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MANIPAL UNIVERSITY

FIRST YEAR M.O.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: PAPER – II: OCCUPATIONAL THERAPY: KNOWLEDGE BASE

Saturday, June 02, 2012

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

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

✍ **Long Question:**

1. Discuss the neuromuscular and musculoskeletal limitations that affect postural control.
(10+10 = 20 marks)

2. Describe the factors that influence force, velocity and duration of muscle contraction. Draw graphical representation wherever applicable.
(15+5 = 20 marks)

3. Define motor learning. Compare and differentiate between associative and non-associative forms of motor learning with examples. Discuss the applicability of closed loop theory in motor skill acquisition.
(3+7+10 = 20 marks)

4. **Short Notes:**
 - 4A. Explain the kinematic variables used to describe human movement.
 - 4B. Describe the structure of basal ganglion and its role in movement.
(10×2 = 20 marks)



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MANIPAL UNIVERSITY

FIRST YEAR M.O.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: PAPER – III: ASSESSMENTS IN OCCUPATIONAL THERAPY

Tuesday, June 05, 2012

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

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

✍ **Long Questions (20 marks each)**

1. Discuss the various clinical tools to assess the tone abnormality. What is Ashworth scale? Comment on the psychometric properties of modified Ashworth scale as a clinical tool in measuring the muscle tone.

(5+5+10 = 20 marks)

2. Explain with examples the complexities of both occupational therapy functional assessment and measurement of functional outcome. Discuss about factors which can affect occupational performance.

(10+10 = 20 marks)

3. Discuss in detail the steps for selecting the appropriate ADL and IADL assessment tools and explain in brief any two commonly used tool for ADL and IADL assessment.

(12+8 = 20 marks)

4. Short Notes:

4A. Describe the guidelines for evaluation of mental impairment.

4B. Describe the Loewenstein Occupational Therapy Cognitive Assessment (LOTCA) Battery.

(10×2 = 20 marks)



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MANIPAL UNIVERSITY

FIRST YEAR M.O.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: PAPER – IV: OCCUPATIONAL THERAPY: TOOLS FOR PRACTICE

Thursday, June 07, 2012

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

Answer ALL the questions.

Long questions

1. Discuss why the environment is critical to occupational performance. Discuss the assessment of physical environment at work place. Give examples of environmental modifications in the workplace for gross motor impairment and with fatigue/weakness. Explain intervention strategies to optimize participation.

(5+5+6+4 = 20 marks)

2. Describe any three standards of practice in occupational therapy. Describe the scope of practice in schools and what needs to be done to enhance the practice in India.

(6+6+8 = 20 marks)

3. Describe the major parts of AFO's. Explain in detail the ankle control and foot control mechanism and their specific indications.

(8+12 = 20 marks)

Short notes:

4A. Discuss on the psychosocial adjustment issues of person with cancer.

4B. Comment on the Leisure assessment tools with one example.

(10×2 = 20 marks)



MANIPAL UNIVERSITY

FIRST YEAR M.O.T. DEGREE EXAMINATION – MAY/JUNE 2012
SUBJECT: ADVANCED BIostatISTICS & RESEARCH METHODOLOGY

Tuesday, May 29, 2012

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ Answer ALL the questions.

- 1A. Define mean, median, mode, standard deviation and coefficient of variation for 'n' observations.
1B. Explain stratified random sampling method. (5+5 = 10 marks)
2. Fifty patients with congestive heart failure were weighed before and after receiving a novel diuretic agent and the average weight loss (the difference between the two weights) for this sample was found to be 3.5 KG with a standard error of 2.6 Kg.
2A. Name the statistical test used for testing whether the agent is effective in reducing the weight.
2B. State the null and alternate hypothesis.
2C. Write the test statistic for this test.
2D. Mention the assumptions for the validity of this test.
2E. How do you take a decision on the acceptance or rejection of null hypothesis? (2×5 = 10 marks)
- 3A. What do you mean by sampling distribution and standard error? What are the factors that affect the width of a confidence interval for mean?
3B. Write a short note on binomial distribution. ((2+3)+5 = 10 marks)
4. What do you mean by randomization in randomised controlled trials (RCTs)? Explain different methods of randomization in RCTs. (1+9 = 10 marks)
- 5A. A hospital administrator wishes to estimate the mean weight of babies born in the hospital. How large a sample of birth records should be taken if the administrator wants a 95% confidence interval with margin error of 1.2 Kg? Assume that a reasonable estimate of the population standard deviation is 5 Kg.
5B. Write a short note on cross sectional study design. (5+5 = 10 marks)
6. Explain the structure of a research thesis. (10 marks)
7. Write short notes on:
7A. Chi square test
7B. Survival analysis
7C. Validity of a diagnostic test
7D. One way ANOVA (5×4 = 20 marks)



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MANIPAL UNIVERSITY

FIRST YEAR M.O.T. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: PAPER – I: OCCUPATIONAL THERAPY: PHILOSOPHY AND THEORETICAL FOUNDATIONS

Thursday, May 31, 2012

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

1. Long Questions:

1A. Explain operant conditioning. Elaborate on the use of “reinforcement” in occupational therapy practice.

(8+12 = 20 marks)

1B. What is Theory Focused Activity Analysis? Analyze the activity “preparing a sandwich” with a practice theory of your choice and explain how this activity can be graded and/or adapted.

(8+12 = 20 marks)

1C. Explain the assumptions and function-dysfunction continua of the rehabilitation Frame Of Reference (FOR). Describe in detail the rehabilitation FOR rationale for using wheelchair modifications, ambulatory devices, and safety education.

(8+12 = 20 marks)

2. Short notes:

2A. L.Lorens' contribution to developmental frames of reference

2B. Function-dysfunction continuum of the Model of Human Occupation

(10+10 = 20 marks)

