

# MANIPAL UNIVERSITY

## SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2009

### SUBJECT: PATHOLOGY AND MICROBIOLOGY (COMMON FOR BOTH OLD & NEW REGULATION)

Monday, June 01, 2009

Time: 10:00-13:00 Hrs.

Max. Marks: 80

- ✗ Answer section A and section B in TWO separate answer books.  
✗ Draw labelled diagrams wherever appropriate.

#### SECTION 'A': PATHOLOGY: 40 MARKS

1. Define leukemia. Classify acute leukemias. Describe the clinical features of acute leukemia. (1+3+4 = 8 marks)
  
2. Tabulate the differences between benign and malignant tumors. (7 marks)
  
3. Write short notes on:
  - 3A. Shock
  - 3B. Goitre
  - 3C. Malignant melanoma
  - 3D. Emphysema
  - 3E. Wound healing by primary intention. (5×5 = 25 marks)

#### SECTION 'B': MICROBIOLOGY: 40 MARKS

4. List the etiological agents causing meningitis. Describe the laboratory diagnosis of acute bacterial meningitis. (2+6 = 8 marks)
  
5. Define nosocomial infections; Mention the important nosocomial pathogens. Write briefly on the prevention of nosocomial infections. (1+2+4 = 7 marks)
  
6. Write short notes on any **FIVE**:
  - 6A. Laboratory diagnosis of HIV infection.
  - 6B. Hepatitis B viral markers
  - 6C. Bacterial flagella
  - 6D. Dermatophytes
  - 6E. Robert Koch
  - 6F. Anaphylaxis. (5×5 = 25 marks)



**MANIPAL UNIVERSITY**  
**SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2009**

**SUBJECT: PHARMACOLOGY**  
**(COMMON FOR BOTH OLD & NEW REGULATIONS)**

Tuesday, June 02, 2009

Time: 10:00-11:30 Hrs.

Max. Marks: 40

- 1A. Mention four systemic routes of drug administration.
- 1B. Mention two advantages and two disadvantages of oral over parenteral route of drug administration.
- (1+1+1= 3 marks)
2. Classify  $\alpha$  adrenergic blockers with an example for each class.
- (3 marks)
3. Write two uses and two adverse effects of the following drugs:
- 3A. Ciprofloxacin
- 3B. Penicillins
- 3C. Propranolol
- 3D. Phenytoin
- 3E. ACE inhibitors
- (2×5 = 10 marks)
- 4A. Define haematinics. Mention two different classes of haematinics and write the adverse effects of any one of them.
- 4B. Mention three purified insulin preparations and write advantages of these over conventional preparations.
- 4C. List two uses and two adverse effects of glucocorticoids.
- (4+4+2 = 10 marks)
- 5A. Name two natural and two synthetic opioids.
- 5B. Write two therapeutic uses with the basis for their use.
- 5C. Mention one contraindication with rationale for the use of opioid.
- (2+4+2 = 8 marks)
6. Write briefly on:
- 6A. Thiazides
- 6B. Ibuprofen
- 6C. Amlodipine
- (2+2+2 = 6 marks)



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## MANIPAL UNIVERSITY

SECOND YEAR B.O.T. DEGREE EXAMINATION – JUNE 2009

SUBJECT: DEVELOPMENTAL AND ORGANIZATIONAL PSYCHOLOGY

Wednesday, June 03, 2009

Time: 10:00-13:00 Hrs.

Max. Marks: 80

**✍ Answer all questions. All questions carry equal marks.**

1. What are the theories of development? Describe the approaches to studying development of behavior.
2. Discuss the social development and the method of assessing social skills.
3. What is an Organization? Describe the psychological Problems that may arise in an Organization.
4. Write short notes on:
  - 4A. Functions of Group.
  - 4B. Organizational Conditions for effective coping.
  - 4C. Speech development.
  - 4D. Jean Piaget.



**MANIPAL UNIVERSITY****SECOND YEAR B.O.T. DEGREE EXAMINATION – JUNE 2009****SUBJECT: OCCUPATIONAL THERAPY – II  
(With Biomechanics and Kinesiology)**

Thursday, June 04, 2009

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

1. Define Reflex. What are the different types of reflexes that are tested? Also explain the principles of reflex testing.  
(2+5+8 = 15 marks)
2. Draw a neat labeled diagram and describe the neurophysiology of muscle tone. Explain the gradation of Modified Ashworth scale to assess muscle tone.  
(10+5 = 15 marks)
3. Explain in detail the procedure of history taking along with the advantages and disadvantages of the procedure.  
(10+5 = 15 marks)
4. Explain in detail the structure of ankle joint and explain the joint reaction forces acting in the ankle joint during stance.  
(7+8 = 15 marks)
5. Short Notes:
  - 5A. Scapulo-Humeral rhythm.
  - 5B. Any two Patterns of prehensile hand function.
  - 5C. Objectives of gait analysis.
  - 5D. Principles of ROM measurement.(5×4 = 20 marks)



## MANIPAL UNIVERSITY

## SECOND YEAR B.O.T. DEGREE EXAMINATION – JUNE 2009

## SUBJECT: RESEARCH METHODOLOGY AND STATISTICS

Friday, June 05, 2009

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. Define:

- a) Crude birth rate                      b) Crude death rate                      c) General fertility rate  
 d) Age specific fertility rate                      e) Total fertility rate

(2×5 = 10 marks)

2. Explain with examples different types of variables in research.

(10 marks)

3A. Explain standard deviation with its merits and demerits.

3B. In two series, adults aged 21 years and children 3 months old, following values were obtained for heights. Calculate co-efficient of variation and find out if height is more variable in adults or children?

<i>Category</i>	<i>Mean. Height</i>	<i>Standard Deviation</i>
Adults	160cms	10cms
Children	60cms	5cms

(5+5 = 10 marks)

4A. Define epidemiology and write the objectives of epidemiology.

4B. The estimated mid-year population for City X in 1990 was 761,335 of which 76,100 were in the age group of 1 – 4 years. During the year, there were 700 attacks of measles in the age group 1-4 years. The total new cases of tuberculosis were 912; the total cases of tuberculosis reported during the year were 23,000. Calculate the following:

- i) Incidence rate for Tuberculosis in the year 1990  
 ii) Age specific incidence rate for measles in the age-group 1-4 years  
 iii) Prevalence rate for Tuberculosis.

(4+6 = 10 marks)

5. What is correlation? Explain different types of correlation with the help of scatter diagram.

(1+4 = 5 marks)

6. Explain stratified random sampling with its merits and demerits.

(5 marks)

7. It is observed that pulse rate of healthy male adults follow normal distribution with a mean of 75 per minute and a SD of 4 per minute. Find the probability that a randomly selected person have pulse rate

- a) Less than 71 per minute                      b) Between 67 and 83 per minute

(5 marks)

8. Write short notes on:
- 8A. Census
  - 8B. Characteristics of a good hypothesis
  - 8C. Population, sample and sampling
  - 8D. Biostatistics and its role in health science

(5×4 = 20 marks)

9. Present the following data on percentage of live births by order of birth using a component bar diagram.

Birth Order	% Live births in	
	1990	1996
1	20	21
2	25	24
3	17	18
4	16	13
5	14	15
6 or more	8	9
<b>Total</b>	<b>100</b>	<b>100</b>

(5 marks)

