

021/2020

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Name the Intracapsular ligament of knee joint:
(A) Tibial collateral ligament (B) Anterior cruciate ligament
(C) Fibular collateral ligament (D) Ligamentum patellae
2. Intercalated Disc is present in:
(A) Smooth muscle (B) Skeletal muscle
(C) Cardiac muscle (D) None of the above
3. Foramen transversarium is present in:
(A) Cervical vertebra (B) Thoracic vertebra
(C) Lumbar vertebra (D) Sacral vertebra
4. Which of the following is NOT a muscle of forearm?
(A) Pronator Quadratus (B) Brachioradialis
(C) Supinator (D) Biceps Brachii
5. Name the organ supplied by coronary arteries:
(A) Heart (B) Lung
(C) Liver (D) Spleen
6. Vitamin K dependent clotting factor:
(A) II (B) III
(C) IV (D) V
7. Maximum number of Na⁺ channels per m² of membrane in myelinated mammalian neurons is seen in:
(A) Cell body (B) Initial segment
(C) Nodes of Ranvier (D) Axon terminal
8. Site where water absorption is maximum:
(A) Duodenum (B) Jejunum
(C) ileum (D) Colon

A

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[P.T.O.]

9. All are factors increasing venous return except:
- (A) Increased blood volume (B) Increased venous tone
(C) Increased muscular activity (D) Increased intrapericardial pressure
10. Sensation carried through dorsal column pathway:
- (A) Crude touch (B) Pain
(C) Temperature (D) Vibration
11. Posterior interosseous nerve palsy causes difficulty in:
- (A) Extension of fingers and wrist (B) Flexion of fingers and wrist
(C) Flexion of elbow (D) Extension of elbow
12. Axillary nerve injury occurs when there is injury to:
- (A) Surgical neck of humerus (B) Spiral groove of humerus
(C) Lower end of humerus (D) None of the above
13. In the WHO definition 1980, a disadvantage for a given individual that limits or prevents the fulfillment of a role that is normal for that individual is:
- (A) impairment (B) disability
(C) handicap (D) participation
14. All the following are Instrumental Activities of Daily Living(IADL) except:
- (A) Meal preparation (B) Feeding
(C) Shopping (D) Banking
15. Among the following the feature of upper motor neuron weakness is:
- (A) Flaccid weakness (B) Significant muscle atrophy
(C) Hyperreflexia (D) Fasciculations
16. Assessment by Glasgow Coma Scale includes:
- (A) Eye opening (B) Verbal response
(C) Motor response (D) All the above
17. Which of the following is not a primitive reflex:
- (A) Sucking reflex (B) Rooting reflex
(C) Grasp reflex (D) Blinking reflex

18. Goniometer is an instrument to measure the:
- (A) Range of motion of a joint
 - (B) Strength of a joint
 - (C) Instability of a joint
 - (D) None of the above
19. Which of the following is absent in Erb's palsy:
- (A) Adducted shoulder
 - (B) Externally rotated shoulder
 - (C) Extended elbow
 - (D) Flexed wrist
20. In a classic club foot the deformity seen is:
- (A) Hind foot equinus, forefoot and hind foot varus, forefoot adduction
 - (B) Hind foot equinus, forefoot and hind foot varus, forefoot abduction
 - (C) Hind foot equinus, forefoot and hind foot valgus, forefoot adduction
 - (D) Hind foot equinus, forefoot and hind foot valgus, forefoot abduction
21. The transfer of thermal energy between two bodies in direct contact is called:
- (A) Convection
 - (B) Radiation
 - (C) Conduction
 - (D) All of the above
22. Osteochondritis of the epiphysis of femoral head is known as:
- (A) Keinbock's disease
 - (B) Perthe's disease
 - (C) Calve's disease
 - (D) Panner's disease
23. Regarding Volkmann's Ischemia:
- (1) Volkmann's ischemia is the result of decreases blood supply to the flexor muscles of the forearm
 - (2) The muscles supplied by the anterior interosseous artery are the most susceptible to ischemic damage as it is an end artery
- (A) Only statement 1 is correct
 - (B) Only statement 2 is correct
 - (C) Both statements are correct and 2 is the correct explanation of 1
 - (D) Both statements are correct but 2 is not the correct explanation of 1
24. Gunstock deformity is a complication of supracondylar fracture of humerus. It is a:
- (A) Cubitusvarus deformity
 - (B) Cubitus valgus deformity
 - (C) Fixed flexion deformity of elbow
 - (D) None of the above

