



## BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Physiotherapy-2022/B.Physiotherapy-2023/B.Physiotherapy-2024/B.Physiotherapy-2025

Course Name – Exercise Therapy - I

Course Code - BPTC203

( Semester II ) ✓

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify the planes and axis for hip flexion.
 

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| a) vertical plane & horizontal axis | b) sagittal axis & frontal plane    |
| c) frontal axis & sagittal plane    | d) horizontal plane & vertical axis |
- (ii) Describe the another name for 3rd order lever.
 

|                  |                |
|------------------|----------------|
| a) Balance lever | b) power lever |
| c) speed lever   | d) equal lever |
- (iii) Select the correct option: In isotonic type of contraction -
 

|                       |                     |
|-----------------------|---------------------|
| a) tone is equal/same | b) tone will change |
| c) length will change | d) length will same |
- (iv) State the effects of free exercises.
 

|                             |                  |
|-----------------------------|------------------|
| a) Muscle strengthening     | b) improving ROM |
| c) improve movement pattern | d) all of these  |
- (v) State that endurance develops in response to the application of -
 

|                           |                       |
|---------------------------|-----------------------|
| a) repetitive contraction | b) Maximum resistance |
| c) minimum resistance     | d) no resistance      |
- (vi) Express the progression for De lorme & Watkins technique.
 

|                   |               |
|-------------------|---------------|
| a) Once in a week | b) 2 -3 month |
| c) yearly         | d) Each day   |
- (vii) Identify the true statement for resisted exercise.
 

|                                                  |                                                 |
|--------------------------------------------------|-------------------------------------------------|
| a) Can be applied both manually and mechanically | b) any form of active movement that is resisted |
| c) includes aerobic exercise                     | d) all of these                                 |
- (viii) Write the ability to overcome the resistance
 

|             |              |
|-------------|--------------|
| a) Strength | b) Endurance |
|-------------|--------------|

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>c) Energy</p> <p>(ix) Identify the antagonist muscle during elbow flexion</p> <p style="margin-left: 20px;">a) Biceps brachi</p> <p style="margin-left: 20px;">c) Serratus anterior</p> <p>(x) Express the functions of soleus.</p> <p style="margin-left: 20px;">a) Dorsiflexion</p> <p style="margin-left: 20px;">c) Plantarflexion</p> <p>(xi) Identify the unit of power.</p> <p style="margin-left: 20px;">a) Joules per second</p> <p style="margin-left: 20px;">c) erg</p> <p>(xii) Express the knee flexor muscle</p> <p style="margin-left: 20px;">a) Hamstring</p> <p style="margin-left: 20px;">c) Biceps</p> <p>(xiii) Express the name of close kinematic chain exercises.</p> <p style="margin-left: 20px;">a) squat</p> <p style="margin-left: 20px;">c) elbow extension</p> <p>(xiv) Select the example soft tissue manipulation.</p> <p style="margin-left: 20px;">a) Stroking</p> <p style="margin-left: 20px;">c) Maitland</p> <p>(xv) Choose the normal end-feel of knee joint.</p> <p style="margin-left: 20px;">a) Hard</p> <p style="margin-left: 20px;">c) Soft</p> | <p>d) Inertia</p> <p>b) Triceps</p> <p>d) Upper trapezius</p> <p>b) 1st order lever</p> <p>d) equal lever</p> <p>b) joule</p> <p>d) second</p> <p>b) Quadriceps</p> <p>d) Triceps</p> <p>b) push ups</p> <p>d) both 1 &amp; 2</p> <p>b) kneading</p> <p>d) both 1 &amp; 2</p> <p>b) Empty</p> <p>d) None of these</p> |
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**Group-B**

(Short Answer Type Questions)

3 x 5=15

- |                                                                |     |
|----------------------------------------------------------------|-----|
| 2. Describe the active insufficiency of a muscle with example. | (3) |
| 3. Discuss the muscle work of sitting position.                | (3) |
| 4. Explain the principles of massage.                          | (3) |
| 5. Describe 1 RM testing and its uses.                         | (3) |
| 6. Summarize the procedure of true limb length measurement.    | (3) |

**OR**

- |                                                 |     |
|-------------------------------------------------|-----|
| Illustrate the make test and break test of MMT. | (3) |
|-------------------------------------------------|-----|

**Group-C**

(Long Answer Type Questions)

5 x 6=30

- |                                                                               |     |
|-------------------------------------------------------------------------------|-----|
| 7. Identify the factors for reduce joint range of motion.                     | (5) |
| 8. Describe the difference between open and closed kinematic chain exercises. | (5) |
| 9. Illustrate the FITT format of exercise prescription with an example.       | (5) |
| 10. Describe the derived positions of crook lying and muscle work.            | (5) |
| 11. Explain the contraindication of passive movements in a patient.           | (5) |
| 12. Explain briefly the physiological effects of Massage.                     | (5) |

**OR**

- |                                                         |     |
|---------------------------------------------------------|-----|
| Describe the concave-convex rule with example, diagram. | (5) |
|---------------------------------------------------------|-----|

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