

Group - A

1. Plasma membrane is:
(A) Freely permeable.
(B) Selectively permeable.
(C) Impermeable.
(D) All of these.
2. Protein factories of cell is:
(A) Mitochondria.
(B) Golgi body.
(C) Lysosome.
(D) Ribosome.
3. A 70 kg human contain water about:
(A) 40Lts.
(B) 30Lts.
(C) 50Lts.
(D) 25Lts.
4. Normal pH of blood is about:
(A) 7.2.
(B) 7.3.
(C) 7.4.
(D) All of these.
5. Neutrophil and monocyte can engulf the:
(A) Bacteria.
(B) Virus.
(C) Allergen.
(D) All of these.
6. Angle of pull is most efficient at _____ angle.
(A) Less than 90° .
(B) More than 90° .
(C) At 90° .
(D) All of the above.
7. Pelvis cannot tilt _____.
(A) Anteriorly.
(B) Posteriorly.
(C) Laterally.
(D) Medially.
8. Buoyancy is a type of:
(A) Resistance.
(B) Assistance.
(C) Assistance and Resistance.
(D) None of the above.

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9. Isometric contractions are also known as:
(A) Isotonic contractions.
(B) Isokinetic contractions.
(C) Static contractions.
(D) All of the above.
10. Knee is an example _____ joint.
(A) Saddle.
(B) Ball and socket.
(C) Hinge.
(D) None of the above.
11. Resistance is _____ in springs when parallel than springs when in series.
(A) More.
(B) Less.
(C) Equal.
(D) All of the above.
12. Type of muscular atrophy are the following except:
(A) Duchenne.
(B) Becker.
(C) Emery Dreifuss muscular.
(D) Mc Jones.
13. The partial absence of a limb is known as:
(A) Meromeria.
(B) Amelia.
(C) Phocomelia.
(D) Syringomyelia.
14. Stitching opposite group of muscle with each other the distal end of the stump is known as _____ technique of Amputation.
(A) Myodesis.
(B) Myoplasty.
(C) Closed.
(D) Open.
15. _____ joint can withstand the most compressive force.
(A) Facet Joint.
(B) Hip Joint.
(C) Ankle Joint.
(D) Knee Joint.
16. Which class is lever of power?
(A) 1st.
(B) 2nd.
(C) 3rd.
(D) 2nd & 3rd.

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17. EMG can be quantified by measuring the amplitude of:
- (A) Rectified EMG.
 - (B) Integrated EMG.
 - (C) Filtered EMG.
 - (D) None of the above.
18. Thomas heel is given in a case of _____.
- (A) Equines foot.
 - (B) Cavus foot.
 - (C) Flat foot.
 - (D) CTEV.
19. Flexion injury leading to anterior wedge fracture of vertebral body is common in _____ region.
- (A) Cervical.
 - (B) Thoracic.
 - (C) Lumbar.
 - (D) Thoraco-Lumbar.
20. Creep is the characteristic property of viscoelastic structures, which is defined as _____.
- (A) Elongation over time with the load remaining constant.
 - (B) Load reduces over time with the length remaining constant.
 - (C) Elongation is slower than recoil.
 - (D) Relaxation is slower than lengthening.
21. Venous stasis ulcers can be best treated by:
- (A) Neuropathic walker.
 - (B) Total-contact AFO.
 - (C) Unna boot.
 - (D) Prosthesis.
22. Non-operative treatment of accessory navicular bone is:
- (A) Medial arch support.
 - (B) Thomas heel.
 - (C) Heel seat cup.
 - (D) Heel elevation.
23. Mildest form of spina bifida is:
- (A) Spina bifida occulta.
 - (B) Spina bifida cystic.
 - (C) Myelomeningocele.
 - (D) None of the above.
24. Which of the following is not a component of club foot?
- (A) Adduction of forefoot.
 - (B) Abduction of forefoot.
 - (C) Inversion.
 - (D) Plantar flexion.

