### Instructions for Candidates

1. **Answer all questions.**
2. **All questions carry equal marks.**
3. **Only one answer is to be given for each question.**
4. **If more than one answers are marked, it would be treated as wrong answer.**
5. **Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using **Blue Ball Point Pen**.**
6. **The OMR Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with blue ball point pen only.**
7. **1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will be considered as wrong answer.**
8. **Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.**
9. **Please correctly fill your Roll Number in O.M.R. Sheet. 5 Marks can be deducted for filling wrong or incomplete Roll Number.**

**Warning:** If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

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### Paper Code: 01

**Paper Code**: 01  **Time**: 2.00 hours  **Maximum Marks**: 100

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Do not open this Test Booklet until you are asked to do so.
1. How to measure Leg Length?
   (1) Asis to Medial Malleolus
   (2) Asis to Heel
   (3) Greater Trochanter to Lateral Malleolus
   (4) Greater Trochanter to Heel

2. Multipinnate type arrangement of muscles fiber present in
   (1) Pectoralis major muscles
   (2) Stylohyoid Muscles
   (3) Deltoid Muscles
   (4) Brachioradialis Muscles

3. Center of Gravity lies in normal human being near to
   (1) Second Sacral Vertebra
   (2) Fifth Sacral Vertebra
   (3) Fourth Lumber Vertebra
   (4) Second Lumber Vertebra

4. Which muscles does not participate in flexion movement of shoulder?
   (1) Anterior fiber of deltoid
   (2) Biceps
   (3) Coracobrachialis
   (4) Teres Major

5. All are passive movement, except
   (1) Manipulation
   (2) Mobilization
   (3) Stretching
   (4) Resisted Movement

6. Neurotmesis is
   (1) Disruption of Axon & Nerve Sheath.
   (2) Disruption of Axon but nerve sheath is intact.
   (3) Loss of conduction without degeneration.
   (4) None of these

7. Which of the following exercise indicated in metastatic bone disease affecting ribs?
   (1) Clapping
   (2) Shaking
   (3) Vigorous vibration
   (4) Resisted costal breathing

8. Fifth cervical nerve root irritation could not cause pain and tenderness over
   (1) Insertion of deltoid
   (2) Common extensor origin at the elbow
   (3) Inferior angle of scapula
   (4) Superior angle of scapula
9. In all of the following which orthosis is effective in cervical spine injury?
   (1) SOMI
   (2) TLSO
   (3) R.J. Brace
   (4) Milwaukee Brace

10. All of the following are function of upper limb orthosis, except
    (1) To assist weakened part
    (2) To protect from pain
    (3) To correct deformity
    (4) To relieve weight bearing

11. All of the following are basic determinants of Gait, except
    (1) Pelvic Rotation
    (2) Pelvic Tilt
    (3) Knee Flexion after heel strike
    (4) Hip motion

12. Cubitus valgus is
    (1) Exaggeration of Carrying Angle
    (2) Reduction of Carrying Angle
    (3) Neutralization of Carrying Angle
    (4) Reversal of Carrying Angle

13. All of the following are inflammatory Arthropathies, except
    (1) Rheumatoid Arthritis
    (2) Psoriatic Arthropathy
    (3) Gonococcal Arthritis
    (4) Osteo Arthritis

14. All are early complications of fractures, except
    (1) Vascular injury
    (2) Compartment Syndrome
    (3) Haemarthrosis
    (4) Avascular Necrosis

15. In which type of Electrotherapy patient is a part of Electrical circuit?
    (1) US
    (2) SWD
    (3) MWD
    (4) IRR

16. What is the wavelength of Infrared radiation in clinical practice?
    (1) IR-A Special Value of 0.78–1.4 μm.
    (2) IR-B Special Value of 1.4–3.0 μm.
    (3) IR-C Special Value of 3.0–1.0 mm.
    (4) IR-D Special Value of 1.0–2.0 mm.
17. Short wave diathermy is contraindicated in
   (1) Recent Ankle Injuries
   (2) Acute Back pain
   (3) Chronic Arthritis
   (4) External Fixator in tissue

18. Any passive devices which is capable of storing electric charge is
   (1) Dielectric
   (2) Insulator
   (3) Capacitor
   (4) Conductor

