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MANIPAL UNIVERSITY

SECOND YEAR B.P.T./B.O.T./B.Sc. R.T./ B.Sc. C.V.T./ B.Sc. R.R.T. & D.T DEGREE EXAMINATION – DECEMBER 2015

SUBJECT: PATHOLOGY

(2010 SCHEME/2011 BATCH/2010 SCHEME/2011 SCHEME)

Tuesday, December 15, 2015

Time: 10:00-11:30 Hrs.

Max. Marks: 40

- ✍ Answer ALL questions.
- ✍ Illustrate your answers with diagrams wherever necessary.

1. Discuss the etiology of Iron deficiency anemia. Describe the peripheral smear, bone marrow findings and relevant clinical investigations in a case of iron deficiency anemia.
(2+2+2+2 = 8 marks)
2. Describe the etiopathogenesis and fate of thrombus formation.
(3+4 = 7 marks)
3. Write short notes on:
 - 3A. Differences between caseous necrosis and coagulative necrosis
 - 3B. Complications of cutaneous wound healing
 - 3C. Morphology of Primary pulmonary Tuberculosis
 - 3D. Rheumatoid arthritis
 - 3E. Morphology of Ischemic heart disease(5 marks × 5 = 25 marks)



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MANIPAL UNIVERSITY

SECOND YEAR BPT/BOT/B.Sc. RT/B.Sc. CVT/B.Sc. RRT & DT DEGREE EXAMINATION – DECEMBER 2015

SUBJECT: MICROBIOLOGY
(COMMON FOR 2010 SCHEME/2011 BATCH/2010 SCHEME/2011 SCHEME)

Wednesday, December 16, 2015

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ **Draw diagrams wherever appropriate.**

1. Describe the causes, sources and routes of spread and prevention of hospital acquired infections.

(2+3+3 = 8 marks)

2. Discuss the pathogenesis and laboratory diagnosis of pulmonary tuberculosis.

(3+4 = 7 marks)

3. **Write short notes on:**

3A. Working principle and uses of autoclave

3B. Mechanism and examples of delayed type hypersensitivity

3C. Pathogenesis and prevention of tetanus

3D. Laboratory diagnosis of Hepatitis B infection

3E. Pathogenesis of HIV infection

(5 marks × 5 = 25 marks)



MANIPAL UNIVERSITY**SECOND YEAR B.P.T./B.O.T./B.Sc. M.I.T./B.Sc. C.V.T./B.Sc. R.R.T. & D.T.
DEGREE EXAMINATION – DECEMBER 2015****SUBJECT: PHARMACOLOGY****(COMMON FOR 2010 REGULATION/2011 BATCH/2012 SCHEME/2011 SCHEME)**

Thursday, December 17, 2015

Time: 10:00-11:30 Hrs.

Max. Marks: 40

Answer the following questions:**1. Describe the following terms with an example:**

- 1A. Synergism
- 1B. Teratogenicity
- 1C. Chemoprophylaxis

(2 marks × 3 = 6 marks)

2. List two examples and two therapeutic uses of the following classes of drugs:

- 2A. Alpha blockers
- 2B. Diuretics
- 2C. Non-steroidal anti-inflammatory drugs
- 2D. Anticoagulants

(2 marks × 4 = 8 marks)

3. Describe the mechanism of action of the following drugs and list their two therapeutic uses:

- 3A. Cotrimoxazole
- 3B. Omeprazole
- 3C. Lignocaine
- 3D. Nifedipine

(3 marks × 4 = 12 marks)

- 4A. List four drugs belonging to different classes used in bronchial asthma.
- 4B. List two skeletal muscle relaxants and mention two therapeutic uses of any one of them.
- 4C. Describe the pharmacological action of adrenaline on the heart.

(2+2+2 = 6 marks)

5. List two drugs used for the following conditions:

- 5A. Angina
- 5B. HIV infection
- 5C. Vomiting
- 5D. Epilepsy
- 5E. Diabetes mellitus

(1 mark × 5 = 5 marks)

6. Mention one example and one adverse effect of the following classes of drugs:

- 6A. Aminoglycosides
- 6B. Anticancer drugs
- 6C. Corticosteroids

(1 mark × 3 = 3 marks)



MANIPAL UNIVERSITY
SECOND YEAR B.P.T. DEGREE EXAMINATION – DECEMBER 2015
SUBJECT: ELECTROTHERAPY
(2010 REGULATION)

Friday, December 18, 2015

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

1. Essay Questions:

1A. Define Faradic currents. Discuss the physiological effects of Faradic currents. Add a note on the indications for the use of Faradic currents.

(1+5+4 = 10 marks)

1B. Name the types of Ultra -violet rays with their wavelengths. Discuss the physiological effects of Ultra -violet irradiation. Add a note on the contraindications to Ultra -violet irradiation.

(2+6+2 = 10 marks)

2. Short Notes:

2A. Techniques of applications of Ultrasound

2B. Strength – duration curve

2C. Therapeutic uses of short wave diathermy

2D. Indications and contraindications of Interferential therapy

2E. Discuss the properties of LASER.

