



# BRAINWARE UNIVERSITY

**Term End Examination 2021 - 22**

**Programme – Bachelor of Physiotherapy**

**Course Name – Fundamental of Exercise Therapy**

**Course Code - BPT401**

**( Semester IV )**

**Time allotted : 1 Hrs.15 Min.**

**Full Marks : 60**

[The figure in the margin indicates full marks.]

## Group-A

(Multiple Choice Type Question)

1 x 60=60

*Choose the correct alternative from the following :*

- (1) 40 Kg traction force is applied to the part at an angle of 30 degrees. What will be the effective distractive force at the joint?
 

a) 30 kg	b) 35 kg
c) 40 kg	d) 45 kg
- (2) Friction is the resistive force offered by the surface, when one surface moves over the other, which is \_\_\_\_\_.
 

a) Directly proportional to the area of the surface in contact	b) Nature of the surface
c) Nature of the surface	d) All of the above
- (3) Pulleys are used to \_\_\_\_\_.
 

a) Make the work easy	b) Alter the direction of motion
c) Gain mechanical efficiency	d) All of the above
- (4) In a pulley maximum resistance force is produced when the angle of pulley is
 

a) In line with the moving bone	b) 90 degrees to the moving bone
c) 60 degrees with moving bone	d) 45 degrees with the moving bone
- (5) Which order/class of lever is the lever of speed.
 

a) 1 class	b) 2 class
c) 3 class	d) All of the above
- (6) Knee flexion in prone lying is an example of which lever?
 

a) 1 class	b) 2 class
c) 3 class	d) All of the above
- (7) Standing on toes is an example of which lever ?

- a) 1  
c) 3
- b) 2  
d) All of the above
- (8) The degrees of freedom of the MCPJ of fingers is  
a) 1  
c) 3  
b) 2  
d) 4
- (9) Ankle DF/PF takes place  
a) Saggital plane & frontal axis  
c) Transverse plane & vertical axis  
b) Frontal plane & saggital axis  
d) Coronal plane & horizontal axis
- (10) The characteristics of any starting position  
a) Stable  
c) Provide room for full range of motion  
b) Comfortable  
d) All of the above
- (11) Active fixation can be achieved by  
a) Co contraction of muscles  
c) Manual pressure  
b) Straps  
d) None of the above
- (12) Pronation and supination take place on  
a) Sagittal plane and frontal axis  
c) Transverse plane and vertical axis  
b) Frontal plane and sagittal axis  
d) Coronal plane and horizontal axis
- (13) Mechanically the assistance/ resistance are most effective when it acts at  
a) Acute angle  
c) Perpendicular  
b) Obtuse angle  
d) 0 degree
- (14) Forearm pronation range of motion is limited due to  
a) Bony contact  
c) Soft tissue tension  
b) Soft tissue approximation  
d) Soft tissue tension
- (15) Example of soft tissue approximation limiting joint range of motion is  
a) Forearm pronation  
c) Ankle df with knee flexion  
b) Hip flexion with knee extension  
d) Elbow flexion
- (16) Example of passive insufficiency is  
a) Hip flexion with knee extension  
c) Ankle df with knee flexion  
b) Fingers flexion with wrist extension  
d) Shoulder external rotation with abduction
- (17) Example of bony end feel is.  
a) Knee extension  
c) Ankle df  
b) Elbow extension  
d) Forearm supination
- (18) Forced passive movement is contraindicated for  
a) Hip  
c) Elbow  
b) Knee  
d) Spine
- (19) Joint mobilization is contraindicated in  
a) Soft tissue tightness  
c) Loose body inside the joint  
b) Joint stiffness  
d) Bursitis
- (20) Glenohumeral anterior glide can improve  
a) Extension range  
c) Extension and external rotation  
b) Flexion range  
d) Flexion and internal rotation range
- (21) 41. Leathery end feel is characteristic of

- a) Soft tissue tightness  
c) Bony obstruction
- b) Capsular tightness  
d) Internal derangement
- (22) The end feel of the loose body inside the joint is  
a) Elastic  
c) Leathery
- b) Hard  
d) Springy rebound
- (23) The fixed point in axial suspension is  
a) Vertically above the axis of the joint  
c) Sideways to the anatomical axis of the joint
- b) Vertically above the cg of the part  
d) Sideways to the CG of the part
- (24) In axial suspension the part rests in which position  
a) Neutral  
c) Above the supporting surface
- b) Away from neutral  
d) Flexion
- (25) Movement in pendular suspension takes place in  
a) Horizontal  
c) Sagittal
- b) Inclined plane  
d) Frontal
- (26) Which of the following statements is true regarding muscle strengthening?  
a) Increase & decrease in speed of movement is a progression of concentric work  
c) Decrease in speed of movement is a progression of static work
- b) Increase in speed of movement is a progression of eccentric work  
d) All of the above
- (27) Frenkel's exercises are devised to improve co-ordination by use of sight, sound and touch in case of ataxia due to  
a) Cerebellar lesion  
c) Spastic paralysis
- b) Loss of kinesthetic sensation  
d) Flaccid paralysis
- (28) Progression of Frenkel's exercise is made by alteration of  
a) Speed- Quick to slow  
c) Complexity of exercises
- b) Range- wider to smaller  
d) All of the above
- (29) Which of the following PNF techniques is used in Cerebellar ataxia  
a) Repeated contraction  
c) Rhythmic initiation
- b) Hold & relax  
d) Rhythmic stabilization
- (30) Rhythmic Initiation technique is used for  
a) Tightness  
c) Cerebellar ataxia
- b) Flaccid paralysis  
d) Parkinsonism
- (31) Groove in PNF refers to  
a) Maximum resistance  
c) Repetition
- b) Diagonal pattern of movement  
d) Proprioceptive stimuli
- (32) In PNF elbow flexion is a component of  
a) Flexion- abduction – external rotation  
c) Extension- abduction – internal rotation
- b) Flexion- adduction – external rotation  
d) All of the Above
- (33) In PNF knee flexion is a component of  
a) Flexion- abduction – external rotation  
c) Extension- adduction – internal rotation
- b) Flexion- adduction – external rotation  
d) Extension- abduction – external rotation
- (34) Which is not true for rhythmic stabilization?

