

1. Targeted Intervention for Sub-acute phase of spinal cord injury

- a. Prevention.
- b. Spinal Immobilization
- c. Autologous Macrophage Implantation
- d. Schwann Cell Transplantation

C

2. In a 7-year-old Girl, a posterior elbow dislocation is an equivalent of which type of monteggia fracture as per Bado Classification ?

- a. 3
- b. 1
- c. 2
- d. 4

C

3. Closed fractures with significant muscle contusion and possible deep contaminated skin abrasions associated with moderate to severe energy mechanisms and skeletal injury is graded as which grade as per Tscherne classification ?

- a. 2
- b. 0
- c. 3
- d. 4

A

4. What constitutes the term Wind Swept Pelvis, as per Young and Burgess Classification ?

- a. YB Lateral Compression Type 2
- b. YB Lateral Compression Type 3
- c. YB AP Compression Type 3
- d. YB AP Compression Type 2

B

5. Which of the following is not a relative indication for operative intervention for cases of fracture clavicle ?

- a. High Energy Closed Fractures with > 15 to 20mm displacement.
- b. Fractures with complete Displacement
- c. Neuro-vascular Impairment
- d. Fractures with comminution

C

6. Among the following, Type 1 collagen is not seen in :

- a. Skin
- b. Tendons
- c. Cartilage
- d. Teeth

C

7. Among the following, which is a marker of Bone formation :

- a. Hydroxy Proline
- b. Osteocalcin
- c. Sialoproteins
- d. Tartarate resistant acid phosphatase

B

8. In patients of scurvy, due to deficiency of vitamin C, hydroxylation of which amino acid pair is altered :

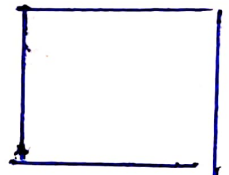
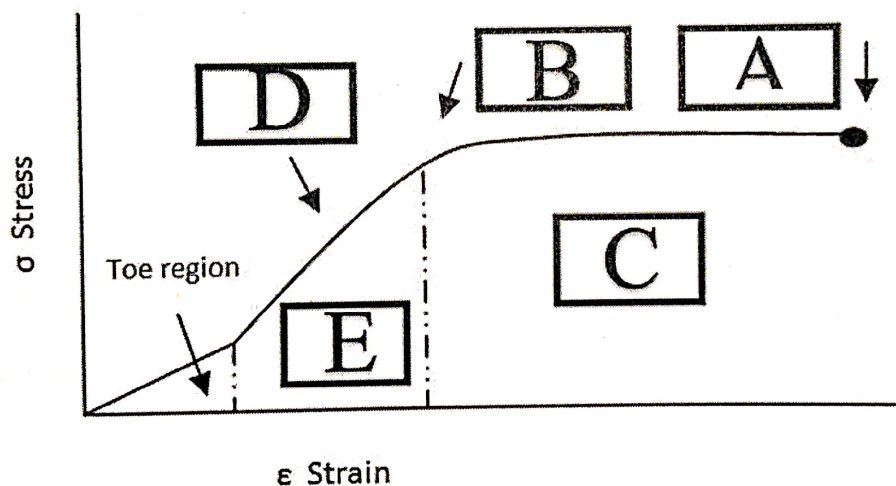
- a. Lysine and Proline
- b. Valine and Lysine
- c. Proline and Valine
- d. Valine and Cysteine

QNo. 08

A

### Theme based Question

#### Stress Strain Curve



Based on above Stress and Strain Curve answer the following :

9. Correct Label for Point A.

Options :

- a. Yield Point
- b. Ultimate Fail Point
- c. Plastic End Limit
- d. Elastic End Limit

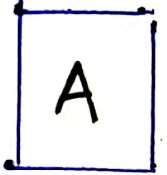
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B

10. Correct Label for Point B.

Options :

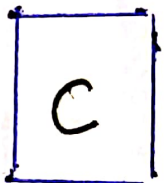
- a. Yield Point
- b. Ultimate Fail Point
- c. Plastic End Limit
- d. Elastic End Limit



11. If D is the slope of the stress strain curve and X is the angle of the slope, then which of the following statements is correct ?