2F. Electric shock

2G. Non luminous generators of Infra red rays

2H. Laws of electromagnetic induction

(5 marks × 8 = 40 marks)

3. Brief Answers:

3A. Define Ohm's law.

3B. Mention the uses of choke coil.

3C. List any four techniques of application of cryotherapy.

3D. Define Iontophoresis. Give two ions used in Iontophoresis with their uses.

3E. Define rheobase and chronaxie.

3F. Enumerate the physiological effects of heat.

3G. Mention the contraindications to Paraffin wax bath treatment.

3H. List the properties of a Magnet.

3I. What is combination therapy?

3J. Enumerate the types of TENS.

(2 marks × 10 = 20 marks)



MANIPAL UNIVERSITY
SECOND YEAR B.P.T. DEGREE EXAMINATION – DECEMBER 2015
SUBJECT: BIOMECHANICS AND EXERCISE THERAPY – II
(2010 REGULATION)

Saturday, December 19, 2015

Time: 10:00-13:00 hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

SECTION A: BIOMECHANICS

✍ **Essay Questions:**

1. Discuss the kinetics and kinematics of the elbow joint.

(5+5 = 10 marks)

2. **Short Notes:**

2A. What are the ligaments of the knee joint and their role in knee joint mechanics.

2B. Role of rotator cuff muscles in shoulder biomechanics.

2C. Discuss the structure and function of the intervertebral disc.

2D. Discuss the frontal plane analysis of posture.

(5 marks × 4 = 20 marks)

3. **Brief Answers:**

3A. What is windlass mechanism?

3B. What is extensor mechanism of the digits?

3C. Define passive insufficiency.

3D. Name any two anatomic pulleys.

3E. Mention the various types of prehension.

(2 marks × 5 = 10 marks)

SECTION B: EXERCISE THERAPY II

✍ **Essay Questions:**

4. Define mobilization. Discuss the principles, indications and contraindications of mobilization.

(1+3+3+3 = 10 marks)

5. **Short Notes:**

5A. Describe the principles of Proprioceptive Neuromuscular Facilitation.

5B. Discuss the various types of stretching and their indications.

5C. Discuss the principles of progressive resisted exercises.

5D. Describe the various types of traction.

(5 marks × 4 = 20 marks)

6. **Brief Answers:**

6A. What is successive induction?

6B. Oxford protocol for strengthening.

6C. Mention two advantages of prescription of a walker as a walking aid.

6D. Mention any two tests for co-ordination.

6E. Mention the limitations of Manual Muscle Testing.

(2 marks \times 5 = 10 marks)



MANIPAL UNIVERSITY**SECOND YEAR B.P.T. DEGREE EXAMINATION – DECEMBER 2015****SUBJECT: PSYCHOLOGY
(2010 REGULATION)**

Monday, December 21, 2015

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. Attempt any TWO essay type questions:

- 1A. What is intelligence? Explain theories and various tests to assess intelligence.
- 1B. Explain various theories of personality.
- 1C. Compare and contrast classical and operant conditioning

(15 marks × 2 = 30 marks)

2. Attempt any SIX short notes:

- 2A. Role of Clinical psychologists
- 2B. Laws of learning
- 2C. What is crisis and crisis reaction?
- 2D. What is learning? Explain various types of learning.
- 2E. Dynamic tradition of clinical psychology
- 2F. What is PTSD?
- 2G. Explain with the help of an example James-Lange theory of emotion.
- 2H. What are the various perspectives of abnormality?
- 2I. Freud's psychosexual stages.

(5 marks × 6 = 30 marks)

3. Attempt any FIVE very short answer questions:

- 3A. Define stress.
- 3B. Define psychotherapy.
- 3C. What is perception?
- 3D. What is psychological assessment?
- 3E. Define psychology.
- 3F. What are Army Alpha and Army Beta?
- 3G. Name some of personality tests widely used.

(3 marks × 5 = 15 marks)

4. **Multiple Choice Questions (All questions are compulsory):**

4A. The observation is _____

- i) Perceiving the behavior as it is
- ii) Behavior analysis
- iii) Examination in lab
- iv) Related to the vision

4B. Perception involves the process of _____ sensory stimuli.

- i) Fixation
- ii) Interpretation
- iii) Attention
- iv) Involvement

4C. Unconditioned stimuli is _____

- i) Dog
- ii) Bell
- iii) Foot steps
- iv) Food

4D. What does James-Lange theory of emotion states?

- i) "I feel afraid because I tremble"
- ii) "I feel afraid and hence I tremble"
- iii) Both i) and ii) is correct
- iv) Both i) and ii) is incorrect

4E. The theory which does not explain the motivation is _____

- i) Murphy's law
- ii) Social urges theory
- iii) Goal oriented theory
- iv) Maslow's theory

(1 mark × 5 = 5 marks)

