

**SAMPLE QUESTION PAPER (2022-23)**  
**(With Solutions)**  
**Class XII**  
**PHYSICAL EDUCATION (048)**

**TIME: 3 hrs**

**M.M: 70**

**General Instructions:**

1. The question paper consists of 5 sections and 37 Questions.
2. Section A consists of questions 1-18 carrying 1 mark each and are multiple choice questions. All questions are compulsory.
3. Section B consists of questions 19-24 carrying 2 marks each and are very short answer type and should not exceed 60-90 words. Attempt any 5.
4. Section C consists of questions 25-30 carrying 3 marks each and are short answer type and should not exceed 100-150 words. Attempt any 5.
5. Section D consists of questions 31-33 carrying 4 marks each and are case studies. There is internal choice available.
6. Section E consists of questions 34-37 carrying 5 marks each and are long answer type and should not exceed 200-300 words. Attempt any 3.

**SECTION–A**

1. Identify the asana:



- |                       |                 |
|-----------------------|-----------------|
| (a) Paschimottanasana | (b) Halasana    |
| (c) Vajrasana         | (d) Dhanurasana |

**(Question for visually impaired)**

Which asana amongst these can be done just after having meals?

- |                  |                         |
|------------------|-------------------------|
| (a) Bhujangasana | (b) Dhanurasana         |
| (c) Vajrasana    | (d) Ardhamatsyendrasana |

2. A person who likes to learn new things, new concepts and new experiences are categorized as .....  

(a) Agreeableness	(b) Extroversion
(c) Conscientiousness	(d) Openness
3. Cartwheel in gymnastics is an example of .....  

(a) Static Equilibrium	(b) Dynamic Equilibrium
(c) Active Equilibrium	(d) Passive Equilibrium
4. Slow twitch fibres are ..... in colour.  

(a) White	(b) Red
(c) Transparent	(d) Brown
5. Jumping on the spot is an example of .....  

(a) Iso-metric	(b) Iso-tonic
(c) Iso-kinetic	(d) Iso-kinesthetic
6. Take-off in Long Jump is an example of ..... strength.  

(a) Explosive strength	(b) Maximum strength
(c) Strength endurance	(d) Static strength

## A.2 Essentials of Physical Education—XII

7. The amount of oxygen which can be absorbed and consumed by the working muscles from the blood is called .....  
(a) Oxygen uptake (b) Oxygen intake  
(c) Oxygen transport (d) Vital capacity

8. In Law of Acceleration, acceleration of an object is inversely proportionate to its .....  
(a) Force (b) Mass (c) Speed (d) Size

9. Given below are the two statements labelled Assertion (A) and Reason (R).

**Assertion:** Intrinsic motivation has long-term benefits.

**Reason:** As factors behind it are naturally pursuing actions that provide fun, pleasure, fulfilment or challenge.

In the context of the above two statements, which one of the following is correct?

- (a) Both (A) and (R) are true and (R) is the correct explanation of (A).  
(b) Both (A) and (R) are true but (R) is not the correct explanation of (A).  
(c) (A) is true, but (R) is false.  
(d) (A) is false, but (R) is true.

10. Carbohydrates which are soluble in water and crystalline in structure.  
(a) Simple (b) Complex (c) Compound (d) Complicated

11. Which amongst these is not a micro mineral?  
(a) Iodine (b) Magnesium (c) Iron (d) Copper

12. Which asana is helpful in increasing height?  
(a) Sukhasana (b) Tadasana (c) Bhujangasana (d) Vajrasana

13. How many byes will be given if there are 17 teams?  
(a) 1 (b) 8 (c) 15 (d) 12

14. How many matches will be played in a knockout tournament first round if there are 15 teams?  
(a) 8 (b) 7 (c) 5 (d) 6

15. Watching others play and enjoy which in turn motivates the child with special need to participate is a part of which kind of strategy?  
(a) Mental (b) Physical (c) Psychological (d) Social

