



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCE  
DEPARTMENT OF REHABILITATION MEDICINE  
BACHELOR OF SCIENCE IN PHYSIOTHERAPY  
END OF SEPT-DECEMBER 2024 TRIMESTER EXAMINATIONS**

**UNIT CODE: PHT 333                      UNIT NAME: Pediatrics Physiotherapy**

**DATE:                      Tuesday/ 10th/ December**

**TIME:                      TWO HOURS**

**START:                      9am                                      STOP : 11am**

**INSTRUCTIONS (physical exams)**

**Do not write on this question paper**

(Marks and questions distribution as per program curriculum.)

1. This exam is marked out of 70 marks
2. This Examination comprises 3 Sections
3. This exam shall take 2 Hours

**Section A: Multiple Choice Questions. Answer all the questions (30 Marks).**

1. The paediatric Physiotherapists should be able to go assess and treat patients appropriately based on?
  - A. The physiotherapists experience and the research findings
  - B. The patient's preference and the physiotherapists preference
  - C. The research findings and the hospital the patient has attended
  - D. The physiotherapists experience and the modalities available
2. While you were assessing a 3 month old baby with a diagnosis of delayed milestones, you noticed that the baby has got no sucking reflexes and, you therefore concluded that the baby could be having?
  - A. Unknown diagnosis
  - B. Central nervous damage
  - C. Musculoskeletal damage
  - D. All of the above
3. In the management of paediatric patients, the ICF model is applied through a top-down approach, what is the indication of a top-down approach?
  - A. To emphasize body structure and function
  - B. To emphasize participation
  - C. To emphasize on activity
  - D. All of the above
4. While assessing an infant with a diagnosis of cerebral palsy, you noticed that the child has increased muscle tone, reduced range of motion, difficulties in rolling, creeping, and crawling, not being able to watch cartoons, and a fever. From the impairments listed above, which one falls under personal factors
  - A. Fever
  - B. Reduced range of motion
  - C. Rolling
  - D. Increased muscle tone
5. In the development of infants which skills develops faster
  - A. Gross motor control
  - B. Fine motor control.
  - C. Primitive reflexes
  - D. Deep tendon reflexes
  - E. False
6. When an infant bangs 2 blocks together and claps hands together is demonstrating which type of skills?
  - A. Gross motor skills
  - B. Fine motor skills
  - C. Voluntary skills
  - D. Involuntary skills

7. The appearance and disappearance of infantile reflexes is key as it
  - A. Helps in diagnosing neurological disorders.
  - B. Is a foundation for later voluntary movements
  - C. Can help to describe the developmental milestones of an infant
  - D. All of the above
8. While attending a ward round at your hospital, a clinician supports the infant's head and shoulders with one hand, then he allowed the neck to drop back to allow the anterior neck muscles to stretch. What type of reflex was the clinician testing?
  - A. The sucking
  - B. The Landau
  - C. The Moro reflex
  - D. The asymmetrical tonic neck reflex
9. While assessing a four-year-old child with spastic diplegia diagnosis, you noticed that he had an ankle equinus, flexed knee, and hip joints in the early stance moving towards extension in the late stance. What type of gait pattern was the child presenting with?
  - A. Type I, true ankle equinus gait
  - B. Type II, jump gait
  - C. Type III, apparent equinus gait
  - D. Type IV, crouch gait
10. In congenital muscular torticollis, the contracture occurs to which muscle?
  - A. Trapezius
  - B. Sternocleidomastoid
  - C. Supraspinatus
  - D. Infraspinatus
11. Impaired reciprocal activation of paraspinal and abdominal muscles will lead to difficulties in?
  - A. Walking
  - B. Crawling
  - C. Sitting
  - D. rolling
12. While assessing an 8-year-old boy for muscular integrity, you noticed the child standing with a forward trunk lean. Which is the most common impairment associated with this gait?
  - A. Impaired strength in his gluteus maximus.
  - B. Impaired strength in his paraspinal.
  - C. Impaired strength in his abdominals
  - D. All of the above
13. In Erb's palsy, lateral movement of the head with shoulder depression can stretch the nerves and compress them against the first rib leading to which type of the syndrome
  - A. A lower plexus injury
  - B. An upper plexus injury.
  - C. Permanent paralysis of the arm
  - D. Partial paralysis of the arm