Options :

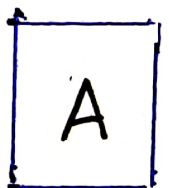
- a.  $\cos X = \text{Stress} / \text{Strain} = \text{Youngs Modulus}$
- b.  $\cos X = \text{Strain} / \text{Stress} = \text{Youngs Modulus}$
- c.  $\tan X = \text{Stress} / \text{Strain} = \text{Youngs Modulus}$
- d.  $\tan X = \text{Strain} / \text{Stress} = \text{Youngs Modulus}$



12. Youngs Modulus is the modulus of ?

Options :

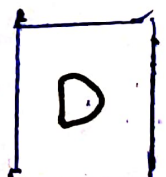
- a. Elasticity
- b. Plasticity
- c. Ductility
- d. Brittleness



13. The Area under the stress and strain curve equals to :

Options :

- a. Stiffness
- b. Ductility
- c. Brittleness
- d. Toughness





14. Correct Label for Points E and C respectively are :

Options :

- a. Plastic Region and Elastic Region
- b. Elastic Region and Plastic Region
- c. Yield Strain and Ultimate Strain
- d. Yield Stress and Ultimate Stress

B

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15. Marble Bone Disease is another name of :

- a. Osteopoikilosis
- b. Osteoporosis
- c. Osteogenesis imperfecta
- d. Osteopetrosis

D

16. In interpreting a DEXA Scan, Z – Score is calculated in comparison to:

- a. Same Sex and Same Age
- b. Same Sex and Standard Age
- c. Opposite Sex and Standard age
- d. Opposite sex and Same Age

A

17. What is the MOA of the drug Strontium Ranelate, a drug used for Osteoporosis ?

- a. Inhibits Bone Resorption
- b. Promotes Bone Formation
- c. Both a. and b.
- d. None of the above

C

18. Which of the below statements are correct ?

A. Sonication Increases the yield rates of detection of the causative agent.

B. RNA 2 inhibiting Peptides ( RIPs) have proven beneficial in eradicating sessile bacteria by Inhibiting Quorum Sensing.

- a. Only A is True
- b. Only B is True
- c. Both Statements are True
- d. None of the above are True

A

19. Which of the following is not a pre-requisite for a normal gait as per Perry ?

- a. Adequate Step length
- b. Clearance of the Non-Weight Bearing foot in swing phase
- c. Energy Conservation
- d. Stability of the Weight bearing foot in Stance

C

20. Which of the following is not a classification system adopted for Legg-Calve- Perthes Disease ?

- a. Catterall Classification
- b. Salter – Thompson Classification
- c. Mod. Elizabethtown Classification
- d. Schaller Classification

D

21. Match the following statements

- I. Hooman's Sign
- II. Rivaroxaban
- III. Mose's Sign
- IV. Fondaparinux

- A. Factor Xa Inhibitor
- B. Passive Dorsiflexion at ankle causes pain
- C. Synthetic Penta saccharide
- D. Gentle squeezing of calf muscle causes pain

**Options:**

- a. I B, II A, III D, IV C
- b. I D, II C, III B, IV A
- c. I B, II C, III D, IV A
- d. I D, II A, III B, IV C

Qno. 21

A

22. Which of the following is not a clinical manifestation of Rickets ?

- a. Frontal Bossing
- b. Pectus Excavatum
- c. Crania-Tabes
- d. Coxa Vara

B

23. Looser's Zone aka Milkman's Line a radiological marker of :

- a. Osteopetrosis
- b. Osteomalacia
- c. Paget's Disease of Bones
- d. Osteopoikilosis

D

24. White line of Frankel, is a radiological sign of:

- a. Scurvy
- b. Rickets
- c. Paget's disease
- d. Osteopetrosis

A

25. Which of the following statements is true ?

- A. PTH causes Resorption of Cortical Bone
- B. PTH has Anabolic effect on Trabecular Bone
- C. PTH causes Resorption of Trabecular Bone
- D. PTH has Anabolic effect on Cortical Bone

↓

**Options:**

- a) A and B is true.
- b) C and D is True
- c) A and C is true
- d) B and D is true

Q No. 25

A

26. Which of the following statements is true ?

- A. Decompression by laminectomy is the treatment of choice for cases of Lumbar canal stenosis.
- B. Pain of Lumbar canal stenosis worsens by flexion and relieves by extension.
- C. Bony overgrowth of the inferior articular process due to degeneration is the most common pathology of lateral recess type of lumbar canal stenosis.
- D. During laminectomy, a central trough is created first followed by extension laterally to ensure that the traversing nerve root is freed of pressure.