25. Following are features of Autonomic dysreflexia except:
- (A) Pounding headache
 - (B) Hypotension
 - (C) Facial flushing
 - (D) Reflex bradycardia
26. Prolonged walking or running in those who are not accustomed to it can cause fracture of:
- (A) Talus
 - (B) Calcaneum
 - (C) Metatarsal shaft
 - (D) Phalanges
27. All the following are muscles of rotator cuff except:
- (A) Supraspinatus
 - (B) Teres minor
 - (C) Teres major
 - (D) Subscapularis
28. The contraindication to Postural drainage includes:
- (A) Hemoptysis
 - (B) Recent myocardial infarction
 - (C) Pneumothorax
 - (D) All the above
29. No. of bronchopulmonary segments in the right lung:
- (A) 7
 - (B) 8
 - (C) 9
 - (D) 10
30. Regarding lung volumes in an adult, all are true except:
- (A) Total lung capacity is 6 litres
 - (B) Inspiratory reserve volume is 3 litres
 - (C) Tidal volume is 500 ml
 - (D) Expiratory reserve volume is 3 litres
31. A muscle produces the most force output when it is contracting:
- (A) Eccentrically
 - (B) Isometrically
 - (C) Concentrically
 - (D) None of the above
32. Factors contributing to the hypertrophy of a muscle fibre include all the following except:
- (A) Increase in the amount of protein
 - (B) Increase in the density of the capillary bed
 - (C) Denervation of the muscle
 - (D) Biochemical changes

33. Vitamin that is produced in the body on exposure to the sunlight is:
- (A) Vitamin A (B) Vitamin B
(C) Vitamin C (D) Vitamin D
34. Deconditioning effects associated with prolonged bed rest include all the following except:
- (A) Decreased muscle mass (B) Increased heart volume
(C) Decreased bone mineral density (D) Decreased orthostatic tolerance
35. Non thermal effects of ultrasound:
- (A) Cavitation (B) Acoustic streaming
(C) Standing waves (D) All the above
36. Most short wave diathermy machines operate at:
- (A) 13.56 MHz (B) 27.12 MHz
(C) 40.68 MHz (D) None of the above
37. Mechanism of action of TENS include:
- (A) Segmental inhibition of pain signals to the brain and dorsal horn
(B) Activation of descending inhibitory pathways and release of endogenous opioids
(C) Both (A) and (B)
(D) None of the above
38. Which is the modality that uses electric current signals of slightly different frequencies:
- (A) Short wave diathermy (B) Medium wave diathermy
(C) Interferential current (D) Ultrasound therapy
39. ETOIMS stands for:
- (A) Electrical treatment option for intramuscular stimulation
(B) Electrical twitch obtaining intramuscular stimulation
(C) Electrical twitch observed on intramuscular stimulation
(D) None of the above
40. Who developed Conductive education:
- (A) Margerett Rood (B) Vojta
(C) AndrasPeto (D) Bobat

41. Kabat, Margaret Knott and Dorothy Voss developed:
- (A) Proprioceptive neuromuscular facilitation
 - (B) Synergetic movement patterns
 - (C) Progressive patterns movement
 - (D) Reflex creeping and reflex reaction
42. Which of the following is not a functional sub phase of swing phase of gait cycle:
- (A) Initial Swing
 - (B) Mid swing
 - (C) Preswing
 - (D) Terminal swing
43. Which is the normal distribution of floor contact period during gait cycle:
- (A) 60% swing and 40% stance
 - (B) 60% stance and 40% swing
 - (C) 60% for stance plus swing and 40% for double support
 - (D) 60% for double support and 40% for stance plus swing
44. The body weight transmission for a unilateral cane opposite to the affected side is approximately:
- (A) 75%
 - (B) 50%
 - (C) 25%
 - (D) 0%
45. Axillary crutch length is measured from anterior axillary fold to a point how many inches lateral to the 5th toe:
- (A) 6 inches
 - (B) 4 inches
 - (C) 2 inches
 - (D) 1 inch
46. While doing cervical traction the best clinical relief occurs in:
- (A) 20 to 30 degrees of extension
 - (B) 20 to 30 degrees of flexion
 - (C) Neutral position
 - (D) None of the above
47. The temperature range used in paraffin wax in degree Celsius:
- (A) 49 to 51
 - (B) 52 to 54
 - (C) 55 to 57
 - (D) 58 to 60

