011 SCHEME)

Tuesday, June 27, 2017

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

✍ Long Question:

1. Mention the Important and Common Causes of "Malnutrition" in children under the age of five years. Enumerate measure for "Prevention" of Malnutrition. Mention any four Anthropometric measurements used in assessment of Malnutrition.

(3+5+2 = 10 marks)

2. Write short notes on:

- 2A. Write the components for control of "Iodine Deficiency Disorders" in India.
- 2B. Enumerate "Common" causes for "Locomotor Disabilities" in India.
- 2C. Write the "Universal Immunization Schedule" for Infants (up to one year of age).
- 2D. Enumerate the steps used in conducting "Cohort Study".
- 2E. Explain the concept of "Iceberg Phenomenon" of a Disease with examples.
- 2F. Mention the functions of United Nations Children's Emergency Relief Fund (UNICEF).

(5 marks × 6 = 30 marks)

SECTION 'B': SOCIOLOGY : 40 MARKS

1. What is social change? Explain the factors of social change.

(2+8 = 10 marks)

2. Explain the meaning of rural and urban communities and their role in public health.

(2+2+6 = 10 marks)

3. Explain the influence of family on health and sickness of an individual.

(5+5 = 10 marks)

4. Write short notes on the following:

- 4A. Social welfare measures in relation to the disabled.
- 4B. Explain the problems of women in employment.

(5+5 = 10 marks)



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THIRD YEAR B.O.T. DEGREE EXAMINATION – JUNE/JULY 2017

SUBJECT: OCCUPATIONAL PERFORMANCE: ADL, WORK AND LEISURE
(2011 SCHEME)

Thursday, June 29, 2017

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ **Answer ALL the questions.**

1. **Explain the following:**

1A. Work conditioning

1B. Work hardening

(5+5 = 10 marks)

2. Explain the parameters used to determine appropriate goal behaviors for ADL interventions.

(10 marks)

3. **Short notes:**

3A. Skills required for role duty of a homemaker

3B. Purpose of conducting job analysis

3C. View of play and leisure as time

3D. Concerns of parents with psychiatric disabilities

(5 marks × 4 = 20 marks)