**Options :**

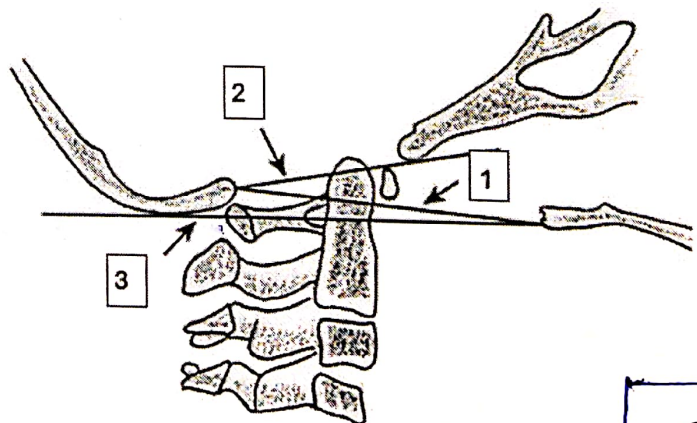
- a. A, B and C are true.
- b. B and D are true.
- c. B, C and D are true.
- d. A and D are true.

D

27. Identify the lines in following diagram :

**Options :**

- a. 1: Mc Rae, 2: Chamberlain, 3: Mc Gregor
- b. 1: Chamberlain, 2: Mc Gregor, 3: Mc Rae
- c. 1: Chamberlain, 2: Mc Rae, 3: Mc Gregor
- d. 1: Mc Rae, 2: Mc Gregor, 3: Chamberlain



C



28. Coxa valga after proximal tibial physeal fractures is named as which phenomenon?

- a. Cozen
- b. Osgood
- c. Dias and Tachdjian
- d. McKeever

A

29. Which of the following is a part of LINDEQUE respiratory criteria ?

- a. Sustained  $\text{PaCO}_2$  more than 7.5 kPa
- b. Respiratory rate less than 10 cpm
- c.  $\text{pH} < 7.3$
- d. Sustained  $\text{PaO}_2$  more than 8 kPa

C

30. Osteoporosis circumscripta, is a radiological sign of:

- a. Scurvy
- b. Rickets
- c. Paget's disease
- d. Osteopetrosis

C

31. Erlen- Meyer Flask Deformity is a radiological sign of:

- a. Scurvy
- b. Rickets
- c. Paget's disease
- d. Osteopetrosis

D

32. Clergy Man's Knee is another name for :

- a. Supra-patellar bursitis
- b. Pre-patellar bursitis
- c. Infra-patellar bursitis
- d. Pes anserina bursitis

C

33. A 42-year-old Male met with an RTA at 10:30 am and sustained a severe left lower limb injury, reporting to you at 3:10 pm with stable vitals but pulseless left lower limb. Signs of ischemia have not developed yet in the injured limb but massive degloving and after radiography comminuted segmental fracture of distal 1/3<sup>rd</sup> femur is confirmed. What will be further course of action ?

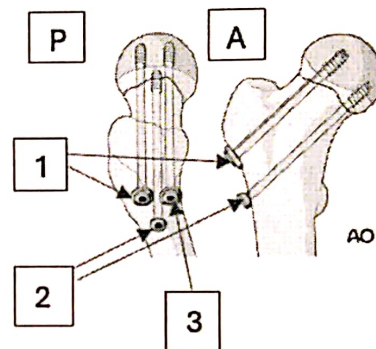
- a) Definitive Fixation and Resuscitation
- b) Amputation and Resuscitation
- c) External Stabilization and Resuscitation
- d) Fluid Resuscitation and Observation

C

34. In the following diagram, what is the recommended sequence of screw insertion while fixing a Neck Femur Fracture with Cancellous screws as per AO Principles ?

Options :

- a. 2, 1, 3
- b. 2, 3, 1
- c. 3, 2, 1
- d. 3, 1, 2



A

35. As per Hohl and Moore Classification, which type constitutes a Rim Compression type of Tibial Plateau Fracture

- a. 2
- b. 1
- c. 4
- d. 5

C

36. Kocher – Lorenz Fragment is seen in which type of capitellum fractures ?

- a. Type 2
- b. Type 1
- c. Type 3
- d. Type 4

A

37. Which of the below statements are correct ?

- A. Pyrazinamide has bacteriostatic role among the Anti Tubercular drugs.
- B. MOA of streptomycin is by inhibition of bacterial protein synthesis.

