

**PHYSICAL MEDICINE AND REHABILITATION**

PAPER- I

Time : 3 hours  
Max. Marks : 100

PMR/D/11/35/I

Attempt all questions in order.  
Each question carries 10 marks.

1.
  - a. Enumerate causes of cerebral palsy. (2)
  - b. Give various classifications of cerebral palsy. (3)
  - c. Enumerate various developmental milestones up to 3 years of age. (3)
  - d. Enumerate associated problems of cerebral palsy. (2)
2.
  - a. Define meningo-myelocele (MMC). (2)
  - b. Enumerate common problems in MMC. (3)
  - c. Elaborate rehabilitation of a 6 years old child with MMC. (5)
3.
  - a. Enumerate common musculoskeletal problems caused by excessive computer use. (3)
  - b. Briefly describe their management. (2)
  - c. Enumerate injuries sustained in the knee by a footballer. (5)
4.
  - a. Describe preoperative evaluation and rehabilitation management of a patient of peripheral vascular disease due for B.K. amputation. (5)
  - b. Briefly describe advantages and disadvantages of knee disarticulation. (3)
  - c. Prescribe modular prosthesis for a 60 years old man with very short below knee amputation. (2)
5.
  - a. Describe sexual problems of a man with spastic traumatic paraplegia. (5)
  - b. Why is he unable to father a child? (2)
  - c. What are the new techniques to collect viable semen from him? (3)
6.
  - a. Define autonomic dysreflexia (2)
  - b. What are its signs and symptoms? (2)
  - c. How do you manage it? (6)
7.
  - a. What are the causes of ulcers in feet of a leprosy patient? (3)
  - b. What are the different methods of pressure mapping in foot? (2)
  - c. How do you prevent and treat these ulcers? (5)

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PHYSICAL MEDICINE AND REHABILITATION

FINAL EXAM  
DECEMBER 2011

NATIONAL BOARD OF EXAMINATIONS

PAPER - I

PMR/D/1135A

Time : 3 hours

Max. Marks : 100

- 8. a. Enumerate causes of back pain in a young man. (5)
- b. What are the causes and types of spondylolisthesis? (3)
- c. Write conservative management of spondylolisthesis? (2)
  
- 9. a. What is the role of a PMR specialist in pregnancy? (5)
- b. What treatment modalities are avoided during pregnancy? (3)
- c. What are the various causes that can lead to genetic abnormalities? (2)
  
- 10. a. What are impairment, disability and handicap? (4)
- b. How is disability described under UNCRPD? (3)
- c. What are special features being proposed in new PwD bill under circulation? (3)

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**PHYSICAL MEDICINE AND REHABILITATION**

**PAPER- II**

**Time : 3 hours**  
**Max. Marks : 100**

**PMR/D/11/35/II**

**Attempt all questions in order.**  
**Each question carries 10 marks.**

1.
  - a. What is a modular prosthesis? (2)
  - b. What are the various terminal devices in upper limb prosthesis? (3)
  - c. How are terminal devices activated? (3)
  - d. What are advantages of Krukenberg procedure? (2)
2.
  - a. Prescribe prosthesis for an A.K. amputee of 65 years old age having diabetes. (2)
  - b. Prescribe prosthesis for 25 years old man with bilateral above knee amputation. (3)
  - c. What are accessibility needs of lower limb amputees? (3)
  - d. Contraindications for energy storing foot. (2)
3.
  - a. Describe causes of foot drop. (3)
  - b. How you will manage it conservatively? (3)
  - c. What are the various operations for foot drop? (4)
4.
  - a. Describe types of L-S support orthosis. (2)
  - b. Indications for L-S belt. (3)
  - c. What are disadvantages of L-S belt? (2)
  - d. What is surgical treatment for severe L-S degeneration? (3)
5.
  - a. Describe types of wheel chairs. (2)
  - b. What are muscles needed to propel wheel chair? (3)
  - c. Modification in a wheel chair for mid cervical quadriplegic. (3)
  - d. What is joystick control? (2)
6.
  - a. What are the muscles supplied by radial nerve? (3)
  - b. Effects of radial nerve palsy. (2)
  - c. Describe its conservative management. (2)
  - d. Operative management of radial nerve palsy. (3)
7.
  - a. Describe checkout of ischial weight relieving calipers. (7)
  - b. What are its indications and contraindications? (3)
8.
  - a. What are the merits and de-merits of Syme's amputation? (5)
  - b. Write briefly on Syme's prosthesis. (5)

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Time : 3 hours  
Max. Marks : 100

9. a. Mention the causes of scoliosis. (4)  
 b. Discuss briefly its orthotic management. (4)  
 c. Comment briefly on infantile scoliosis. (2)
10. a. What is phantom pain? (2)  
 b. Write various ways of its management. (5)  
 c. What precautions should be taken to prevent it? (3)

