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(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)
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Entrance Examination 2020 - ACP _ in_ Physiotherapy in Neurological Sciences

Sl No	Question	Answer	OptionA	OptionB	OptionC	OptionD
1	Which assistive device allows for 2 point, 3 point and 4 point gait pattern ?	C	Straight cane	Walker	Axillary crutches	Quad cane
2	A patient complains of pain inferior to the anteromedial surface of the knee, especially while climbing stairs. On examination, there is tenderness to palpation over the proximal anteromedial tibia. What is the most likely diagnosis	A	Pes anserinus bursitis	Iliotibial band syndrome	Patellar tendinitis	Prepatellar bursitis
3	Which of the following is true about anterior spinal artery syndrome ?	A	Sparing of posterior column tract	Sparing of anterior column tract	Like a hemicord	Sparing of corticospinal tract
4	Which is not a part of quadriceps muscle ?	A	Biceps femoris	Rectus femoris	Vastus lateralis	Vastus medius
5	Which measurement is used to determine armrest height of a wheelchair ?	D	Femur to radial head distance	Seat to ASIS	Elbow to acromion	Seat to olecranon
6	When a patient with recent onset of hemiplegia shows progressive motor recovery from Brunnstrom Stage 1 to Brunnstrom Stage 3, what do you expect?	D	Decreasing tone and increasing isolated voluntary movements	Unchanged tone and increasing isolated voluntary movements	Decreasing tone and increasing synergistic movements	Increasing tone and increasing synergistic movements
7	Which of the following is not innervated by anterior interosseous nerve ?	A	Flexor digitorum superficialis	flexor pollicis longus	flexor digitorum profundus	pronator quadratus
8	Centre of gravity of adult human in anatomical position	D	Anterior to S1 vertebrae	Posterior to S2 vertebrae	Posterior to S1 vertebrae	Anterior to S2 vertebrae
9	Most frequent symptom of multiple sclerosis is ?	A	Walking difficulty	Bowel and bladder discomfort	Pain	Visual disturbance
10	Which ligament helps to maintain medial longitudinal arch ?	B	Talo navicular	Calcaneonavicular	Anterior talofibular	Posterior talofibular
11	Effects of traction depend on?	D	Magnitude of tractive force	Duration of application	Position of patient	All of the above
12	Massage in which there is series of brisk blows in alternating fashion?	C	Vibration	Kneading	Tapotement	Friction massage
13	One MET is _____ ml of oxygen/kg/min in males	B	2.5	3.5	4.5	1.5
14	Which fibers transmit poorly localized, dull, visceral pain to the spinal cord?	D	Myelinated A-alpha	Myelinated A-delta	Unmyelinated gamma	Unmyelinated C
15	Treatment of acute myositis ossificans is	D	Passive mobilization	Active mobilization	Infrared therapy	Immobilization
16	What is the most common pathology underlying rotator cuff disorders in the nonathlete?	B	Deltoid atrophy	Subacromial impingement	Acromioclavicular arthritis	Bicipital tendon disorder
17	TENS reduce pain by action over	C	A delta fibers	A alpha fibers	A beta fibers	C fibers
18	Infrared has a strong effect on ?	B	Bone	Fat	Water	Both B and C
19	Which of the muscle disease present with early contracture ?	B	Congenital myopathy	Emery dreifuss MD	FSHD	DMD
20	Normal Stride length is about	A	70 - 82 cms	35 -41 cms	41-47 cms	15 -20 cms
21	Infra red lamp works by the principle of	B	conduction	Radiation	Convection	reverse piezoelectric effect
22	The covering of each muscle fascicle known as	A	Perimysium	Endomysium	Epimysium	Endoneurium
23	In athletes, who train intensely for 2 to 6 hrs, should consume _____ g of protein per kg of body mass daily	C	0.5 - 0.8	0.8 -1.2	1.2 -1.8	1.8-2.4
24	In myo electric prosthesis the commonest hand grip is	A	Three-jaw chuck	Lateral	Spherical	Power
25	In SCI ASIA grading, Hip flexor strength assessment corresponds to which level	B	L1	L2	L3	L4
26	Which is true for ultrasound therapy ?	B	3MHz penetrates > 1 MHz	1 MHz penetrates > 3 MHz	Both penetration is same	None of the above
27	Which muscle fibers contain the greatest mitochondrial concentration of all tissues?	D	Striated shincter	Smooth muscles	Skletal muscles	Cardiac muscles
28	Absolute contraindication for exercise in pregnancy is ?	B	Anemia	Incompetent cervix	morbid obesity	Diabetis Mellitus
29	Physical therapy treatment for patients with Parkinson disease includes	D	teaching the individual to turn en bloc	training the individual not to focus on foot position	shortening step length to prevent freezing	using verbal and visual cueing
30	The index of relative cardiac work, called the double product or rate-pressure product is	C	MAP x CO	MAP x HR	SBP X HR	DBP X HR
