
UNIT - 5

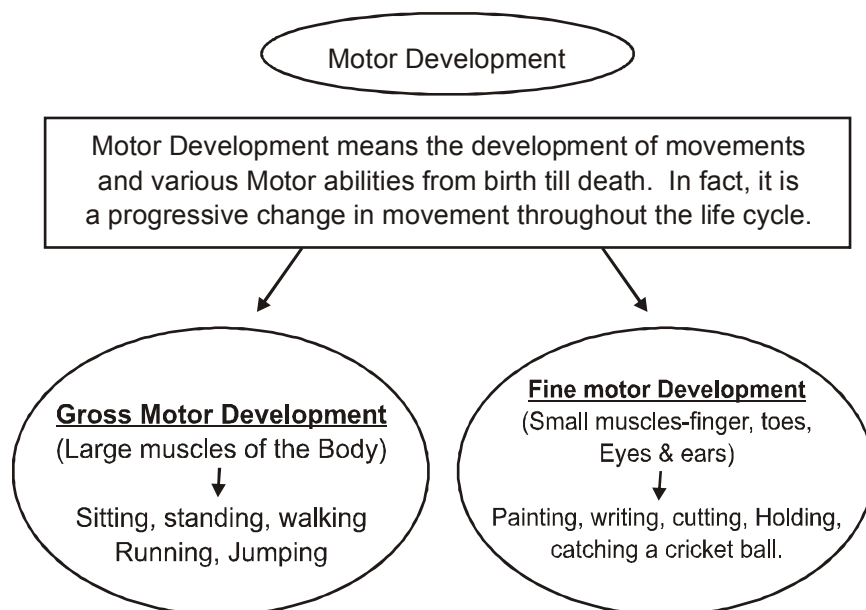
Children and Sports

Key Points :-

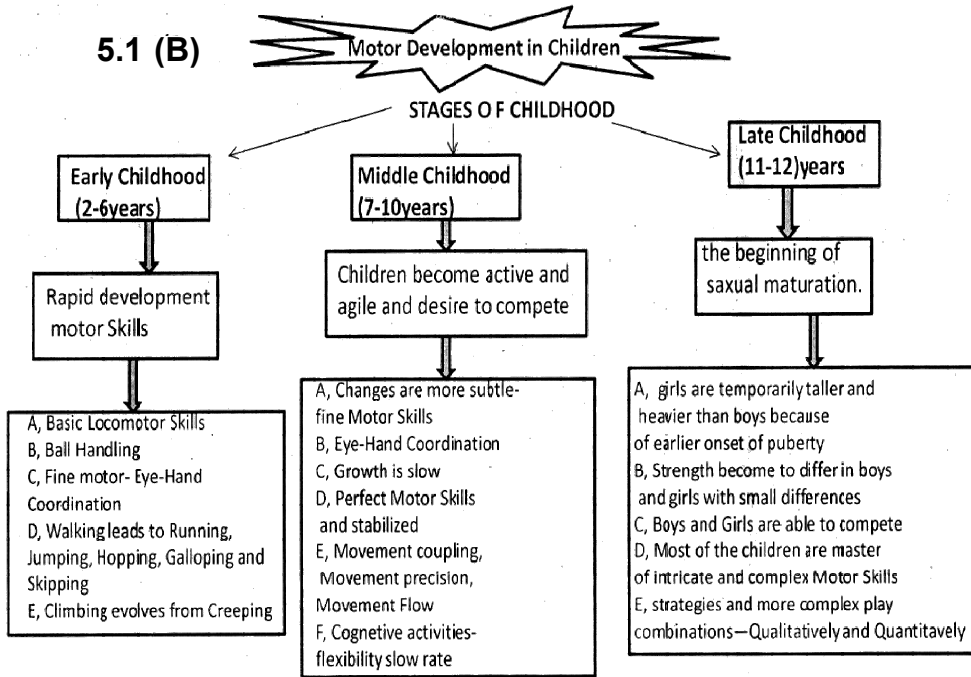
- 5.1. Motor Development and factors affecting it.
- 5.2. Exercise Guidelines at different stage of growth and development.
- 5.3. Advantages and disadvantages of weight training.
- 5.4. Concept and advantages of correct posture.
- 5.5. Causes of Bad posture.
- 5.6. Common postural Deformities knock knee, flat feet, Round shoulders, Lordosis, kyphosis, Bow legs and scoliosis.
- 5.7. Corrective Measures for postural Deformities.