Options :

- a. Only A is True
- b. Only B is True
- c. Both Statements are True
- d. None of the above are True

B

38. Match the Following Names with respective locations of osteo chondritis:

- |                       |                         |
|-----------------------|-------------------------|
| A. Calve's Disease    | I. Calcaneal Tuberosity |
| B. Kohler's Disease   | II. Navicular Bone      |
| C. Keinbock's Disease | III. Vertebral Body     |
| D. Sever's Disease    | IV. Lunate Bone         |

Options:

- a. A - I, B - II, C - III, D - IV
- b. A - III, B - II, C - IV, D - I
- c. A - I, B - II, C - IV, D - III
- d. A - II, B - III, C - IV, D - I

B

39. While performing Apley's Distraction Test, Pain on external rotation implies an injury to ?

- a e. Medial Meniscus
- b f. Lateral Collateral ligament
- c g. Lateral Meniscus
- d h. Medial Collateral Ligament

D



40. While performing Mc Murray's Test, Pain on internal rotation implies an injury to ?

- a. Medial Meniscus
- b. Lateral Collateral ligament
- c. Lateral Meniscus
- d. Medial Collateral Ligament

C

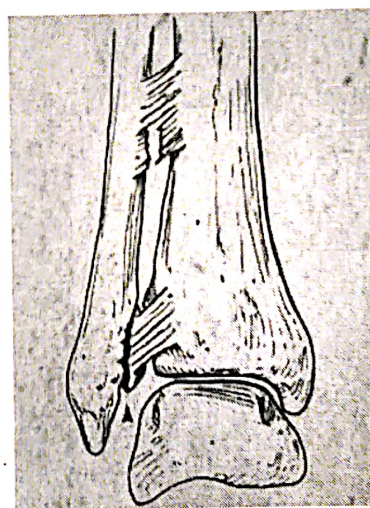
41. While performing Silverskold Test, if resistance is felt on Dorsiflexion of foot throughout the knee range of motion, it implies contracture of :

- a. Gastrocnemius muscle
- b. Soleus Muscle
- c. Tibialis Anterior Muscle
- d. Normal Finding.

A

42. Identify the Fracture shown below :

- a. Le - forte Wagstaffe
- b. Maisonneuve
- c. Curbstone
- d. Tillaux Chaput



A

43. As per Mayfield classification, the greater arc of gilula passes through which of the following :

- a. Radial styloid
- b. Triquetrum
- c. Midcarpal joint
- d. Lunato - Triquetral Space

B



44. Which of the following is not a true inter-vertebral disc herniation ?

- a. Disc Sequestration
- b. Disc Bulge
- c. Disc Protrusion
- d. Disc Extrusion

B

45. Which type of Boyd and Griffin Class of Inter-Trochanteric Fracture can be termed as a Reverse Obliquity Fracture pattern ?

- a. 3
- b. 1
- c. 2
- d. 4

A

46. Among the following, which is not a type of Pulsatile Bone tumors ?

- e. Osteosarcoma
- f. GCT
- g. Aneurysmal Bone cyst
- h. Ewing's Sarcoma

D

47. Enchondroma of Hands/ Phalanges along with Hemangiomas, is a feature of :

- a. Maffucci's Syndrome
- b. Ollier's Disease
- c. Diamond- Blackfan Syndrome
- d. Ehlers- Danlos Syndrome