19. All are common deformities seen in Rheumatoid Arthritis, except
   (1) Boutonniere Deformity
   (2) Swan Neck Deformity
   (3) Claw Hand Deformity
   (4) Ulnar Deviation

20. All of the following, which muscles is not useful in crutch walking?
   (1) Shoulder Depressor and Adductor’s
   (2) Elbow Extensor
   (3) Wrist Flexor
   (4) Finger Flexors

21. All of the following pathway, which is not responsible for pain sensation?
   (1) Spinothalamic Pathway
   (2) Spinoreticular Pathway
   (3) Spinotectal Pathway
   (4) Corticospinal Pathway

22. Which is the heat transfer mechanism in which gross movement of molecules occur within the fluid?
   (1) Conduction
   (2) Convection
   (3) Thermal Radiation
   (4) Evaporation

23. When any stress applied to a bone the trebeculae within that bone develop and align themselves to adapt to these line of stress known as
   (1) Laxman Law
   (2) Neuton’s Law
   (3) Wolff’s Law
   (4) Pirani’s Law
24. All are the common causes of Volkmann's ischemic contracture, except
(1) Supra condylar fracture of humerus in children.
(2) Traumatic severe bleeding in forearm.
(3) Un-displaced fracture of wrist bone.
(4) Tight cast or bandage of forearm.

25. In De Quervain's syndrome involved tendon's are
(1) Extensor Pollicis Brevis, Abductor Pollicis Longus.
(2) Extensor Pollicis Longus, Extensor Pollicis Brevis.
(3) Extensor Carpi radialis, Abductor Pollicis Longus.
(4) Extensor Pollicis Longus, Abductor Pollicis Longus.

26. Which is not the superficial volar muscles of forearm?
(1) Pronater Teres
(2) Flexor Carpi Radialis
(3) Flexor Digitorum Profundus
(4) Flexor Carpi Ulnaris

27. Which nerve entrap in Cubital Tunnel?
(1) Ulnar Nerve
(2) Radial Nerve
(3) Posterior Tibial Nerve
(4) Median Nerve

28. 'Structured Exercise Program's is not indicated in spinal cord injury patient due to following reasons, except
(1) Autonomic Dysreflexia
(2) Postural Hypotention
(3) Thermoregulatory Problem
(4) Weakness in Muscles

29. Nerve supply of the serratus anterior muscles is
(1) Long Thoracic Nerve
(2) Dorsal Scapular Nerve
(3) Suprascapular Nerve
(4) Thoracodorsal Nerve

30. Severe intractable pain worse at night, relieve on exercise, morning stiffness for more than 30 minute with ESR, weight loss diagnosis is
(1) Osteoporosis
(2) Ankylosing Spondylitis
(3) Spondylolisthesis
(4) Recent Spine Fracture
31. In all of the following which is most common site of pressure ulcer in spinal cord injury patients?
   (1) Ischium
   (2) Sacrum
   (3) Greater Trochanter
   (4) Heel

32. Which is a common progressive disabling disease of childhood?
   (1) Spina Bifida
   (2) Cerebral Palsy
   (3) Traumatic Brain Injury
   (4) Muscular Dystrophy

33. Which primitive reflex persist life long?
   (1) Tonic Neck Reflex
   (2) Parachute Reflex
   (3) Moro Reflex
   (4) Landau Reflex

34. Spastic Diplegia term is used, when
   (1) All four limb equally involve
   (2) B/L lower limb involve
   (3) B/L upper limb involve
   (4) B/L lower limb majorly involve and upper limb’s only subtly involve

35. Inability to interpret or recognize information although the end organ is intact, known as
   (1) Apraxia
   (2) Agnosia
   (3) Dementia
   (4) Aphasia

36. What is the minimum weight to accomplish any cervical vertebral separation in cervical traction?
   (1) 50 pounds
   (2) 25 pounds
   (3) 35 pounds
   (4) 15 pounds

37. All are general indication for therapeutic heat therapy, except
   (1) Pain
   (2) Muscles Spasm
   (3) Bursitis
   (4) Haemorrhage

38. Glasgow coma scale in traumatic brain injury assess the all response, except
   (1) Eye opening
   (2) Best motor response
   (3) Verbal response
   (4) Hearing Response
39. In all the following, which approach aims to inhibit spasticity, and synergies, using inhibitory posture and movement, and to facilitate normal automatic responses
   (1) Rood
   (2) Brunnst Rom
   (3) PNF
   (4) NDT (Bobath)