5.1

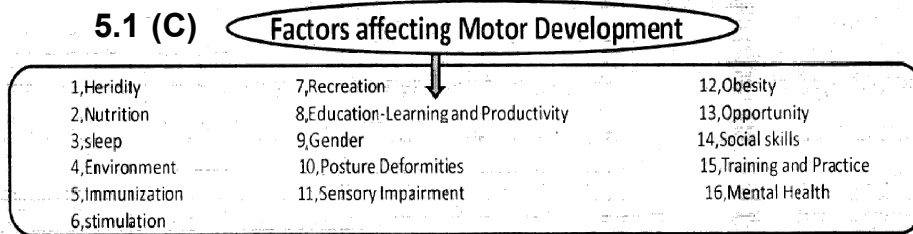
5.1 (A)



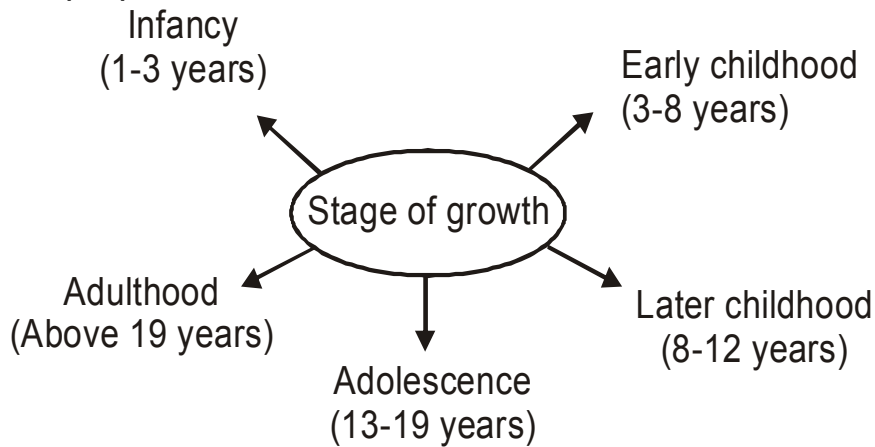
5.1 (B)



5.1 (C)



(5.2)



5.2. Exercise guidelines of different stages of growth

1. Infancy (1 to 3 years)

- Exercise to develop head control, sitting & crawling.
- Gross motor activities should be promoted.
- Exercise for moving arms, legs reaching to object.
- Exercise like throwing, catching & kicking a ball.

2. Early childhood (3 to 8 years)

- Exercise to develop competence in movement skills.
- Emphasis on participation not on competition.
- Activities related to fine motor skills.
- Minimum one hour regular medium exercise.
- Recreative & enjoyable methods of physical activities.
- Clean & safe environment.

3. Later childhood (8 to 12 years)

- Exercise to develop body control, strength and coordination.
- Activities related to endurance should be avoided.
- Organised or team games to develop social-consciousness.
- Teach basic rules of sports i.e. fair, play, simple strategies.
- Introduction to concept of sports training.

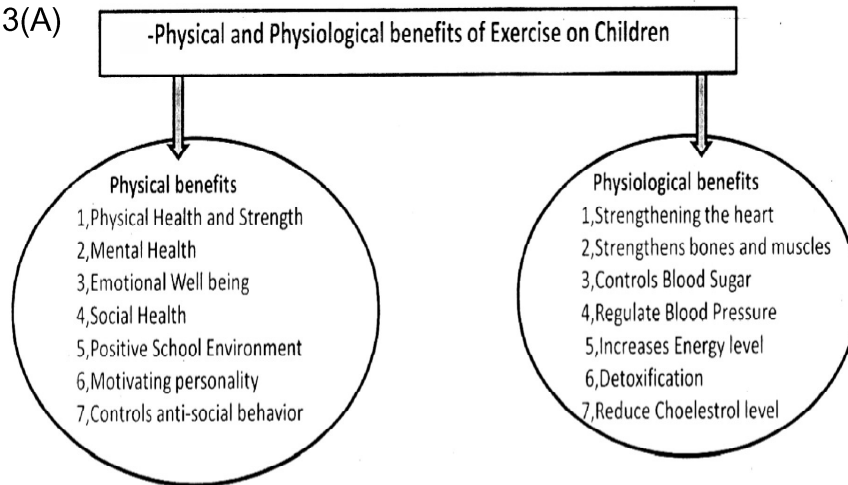
4. Adolescence (13 to 19 years)

- Moderate to vigorous intensity physical activity.
- 60 min to several hrs everyday.
- Muscle strengthening exercise at least 3 times a week.
- Bone strengthening exercise and resistance exercise weight training.
- Running swimming etc. for stamina building.