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25. Orthotic causes of lateral trunk bending includes all except:
- (A) Adduction of hip joint of the HKAFO.
 - (B) Abduction of the hip joint of the HKAFO.
 - (C) Transverse plane malalignment.
 - (D) Insufficient heel lift.
26. Functional foot orthosis should be aligned in:
- (A) Subtalar joint in neutral position.
 - (B) Subtalar joint in inversion.
 - (C) Subtalar joint in eversion.
 - (D) Subtalar joint in neutral with midtarsal joint in plantarflexion.
27. Indication of craig-scott orthosis is:
- (A) Poliomyelitis.
 - (B) Cerebral palsy.
 - (C) Paraplegia.
 - (D) Myopathy.
28. The orthosis can be prescribed in which of the following condition:
- (A) Peripheral vascular disease with ischemic ulcer.
 - (B) Combination of peripheral vascular disease and peripheral neuropathy.
 - (C) Peripheral neuropathy with pressure ulcer.
 - (D) All the above.
29. Which statement is true about Hop-skip running gait pattern?
- (A) Its unilateral transtibial gait pattern.
 - (B) Its bilateral transtibial gait pattern.
 - (C) Its unilateral transfemoral gait pattern.
 - (D) Its bilateral transfemoral gait pattern.
30. Which of the following prosthesis design factors belongs to environmental factors under ICF (International Classification of functioning), disability and health?
- (A) Level of amputation.
 - (B) Joint ROM of the ankle and subtalar joint.
 - (C) Activity level of the patient.
 - (D) Prosthesis availability.
31. In normal human hand which of the rays serves as fixed post for pinch and power functions:
- (A) The first and second.
 - (B) The second and third.
 - (C) The third and fourth.
 - (D) The fourth and fifth.
32. Which statement is false about immobilization splint?
- (A) Maintain tissue length.
 - (B) Improve and preserve the joint alignment.
 - (C) Prevent possible contracture development.
 - (D) Assist in functional use of the hand.

33. Inversion is the:
- (A) Ankle joint motion.
 - (B) Transverse tarsal joint motion.
 - (C) Tarso-Metatarsal joint motion.
 - (D) Sub-talar joint motion.
34. Windlass effect shown in the foot helps in:
- (A) Propulsion of the body forward.
 - (B) Medio-lateral stability of the ankle.
 - (C) Antero-posterior stability of the ankle.
 - (D) Pronation twist.
35. Fore-quarter amputation includes:
- (A) Humeral neck.
 - (B) Gleno-humeral.
 - (C) Interscapulo-thoracic.
 - (D) None of the above.
36. Definitive prosthesis is provided in which of the following stages of rehabilitation:
- (A) Acute post operative phase.
 - (B) Early post operative phase.
 - (C) Rehabilitation phase.
 - (D) All are true.
37. Which of the following is not a factor helping in determining degree of user's level of voluntary control?
- (A) Residual limb length.
 - (B) Active ROM and muscle strength.
 - (C) Overall balance.
 - (D) Body image.
38. Which of the following deformity couldn't be corrected / maintained in a plastic molded AFO design used in the CTEV?
- (A) Equinus.
 - (B) Mid-Foot cavus.
 - (C) Fore-Foot adduction.
 - (D) Tibial torsion.
39. Most popular and widely accepted technique for early intervention to correct CTEV is:
- (A) Ponseti method of manipulation & plastering.
 - (B) Kites' method of manipulation & plastering.
 - (C) French method of manipulation & strapping.
 - (D) Surgical correction.

