

MANIPAL UNIVERSITY

SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2011

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

Monday, June 06, 2011

Time: 14:00-17:00 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

- Define and classify anemia. Discuss the clinical features, aetiology and basic investigations of thalassemia.
(1+2+1+2+2 = 8 marks)
- Define atherosclerosis. Discuss the predisposing factors, complications and clinical effects of atherosclerosis.
(1+2+2+2 = 7 marks)
- Write short note on:**
 - Osteomyelitis.
 - Bronchial asthma.
 - Rheumatoid arthritis.
 - Goitre.
 - Prognosis of tumours.

(5×5 = 25 marks)

SECTION 'B': MICROBIOLOGY: 40 MARKS

- Classify hypersensitivity reactions. Discuss the IgE mediated hypersensitivity reaction in detail.
(2+6 = 8 marks)
- Enumerate the agents causing diarrhoea. Discuss the laboratory diagnosis of cholera.
(2+5 = 7 marks)
- Write short notes on:**
 - Bacterial cell wall.
 - Hot air oven.
 - Investigation of hospital acquired infections.
 - Prophylaxis of rabies.
 - Predisposing factors of UTI.

(5×5 = 25 marks)



MANIPAL UNIVERSITY**SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2011****SUBJECT: PHARMACOLOGY
(COMMON FOR BOTH OLD & NEW REGULATIONS)**

Wednesday, June 08, 2011

Time: 14:00-15:30 Hrs.

Max. Marks: 40

1. List two each advantages and disadvantages of following route of drug administration and give one example of drug administered through each route.
 - 1A. Intravenous
 - 1B. Sublingual

(2½×2 = 5 marks)

2. Define the following terms with one example
 - 2A. Generic name of a drug
 - 2B. Zero order kinetics
 - 2C. Idiosyncrasy

(2×3 = 6 marks)

3. List two factors modifying drug action with one example for each.

(1½×2 = 3 marks)

4. List four NSAIDs and explain the basis for using them in rheumatoid arthritis.

(4 marks)

5. List two drugs belonging to the following class:
 - 5A. Peripherally acting skeletal muscle relaxants
 - 5B. Anticholinergics
 - 5C. Local anesthetics
 - 5D. Antiepileptics
 - 5E. ACE inhibitors
 - 5F. Anabolic steroids

(1×6 = 6 marks)

6. Explain the pharmacological basis for the following:
 - 6A. Nitroglycerine is used in angina
 - 6B. Salbutamol is used in bronchial asthma
 - 6C. Allopurinol is used in chronic gout
 - 6D. Morphine is contraindicated in head injury
 - 6E. Levodopa is combined with carbidopa

(2×5 = 10 marks)

7. Mention one drug belonging to the following class and explain its mechanism of action.
 - 7A. Beta- latam antibiotics
 - 7B. Macrolides
 - 7C. Anticoagulant

(2×3 = 6 marks)



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MANIPAL UNIVERSITY

SECOND YEAR B.O.T. DEGREE EXAMINATION – JUNE 2011

SUBJECT: DEVELOPMENTAL AND ORGANIZATIONAL PSYCHOLOGY

Friday, June 10, 2011

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ **Answer all questions.**

✍ **All questions carry equal marks.**

1. Narrate the theories proposed to explain development of intelligence and discuss any three tests of intelligence.
2. Define organizational psychology and discuss the psychological problems that could occur in an organization.
3. Discuss the pattern of social development during childhood and adolescence.
4. **Write short notes on:**
 - 4A. Components of social skills.
 - 4B. Assessment of speech functions.
 - 4C. Any two theories of emotions.
 - 4D. Assessment of motor skills.



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MANIPAL UNIVERSITY

SECOND YEAR B.O.T. DEGREE EXAMINATION – JUNE 2011

SUBJECT: OCCUPATIONAL THERAPY – II
(With Biomechanics and Kinesiology)

Monday, June 13, 2011

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ Answer ALL the questions.

1. Define lever and explain what is mechanical advantage. Explain which of the three lever orders has the high mechanical advantage.
(5+10 = 15 marks)
2. Describe gait analysis of hip joint during stance phase in both saggital and frontal plane.
(8+7 = 15 marks)
3. Describe the test items and subtests of the Purdue pegboard test and explain its purpose for evaluation.
(5+10 = 15 marks)
4. Define leisure and explain the theories of leisure.
(3+12 = 15 marks)
5. **Short Questions:**
 - 5A. Classification of tone abnormalities.
 - 5B. Mention five differences between normal and hemiplegic gait.
 - 5C. Precautions and contra indications in sensory testing.
 - 5D. Describe the axis for various thumb movements.
(5×4 = 20 marks)



MANIPAL UNIVERSITY

SECOND YEAR B.O.T. DEGREE EXAMINATION – JUNE 2011

SUBJECT: RESEARCH METHODOLOGY AND STATISTICS

Wednesday, June 15, 2011

Time: 14:00-17:00 Hrs.

Max. Marks: 80

- 1A. Briefly explain research process.
 1B. What do you mean by validity of a tool? Define the various types of validity.
(5+5 = 10 marks)

- 2A. Discuss quantitative and qualitative variables with examples.
 2B. Present the following data using a pie diagram.

Causes of low birth weight in 360 children in a city

| Causes | No. of Children |
|--------------------------------|-----------------|
| Maternal malnutrition | 180 |
| Lack of antenatal care | 90 |
| Systemic disease of mother | 30 |
| Congenital defects in children | 15 |
| Multiple pregnancy | 45 |

(5+5 = 10 marks)

- 3A. With the help of an example explain stratified random sampling.
 3B. Briefly explain case report studies.
(5+5 = 10 marks)

- 4A. Define range, inter quartile range, variance, standard deviation and coefficient of variation.
 4B. Erythrocyte Sedimentation Rate (ESR) readings (in mm) of 12 tuberculosis patients are given below. Calculate the various measures of central tendency for this data.

| | | | | | | | | | | | |
|----|---|----|---|---|----|---|----|---|---|----|----|
| 12 | 8 | 11 | 9 | 8 | 15 | 8 | 12 | 8 | 9 | 11 | 10 |
|----|---|----|---|---|----|---|----|---|---|----|----|

(5+5 = 10 marks)

5. From the following data of a city during the year 2005, Calculate:
- i. Infant mortality rate
 - ii. Post Neo-natal Mortality Rate
 - iii. Crude birth rate
 - iv. Maternal mortality rate
 - v. Peri-natal Mortality Rate

Data:

| | |
|------------------------------------------------------------|---------|
| Mid-year population for the year 2005 | 440,000 |
| Late fetal deaths | 29 |
| No. of live births | 5200 |
| No. of infant deaths | 423 |
| No. of maternal deaths | 89 |
| No. of infants deaths in the 1 st month of life | 168 |
| No. of infants deaths within 7 days of age | 83 |

(10 marks)

6. Write short notes on:

- 6A. Prevalence and incidence with examples.
- 6B. Scales of measurements.
- 6C. Histogram with an example.
- 6D. Health information system and its requirements.
- 6E. Normal distribution and its properties.
- 6F. Correlation.

(5×6 = 30 marks)