5. Adult hood (above 19 years)

- Moderate intensity physical activity every day.
- Muscles strengthening exercise at least 2 times a week.
- Bone strengthening exercise and resistance exercise.
- Running, swimming, etc. for stamina building.

5.3(A)



(5.3) Advantages and Disadvantages of Weight training

(A) Weight training:- Weighting training is defined as those exercises, that are designed to strengthen specific muscles by causing them to overcome a fixed resistance, usually in the form of Bar bells or dumb-bells. Actually it refers to exercise phase of the activity, where weight in the form of bar-bells are used to condition and alter the sizes of various segments of the body.

Advantages of Weight Training

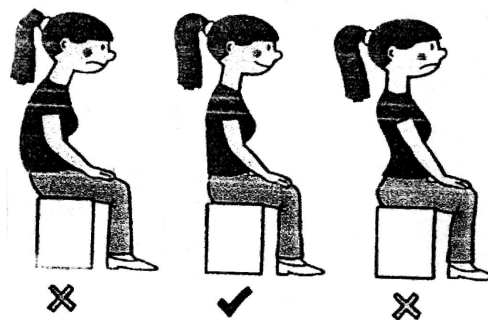
- 1, Improves Posture and range of motion
- 2, Increases muscles strength, bone density and endurance
- 3, Protection against injury
- 4, Improve motor performance
- 5, Promote healthy Blood pressure and Cholesterol levels
- 6, Maintain Healthy Weight
- 7, Develop confidence and self esteem
- 8, Improve immune system functions
- 9, Improve Psycho-socio well being
- 10, Promote and develops exercise habits

Disadvantages of Weight Training

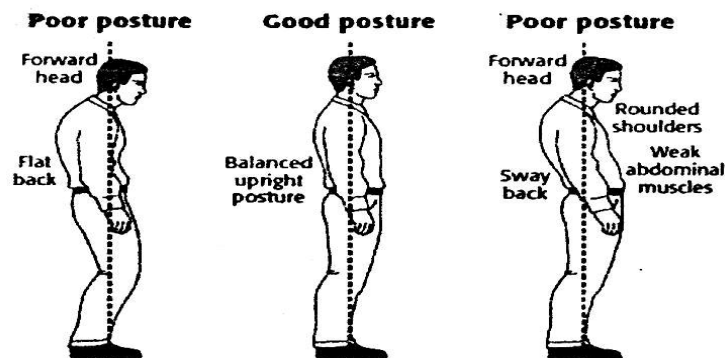
- 1, Maturity
- 2, Introduce Injury
- 3, Safety
- 4, Loss of Flexibility

5.4. (a) Good Posture: Good posture is one, in which the body is so balanced as to produce least fatigue.

A. Correct Sitting Posture : In correct sitting posture the back bone should be so, the natural curve should be straight against back of chair. Head should be in line to hip and shoulder. Arms should be balanced, the waist should touch the back of chair. Thigh should be in straight line resting on seat legs should rest vertically on feet.



B. Correct standing posture : In correct standing posture, feet apart about 8 to 12 inches. Feet should be parallel to each other and balanced evenly on both feet. Hold the head straight. Chin parallel to floor, keep shoulder hips and knees in a straight line. From side view ear, shoulder, hip, knee and ankle should be centered along an imaginary straight line. The centre of Gravity (C.G.) should be with the centre of Gravity.



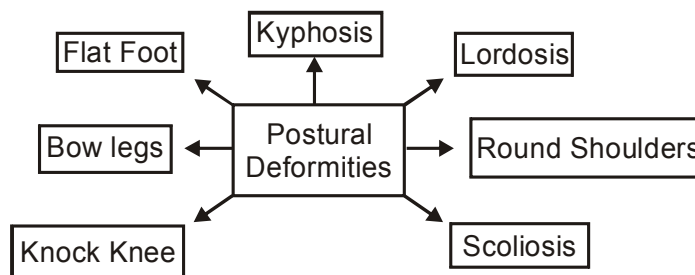
(5.4b) Advantages of Correct posture :

- i Good physical Appearance
- ii Physical Fitness
- iii Lessen the Fatigue
- iv Improves Appetite
- v Good body balance
- vi Grace & Efficiency of movement
- vii Reduce postural Deformities
- viii Prevent Disorders & Diseases
- ix Psychological Balance
- x Improves confidence
- xi Change in mental attitude
- xii Social Value
- xiii Economic Value

5.5 Causes of bad Posture

- (i) Accident
- (ii) Diseases
- (iii) Lack of Nutritional Diet
- (iv) Wrong Postural Habit
- (v) Improper Treatment
- (vi) Psychological Stress
- (vii) Lack of sufficient strength
- (viii) Age factor
- (ix) Poor Eyesight
- (x) Obesity
- (xi) Taking heavy weight on one side.