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40. Which of the following is a contextual factors as per ICF (International Classification of function) disability and health?
- (A) Body structure and function.
 - (B) Environmental factor.
 - (C) Participation potential.
 - (D) Activity potential.
41. Joint end feel is categorized as “hard” which means:
- (A) Bone contacting bone.
 - (B) Bone contacting muscle.
 - (C) Soft tissue contacting muscle.
 - (D) Spring.
42. Range of motion should not be conducted on a joint with:
- (A) Contracture.
 - (B) Range of Motion Lag.
 - (C) Swelling.
 - (D) Dislocation.
43. A client is a 5 year old child who sustained a C6 spinal cord injury secondary to a motor vehicle accident. The injury occurred to the right side of his spinal cord. The OT begins the evaluation knowing that the sensation most likely to be impaired on the leg of the body, below the level of lesion is:
- (A) Two point discrimination.
 - (B) Touch localization.
 - (C) Temperature.
 - (D) Joint motion or kinesthesia.
44. Normal visual acuity is defined as:
- (A) 20/40.
 - (B) 20/30.
 - (C) 20/10.
 - (D) 20/50.
45. Trigeminal nerve:
- (A) Controls superior oblique muscle.
 - (B) Supplies sensory fibers to the upper eyelid and eyeball.
 - (C) Controls closing the eyelid.
 - (D) Controls eye muscle.
46. Agnosia is caused by lesion to:
- (A) Parietal lobe.
 - (B) Frontal lobe.
 - (C) Right Occipital lobe.
 - (D) Temporal lobe.

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47. A major focus of Task oriented training is an:
- (A) Limb training.
 - (B) Arm training using functional tasks.
 - (C) Training by giving tasks.
 - (D) Unassisted training.
48. The symptoms of memory impairment, disturbed executive functioning, confabulation are seen in:
- (A) Dementia.
 - (B) Mania.
 - (C) Anxiety.
 - (D) Alcoholism.
49. All the following are single joint muscle except:
- (A) Biceps Brachi.
 - (B) Soleus.
 - (C) Brachioradialis.
 - (D) Brachialis.
50. The first sign seen in Parkinson's disease is:
- (A) Bradykinesia.
 - (B) Tremor.
 - (C) Rigidity.
 - (D) Tightness.

Group - B

51. In which of the following transtibial socket design, the three-point pressure works such as two posterior directed forces on the tibial shaft and supra-patellar tendon area and one anterior directed force acting at proximal popliteal area:
- (A) PTBSC.
 - (B) PTBSCSP.
 - (C) PTB.
 - (D) PTB with thigh corset and side hinges.
52. Which of the following is one of the most significant factors in lower limb Prosthetic component selection?
- (A) Weight of the amputee.
 - (B) Gadget tolerance of the amputee.
 - (C) Level of amputation.
 - (D) Height of the amputee.
53. Which of the following statement is/are true regarding load line and weight line for a transfemoral Prosthesis user?
- (A) Weight line is the imaginary line drawn through the center of mass which is sum total of the all the load being transferred to the ground during walking.
 - (B) Load line is the individual components of weight being transferred to the ground through either limb/s during walking.
 - (C) Load line is equivalent to weight line during single limb support.
 - (D) All the above.
54. If the ICOR is nearer to the functional knee level in a polycentric prosthetic knee joint, then this polycentric knee is:
- (A) Suitable for a short transfemoral residual stump.
 - (B) Suitable for a long transfemoral residual stump.
 - (C) Better for any level of residual stump.
 - (D) None of the above.
55. A typical high profile prosthetic foot for running mimics which of the following rockers of the foot rockers:
- (A) 1st rockers mainly.
 - (B) 2nd rockers mainly.
 - (C) 3rd rocker mainly.
 - (D) All the above.
56. If a trans-tibial amputation has been planned in a 45-year-old dysvascular patient while there is a prognosis for other side lower limb amputation within next six months. Which of the following statement is correct regarding timing for prosthetic fitment?
- (A) Prosthetic fitment should be delayed till both limbs get amputated.
 - (B) Prosthetic fitment should be done as early as after the first amputation.
 - (C) Patient is not a candidate for prosthetic fitment.
 - (D) None of the above.