40. Mild Traumatic Brain injury is characterized by all except
   (1) Post Traumatic Amnesia 24 hr or less
   (2) Initial GCS 8 to 10
   (3) Negative CT or MRI
   (4) Loss of consciousness if any 30 minute or less

41. Resistance training is contra indicated in all except
   (1) Congestive heart failure
   (2) Poor left ventricular function
   (3) Severe valvular disease
   (4) Stable, Hypertension

42. All of the following are common causes of stroke, except
   (1) Embolism
   (2) Infection
   (3) Intra cerebral Haemorrhage
   (4) Cerebral Thrombosis or Large Vessel Occlusion

43. Contracture in spinal cord injury patient can be prevented by following measures except
   (1) Bed Positioning
   (2) ROM Exercise
   (3) Four Hourly Turning
   (4) Resting Splint

44. All are contra indication of spinal extension exercises, except
   (1) Segmental Hypermobility or instability of spine
   (2) Large Herniation of disc
   (3) B/L Sensory or Motor Sign
   (4) Congenital Scoliosis

45. What is the end product of Anaerobic Glycolysis?
   (1) Lactate
   (2) CO₂ + Water
   (3) Inorganic Phosphate
   (4) Pyruvate
46. All of the following are energy sources of diet, energy value of which food not correct?
   (1) Carbohydrate 4.0 Kcal/g
   (2) Protein 6.0 Kcal/g
   (3) Fat 9.0 Kcal/g
   (4) Ethanol 7.1 Kcal/g

47. All of the following circulatory system provide nutrition to mobile segment except
   (1) Arterial system
   (2) Venous system
   (3) Lymphatic system
   (4) Nervous system

48. Physical treatment is contra indicated in all except
   (1) Cauda Equina Syndrome
   (2) Malignancy
   (3) Osteomyelitis (Tubercular)
   (4) Ankylosing Spondylitis

49. Which is not the part of below elbow prosthesis?
   (1) Socket
   (2) Control
   (3) Elbow joint
   (4) Terminal device

50. Sign of Bony Ankylosis is
   (1) No movement even on using force
   (2) No local pain
   (3) Bony trabeculation across the joint in X-ray
   (4) All of these

51. Transcutaneous application of alternating medium frequency electrical current amplitude modulated at low frequency known as
   (1) TENS
   (2) Low frequency Laser Therapy
   (3) Interferential Therapy
   (4) Microwave Diathermy

52. Which structure does not act as pain generators in the vertebral mobile segment?
   (1) Intervertebral disk and Ligaments
   (2) Zygapophyseal joints, Capsule
   (3) Bone of Vertebra
   (4) Dura Mater
53. A rocker bar attachment in outer sole of the shoe, help to relieve pressure under
   (1) Metatarsal head
   (2) Heel
   (3) Subtalar joint
   (4) Ankle joint

54. An isotonic resistance training consists of three sets of repetitions, which are performed at 100%, 75% and 50%, the ten-repetition maximum is known as
   (1) Oxford technique
   (2) Delorme technique
   (3) DAPRE technique
   (4) All of these

55. Following statements are true about Plyometric training except
   (1) Plyometric volume is expressed as the number of repetitions and sets performed during a given training session.
   (2) Plyometric follows the principles of progressive overload.
   (3) Mini-trampolines are commonly used for beginning plyometrics.
   (4) the critical weight for an athlete to avoid high-volume high intensity plyometric exercise is 80 kg so as to overcome the risk of injury.

56. Transient ischemic attack usually defined if neurological deficit recovers with in ______
   (1) 24 hours
   (2) 48 hours
   (3) > 24 hours < 7 days
   (4) > 7 days

57. Modified ashworth scale grade 1 + ______
   (1) slight increase in muscle tone, manifested by a catch, followed by minimal resistance throughout the reminder (less than half) of the range of motion
   (2) slight increase and tone, manifested by a catch and release and by minimal resistance at the end of the range when the affected part is moved in flexion and extension
   (3) more marked increase in tone, but affected part easily flexed and extension
   (4) consideration increase in tone, passive movement difficult
58. During moderate to high exercise how does ventilation increase?
   (1) by increasing breathing frequency.
   (2) by increasing tidal volume.
   (3) by increasing tidal volume and breathing frequency.
   (4) by decreasing dead space.