16. Match the following:

- |                                    |                                    |
|------------------------------------|------------------------------------|
| (i) Garudasana                     | 1. Round shoulder                  |
| (ii) Gomukhasana                   | 2. Lordosis                        |
| (iii) Chakrasana                   | 3. Bow legs                        |
| (iv) Naukasana                     | 4. Knock knees                     |
| (a) (i)-3, (ii)-4, (iii)-1, (iv)-2 | (b) (i)-1, (ii)-3, (iii)-4, (iv)-2 |
| (c) (i)-4, (ii)-2, (iii)-1, (iv)-3 | (d) (i)-2, (ii)-3, (iii)-4, (iv)-1 |

17. Match the following:

- |                                    |                                    |
|------------------------------------|------------------------------------|
| (i) Chair stand test               | 1. Lower body strength             |
| (ii) Arm curl test                 | 2. Aerobic endurance               |
| (iii) Back scratch test            | 3. Upper body strength             |
| (iv) Six-minute walk test          | 4. Upper body flexibility          |
| (a) (i)-1, (ii)-3, (iii)-4, (iv)-2 | (b) (i)-2, (ii)-3, (iii)-1, (iv)-4 |
| (c) (i)-1, (ii)-3, (iii)-2, (iv)-4 | (d) (i)-2, (ii)-3, (iii)-4, (iv)-1 |

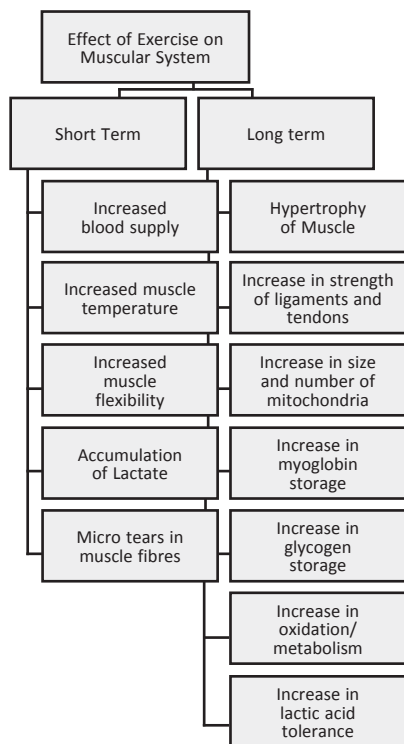
18. Weakening of bones due to loss of bone density and improper bone formation is known as .....  
(a) Amenorrhoea (b) Anorexia Nervosa  
(c) Osteoporosis (d) Lordosis

- Answers:** 1. (d) or (c) 2. (d) 3. (b) 4. (b) 5. (b) 6. (a)  
7. (a) 8. (b) 9. (a) 10. (a) 11. (b) 12. (b)  
13. (c) 14. (b) 15. (d) 16. (a) 17. (a) 18. (c)

**SECTION-B**

19. List down any four effects of exercise on the muscular system.

Ans.



20. List down any four benefits of self-talk by athletes in sports.

- Ans. (i) Building and developing self-efficacy (ii) Skill acquisition  
 (iii) Creating and changing mood (iv) Controlling efforts  
 (v) Focusing attention

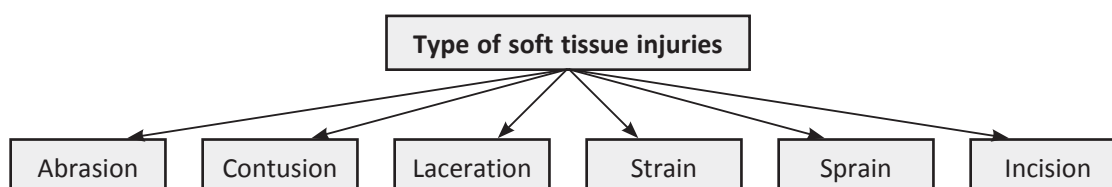
21. List down any four advantages of Fartlek training method.

Ans.