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57. Which of the following statement is false regarding Amputee Mobility Predictor?
- (A) It's a task-oriented measurement tool used in the amputee with or without Prosthesis.
 - (B) Its score helps in deciding Activity level for the Prosthetic components' selection.
 - (C) It can be used in unilateral as well as in bilateral amputee.
 - (D) None of the above.
58. If the Prosthetic Hip joint is placed higher than the appropriate position in a Canadian type hip disarticulation prosthesis, then the problem during seating could be:
- (A) The thigh length will appear longer while leg will be inclined forward.
 - (B) The thigh length will appear shorter, and leg will recline posterior.
 - (C) There will not be any effect on Thigh and leg length appearance.
 - (D) None of the above.
59. Medicare K-level used in selection in prosthetic components is based on:
- (A) Abilities of the patient before the amputation.
 - (B) Current and potential abilities of the patient.
 - (C) Expectation and desires of the patient.
 - (D) All of the above.
60. Which of the following is least affected in patient with Stubbies Prostheses?
- (A) The body images.
 - (B) The shock absorption capacity.
 - (C) Uneven terrain traversing capability.
 - (D) The basic ADL carrying capacity.
61. Which of the following design comes under sub-ischial socket?
- (A) Ramal containment socket.
 - (B) Quadrilateral Socket.
 - (C) Ischial containment socket.
 - (D) All the true.
62. Diagnostic socket in shoulder disarticulation could be used for:
- (A) Correcting original trim lines for improving ROM and comfort.
 - (B) Testing position of myo-switches.
 - (C) Testing position of harness.
 - (D) All of the above.
63. The principle on which checkout of the prosthesis is based are:
- (A) Comfort and safety.
 - (B) Function and alignment.
 - (C) Appearance of the prosthesis.
 - (D) All of the above.

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64. A 12-year-old girl has been recently diagnosed with right side thoraco-lumbar idiopathic scoliosis with apex of the curve at T11 with 30-degree Cobb's angle. The prescribed TLSO should have:
- (A) Left lateral trim-line should be one level superior to the apex of the curve while higher trim-line should be made on the right lateral side with a window opposite to the right lateral trim-line.
 - (B) Right lateral trim-line should be one level superior to the apex of the curve while the left side lateral trim-line should be higher with a window cut in the lateral wall just opposite to the right lateral trim-line.
 - (C) No window should be created instead both the side lateral trim-line should be at the same level.
 - (D) Right lateral trim-line should be one level inferior to the apex of the curve while lower trim-line should be made on the left lateral side without any window.
65. A 35-year-old Male was presented with stable anterior compression fracture at L1 level and anterior column height decrement due to motor vehicle accident. What should be the best conservative management in the case?
- (A) Boston brace.
 - (B) A three-point hyper-extension orthosis (Jewett brace).
 - (C) Knight Taylor brace.
 - (D) A posterior TLSO (Taylor brace).
66. A Traumatic Trans-humeral amputee was prescribed body-powered upper limb prosthesis with internal elbow unit, quick disconnect wrist and VC mechanical hook. Which of the following joint motion will be used to control internal elbow function?
- (A) Shoulder complex protraction, Gleno-humeral flexion, abduction.
 - (B) Shoulder complex retraction, elevation, Gleno-humeral flexion, abduction.
 - (C) Shoulder complex depression, Gleno-humeral extension and abduction.
 - (D) None of the above.
67. One of the functions of SWASH brace, prescribed in severe adductor tightness in spastic CP child is:
- (A) To keep the lower-limb reciprocating during standing and while keeping them parallel during sitting.
 - (B) To keep the lower-limb parallel during sitting and while keeping them apart during walking.
 - (C) To keep the lower-limb parallel during standing and while keeping them apart during sitting.
 - (D) None of the above.
68. Which of the following congenital limb deficient condition could be better served by Assistive Technology than ortho-prosthesis?
- (A) Proximal femoral focal deficiency.
 - (B) Fibular deficiency.
 - (C) Humeral deficiency.
 - (D) Severe phocomelia of all the four limbs.

