

**BOWEN UNIVERSITY**  
**COLLEGE OF HEALTH SCIENCES**  
**PHYSIOTHERAPY PROGRAMME**

**PST 413 (MUSCLE STRENGTHENING AND JOINT MOBILISATION  
TECHNIQUES)**

**INCOURSE EXAMINATION (2020/2021 SESSION)**

**TIME ALLOWED: ONE HOUR**

**ATTEMPT ALL QUESTIONS**

**SECTION A: Circle the most correct option from A – D.**

1. Goniometry measures (a) roll (b) spin (c) glides (d) a, b and c.
2. Flexion of shoulder joint is in (a) sagittal plane, (b) horizontal plane (c) frontal plane, (d) vertical axis.
3. Circumduction in hip joint is in (a) sagittal plane, (b) horizontal plane (c) frontal plane, (d) vertical axis.
4. Plantar-flexion and dorsiflexion is in (a) sagittal plane, (b) horizontal plane (c) frontal plane (d) vertical axis.
5. Head rotation is in (a) sagittal plane, (b) horizontal plane (c) frontal plane, (d) vertical axis.
6. Knee flexion and extension is in (a) sagittal plane, (b) horizontal plane (c) frontal plane, (d) vertical axis.

**SECTIONS B AND C: answer questions 7 to 21 by fixing either true or false beside each question.**

In the measurement of joint range of motion using universal goniometer the following are necessary.

7. Recommended testing positions
8. Nature of the joint
9. Alternative positioning
10. Stabilization of distal joint required
11. Types of motion to be measured
12. Joint structure and function
13. Abnormal end-feels

14. Anatomical bony landmarks
15. Instrument alignment
16. Size of the joint

### **SECTION C**

Restriction in joint range of motion during examination of patient may be due to:

17. contracture of muscle
18. bony ankyloses
19. pain
20. ligamentous tightness
21. can be measured with a tape rule
22. can be measured with inclinometer

### **SECTION D**

#### **Circle the most correct option**

23. Muscle strength is (A) is a minimum force that a muscle or group of muscle can generate. (B) is maximum force that a muscle or group of muscle can generate. (C) Maximum amount of weight somebody can carry for one round (D) b and c
24. Muscle strength is assessed by (A) by using very high velocity testing to examine the peak torques produced (B) using low velocity testing to examine the torques produced (C) It is assessed by using slow velocity testing to examine the peak torques produced. (D) It is assessed by using medium velocity testing to examine the torques produced.
25. One repetition maximum is (A) is define as the maximum weight the individual can lift just once (B) is define as the minimum weight the individual can lift just once (C) is define as the maximum weight the individual can lift just ten times before fatigue (D) is define as the minimum weight the individual can lift ten times.
26. Muscle strength can be examined by measuring the following except (A) static strength (B) dynamic strength (C) strength at various speed (D) sustained contraction of a muscle for a period.
27. Endurance can be estimated by (A) assessing the maximum number of repetitive muscle contraction somebody can perform (B) assessing the minimum number of repetitive muscle contraction somebody can perform (C) assessing the minimum number of repetitive muscle contraction somebody can perform (D) none of the above.

28. Muscular endurance can increase through the following except (A) gain in muscular strength (B) changes in local metabolic rate (C) increase in circulatory function (D) change in daily physical activities.
29. Factors that affect muscle grading include (A) application of resistance (B) application of stimulation (C) the use of electromyography (D) application of palpation
30. Oxford muscle grading has how many scales (a) 2 (b) 4 (c) 5 (d) 6
31. Using oxford muscle grading scale and manual muscle strength grading chart; power 4 is equivalent to (A) poor (B) good (C) very good (D) normal.
32. FAI is used for (A) Hip joint (B) knee joint (C) elbow joint (D) menisci damage.
33. In femoral stress test, the stethoscope is placed over the (A) patellar (B) Thigh close to the inguinal region (C) pubic tubercle (D) over the anterior superior iliac crest.
34. Assessing the femoral stress test, a positive response is (A) increase percussion compared to the other side ( B) diminished percussion noted compared with contralateral side (C) no percussion noted compared with contralateral side (D) none of the above.
35. Fulcrum test is used to assess (A) knee injury (B) traumatic fracture of femur (C) stress test of femur (D) Knee osteoarthritis
36. Quadrant test is for capsular tightness of the (A) Knee (B) ankle (C) shoulder (D) Hip
37. Ober's test is performed while patient is in (A) sitting position (B) lying prone (C) side lying (D) Standing position
38. Ober's test is used to confirm (A) tightness of the tensor fasciae latae (B) tightness of illio tibial band (C) tightness of ligamentum patellae (D) a and b
39. In McConnel's test, a positive test is (A) decrease in symptom (B) increase in symptom (C) no change in symptom (D) none of the above.
40. McConnel's test is used for (A) knee joint (B) hip joint (C) patella-femoral joint (D) Shoulder joint.