

**Second Year B.Physiotherapy Examination  
Bio-Statistics and Research Methodology**

**Date : 23-07-2019, Tuesday]**

**[Max. Marks : 40**

**[Time : 2 Hours**

- Instructions :** (1) Figure to the right indicates marks.  
(2) Draw diagram wherever necessary.  
(3) Write legibly.

Q.1.

- a) Describe in detail Randomized controlled trial. (8)  
b) In an ophthalmic OPD 130 persons above the age of 40 years were examined. (7)

Following findings were observed.

	Trachoma	No Trachoma	Total
Corneal Degeneration	30	50	80
No Corneal Degeneration	25	25	50
Total	55	75	130

Determine if there is any association between Trachoma and corneal degeneration.

(At 5% significance level, table value of the test = 3.84, df=1)

OR

Q.1.

- a) Discuss various measures of Variability by giving examples. (8)  
b) In two groups of infants of 7 months following findings were observed. (7)

Group 1: No. of infant= 100, Mean Weight= 6.7 kg, Standard Deviation= 1.2 kg

Group 2: No. of infant= 160, Mean Weight= 7.4 kg, Standard Deviation= 0.9 kg

Tests whether mean weights are significantly different?

(At 5% significance level, table value of the test is 2.2)

**2. Write Short Notes on (Any three)** (15)

- a) Sampling methods  
b) Uses of Computer in Medical Science  
c) Normal Distribution curve and its properties  
d) Odd's Ratio

**3. Write Short Notes on (Any two)** (10)

- a) Type I error and Type II error  
b) Graphical Methods of presenting **Qualitative** data  
c) Sample size



**Second Year B.Physiotherapy Examination**  
**Exercise Therapy-II & Kinesiology**

**Date : 25-07-2019, Thursday]**  
**[Time : 3 Hours**

**[Max. Marks : 80**

- Instructions :** (1) Figure to the right indicates marks.  
 (2) Draw diagram wherever necessary.  
 (3) Write legibly.  
 (4) Use separate answer books for each section.

**SECTION I**

56 marks

Q1. What is PNF? Write basic principles and special techniques of PNF.

16 Marks

OR

Q1. Define Coordination and discuss in detail various factors governing coordination. Write a note on Frenkel exercise.

16 Marks

Q2. What do you understand by fitness testing? Write in brief some methods of testing various components of fitness.

16 Marks

OR

Q2. What are the causes for restriction of joint motion and how mobilization can help in its treatment? Also describe in detail mobilization of knee joint to improve:

16 Marks

- a) Knee flexion.
- b) Knee extension.

Q3. Write Short Notes on (3 out of 4) (4 marks each)

12 Marks

- a. Describe in brief principles of passive exercise.
- b. Postural drainage of both lower lobes.
- c. General relaxation.
- d. What is scoliosis? Corrective exercise for scoliosis.

Q4. Write Short Notes on (3 out of 4) (4 marks each)

12 Marks

- a. Clapp' crawl.
- b. Types of contracture.
- c. Voluntary control grading.
- d. Types of traction.

**SECTION II**

24 Marks

Q5. Define gait. Describe phases of gait cycle. Explain in brief kinetics and kinematics of gait.

16 Marks

OR

Q5. Explain in detail the biomechanics of respiration.

16 Marks

Q6. Write Short Notes on (2 out of 3)

8 Marks

- a. Skilled movements.
- b. Function of intervertebral disc.
- c. Occupational hazards and use of correct body mechanics in physiotherapy.



Second Year B.Physiotherapy Examination  
Pathology & Microbiology

Date : 31-07-2019, Wednesday]  
[Time : 2 Hours

[Max. Marks : 40

- Instructions :** (1) Figure to the right indicates marks.  
(2) Draw diagram wherever necessary.  
(3) Write legibly.  
(4) Use separate answer books for each section.