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69. Myoelectric prosthesis works in the principle of:
- (A) External power.
 - (B) Brain power.
 - (C) Body power.
 - (D) None of the above.
70. Which of the following is not a constraint for ISPO classification?
- (A) Skeleton deficiency classification of upper and lower limb.
 - (B) Include only those deficiency which are due to failure of formation.
 - (C) Skeleton deficiency classification of spinal malformation.
 - (D) It described on anatomical and radiological basis.
71. 34-year-old individual presented with left short Trans-radial, 8 weeks after the amputation due to crush injury. He is a building contractor and has family with wife and two children. What could be the best prescription as he wants to return to his job again:
- (A) Body powered prosthesis with self-suspended double standard TR socket with a quick disconnect wrist and VO hook.
 - (B) Body powered prosthesis with self-suspended double standard TR socket with a quick disconnect wrist and VO mechanical hand.
 - (C) Cosmetic hand.
 - (D) Myoelectric prosthesis with self-suspended double wall socket with a powered wrist and Griever TD.
72. Wilmer carrying orthosis working principle for flail arm support can be explained by:
- (A) 1st class lever principle.
 - (B) 2nd class lever principle.
 - (C) 3rd class lever principle.
 - (D) Three-point pressure principle.
73. Advantages of Utah socket design is/are:
- (A) Greater ROM.
 - (B) Better socket stability.
 - (C) Better cosmesis.
 - (D) All the above.
74. Following which one is not in 4Ps policy related to standard of Prosthetics and Orthotics as per WHO?
- (A) Policy.
 - (B) Provision.
 - (C) Pension.
 - (D) Product.
75. Which of the following is not a alternative gait pattern?
- (A) Four-point crutch gait.
 - (B) Cane gait.
 - (C) Swing through gait.
 - (D) Walker gait.

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76. Which of the following is an advantage from the Provision of adjustable Camber angle in an active wheelchair?
- (A) Ease of propulsion.
 - (B) Increasing base of support.
 - (C) Smaller turning angle.
 - (D) All of the above.
77. Active Range of Motion of the ankle dorsiflexion of five to 10 degrees minimum is required in a Partial foot amputation case for prescribing:
- (A) A high-profile socket designs.
 - (B) A Posterior window type high profile socket design.
 - (C) A low-profile socket design in a Partial foot amputation case.
 - (D) None of the above.
78. Biomechanical reason for which a patient with lower limb amputation is asked to walk with shorter step length during gait training so that:
- (A) The GRF vector may have least posterior horizontal component during initial contact.
 - (B) The GRF vector may have least anterior horizontal component during initial contact.
 - (C) The GRF vector may have least vertical component during initial contact.
 - (D) None of the above.
79. Which of the statement is false about traditional three point hyperextension orthosis?
- (A) Its indicated in stable thoracic/ upper lumbar stable compression fracture.
 - (B) Its prescribed to treat acute pain secondary to VCFs resulting from osteoporosis.
 - (C) It controls by applying two anterior directed forces at the scapular and pelvic level and one anterior directed force at the abdominal level.
 - (D) It does not provide stabilization in the transverse plane of the spine.
80. Mobile Arm Support Orthosis is indicated in spinal cord injury:
- (A) For C4 level injuries.
 - (B) For C5 level injuries.
 - (C) For C6 level injuries.
 - (D) For C7 level injuries.
81. Which of the following statement is false for soft cervical collar treatment?
- (A) They give kinaesthetic reminder to limit exaggerated neck movement.
 - (B) May be useful in minor whiplash injuries.
 - (C) Can be prescribed in some unstable cervical spine.
 - (D) All are true.
82. Which of the following scoliotic braces will be most uncomfortable if used in upright posture?
- (A) Milwaukee C TLSO.
 - (B) Boston thoracolumbosacral orthosis.
 - (C) Charleston bending brace.
 - (D) SpineCor brace.