59. The first superficial reflex to recover following SCI is _____.
   (1) Bulbocavernous
   (2) Anal
   (3) Cremastric
   (4) Abdominal

60. MND involves progressive degeneration of _____
   (1) anterior horn cells of in the spinal cord.
   (2) cells of lower cranial motor nuclei.
   (3) neurons of the motor cortex and pyramidal tract.
   (4) All of these.

61. The ability of a muscle to perform low-intensity, repetitive or sustained activities over a prolonged period is known as
   (1) Strength
   (2) Power
   (3) Endurance
   (4) All of these

62. What is snapping scapula?
   (1) Trapezius muscle weakness
   (2) Serratus anterior weakness
   (3) Scapulo-thoracic bursitis
   (4) Nodule forms in the supraspinatus tendon

63. In bladder training programme the most used technique is
   (1) Clean Intermittent Catheterization
   (2) Stroking of Abdominals
   (3) Using Abdominal Contraction
   (4) None

64. SLAP-superior labrum anterior to posterior injurious common for which group of sports people?
   (1) Foot ballers
   (2) Overhead Throwing Athletes
   (3) Skiers
   (4) Rowing
65. How can we identify posterior instability of shoulder by physical examination?
   (1) Arm is held with slight external rotation and abduction.
   (2) Limited internal rotation of the arm.
   (3) Arm is held in adduction and internal rotation.
   (4) All of these.

66. Secondary injury in head injury is due to
   (1) Blood loss to tissues
   (2) Hypoxemia to brain
   (3) Decreased O₂
   (4) All of these

67. Chorea-athetosis is due to lesion at
   (1) Cerebellum
   (2) Caudate nucleus
   (3) Globus pallidus
   (4) Basal ganglia

68. Which is the commonest ligament injury in ankle?
   (1) Calcaneo fibular
   (2) Anterior talofibular
   (3) Posterior talofibular
   (4) LCL

69. Charcot joints are
   (1) Painless arthritic joint disease
   (2) Degenerative joint disease
   (3) Infective joint disease
   (4) Ankylosed joints

70. Moro reflex is
   (1) Abduction, extension and internal rotation of arms.
   (2) Abduction, extension and external rotation of arms.
   (3) Adduction, internal rotation, extension of arms.
   (4) Abduction, internal rotation, flexion of arms.
71. Which is not related to favourable prognosis for patient with multiple sclerosis?
   (1) Onset with only one symptoms.
   (2) Relapsing-remitting variety.
   (3) Onset before the age of 40.
   (4) Significant pyramidal and cerebellar signs with involvement at multiple sites in 5 years.

72. Sacralization of the vertebra means
   (1) 5th lumbar vertebra fuses with sacrum and ilium.
   (2) S1 segment may be mobile.
   (3) The 5 sacral segments function as independent vertebrae.
   (4) All the lumbar vertebra are fused.

73. Ape thumb deformity is present in
   (1) Median nerve lesion
   (2) Ulnar nerve lesion
   (3) Radial nerve lesion
   (4) All of these

74. Graphesthesia is the ability to
   (1) Recognize the letters written over the skin
   (2) Put calculation
   (3) Find solution to problem
   (4) None

75. In any exercise programme for 1 MET increase of exercise level systolic B.P. rises by ____
   (1) 5 - 7 mm Hg.
   (2) 5 - 10 mm Hg.
   (3) 10 - 12 mm Hg.
   (4) 12 - 15 mm Hg.

76. The Centre of Gravity (CG) displaced to highest level during ____ phase of gait cycle.
   (1) Flat Foot
   (2) Mid-stance
   (3) Double support
   (4) Mid-swing

77. Weakness of hip abductors causes
   (1) Dropping of the Pelvis on the opposite side with lateral flexion of trunk with head on affected side.
   (2) Dropping of Pelvis on same side with lateral flexion of trunk and head on unaffected side.
   (3) Dropping of Pelvis on opposite side with lateral flexion of trunk with head on unaffected side.
   (4) None of these
78. Caries Spine is also known as
(1) Meningioma of spine
(2) Pott’s spine
(3) Spondylolisthesis
(4) Meningomyelocele

79. Baker’s cyst occurs in
(1) Cubital fossa
(2) Popliteal fossa
(3) Axillary fossa
(4) Anterior cranial fossa

80. Faradic current is impulse of
(1) Short duration and large frequency.
(2) Long duration and small frequency.
(3) Short duration and small frequency.
(4) Long duration and large frequency.

