

MANIPAL UNIVERSITY

FRIST YEAR MASLP / MOT / MSc. MLT / MSc. RT / MSc. ECHOCARDIOGRAPHY / MSc. CARDIAC CATHETERIZATION & INTERVENTIONAL TECHNOLOGY / OPTOMETRY / MSc. MIT / MSc. RRT & DT / DEGREE EXAMINATION – JUNE 2016

SUBJECT: STATISTICS & RESEARCH METHODS / ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY / BIOSTATISTICS / ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY / PAPER IV: EPIDEMIOLOGY & BIOSTATISTICS / PAPER IV: EPIDEMIOLOGY & BIOSTATISTICS / PAPER IV: RESEARCH METHODOLOGY & BIOSTATISTICS / BIOSTATISTICS/ ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY

Thursday, June 02, 2016

Time: 10:00 – 13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

- 1A. Explain the situation for use and computation procedure of mean and median.
 1B. What is cluster sampling? Explain the procedure with example. List the advantages and disadvantages of this technique. (5+5 = 10 marks)
- 2A. Suppose the ages at time of onset of a certain disease are approximately normally distributed with a mean of 12 years and a standard deviation of 3 years. A child has just come down with the disease. What is the probability that the child is:
 i) Between the ages of 9 and 12 years?
 ii) Over 15 years?
 2B. Write a short note on Poisson distribution. (5+5 = 10 marks)
- 3A. Define the following terms:
 i) Power of a test
 ii) P-value
 iii) Type one and type two errors in testing of 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 Kruskal-Wallis test.
 4B. Write a short note on the application of Chi-square test. (5+5 = 10 marks)
- 5A. A hospital administrator wishes to know what proportion of discharged patients is unhappy with the care received during hospitalization. How large a sample should be drawn if we let the error margin $d = 0.1$, the confidence coefficient is 0.95, and the anticipated percentage of unhappy patients is 30? (Given $Z_{1-\alpha/2} = 1.96$).
 5B. Write a short note on Logistic Regression. (5+5 = 10 marks)

6. Discuss Cohort study under:

6A. Basic design

6B. Basic features

6C. Basic steps

6D. Merits and demerits

(10 marks)

7. Explain the structure of a scientific research paper.

(10 marks)

8. Write short notes on the following:

8A. Randomized controlled trials

8B. Sensitivity and specificity of a diagnostic test

(5+5 = 10 marks)



MANIPAL UNIVERSITY**FIRST YEAR M.O.T. DEGREE EXAMINATION – JUNE 2016****SUBJECT: PAPER – I: OCCUPATIONAL THERAPY: PHILOSOPHY AND THEORETICAL FOUNDATIONS**

Saturday, June 04, 2016

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL questions.**

✍ **Long Questions.**

1. Explain the assumptions of the Sensory Integration Frame of Reference (FOR). Discuss the scope of application of this FOR in occupational therapy practice.
(10+10 = 20 marks)
2. Explain with suitable evidence 'Occupation/activity as ends and means'.
(20 marks)
3. Explain the 'Habitation subsystem' of the Model of Human Occupation. Describe how this subsystem is assessed in clinical practice and the treatment principles.
(8+6+6 = 20 marks)
4. **Short notes:**
 - 4A. Explain with suitable examples the client factors components - values, beliefs and spirituality, in the Occupational Therapy Practice Framework.
 - 4B. Contributions and limitations of the Cognitive Disability Frame of Reference.
(10+10 = 20 marks)



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FIRST YEAR M.O.T. DEGREE EXAMINATION – JUNE 2016

SUBJECT: PAPER – II: OCCUPATIONAL THERAPY: KNOWLEDGE BASE

Tuesday, June 07, 2016

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

✍ **Draw diagram wherever necessary.**

✍ **Long Questions:**

1. Describe intrinsic and extrinsic feedback. Discuss the importance of extrinsic feedback form and its clinical uses.

(5+15 = 20 marks)

2. Describe the types of exercises used in strength and endurance training program.

(10+10 = 20 marks)

3. Describe the structure and functions of frontal and parietal lobes.

(10+10 = 20 marks)

4. **Write short notes on:**

4A. Describe the three classes of levers and their mechanical advantage with diagrams.

(6+4 = 10 marks)

4B. Discuss the influence of tone on posture.

(10 marks)



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FIRST YEAR M.O.T. DEGREE EXAMINATION – JUNE 2016

SUBJECT: PAPER – III: ASSESSMENTS IN OCCUPATIONAL THERAPY

Thursday, June 09, 2016

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL the questions.**

✍ **Long questions:**

1. Discuss about test components, administration and psychometric properties of Crawford Small Part Dexterity test. Discuss any three areas of application of its results by occupational therapist.

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

2. Discuss the importance of relating the findings of edema, wasting, contractures and scar at various stages of orthopaedic assessment.

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

3. Define disability and explain three disability models, which support the shift from medical measure of outcome (mortality) to measure of functional limitation.

(2+18 = 20 marks)

4. **Short notes:**

4A. Explain criteria for appropriate choice of instruments for assessing quality of life.

4B. Calculate the total percentage of physical impairment for an individual with dislocation of shoulder, resulting in 25% loss of motion at arm, 10% loss in strength and 8% loss in coordination.

(10+10 = 20 marks)



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FIRST YEAR M.O.T. DEGREE EXAMINATION – JUNE 2016

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

Saturday, June 11, 2016

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 80

✍ **Answer ALL questions.**

✍ **Long questions:**

1. Discuss the various aspects of an ideal 'ramp'.
(20 marks)

2. Describe the mechanism of ultrasound as a therapeutic modality. How the intensity and duration of treatment with ultrasound modality is determined.
(10+10 = 20 marks)

3. Describe any two developmental theories of play. How are the interventions planned for promoting play with developmental theories?
(10+10 = 20 marks)

4. **Short notes:**

4A. Discuss any three settings in the application of assistive technology with suitable examples.

4B. What is the mechanical basis of applying rotatory force perpendicular to the moving segment?
(10 marks × 2 = 20 marks)