48. The adverse effects of ultraviolet rays include all except:
(A) Psoriasis (B) Premature aging of skin
(C) Nonmelanoma skin cancers (D) Cataract
49. A patient coming to you finds it difficult to flex and extend his spine. His chest expansion is also reduced. What is his most possible condition:
(A) Gouty arthritis (B) Rheumatoid arthritis
(C) Systemic lupus erythematosus (D) Ankylosing spondylitis
50. Saturday night palsy is:
(A) Ulnar nerve palsy (B) Radial nerve palsy
(C) Axillary nerve palsy (D) Median nerve palsy
51. Gower's sign is seen in:
(A) Duchenne muscular dystrophy (B) Myasthenia gravis
(C) Transverse myelitis (D) None of the above
52. Rule of nine is used in assessing:
(A) Area of burns (B) Severity of psoriasis
(C) Scoring brain injury (D) Weakness in spine injury
53. ASIA grading is used in:
(A) Traumatic brain injury (B) Traumatic Spinal cord injury
(C) Traumatic hip injury (D) Traumatic shoulder injury
54. Frenkel's exercises are used in:
(A) Periarthritis shoulder (B) Spinal cord injury
(C) Autonomic dysreflexia (D) Cerebellar diseases
55. SOMI brace is used in:
(A) Cervical spine injury (B) Shoulder injury
(C) Lumbar spine injury (D) Hip injury
56. Boyd amputation is:
(A) Above knee amputation (B) Below knee amputation
(C) Ankle disarticulation (D) Metatarsophalangeal amputation

57. Quadrilateral socket is used in:
- (A) Hip disarticulation (B) Above knee amputation
(C) Below knee amputation (D) Ankle disarticulation
58. The following are components of quadriceps muscle except:
- (A) Vastusmedialis (B) Vastuslateralis
(C) Quadratusfemoris (D) Rectus femoris
59. Long thoracic nerve of Bell supplies:
- (A) Lattisimusdorsi (B) Rhomboids major
(C) Pectoralis major (D) Serratus anterior
60. Froment's sign is positive in lesions of:
- (A) Median nerve (B) Ulnar nerve
(C) Radial nerve (D) Axillary nerve
61. The detection, recording and interpretation of electric voltages generated by skeletal muscles is known as:
- (A) Nerve Conduction Study (B) Electromyography
(C) Electro encephelography (D) Electro modulation
62. The modality that uses two alternating current signals of slightly different frequencies in order to produce thermal effect is:
- (A) Faradism under pressure (B) Contrast bath
(C) Interferential current therapy (D) Low energy laser
63. The frequency used in microwave diathermy machine is:
- (A) 100 MHz (B) 250 MHz
(C) 560 MHz (D) 2450 MHz
64. The modality used to deliver medicines directly to the soft tissues eliminating the systemic absorption is:
- (A) Interferential current therapy
(B) Short wave diathermy
(C) Iontophoresis
(D) Laser therapy

65. Quadrilateral socket is used in:
- | | |
|---------------------------|---------------------------|
| (A) Hip Disarticulation | (B) Above knee amputation |
| (C) Below knee amputation | (D) Syme's amputation |
66. The nerve involved in Saturday Night Palsy is:
- | | |
|------------------|--------------------|
| (A) Radial nerve | (B) Ulnar nerve |
| (C) Median nerve | (D) Axillary nerve |
67. The band which disappears in muscle contraction is:
- | | |
|------------|------------|
| (A) A band | (B) I band |
| (C) Z band | (D) H band |
68. The primary form of heat production in microwave diathermy is by:
- | | |
|----------------|----------------|
| (A) Conduction | (B) Convection |
| (C) Conversion | (D) Radiation |
69. The treatment temperature used in paraffin bath is:
- | | |
|----------------------|---------------------|
| (A) 70 to 80°C | (B) 52.2 to 54.4 °C |
| (C) 101.1 to 105.2°C | (D) 10.5 to 12.2 °C |
70. Therapeutic Ultrasound works on the principle of:
- | | |
|--------------------------|----------------------------------|
| (A) Piezoelectric effect | (B) Reverse Piezoelectric effect |
| (C) Radiation | (D) Conduction |
71. Training technique that attempts to modify autonomic functions, pain, and motor disturbances by acquired volitional control is known as:
- | | |
|----------------------------|--------------------------|
| (A) Bio feedback | (B) Relaxation technique |
| (C) Electrical stimulation | (D) Phonophoresis |
72. A diagnostic tool frequently used for quantifying muscle tone is:
- | | |
|----------------------------|---------|
| (A) Nerve conduction study | (B) TMT |
| (C) EEG | (D) EMG |
73. An active corrective Spinal Orthosis used exclusively in the ambulant treatment of structural scoliosis:
- | | |
|------------------------|--------------------|
| (A) Halo body orthosis | (B) Minerva jacket |
| (C) Milwaukee brace | (D) SOMI brace |