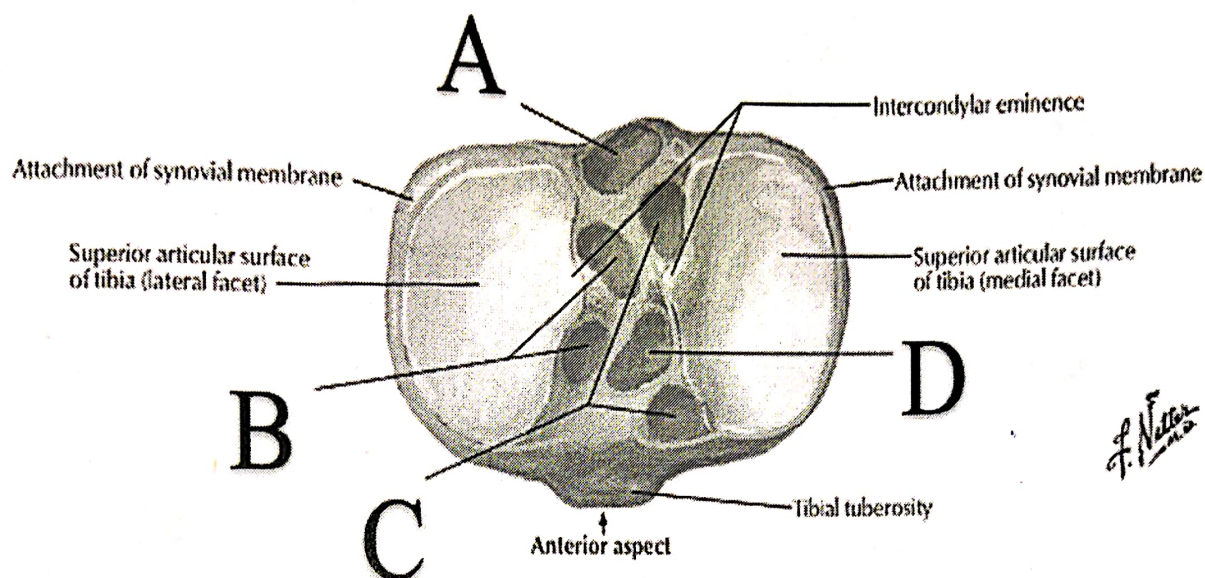
A

48. Most common Benign Bone Tumor ?

- a. Fibrous Dysplasia
- b. Non-Ossifying Fibroma
- c. Bone Cysts
- d. Osteoid Osteoma

B

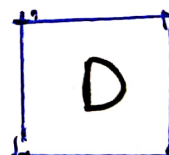
49. Match the Following :



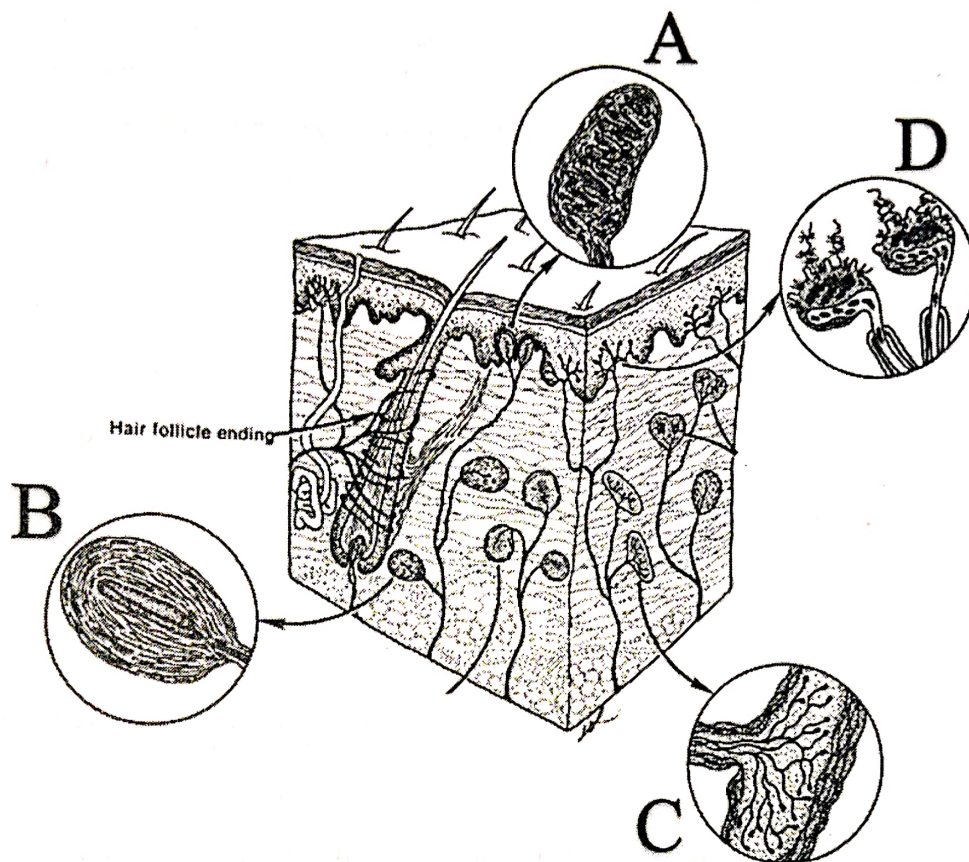
- I. Attachment of ACL
- II. Attachment of Medial Meniscus
- III. Attachment of PCL
- IV. Attachment of Lateral Meniscus

Options :

- a. A – I, B – II, C – IV, D – III
- b. A – III, B – II, C – IV, D – I
- c. A – I, B – IV, C – II, D – III
- d. A – III, B – IV, C – II, D – I



50. Match the Following :



- I. Pacinian Corpuscles
- II. Meissner's Corpuscles
- III. Merkel's Corpuscles
- IV. Ruffini's Corpuscles