5.6.Common Postural Deformities



5.7. Corrective measures for postural deformities corrective measures means practice, exercises etc to correct deformities.

Very Short Answer Type Question (1 Mark each)

Q.1 Define Motor Development?

Ans. Motor Development refers to the development of a child's bones, muscles and ability to move around, and react with controlled movements.

Q.2 What do you mean by posture?

Ans. It is the specific position of a person while sitting, standing, walking, lying etc.

Q.3. What is good Posture?

Ans. A good posture is the particular state of body in which our various body parts are properly aligned, they support each other and body can perform more efficiently on the expenditure of less energy.

Q.4 What is kyphosis

or

What is round back or hump back

Ans. The curve of thoracic region of spine is increased posteriorly or in the backward direction is known as kyphosis.

Q.5. What is lordosis or what is hollow back?

Ans. The increment in the curve of lumbar region of spine anteriorly or in forward direction is known as lordosis.

Q.6. What is scoliosis?

Ans. Lateral bending of spine from its mid line is called scoliosis. Scoliosis are of two type **e** curve & **s** curve.

Q.7 What are bow legs?

Ans. Bending of legs in outward direction just like the bow is known as bow legs in other words legs bend in convex shape.

Q.8 What is knock knee?

or

What is Genu valgum?

Ans. Bending of legs in inward direction in concave shape is known as knock knee. In the knock knees the gap is disappeared.

Q.9 What do you understand by flat feet?

Ans. Disappearing the long arch of the feet is known as flat feet. In this condition mid part of the feet touches the ground.

Q.10. What is round shoulder?

Ans. In this deformity our shoulders become round & tilt in the forward direction.

Q.11. Write down correct way of sitting posture.

Ans. Back should be straight, feet should be properly placed on the ground.

Q.12. Write down the correct way of standing posture.

Ans. All body parts aligned in such a way to support each other, back should be straight, body weight is equally distributed on both legs & C.G of all body parts must be near to the imaginary line that pass through the center of the body.

Short Answer Question

3 Marks each

Q.1. Disadvantage of weight training in the children?

Ans.1. **Risk of injury** :- Incorrectly and excessive weight training introduce injury and pain in children.

2. **Less flexibility** :- Weight training reduces the level of flexibility because weight training is mostly practised for development of strength. So flexibility is reduced due to it.

3. **Maturity** :- Children should not begin weight training or any other workouts until they are physically and emotionally mature enough to handle it because it can lead to serious, bony injury or deformities in the children.

4. **Growth of Children** : Excessive weight training may cause negative effects on the normal growth of children.

5. **Needs a supporter** :- children shall not perform any weight

training or workout in case of absence of supporter.

Q.2 What are the characteristics of good posture.

Ans.- Correct alignment of various body parts so, as to support each other.

- Body wt. equally distributed on both legs.
- Good coordination among the various body parts.
- Less Fatigue
- Good balance
- C.G. of various body parts lay near to the imaginary line that passes through the center of the body.

5 Marks questions

Q.1. What are the symptoms of kyphosis and how it can be cured?

Ans. Symptoms: Distance between the scapula increase.

- The length of the chest muscles become short.
- Shoulders tilt forward.
- Neck tilt forward
- Upper Body wt. lean forward.

Corrective Measures :- In order to cure kyphosis such types of exercises are suggested, those increase the length of the pectorals and provide strength to the thoracic region such as :

- 1 Back stroke swimming.
- 2 Chakar Asana
- 3 Bhujang Asana
- 4 Dhanur Asana
- 5 Reverse bending on the swiss ball
- 6 Reverse butterfly
- 7 Pillow back extension
- 8 Marjaryasana (cat pose)
- 9 Adhomukha svanasana (Down word dog pose)
- 10 Ustrasana (Camel pose)
- 11 Half wheel pose (Ardha chakaarasana)

Q.2. What are the symptoms & corrective measures of lordosis.