**SECTION -1**

**Q.1** Define thrombosis. Describe pathogenesis and fate of thrombus (10)

OR

Define Neoplasia. Write in details about its classification, spread and characteristics of benign and malignant tumors.

**Q.2** Write short notes on any two (10)

1. Megaloblastic anemia
2. Emphysema
3. Rheumatoid arthritis
4. Difference between dystrophic and metastatic calcification

**SECTION II**

**Q.3** Define sterilization. (10)  
Write in detail about physical methods of sterilisation.

OR

Write pathogenicity and laboratory diagnosis of Rabies virus.

**Q.4** Write short notes. (2 out of 4) (10)

- 1.) ELISA
  - 2.) Morphology and pathogenicity of Neisseria gonorrhoeae
  - 3.) Ring worm infection
  - 4.) E. histolytica
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**Second Year B.Physiotherapy Examination**  
**Electrotherapy-I & II**

**Date : 29-07-2019, Monday]**

**[Max. Marks : 80**

**[Time : 3 Hours**

- Instructions :** (1) Figure to the right indicates marks.  
(2) Draw diagram wherever necessary.  
(3) Write legibly.  
(4) Use separate answer books for each section.

**Section I**

Q1. Explain therapeutic uses and physiological effects, methods of applications, indication and contraindications of short wave diathermy (SWD) 15

Or

Q1. Describe characteristics, therapeutic effects, principles of applications and indications of Laser therapy 15

Q2. Write short notes on any 3 15

- i) Production of infra-red rays(IRR)
- ii) Properties of water
- iii) Techniques of applications and contraindications of cryotherapy
- iv) Physiological effects of Ultra violet rays (UVR)

Q3. Write short notes on any 2 10

- i) Principles of treatment and dangers of long wave diathermy
- ii) Technique of application and dosage of ultra sound therapy
- iii) Therapeutic uses and physiological effects of paraffin wax bath

**SECTION II**

Q-4 Write in detail about characteristics, physiological effects and therapeutic uses and precautions of interrupted direct current 15

Or

Q-4 What is interferential current? Explain in detail about characteristics, physiological and therapeutic effects, indications and contraindications of interferential current. 15

Q-5 Write short notes on any 3 15

- i) Explain the Rebox current
- ii) Explain pain gate theory in detail
- iii) Indications, contraindications and dangers of Iontophoresis
- iv) Describe faradism under pressure

Q-6 Write short notes on any 2 10

- i) Explain parameters, indications and contraindications of transcutaneous electrical stimulation (TENS)
- ii) Explain care of wounds
- iii) Explain physiological and therapeutic effects of galvanic current





Second Year B.Physiotherapy Examination  
Pharmacology

Date : 02-08-2019, Friday]

[Time : 2 Hours

[Max. Marks : 40

- Instructions :** (1) Figure to the right indicates marks.  
(2) Draw diagram wherever necessary.  
(3) Write legibly.

Q. 1 Classify skeletal muscle relaxant. Describe the mechanism of action and adverse effects of succinylcholine. (15)

OR

Describe briefly the mechanism of action, adverse effect and use of glucocorticoids. (15)

Q. 2 Attempt **any three** of the following: (Five marks each) (15)

- a) Classify diuretics. Describe briefly the mechanism of action and therapeutic uses of hydrochlorthiazide.
- b) Classify anticholinesterase. Enumerate therapeutic use and adverse effect of physostigmine.
- c) Describe drug therapy of newly diagnosed smear positive tuberculosis.
- d) Describe briefly the pharmacological basis for the use of
  - i. Piperacillin + Tazobactam in bacterial infection
  - ii. Lignocaine + Adrenaline [1:200000] for local anaesthesia

Q. 3 Write short notes on **any two** of the following: (Five marks each) (10)

- a) Describe mechanism of action and adverse effect of metformin.
  - b) Selective cox-2 inhibitors
  - c) Describe drug elimination through kidney.
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