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83. The ISPO nomenclature for congenital elbow disarticulation will be:
- (A) Congenital longitudinal deficiency of Forearm Total.
 - (B) Congenital transverse deficiency of Forearm Total.
 - (C) Congenital longitudinal deficiency of upper arm Total.
 - (D) Congenital transverse deficiency of upper arm Total.
84. Stovepipe prosthetic socket design features:
- (A) Inner Cylindrical and Outer anatomical interface design.
 - (B) Inner anatomical and outer cylindrical interface design.
 - (C) Vacuum socket system.
 - (D) None of the above.
85. Possible gait deviation in case of longitudinal deficiency of femoral partial:
- (A) Vaulting on the sound side during affected side swing phase.
 - (B) Hip hiking and circumduction during affected side swing.
 - (C) Lateral lurching during midstance.
 - (D) All of the above.
86. Three point pressure in the AFO for foot drop helps during:
- (A) Initial contact phase.
 - (B) Loading response phase.
 - (C) Swing phase.
 - (D) All are true.
87. Initial adduction angle of 5 degree created in the Transfemoral socket helps by:
- (A) Creating valgus moment about the knee joint to control abduction.
 - (B) Creating force couple of proximal medial force directed laterally and distal lateral force directed medially to stabilize in mediolateral plane.
 - (C) Creating force couple of proximal medial force directed medially and distal lateral force directed laterally to stabilize in mediolateral plane.
 - (D) None of the above.
88. Which class lever can better explain the Prosthesis motion during swing phase with knee joint as fulcrum?
- (A) First class.
 - (B) Second class.
 - (C) Third class.
 - (D) None of the above.
89. Which of the statement is not true for the input signal in a generic Microprocessor controlled hydraulic knee joint?
- (A) Strain-gauge sensor provides bending moment signal during stance.
 - (B) Myo-sensor provides muscle activity signal during stance.
 - (C) Gyroscope provides angular acceleration signal.
 - (D) Knee Angle sensor provides knee joint position in space.

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90. If the line passing through hip and knee joint axis in sagittal plane passes more behind the heel in case of hip disarticulation prosthesis bench alignment, then:
- (A) Patient may buckle during heel initial contact.
 - (B) Prosthesis step length will get increased.
 - (C) Patient will find difficulty in flexing the knee during pre-swing.
 - (D) None of the above.
91. Anterior cruciate ligament can be best treated by:
- (A) Lenox Hill Derotation knee brace.
 - (B) Rehabilitation Knee Orthoses.
 - (C) Swedish knee cage.
 - (D) Knee sleeves.
92. Which position should be maintained in Posterior dislocation of hip joint?
- (A) 80 degree Flexion and 40 degree external rotation.
 - (B) 20 degree Internal rotation and 50 degree adduction.
 - (C) 10 to 20 degrees of abduction and some degree of flexion.
 - (D) Excessive flexion, adduction, and internal rotation.
93. The primary indication for orthotic management after total knee replacement is:
- (A) Knee flexion range of motion is 100 degree.
 - (B) Weakness or injury to the extensor mechanism.
 - (C) Anterior cruciate ligament weakness.
 - (D) None of the above.
94. Orthosis for developmental dysplasia of hip is:
- (A) Pavlic harness.
 - (B) Toronto orthosis.
 - (C) Atlanta orthosis.
 - (D) Newinton orthosis.
95. A brain-injured patient with mild varus deformity may be benefitted from:
- (A) Rigid AFO.
 - (B) Rigid AFO with lateral shoe flare.
 - (C) Dynamic foot orthosis.
 - (D) Posterior leaf spring AFO.
96. Severe medial compartment knee osteoarthritis can be best treated by:
- (A) Medial sole and heel wedge.
 - (B) Lateral sole and heel wedge.
 - (C) Valgus unloader knee brace.
 - (D) Varus unloader knee brace.
97. Ankle rocker occurs when:
- (A) Controlled deceleration of the foot –towards the floor occurs.
 - (B) The tibia advances over the ankle-foot complex from at the end of loading response to the end of the midstance.
 - (C) Heel rises off the ground surface.
 - (D) Bodyweight rolls over the first MTP joint through push off at terminal stance.

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98. Knee brace for genu recurvatum:
- (A) Swedish knee cage.
 - (B) Lenox hill derotation knee orthosis.
 - (C) Palumbo orthosis.
 - (D) Rehabilitative knee orthosis.
99. The bar in denis browne splint is bent toward centre to create:
- (A) Varus moment at midfoot.
 - (B) Varus moment at hindfoot.
 - (C) Valgus moment at midfoot.
 - (D) Valgus moment at hindfoot.
100. Orthosis for Genu varum deformity in child is:
- (A) Lateral sole wedge.
 - (B) Mermaid splint.
 - (C) Unibar KAFO.
 - (D) All of the above.