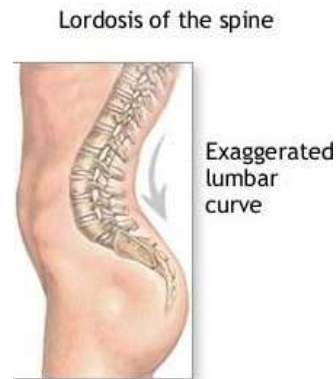
Ans. Symptoms :

- Forward & downward tilt pelvis
- A large gap between the lowerback & the floor when laying in supine line position.
- Pain in lower back
- The length of lower back muscles get shortened.
- Abdomen at lumbar region tilt forward.

Corrective Measures

- In order to cure the lordosis those types of exercises are suggested, which increase the length of lower back muscles & strengthen the abdominal muscles such as.

- Sit ups < Bent knee
- Straight legs
- Leg raises
- Halasana
- Good morning exercises
-
- Nauka Asana
- Paschimotanasana
- Cycling
- Oblique crunches
- Lower back muscle stretch
- Lunges
- Mountain climbing exercises
- High jumps on the spot (knees touches the chest)
- Bending down ward
- Alternate toe touch



Q.3 What are the symptoms and corrective measures exercise for scoliosis.

Ans. Symptoms :

- One shoulder up & one down

- Pelvis - One side up & one down.
- Body Weight uneven on both legs.
- Body seems to bend one side.



Corrective measures :

- Breast stroke swimming
- Trikon Asana
- Hanging on Horizontal bar
- Streaching exercises in which down shoulder goes up.
- Perform down ward facing stretches.

Q.4 Write down the symptoms, causes & corrective measures of knock knee.

Ans. Symptoms :

- Knees touch each other in standing position.
- Knees touch each other in walking.
- Knees touch each other in running.

Causes :-

- Obesity
- Defficiency of vit D
- Rickets
- Early age walk or standing
- Malnutrition
- Enlargement of medial ligament of both knees quickly as compare to lateral ligament.
- Heavy load for long time.



Corrective measures :-

- Horse riding
- Padamasana
- Standing with pillow between the knee
- Use walking calliper

-
- Straight leg lift.
 - Straight leg knee press on the towel placed under the knee
 - Side kicking the football
- Q.5 Write down the symptoms, causes & corrective measures of Bow legs.

Ans. **Symptoms :**

- Gap between the knees are increased
- Knee moves in outward direction in standing, walking & running.
- Shape of legs look like the bow.

Causes :-

- Inlargement of lateral ligment of both knee quickly as compare to medial ligament.
- Weakness of bones and muscle.
- Long time cross leg sitting.
- Faulty style of Walking.
- Obesity
- Rickets
- Early age standing and walking.



Corrective measures :

- Walking (feet twisted inward)
- Use of walking callipers.
- Massage therapy.
- Use those exercise which strengthen the muscles surrounding the knee such as leg extension in laying position.
- Use yoga strap to bind the legs together then make cow face posture & forward bending are recomended.
- Pilate exercise such as roll up & ballerina arms are effective to tone legs.
- Garud Asana, Ardh-Matsyendrasana

Q.6. Write down the symptoms, causes & corrective measures of

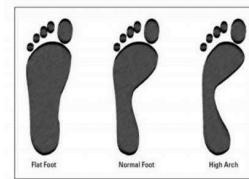
Flat feet.

Ans. **Symptoms :**

- Pain in mid part of feet during standing & walking.
- Disappearing the long arch of the feet
- Complete feet print can be seen on the floor.

Causes

- Weakness of muscles & bones.
- over weight
- Obesity
- Carrying heavy load for long time.
- Injuries
- Malnutrition
- Faulty shoes.



Corrective Measures :-

- Writing with legs
 - Walking or running on the sand.
 - Jumping on toe
 - Wearing proper shoes
 - Pick the pebble with help of feet
 - Walking on toe
 - Tadasana
 - Vajra-asana
 - Ball Ball under the feet game
 - Wear the shoe with hankey inside the mid part of the feet.
- Q.7 Explain the symptoms, causes & corrective measures of round shoulder.

Ans. **Symptoms :**

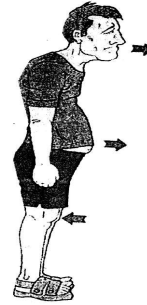
- Shoulder become round & tilt forward
- Neck tilt in forward direction.
- Down shoulders.

