



## Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)

Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

### Bachelor's Degree Examination – May 2025 IV Semester

Class : II UG  
Major : Physiotherapy

Time: 3 Hours  
Max. Marks: 100

#### 22BPTC19 Exercise Therapy-II

##### Course Outcome:

On the successful completion of the course, students will be able to

CO1: To gain knowledge on joint range and their measurements

CO2: Understand posture, movement retraining, and balance and co ordination.

CO3: Evaluate the pathological gait and use of different mobility aids

CO4: knowledge about the basic information on therapeutic massage and its effect on different systems of the body.

CO5: Learn the demonstration of face, neck, back, upper limb, lower limb massage and suspension therapy.

##### Part A

10 x 1 = 10

##### Choose the Correct Answer

- The patient abnormally raises his leg (high step) jerks it forward to strike the ground with stamp is CO1 K1
  - Reeling gait
  - Stamping gait
  - Festinate gait
  - Shuffling gait
- The amount of time that elapses during the stance phase of one extremity in a gait cycle is CO1 K1
  - stance time
  - double support time
  - single support time
  - stride duration
- linear distance from the heel strike of one to the next heel strike of opposite limb CO1 K1
  - Stance time
  - Double support time
  - Step length
  - Stride length
- For suspension therapy patient should have minimal muscle power of CO2 K1
  - 1
  - Less than 2
  - 3
  - 2
- Elbow crutch measurement taken from ulnastyloid process with CO1 K1
  - elbow 20-30<sup>0</sup> flexion
  - elbow 20-30<sup>0</sup> extension
  - internal rotation
  - external rotation
- Temperature often plays a role in hydrotherapy as does CO2 K1
  - Water pressure
  - Elevation
  - Time
  - Training
- Frenkel's Exercise is particularly beneficial for individuals with CO4 K2
  - Joint pain
  - Cardiovascular diseases
  - Respiratory issues
  - None of the above
- Hormone that commonly associated with the relaxation response induced by massage CO5 K3
  - Cortisol
  - Endorphins
  - Insulin
  - Adrenaline
- Primary physiological effects of massage CO5 K3
  - Increased heart rate
  - Decreased blood circulation
  - Reduction of muscle tension
  - Weakening of the immune system
- Stroking manipulations in massage therapy involve CO5 K2
  - Rapid, rhythmic movements
  - Slow, gentle movements
  - Firm pressure applied with knuckles
  - Stretching techniques

**Part B**  
**Answer ALL questions**  
**Each answer should not exceed 400 words or two pages**

**5 x 6 = 30**

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|---|--------|
| 11.a. Describe control of co-ordination.<br>(or)  | CO4 K1 |
| 11.b. Describe the circulatory effects in massage.  | CO5 K2 |
| 12.a. Explain pre-crutch training.<br>(or)  | CO1 K2 |
| 12.b. Explain indications and contraindications of hydrotherapy.                          | CO2 K2 |
| 13.a. Explain indication and contraindication for massage.<br>(or)                        | CO5 K2 |
| 13.b. Explain inco-ordination- definition and causes.                                     | CO3 K2 |
| 14.a. Explain goniometer types, procedure ,selection and position of the patient.<br>(or) | CO3 K1 |
| 14.b. Explain stair climbing by using crutch.   | CO1 K1 |
| 15.a. Explain re-education for balance.<br>(or)   | CO4 K1 |
| 15.b. Write a note on normal and abnormal posture.  | CO2 K1 |

**Part C**  
**Answer ALL questions**  
**Each answer should not exceed 800 words or four pages**

**5 x 12 = 60**

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|--|--------|
| 16.a. Explain in detail frenkel exercise.<br>(or)  | CO4 K1 |
| 16.b. Explain the techniques used in massage.  | CO5 K2 |
| 17.a. Explain principles, procedure and types of suspension.<br>(or)                                     | CO2 K2 |
| 17.b. Explain types of pathological gait. Add a note on hemiplegic gait and ataxic gait.                 | CO1 K2 |
| 18.a. Explain individual and group exercise principles.<br>(or)  | CO3 K2 |
| 18.b. Explain types of manipulation technique in massage.  | CO5 K2 |
| 19.a. Explain balance static and dynamic.<br>(or)  | CO4 K2 |
| 19.b. Explain hazards of bedrest.  | CO5 K2 |
| 20.a. Explain gait pattern of crutch walking non-weight bearing and partial weight bearing gait.<br>(or) | CO1 K2 |
| 20.b. Explain in detail the gait cycle.  | CO1 K1 |

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