31	All are seen in deconditioning except	B	Decreased muscle strength	Increased plasma volume	Decreased bone mineral density	Decreased exercise tolerance

32	Ferromagnetic lead zirconate titanate (PZT) ceramics are used in	D	Infrared	Short wave diathermy	Hydrocollator	Ultrasound
33	A patient complains of knee pain after falling on her flexed knee. Physical examination shows a positive "sag sign." Which ligament is injured?	D	Medial collateral	Lateral collateral	Anterior cruciate	Posterior cruciate
34	Short term memory is mediated by	A	Frontal	Parietal	temporal	Occipital
35	The alternating vasodilatation and vasoconstriction during the application of cold is	C	Joules effect	Turner effect	Lewis Hunting reaction	Hunters effect
36	Anterior Pelvic tilt is produced by	B	Hip extensors and abdominala	Hip flexors and lumbar extensors	Hip adductors and trunk side flexors	none of the above
37	Transcutaneous delivery of drugs using ultrasound is known as	C	Iontophoresis	Plasmapheresis	Phonophoresis	Apheresis
38	A 76-year-old woman is referred for rehabilitation following a recent left total hip arthroplasty. To prevent hip dislocation, you instruct the patient to avoid hip	A	Adduction beyond neutral	Abduction greater than 20 degrees	Flexion greater than 45 degrees	External rotation beyond neutral
39	The staging of pressure ulcer corresponding to full-thickness tissue loss and subcutaneous fat may be visible but bone, tendon, and muscle are not exposed.	C	Stage 1	Stage 2	Stage 3	Stage 4
40	The Short wave diathermy for therapeutic use is	A	27.12MHz	44.6 MHz	21.2MHz	23.12MHz
41	All are seen in exercising muscle except	A	Increased tissue PO2	Increased blood flow	Increased tissue H+	Increased oxygen extraction
42	During an exercise tolerance test, what percent of the maximum heart rate is the usual target?	C	60	75	85	100
43	The most powerful muscle of the body	D	Quadriceps	Gluteus maximus	Deltoid	Gastrosoleus
44	For bilateral transfemoral amputation which of the prosthetic component is not recommended ?	D	Stubbies	Endoskeletal shank	Ischial containment socket	Manual locked knees
45	In AFO ankle set in 5° plantarflexion decreases the _____ moment and stabilizes the knee during midstance.	D	Extensor	Internal rotation	External rotation	Flexor
46	The highest oxygen uptake during upper-body exercise averages between _____ % of V O2max.	D	50 - 60	80 -90	60 -70	70-80
47	Dorsal root ganglion is a part of	A	Afferent pathway	Efferent pathway	Autonomic pathway	Optic pathway
48	Nutrients needed for wound healing are	D	Vitamin B12	Folic acid	Zinc	All the above
49	Which provocative test evaluates both the hip and sacroiliac joints?	A	FABER	SLR	Crossed SLR	Obers test
50	Treatment of CTEV should start at	D	2nweeks	1 month	9 months	soon after birth
51	The energy system that predominates after the second minute of exercise	C	Anaerobic	Creatine Kinase	Aerobic	Stored ATP
52	Modified Rankin scale in stroke is used for	B	To predict prognosis	To assess disability	To assess muscle strength	To plan intensive care
53	Which of the following patients would be most in need of a wheelchair with hand rim projections ?	D	Hemiplegic	Cauda equina	C3 Spinal cord injury	C5 Spinal cord injury
54	In a sarcomere, the H zone, a region of lower optical density includes	A	Only Myosin	Only actin	Both actin and myosin	an entire sarcomere
55	Lateral curvature of the spine is	C	Kyphosis	Scoliosis	Lordosis	Ankylosis
56	Therapeutic intervention that focuses on moving the less impaired limb while watching its mirror reflection is known as?	C	Mental imagery	Constrain induced therapy	Mirror therapy	Virtual reality
57	The proper length for a cane should be measured with the elbow in which position?	B	Extension	45 degree flexion	20 degree flexion	90 degree flexion
58	Training in parallel bar with long mirrors will NOT help in?	A	Upper limb functions including control of incoordination	Sensory integration	Posture correction	Gait training
59	Ischial containment prosthesis is used in	B	Transtibial amputation	Transfemoral amputation	Trans radial amputation	Trans humeral amputation
60	Which one of the following is not a function of patella?	D	Increase the leverage	Protection of knee joint	Convergence of muscle force	Increase the stride length
61	Which organalle is the site of ATP production	B	Sarcoplasmic reticulumn	Mitochondria	Nucleus	Golgi apparatus
62	Normal range of shoulder abduction is _____ degree	C	120	90	180	100
63	Frenkel's exercise are done to improve function in	A	Cerebellar dysfunction	Spinal cord injury	Amputation	Muscular dystrophy