Advantages	Disadvantages
• Develops strength and endurance	• Many exercises require specialized equipment, e.g., gym equipment
• Appropriate form of training for most sports	• Ample space required to set up circuit exercises and equipment
• Can be adjusted to suit age, fitness and health of the athlete	• In general, can only be conducted where appropriate facilities/equipments are available
• Exercises are simple enough to make each athlete feel a sense of achievement in completing them	• Use of additional equipment requires appropriate health and safety monitoring
• A wide range of exercises to select from which will maintain the athlete's enthusiasm	
• Can be done in group	

22. Explain any two types of soft tissue injuries with the help of examples.

Ans. A soft tissue injury is the damage to muscles, ligaments and tendons throughout the body.



#### A.4 Essentials of Physical Education—XII

23. Write down the objectives and administration of Flamingo test.

Ans. Static Balance (Flamingo Balance Test)

What does it measure:	
Ability to balance successfully on single leg. This single leg balance test assesses the strength of the leg, pelvic and trunk muscle as well as static balance.	
<b>How to Perform:</b> Stand on the beam. Keep balance by holding the instructor's hand (if required to start). While balancing on the preferred leg, the free leg is flexed at the knee and the foot of this leg held close to the buttocks. <b>Start the watch as the instructor lets go of the participant/subject.</b> Pause the stopwatch each time the subject loses balance (either by falling off the beam or letting go of the foot being held). Resume, again timing until they lose balance. Count the number of falls in 60 seconds of balancing. If there are more than 15 falls in the first 30 seconds, the test is terminated.	<b>Infrastructure/Equipment Required:</b> Non-slippery even surface, Stopwatch; can be done by just standing on a beam. <b>Scoring:</b> The total number of falls or loss of balance in 60 seconds of balancing is recorded. If there are more than 15 falls in the first 30 seconds, the test is terminated.
<b>Administrative Suggestion:</b> Participants should be encouraged to focus eyes on stationary objects straight ahead.	
<b>Suggested physical activities to improve Balance (Flamingo Test)</b> To improve balance, you should practise one foot balance, walking on toes and heel toe walking, walking on straight lines, skipping, hopping, vrikshasans, walking on beam, etc.	



24. What should be the basic nutrient in a weightlifter's diet and why?

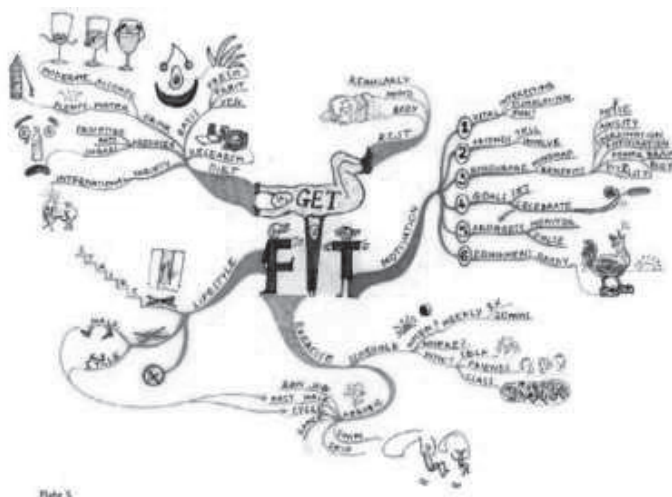
Ans. Proteins

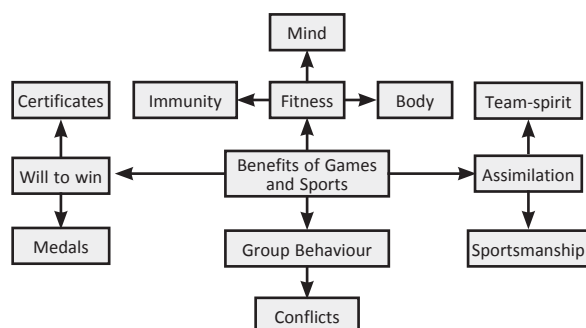
<b>Proteins</b>	• Proteins build and repair body cells	Milk and milk products, fish, eggs, poultry, meat, legumes and grains
	• Proteins form part of various enzymes, hormones and antibodies	
	• Also provide energy (4 Kcal/g)	