74. Wavelength of Infra Red radiation is:
- (A) 390 to 770 nanometers (B) 100 to 390 nanometers
(C) 770 to 12000 nanometers (D) 60 to 100 nanometer
75. Treatment suggestions for low muscle tone is / are:
- (A) Hydrotherapy (B) Quick Ice
(C) Electrical stimulation (D) All of the above
76. The test used to measure the integrity of abductor mechanism of the hip:
- (A) Faber test (B) Trendelenberg's test
(C) Telescopy test (D) Squaring of pelvis
77. Amputation through the midtarsal joint is known as:
- (A) Lisfranc's amputation (B) Chopart's amputation
(C) Syme's amputation (D) Boyd's amputation
78. Winging of the scapula is due to lesions of:
- (A) Long Thoracic nerve (B) Dorsal Scapular nerve
(C) Thoraco dorsal nerve (D) Subscapular nerve
79. The most common site of Pott's spine is:
- (A) Cervical spine (B) Lower Thoracic spine
(C) Lumbar spine (D) Sacral Spine
80. The earliest sign of Volkmann's ischaemic contracture is:
- (A) Pale and cold hand (B) Pain on passive extension
(C) Obliteration of radial pulse (D) Red and warm hand
81. The crystal deposited in the joints in Gouty Arthritis is:
- (A) Calcium pyrophosphate (B) Calcium oxalate
(C) Monosodium urate crystals (D) Disodium Urate
82. The Intervertebral disk pressure is lowest during:
- (A) Lying supine (B) Lying on one side
(C) Sitting (D) Disodium Urate

83. Injury to C8 nerve root causes paralysis of:
- (A) Flexors of the wrist
 - (B) Extensors of the wrist
 - (C) Biceps
 - (D) Brachioradialis
84. Froment's sign is positive in lesions of:
- (A) Median Nerve
 - (B) Radial Nerve
 - (C) Ulnar Nerve
 - (D) Axillary Nerve
85. Cross linkage in sarcomere is by:
- (A) Myosin
 - (B) Calmodulin
 - (C) Actin
 - (D) Tropomyosin
86. The smallest current intensity required to elicit a minimal contractile response:
- (A) Chronaxie
 - (B) Rheo base
 - (C) Single stimulus
 - (D) Half stimulus
87. The most reliable method for detecting bony metastasis of the following:
- (A) MRI
 - (B) Radiography
 - (C) Spect
 - (D) CT Scan
88. The most common cause of neuropathic joints:
- (A) Diabetes
 - (B) Leprosy
 - (C) Syphilis
 - (D) Rheumatoid Arthritis
89. Cozen's test is diagnostic of:
- (A) Ulnar bursitis
 - (B) Tennis Elbow
 - (C) Carpal Tunnel Syndrome
 - (D) de Quervain's Disease
90. The gate control theory of pain modulation was first proposed by:
- (A) Tennison and Pulaski
 - (B) Bobbath
 - (C) Carr and Sheperd
 - (D) Melzack and Wall
91. Treatment suggestion/s for low muscle tone:
- (A) Hydrotherapy
 - (B) Quick ice
 - (C) Electrical stimulation
 - (D) All of the above

92. The intensity of an ultrasound machine with total output of 30 watts and radiating surface of 10 cm²:
- (A) 30 W/ cm² (B) 10 W/ cm²
 (C) 3 W/ cm² (D) 0.3 W/ cm²
93. Dugas' test is diagnostic of:
- (A) Anterior dislocation of shoulder (B) Scaphoid fracture
 (C) Fracture neck of femur (D) Dislocation of hip
94. The nerve involved in carpal tunnel syndrome is:
- (A) Accessory nerve (B) Axillary nerve
 (C) Ulnar nerve (D) Median nerve
95. The frequency of the tuning fork used to test vibration sense is:
- (A) 218 Hz (B) 216 Hz
 (C) 128 Hz (D) 256 Hz
96. The variable which is manipulated in plyometric power training regimen is:
- (A) Speed of movement (B) Resistance to motion
 (C) Power of motion (D) All of the above
97. Sprengel's deformity is:
- (A) Absence of Clavicle (B) Acromioclavicular joint dislocation
 (C) Congenital elevation of scapula (D) Recurrent dislocation of shoulder
98. Abduction of the shoulder joint above 90° is due to the action of:
- (A) Serratus anterior (B) Supraspinatus
 (C) Biceps (D) Trapezius
99. The commonest cause of cervicobrachial neuralgia is:
- (A) Cervical rib (B) Scalenus anticus syndrome
 (C) Cervical spondylosis (D) Acute cervical disc prolapse
100. Ortolani's test is elicited in which of the following conditions:
- (A) Achondroplasia (B) Anterior shoulder dislocation
 (C) Congenital dislocation of hip (D) Medial collateral ligament tear

SPACE FOR ROUGH WORK

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