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34 (2) EXTH 2·3

2017

**EXERCISE THERAPY**

Full Marks : 100

Time : Three hours

***The figures in the margin indicate full marks for the questions.***

1. Multiple choice questions :  $1 \times 20 = 20$ 
  - (A) Measurement of axillary crutches is done —
    - (a) 5cm below posterior axilla and 15cm lateral to heel of shoe with patient in supine lying.
    - (b) 7cm below anterior axilla and 10cm lateral to heel of shoe with patient in standing.
    - (c) 4cm below the axilla and 10cm medially to heel of shoe with patient in supine.

Contd.

- (d) 5cm below posterior axilla and 12 cm lateral to heel with patient standing.
- (B) During squaring of the pelvis length of the lower limb apparently can be increased by
- (a) Abducting the affected leg
  - (b) Adducting the affected leg
  - (c) Lengthening apparently is not possible
  - (d) None of the above.
- (C) Which of the following is not true about PFT?
- (a) It is also known as lung function test
  - (b) It is used to assess the condition of your lungs
  - (c) It is also known as spirometry
  - (d) PFI cannot diagnose pulmonary tumor.

- (D) For goniometry \_\_\_\_\_ is done first.
- (a) Align the fixed arm with the proximal segment
  - (b) Align the movable arm with the distal segment
  - (c) Align the axis over the anatomical axis of joint
  - (d) None of the above.
- (E) Push up is an example of :
- (a) Close kinetic chain exercise
  - (b) Active free weight bearing exercise
  - (c) Both (a) and (b)
  - (d) Resisted exercise.
- (F) The Principle of Frenkel's coordination exercise is /are —
- (a) Precision
  - (b) Attention
  - (c) Repetition
  - (d) All of the above.

(G) Carpometacarpal joint of thumb has got \_\_\_\_\_ degrees of freedom.

- (a) One
- (b) Two
- (c) Three
- (d) Four

(H) Simple objective method of muscle evaluation can be done by —

- (a) Manual muscle testing
- (b) 1 repetition maximum
- (c) Isokinetic device
- (d) Dynamometer.

(I) \_\_\_\_\_ manipulation is used to obtain sensory stimulation

- (a) Stroking
- (b) Kneading
- (c) Effleurage
- (d) Friction

(J) Oscillatory mechanical energy can be transmitted to the chest by the following massage technique :

- (a) Shaking
- (b) Vibration
- (c) Both (a) and (b)
- (d) Hacking

(K) For the effective stretching of the hip flexors

- (a) Lay in prone
- (b) In prone position at the edge of the bed, hold the sound hip in full flexion out of the bed
- (c) In supine lying, at the edge of the bed, hold the sound hip in full flexion and hold the involved side foot to pull the thigh downward out of the bed
- (d) All of the above.

- (L) Which is more functional speed in isokinetic training ?
- (a) High
  - (b) Intermediate
  - (c) Low
  - (d) Low followed by high.

- (M) The optimal time hold for isometric contraction is
- (a) 6 sec
  - (b) 10 sec
  - (c) 12 sec
  - (d) 60 sec.

- (N). Mitchell technique of relaxation is based on the principle of
- (a) Reciprocal innervations
  - (b) Autogenic inhibition
  - (c) Cue controlled relaxation
  - (d) Release only.

- (O) Valsalva Maneuver should be avoided for
- (a) Hypertensive patient
  - (b) Geriatric patient
  - (c) Patient undergoing abdominal surgery
  - (d) All of the above.

- (P) In single leg standing hip joint is subjected to load equal to
- (a)  $\frac{1}{3}$ rd of body weight
  - (b) body weight
  - (c) 2 times of body weight
  - (d) 3 times of body weight.

- (Q) Which of the following is not a tapotement technique
- (a) Clapping
  - (b) Beating
  - (c) Pounding
  - (d) Petrissage.

(R) Which exercise program increases balance ?

- (a) Weight machine
- (b) Free machine
- (c) Both (a) and (b)
- (d) Pulley or cam machine.

(S) Best way for stretching tight structure is

- (a) Manual stretch
- (b) Prolonged cyclic
- (c) Prolonged sustained stretching
- (d) Ballistic.

(T) Delayed on set muscle soreness peaks at —

- (a) 1-2 days
- (b) 2-3 days
- (c) 1 week
- (d) None of the above.

2. Short essay type : 5×10=50

- (a) Short note on Anthropometric Measurements.
- (b) Write the procedures of doing PFT.
- (c) Explain types of contractures.
- (d) Elaborately explain the precautions to be taken during Resisted exercise.
- (e) Explain about the procedure of limb length of limb girth measurement.
- (f) What do you mean by Jacobson's and Mitchel's technique of relaxation ? Explain the techniques.
- (g) Discuss about the various tests for coordination.
- (h) What do you mean by PNE ? Explain the differences between rhythmic initiation and rhythmic stabilisation along with examples.

- (i) Discuss about hydrostatics and hydrodynamics.
- (j) Discuss about the various grades of mobilization given by Maitland and Kaltenborn with neat labelled diagram.

3. Short Answer : 2×5=10

- (a) PRE
- (b) Group exercise
- (c) Walking aids
- (d) Pranayama
- (e) Circuit weight training.

4. Essay Type : (Answer **any two** out of **three**)  
10×2=20

- (a) Define balance. Discuss the components of balance. Explain about the type of balance retraining.
- (b) What are mat exercises ? Discuss the activities on mat from lying to sitting transition with neat diagrams.

- (c) What are passive movements ? Give its classification. Discuss the indication, contraindication and principles of giving passive movements.