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**PHYSICAL MEDICINE AND REHABILITATION**

**PAPER- III**

**Time : 3 hours**

**PMR/D/11/35/III**

**Max. Marks : 100**

**Attempt all questions in order.  
Each question carries 10 marks.**

1. a. How is cold therapy used in PMR practice? Discuss its physiological properties. (7)  
b. What are its contraindications? (3)
2. a. What is spasticity? (2)  
b. Discuss its pharmacological and non-pharmacological management. (6)  
c. Describe in brief its surgical management in lower limb. (2)
3. Discuss the causes and management of a 50 years old male suffering from painful limitation of shoulder joint movement for the last 6 months. 10
4. a. Briefly discuss the features of Carpel Tunnel Syndrome (2)  
b. Diagnosis of Carpel Tunnel Syndrome (4)  
c. Management of Carpel Tunnel Syndrome (4)
5. a. Discuss the advantage and disadvantages of paraffin wax bath compared to hydrocollator packs. (8)  
b. What is the mechanism of action of paraffin wax bath? (2)
6. a. Define Osteoarthritis of knee and grade it. (4)  
b. What are the conservative methods of its management? (4)  
c. When will you advise surgical treatment? (2)
7. a. What is the role of electric currents in the management of pain? (5)  
b. Describe interferential therapy, its effects and advantages. (5)
8. a. Mention the clinical features and management of tennis elbow. (4+4)  
b. Describe the recent method of its treatment done in case of Sachin Tendulkar. (2)
9. a. What are the effects of regular exercise on cardio-vascular activity? (4)  
b. What are the exercise guidelines for a normal man and for a man after angioplasty? (3+3)

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- 10. a. What are communication disorders in children? (3)
- b. Describe importance of early intervention. (3)
- c. What are International accessibility norms for them? (4)

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**PHYSICAL MEDICINE AND REHABILITATION**

**PAPER- IV**

**Time : 3 hours**

**PMR/D/11/35/IV**

**Max. Marks : 100**

**Attempt all questions in order.  
Each question carries 10 marks.**

1. a. What is normal structure of bone and the manner of its growth effects in children? (2+2)  
b. Describe role of vitamin D in children and effect of its deficiency. (6)
2. a. Draw a labeled diagram of cross section of spinal cord at T-2 level. Show the lamellar organization of the neurons. (6)  
b. Up to what level can a person be rehabilitated with lesion at T-2? (4)
3. a. Discuss the role of PTH and calcitonin in calcium metabolism. (6)  
b. How will you manage a woman of 70 years with Osteoporosis? (4)
4. a. Discuss the determinants of gait. (8)  
b. What is energy efficiency of human gait and compare it with donkey? (2)
5. a. What are the various prehensions of hand? (5)  
b. What is the functional position of hand? (2)  
c. What is the approximate disability caused by amputations at various levels in hand up to wrist level? (3)
6. a. Briefly describe the basis of the deformities caused by ilio-tibial band -Tensor fascia lata tightness in PPRP. (7)  
b. Briefly describe operations done for its correction. (3)
7. Describe advantage and disadvantages of Intra-thecal Baclofen pump. (10)
8. a. Write short note on HLA-B 27. (4)  
b. Write clinical features of ankylosing spondylitis. (6)
9. a. Classify nerve injuries. (2)  
b. What are the NCV and EMG findings in nerve injury? (6)  
c. Discuss its role in prognosis. (2)

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10. a. Discuss the patho-anatomy of Pes-valgus and Pes-cavus. (7)  
 b. Discuss in brief surgical management of these deformities in an adult. (3)

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 b. Describe role of vitamin D in children and effect of its deficiency. (6)
2. a. Draw a labeled diagram of cross section of spinal cord at T-2 level. Show the lamellar organization of the neurons. (6)  
 b. Up to what level can a person be rehabilitated with lesion at T-2? (4)
3. a. Discuss the role of PTH and calcitonin in calcium metabolism. (6)  
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5. a. What are the various prehensions of hand? (6)  
 b. What is the functional position of hand? (2)  
 c. What is the approximate disability caused by amputations at various levels in hand up to wrist level? (2)
6. a. Briefly describe the basis of the deformities caused by lipo-tibial band-Tensor fascia lata tightness in PPRP. (7)  
 b. Briefly describe operations done for its correction. (3)
7. Describe advantages and disadvantages of infra-tibial Bactran pump. (10)
8. a. Write short note on HLA-B-27. (4)  
 b. Write clinical features of ankylosing spondylitis. (6)
9. a. Classify nerve injuries. (2)  
 b. What are the NCV and EMG findings in nerve injury? (6)  
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