64	Which therapeutic modality combines a biologically active substance with a coupling medium and uses ultrasound to force the active material into tissue?	B		Phonophoresis	Diathermy	Fluidotherapy
65	Gait pattern most appropriate for unilateral lower extremity weakness	B	Two point	three point	Swing t o	four point
66	Non Thermal effects of ultrasound therapy is /are	D	Cavitation	Standing waves	Mechanical deformation	All of the above
67	The commonest method of paraffin wax bath usage is	B	Continuous immersion	Dipping	Painting	None of the above

68	Ape thumb deformity is caused by lesion of which nerve ?	C	Ulnar	Radial	Median	Axillary
69	What is the most common diagnosis in young female gymnasts with chronic back pain?	C	Spondylolisthesis	Spondylosis	Spondylolysis	Spondylitis
70	Orthosis which is most effective at limiting cervical motion in all planes	B	Minerva jacket	Halo	SOMI	Philadelphia collar
71	Modified Ashworth scale is used to assess	C	Strength	ROM	Tone	Reflex
72	Function of iliopsoas muscle at hip joint	A	Flexion	Extension	Abduction	Adduction
73	Following a burn injury, transparent custom total contact face mask orthoses are used to	B	cover the disfigurement	preserve facial contours	increase eyelid eversion	prevent infection
74	The action of Parathyroid hormone	D	Mobilizes Calcium from Bones	Increases intestinal absorption of calcium	Increases calcium reabsorption	All of the above
75	The disease with predominant Lower motor neuron (LMN) signs	A	GBS	Multiple sclerosis	Stroke	Parkinsons
76	Which type of muscle contraction produce greater force ?	D	Isotonic	Isometric	Concentric	Eccentric
77	Which level is the most common site of spinal cord injury (SCI) in an elderly patient?	A	Cervical	Thoracic	Lumbar	Sacral
78	In CTEV foot is in	C	Plantar flexion and eversion	Dorsiflexion and eversion	Plantar flexion and inversion	Dorsiflexion and inversion
79	Temperature regulation centre of the body	A	Hypothalamus	Pituitary	Pons	Medulla
80	The outcome scales used in traumatic brain injury is /are	D	GCS	CRS	DOCS	All the above
81	The flexors of the elbow are all except	A	Triceps	Biceps	Brachialis	Brachioradialis
82	Which nerve supplies latissimus dorsi ?	C	Musculocutaneous nerve	Long thoracic nerve	Thoraco dorsal nerve	Suprascapular nerve
83	Which muscles act as extensors of vertebral column	D	Semi spinalis	Interspinalis	Multifidus	All the above
84	Warm sitz bath is useful in the treatment of _____	D	Post partum pain	Anorectal fistula	hemorrhoids	All the above
85	The neurodevelopmental training technique in stroke management	B	Facilitates tone on the spastic hemiplegic side	Attempts to inhibit tone in the spastic hemiplegic extremity	Uses a cuff shoulder sling	Requires restricting voluntary movement of the unaffected extremity
86	Rhythmic initiation, alternating isometrics, reversal of antagonists are methods used in	C	Brunstrom technique	Bobath NDT	PNF	Alexander's technique
87	Hydrocollator packs are stored in water bath reservoirs at temperature _____ in °C. (degree celsius)	A	70 -80	40 -50	50 -60	90-100
88	Which nerve supplies gracilis muscle ?	D	Femoral	Tibial	Sciatic	Obturator
89	Conduction Aphasia is severe impairment of ?	D	Naming	Fluency	Comprehension	Repetition
90	Opponens pollicis is supplied by which nerve?	C	Radial	Ulnar	Median	Axillary
91	Rhomboides major muscle is a primary scapular _____	A	Retractor	Protractor	Elevator	Depressor
92	Crossed Hemiplegia is seen in lesion	A	At the level of Pons	Above Pons	Below Pons	None of the above
93	Triple deformity of knee is seen in	B	Polio	TB	RA	Synovitis
94	In a person with a transfemoral amputation, an abnormal prosthetic gait with lateral trunk bending toward the involved side in midstance most commonly occurs with hip	B	Adductor weakness	Abductor weakness	Flexion contracture	extension contracture
95	Hypertonic state with superimposed ratchet-like jerkiness, commonly seen in upper extremity movements in patients with Parkinson's disease is _____	A	Cogwheel rigidity	Lead Pipe rigidity	Spasticity	None of the above
96	Lee Silverman Voice treatment is used commonly in	C	Stroke	Alzheimer's	Parkinson	TBI
97	The mechanism of neuroplasticity include	D	Collateral sprouting	Long term potentiation	Reactive synaptogenesis	All of the above
98	Which of the following is a deep sensation ?	B	Pressure	Vibration	Touch	Temperature
99	A 29-year-old dancer presents with pain that originates on the sole of her foot. She is tender to palpation along the anterior calcaneus and medial arch. What is the most likely diagnosis?	D	Calcaneal bursitis	Tibiotalar impingement	Lisfranc joint subluxation	Plantar Fascitis
100	Which is not an intrinsic muscle of the hand?	C	Opponens pollicis	Abductor digiti minimi	Flexor carpi ulnaris	Interossei