81. Nerve accommodation can be avoided by
(1) Surging the current.
(2) Using varying current.
(3) Using a varying current that rises and falls suddenly.
(4) None of these.

82. The therapeutic frequency range of ultrasound is
(1) 1 kHz to 3 kHz
(2) 1 MHz to 3 MHz
(3) 10 kHz to 20 kHz
(4) 10 MHz to 15 MHz

83. Speed test is done to assess
(1) Biceps tendonitis
(2) Shoulder impingement
(3) Acromio-clavicular joint dislocation
(4) Shoulder stability

84. Reverse of collis fracture is known as
(1) Barton’s fracture
(2) Smith fracture
(3) Cralezzi fracture
(4) Pott’s fracture

85. Supination of foot in the combination of
(1) Ankle DF subtalar eversion and forefoot abduction.
(2) Ankle PF subtalar inversion and forefoot adduction.
(3) Ankle DF subtalar inversion and forefoot abduction.
(4) Ankle PF subtalar eversion and forefoot adduction.
86. Klumpke's paralysis involves the nerve root
   (1) C5 - C6
   (2) C4 - C5
   (3) C2 - C3
   (4) C8 - T1

87. Phantom pain can be treated by
   (1) Rhythmic hammering over affected area.
   (2) Desensitisation technique over affected area.
   (3) Low frequency TENS
   (4) All of these

88. Inversion and Eversion movement of foot occurs at
   (1) Ankle joint
   (2) Transverse tarsal joint
   (3) Tarso-metatarsal joint
   (4) Subtalar joint

89. Hind quarter amputation is also known as
   (1) Hemi-Pelvecotomy
   (2) Choparts Amputation
   (3) Boyd's Amputation
   (4) Inter-scapulo thoracic Amputation

90. Median nerve injury causes
   (1) Weakness of intrinsic hand muscles.
   (2) Weakness of supinator.
   (3) Weakness of intrinsic thumb muscles.
   (4) Weakness of wrist extensor.

91. Disorder of Vagus nerve causes
   (1) Palatal weakness
   (2) Pharyngeal weakness
   (3) Laryngeal weakness
   (4) All of these

92. In hemiplegia weakness of upper limb and lower limb along with weakness of lower half of the fascial muscles occurs due to
   (1) Upper motor neuron pattern
   (2) Lower motor neuron pattern
   (3) Horner's syndrome
   (4) Sensory syndrome
93. All of the following clinical feature and lab finding in favour of duchenne muscular dystrophy, except
(1) Calf Pseudohypertrophy
(2) Abnormal Nerve Conduction Study
(3) Proximal Symmetrical Weakness
(4) Positive Gower’s Sign

94. All of the following are correct for the functional position of hand, except
(1) Wrist Palmar Flexion – 20-30°
(2) MC-P Joint flexion – 45°
(3) PIP Joint Flexion – 30°
(4) DIP Joint Flexion – 20°

95. Clinical presentation of Parkinson’s disease include all of the following, except
(1) Tremor
(2) Bradykinesia
(3) Spasticity
(4) Freezing Phenomena

96. Which is not a part of Jaipur Foot?
(1) Tread rubber
(2) Wooden Keel
(3) Sponge Rubber
(4) Cosmetic Rubber

97. Strength duration/intensity duration curve testing should be advised after
(1) 7 days of following nerve injury
(2) 10 days following nerve injury
(3) 21 days following nerve injury
(4) 14 days following nerve injury

98. Rheobase is a
(1) Current
(2) Duration
(3) Voltage
(4) None

99. Which reflex is absent in normal adult human being
(1) Cremasteric Reflex
(2) Planter Flexor Reflex
(3) Hoffmann’s Reflex
(4) Pharyngeal Reflex

100. Which muscle is not innervated by ulnar nerve in hand?
(1) Adductor pollicis
(2) Abductor Digiti Minimi
(3) Lumbrical 1st and 2nd
(4) All Interossei