Causes

-
- Wrong habits
 - Tight clothing.
 - Faulty furniture
 - Profession

Corrective measures

- Dhanurasana
- Chakrasana
- Bhujang asana
- Reverse bending on the swissball
- Reverse butterfly
- Pillow neck extension
- Downward dog pose (adho mukh Svanasana)
- Camel pose (Ustra sana)
- Half wheel pose (Ardh Chakrasana)
- Hanging on rod or rope



Q.8 Write the advantages of weight training?

or

How weight training improves the working quality of children?

- Ans.1. Improves the posture and range of motion :- Weight training helps to develop correct posture and extension, contraction of muscles leading to increase range of movement.
2. Increase muscles strength, bone density and endurance :- Resistance training can improve bone density and muscles mass. Due to more muscles mass, the tolerance Power is increased and improves endurance of the body.
 3. Protection against the injury :- Weight training, improves physical activity, system of the body and reduces risk of injury.
 4. Promote health blood pressure and cholesterol level :- Physical exercise with the resistance training decreases bad cholesterol level and increases good cholesterol. It also improves blood circulation, which in turn maintains a healthy blood pressure.

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5. Improves immune system function :- With the proper digestion, release of enzymes, Absorption of nutrients, release of toxic substances and healthy functioning of body organs, the immune system functioning is improved and the body become capable of fighting diseases and infections.
 6. Improves psycho-social well being :- A child with the well shaped healthy body with more potential to work is better accepted by society. A well maintained healthy physique makes a child more confident or raise his self esteem.

Q.9 Explain the motor development during the childhood?

or

Describe the stages of motor development?

or

Ans. Study of motor Development in childhood can be done in three stages :-

1. Early childhood :- The period of early childhood starts from second year and continue till sixth year. The motor development during this periods takes place rapidly. It is know as pre-school years.
 - a) In this period, a child becomes perfect in various fundamental movements such as Running, Jumping, throwing & acquires the ability to unite or combine.
 - b) Children stride length increases and they develop a more mature running pattern.
 - c) Proficiency in climbing on ladder become efficient.
 - d) To hop and gallop skillfully.
 - e) Fine eye-hand coordination.
2. Middle childhood :- The period of middle childhood starts from 7th year and continues up till 10th year. During this period the changes, which takes place are -

-
- a. Children become more agile
 - b. Strong desire to engage in various physical movements and activities.
 - c. Good eye-hand-leg coordination.
 - d. Better in balance and postures.
 - e. Motor skills are perfected and stabilized.
 - f. Coordinative abilities develop at the higher level, while the flexibility develop at the slower level.
3. Late childhood :- The period of late childhood begins from 11th year and continues upto 12th year or till the beginning of sexual maturation process. The no of changes take place during this period are-
- a. Girls are temporarily taller and heavier than boys because of the earlier onset of puberty.
 - b. Strength begins to differ among the boys and girls
 - d. Most of the children are master to most complex motor skills.
 - e. They learn strategies and more complex combination of motor skills.
 - f. Running and jumping movements, qualitatively and quantitatively develop at the faster rate. Coaches and teachers of physical education should continue to encourage skill development with an increasing stress on strategies and tactics.

Practise Questions

1 Marks questions

1. What do you understand by weight training?
2. What do you mean by macro motor development?
3. What do you mean by micromotor development?
4. How many postural defomities are there? Name them.

-
5. What do you mean by spinal curvature?
 6. What are the causes of bow legs?
 7. Write down the causes of scoliosis?

3 Marks questions

1. Write the meaning and types of motor development.
2. Describe the preventive measure of kyphosis.
3. Describe the various stages of motor development.
4. Explain the good posture of standing.
5. Explain the good posture of sitting.
6. Value based Question

Garima was a very intelligent student of our class but she was having a problem of lordosis which is one of the major deformities of spine, most of the students used to laugh at her & passed indecent comments, owing to that she remained under tension & stress one day our sports teacher come to know about her problem. She rebuked the children for their misdeeds & suggested them not to repeat such things in future. She advised garima to take some corrective exercises for correcting the deforming of lordosis. After performing corrective exercises for some months. She has got rid of lordosis.

On the basis of the above passage, answer the following questions.

1. Comment upon the disqualities of most of the students of the class.
2. Discuss the values possessed by her teacher?
3. Mention some corrective exercise for remedy from lordosis.

5 Marks questions

1. Write down the advantages of good posture.
2. Describe the causes of Bad posture.
3. Write physical and physiological benefits of exercise on children.
4. According to exercise guidelines at different stages of growth. What kind of exercise one should do? Explain with the help example at every stage.
5. Describe the factors affecting motor development of children.