14. The deltoid muscle is innervated by?
- A. Axillary nerve
  - B. Radial nerve
  - C. Ulna nerve
  - D. Musculocutaneous nerve
15. Which is the most appropriate functional exercise will you recommend for strengthening weak gluteus Maximus muscles?
- A. Backward walking
  - B. Squatting
  - C. Gluteus bridge
  - D. All of the above
16. Anold's Chiari is a clinical picture of which neurological condition
- A. Cerebral palsy
  - B. Spina bifida
  - C. Hydrocephalus
  - D. All of the above
17. Which of the following signs that you will least watch for in the development of an infant?
- A. uses one hand predominantly
  - B. Sits with weight shifted to one side
  - C. Inability to straighten back
  - D. none of the above
18. While assessing an infant from supine position, you noticed the following features; limited visual tracking, head was placed towards one side, the baby had very minimal movement. As a clinician, you concluded the infant's presentation was;
- A. A peripheral nerve injury
  - B. A central nerve injury
  - C. A muscular injury
  - D. A Bones injury
19. Diphtheria is a highly contagious, infectious disease caused by
- A. Corynebacterium
  - B. varicella-zoster
  - C. morbillivirus
  - D. Meningococcal
20. While you were assessing an infant, the mother gave a history of the child being born at 34 weeks and he never cried immediately. What was the medical diagnosis of this child?
- A. Spina bifida
  - B. Head injury
  - C. Cerebral palsy
  - D. Hydrocephalus

21. Babinsky response usually develops with damage in
- A. upper motor neurone
  - B. lower motor neurone
  - C. cerebellar
  - D. thalamus
22. Children with spastic cerebral palsy will present with the following features.
- A. Decreased muscle tone
  - B. Increased muscle tone
  - C. There will be muscle weakness
  - D. Primitive reflexes will be normal
23. Infants with neurological conditions are better treated from?
- A. A home environment
  - B. A hospital set up
  - C. closed environment
  - D. Field environment
24. The importance of infant reflexes;
- A. Future voluntary movements
  - B. Protection
  - C. Stability
  - D. All of the above
25. The procedure for testing Babinski reflex is?
- A. lateral border of the sole from toe to heel
  - B. medial border of the sole from toe to heel
  - C. across the sole from medial to lateral
  - D. lateral border of the sole from heel to toe
26. The most common cause of neurological conditions in infants is?
- A. Premature birth
  - B. Low birth weight
  - C. Nutritional deficits
  - D. All of the above
27. Which of the following considerations will you take while assessing the muscle strength of head injury infant?
- A. The age of the infant
  - B. Proper positioning
  - C. The available space
  - D. The experience of the physiotherapists
28. Which of the following people in the management of an infant with cerebral palsy will not be considered as a team member?
- A. The infant
  - B. The Caregiver
  - C. Church pastor
  - D. Specialized expertise-physicians

29. Neuroplasticity is a term that is used to indicate;
- The brain can form new neurons
  - Brain damage is permanent
  - Brain does not recover after an injury
  - The brain is delicate
30. Task specific treatment in the physiotherapy management of infants is crucial as;
- It enhances optimum improvement.
  - It enhances optimum mastering of treatment
  - It enhances optimum restoration of function
  - All of the above

**SECTION B: Short Answer questions. Attempt all the questions (20 marks)**

- A child was referred for physiotherapy intervention today due to parental concerns about the child's lack of sitting and yet she is 7 months old. The child was born at 32 weeks gestation on 27/03/22 weighing 2kgs with APGAR scores of 7 and 9 at one and five minutes respectively.
  - What is the child's chronological age? 1 mark
  - Should you adjust for prematurity? If yes, why? 1 marks
  - If so, what is the child's adjusted age? 3 marks
- State the gross motor skills of a four month old infant. 5 marks
- State 2 vaccines given at birth, their indication and the mode of administration. 5 marks
- State five clinical features of chickenpox. 5 marks

**SECTION C: Long answer questions. Attempt any of the two questions (20 marks)**

- Use the case scenario below to answer question that follow.

- John is a 21 year male with mitochondrial disease
- John's best friend is Will. Will is an 18 year old male with spastic diplegic CP
- John has significant ataxia as well as visual impairments, especially depth perception
- John is independent on level surfaces with a manual w/c
- John has decreased Cardiovascular endurance, static and dynamic balance and global muscular weakness
- John needs moderate assistance with transfers
- Will has a driver's license and is independent using his adaptive vehicle for community mobility
- Will is independent with a walker for all mobility
- John wants to be able to go out to eat at his favorite Mexican restaurant with just Will.
- The restaurant is 2 miles away and somewhat w/c accessible. Both John and Will have been there many times with their respective families
- John is very motivated to do whatever he needs to do to be able to go out with Will unsupervised.

Both families support John's goal IF the boys can be safe and successful

- a) Give the physiotherapy diagnosis for John 2 marks
- b) Use the ICF model to write one long term goal (6 to 12 months) and one short term (3 months or less) for John 2 marks
- c) Describe the physiotherapy intervention. 6 marks
2. Describe five extrinsic factors that can impact the developmental sequence of an infant. (10 Marks)
3. Discuss the roles of paediatric physiotherapy. (10 marks).

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