Options :

- a. A – I, B – II, C – III, D – IV
- b. A – II, B – III, C – I, D – IV
- c. A – II, B – I, C – IV, D – III
- d. A – I, B – III, C – IV, D – II

C



51. Manifestation of Brown-Sequard Syndrome :

- a. Ipsilateral Pain and Temperature sensation Loss and Contralateral Motor weakness
- b. Ipsilateral Motor weakness and Contralateral Pain and Temperature sensation Loss
- c. Ipsilateral Sensory as well as Motor impairment
- d. Contralateral Sensory as well as Motor impairment

B

52. Which nerve gets injured in a supracondylar fracture in a 6-year-old female patient with Posteromedial pattern fracture and Posterolateral Pattern fracture respectively:

- a. Median and Radial nerve respectively.
- b. Radial Nerve and Median Nerve respectively.
- c. Both patterns injure Median Nerve most commonly.
- d. Both patterns injure Radial Nerve most commonly

B

53. As per Gaines Load sharing scoring/ classification, a score of 6 advocates which of the following treatment options ?

- a.i. Conservative
- b.j. Operative with only Posterior Stabilization
- c.k. Operative with Anterior and Posterior Stabilization
- d.l. Operative with only Anterior Stabilization

A

54. Juvenile Tillaux Fractures are a type of which Salter and Harris class of epiphyseal injury ?

- a. 2
- b. 3
- c. 1
- d. 4 and 5

B



55. Which among the following, is not a probable cause of irreducible dislocation in an Anterior Hip Dislocation ?

- a. Capsule.
- b. Buttonholing through the Capsule.
- c. Piriformis
- d. Rectus Femoris

C

56. Which of the following is correct about normal relationships at the distal radio-ulnar joint ?

- a. Radial Height 8mm
- b. Radial inclination 30 degrees
- c. Volar tilt 15 degrees
- d. None of the above

D

57. Which of the below statements are correct ?

- A. Tri Calcium Phosphate carriers are used as local drug delivery systems for drugs like Gentamycin and Vancomycin.
- B. Barium is injected in Sinus Tracts to identify living tissues before sinus tract excision.

Options:

- a. Only A is True
- b. Only B is True
- c. Both Statements are True
- d. None of the above are True

D

58. Who proposed the theory of retracting fibrosis as a probable mechanism of development of Clubfoot ?

- a. Kawashima and Irani
- b. Ippolito and Ponseti
- c. Irani and Sherman
- d. Issac and Ponseti

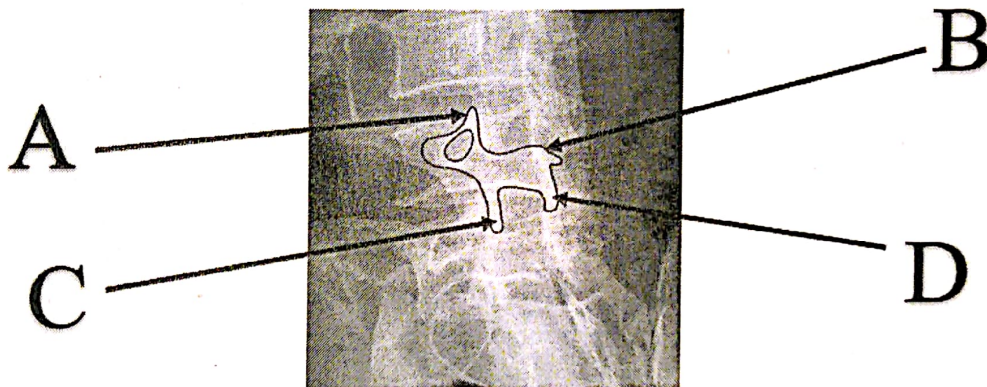
B

59. Spondylolisthesis is considered High Dysplastic type if :

- a. L5 is abnormal
- b. L4 is abnormal
- c. Fatigue fracture of Pars Inter-articularis at L5/S1
- d. Spondylolisthesis secondary to Paget's disease

A

60. Label the following diagram correctly.



- I. Inf. Articular Process of Opposite side
- II. Superior Articular Process of Same side
- III. Superior Articular Process of Opposite side
- IV. Inf. Articular Process of Same side

- a. A – III, B – II, C – I, D – IV.
- b. A – II, B – III, C – IV, D – I.
- c. A – II, B – III, C – I, D – IV.
- d. A – III, B – II, C – IV, D – I.

B