- a) It develops co-contraction  
c) It develops stability
- b) Manual resistance applied alternately  
d) No relaxation phase
- (35) Choose the correct progression of ambulation by a pair of auxiliary crutches\_
- a) 2 point, 3 point, 4 point  
c) 3 point, 4 point, 2 point
- b) 4 point, 3 point, 2 point  
d) 2 point, 4 point, 3 point
- (36) Trendelenburg's sign is said to be positive, when
- a) Sound side pelvis drop down, while standing on affected side  
c) Sound side pelvis elevated, while standing on affected side
- b) . Affected side pelvis drop down, while standing on sound side  
d) =E\$62
- (37) In Thomas test position limitation of hip adduction range indicates shortening of
- a) TFL  
c) Iliopsoas
- b) ITB  
d) Rectus femoris
- (38) Ober's test is done to detect shortening of
- a) Iliopsoas  
c) Hamstring
- b) IT band  
d) Gastro-soleus
- (39) Leg lowering from extended knee position, Quadriceps works
- a) Concentrically  
c) Statically
- b) Eccentrically  
d) Isokinetically
- (40) Leg lowering against resistance from extended knee position
- a) Quadriceps works concentrically  
c) Hamstrings works concentrically
- b) Quadriceps works eccentrically  
d) Hamstrings works eccentrically
- (41) The advantages of group therapy
- a) Time saving for therapist  
c) Maximizes patient's effort
- b) Builds up confidence in patients  
d) All of the Above
- (42) Mitchell technique of relaxation is based on the principle of
- a) Reciprocal innervations  
c) Cue controlled relaxation
- b) Autogenic inhibition  
d) Released only
- (43) Valsalva Maneuver should be avoided for
- a) Patients with hypertension  
c) abdominal surgery patients
- b) Geriatric patients  
d) All of the Above
- (44) DOMS can be prevented by
- a) warm up  
c) stretching
- b) gradual progression  
d) All of the Above
- (45) To improve function which exercise programme is preferable
- a) Closed chain concentric  
c) Plyometric
- b) Open chain concentric  
d) Closed chain concentric & eccentric
- (46) The minimum duration of exercise programme to improve strength should be at least.
- a) 3 weeks  
c) 10 weeks
- b) 6 weeks  
d) 12 weeks
- (47) What should be the progression of exercise protocol following musculoskeletal injury.
- a) Isometric – eccentric – concentric  
b) Isometric – concentric – concentric &

- eccentric
- c) Concentric – eccentric – concentric & eccentric
- d) Isometric - concentric – eccentric
- (48) Oxford technique is opposite of ?
- a) Dapre
- b) Delrome
- c) Mcqueen
- d) None of the above
- (49) Which is not true in case of muscle strengthening
- a) Cross sectional area of the muscle increase
- b) Number of muscle fibre increase
- c) Mitochondrial density increases
- d) Energy sources for muscle activity increases
- (50) Which is the important factor to gain bone density?
- a) Resistance training
- b) Weight bearing aerobic conditioning
- c) Weight bearing resistance training
- d) Non weight bearing aerobic training
- (51) Which is not true for endurance training?
- a) Increased use of fatty acid
- b) Increase used of glycogen
- c) Slowing accumulation of lactic acid in the working muscle
- d) All of the Above
- (52) How much gain in strength is expected from elite individual
- a) 0.02
- b) 0.05
- c) 0.1
- d) 0.15
- (53) The advantage of isometric contraction could be because it
- a) Helps for re – education
- b) Helps gaining muscle strength
- c) Prepares for dynamic exercise
- d) All of the Above
- (54) The cam system used in a weight machine provides
- a) Constant resistance
- b) Less resistance when patient is exhausted
- c) Less resistance at he beginning and end of ROM
- d) Gives resistance intermittently
- (55) If balance is the rehabilitation goal which exercise programme is preferred?
- a) Weight machine
- b) Free machine
- c) Both have similar advantage for balance
- d) Pulley or cam machine
- (56) Hopping, skipping, jumping are form of
- a) Isometric
- b) Isotonic
- c) Pylometric
- d) All of the Above
- (57) Which is more functional speed in isokinetic training?
- a) High
- b) Intermediate
- c) Low
- d) Low followed by high
- (58) Ballistic stretching is helpful for
- a) 5 mins
- b) 10 mins
- c) 30 mins
- d) 60 mins
- (59) If 6 week stretching Programme is given, we expect the retention of gain up to
- a) 1 month
- b) 2 months
- c) 3 months
- d) 6 months
- (60) Stiff knee gait is characterized by

- a) Lurching
- c) Hip hiking

- b) Hand to knee
- d) Steppage gait