### SECTION—C

25. Create a mind map including any six advantages of physical activities for children with special needs.

Ans. Six advantages of physical activities for children with special needs:





26. What are carbohydrates? Differentiate between its types.

**Ans.** Carbohydrates are organic compounds made up of Carbon, Hydrogen and Oxygen. Carbohydrates are a major source of energy. Carbohydrates are **monosaccharide**, **disaccharides** and **polysaccharides**.

**Simple sugars** (mono and disaccharides) are found in fruits (sucrose, glucose and fructose), milk (lactose) and sweets that are produced commercially and added to foods to sweeten, prevent spoilage, or improve structure and texture.

Polysaccharides are more than two units of monosaccharide joined together. These are Starches and fibre (cellulose). These are also called **complex sugars** and are found in whole grain cereals, rice, oats, potatoes, bread, legumes, corn and flour.

27. Define bye. Explain the rules of giving bye with the help of an example.

**Ans.** The position of a participant in a tournament who is not paired with an opponent, usually in the first round, and advanced to the next round without playing.

The right to proceed to the next round of a competition without contesting the present round, often through non-appearance of an opponent.

**Allotment of byes in the fixture should be given in following order:**

First bye will be given to last team of Lower Half.

Second by will be given to first team of Upper Half.

Third bye will be given to first team of Lower Half.

Fourth bye will be given to last team of Upper Half.

Same pattern will be followed after fourth bye till the remaining byes have been given.

28. Make a table explaining any three personalities from Big Five theory and their characteristics.

**Ans.**

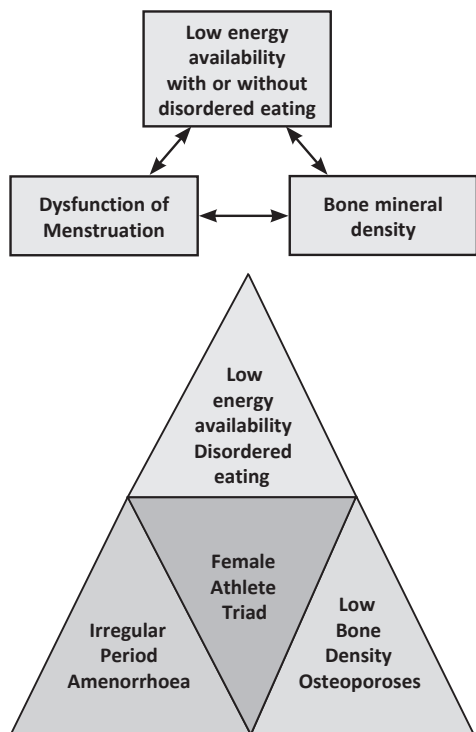
Trait	Description
Openness	Being curious, original, intellectual, creative and open to new ideas
Conscientiousness	Being organized, systematic, punctual, achievement-oriented and dependable
Extraversion	Being outgoing, talkative, socialable and enjoying social situations
Agreeableness	Being affable, tolerant, sensitive, trusting, kind and warm
Neuroticism	Being anxious, irritable, temperamental and moody

29. Explain any three physiological factors determining strength.

**Ans.** Strength – Strength component has varied sub-types like Maximum strength, Explosive strength, Strength, Endurance etc. Each has different types of exercises, intensity and duration so physiological factors vary. In games like weightlifting, jumps, sprint or power, agility and strength dominating sports where force production is high, fatigue is quick, and fast twitch, fibre percentage must be high in muscles. ATP-CP system or anaerobic system works to produce energy for strength training. Stroke volume (the volume of blood pumped out of the left ventricle of the heart during each systolic cardiac contraction) is a vital parameter as far as cardiovascular system is concerned.

30. What is the meaning of Female Athletes Triad? Explain any two in brief.

Ans. Female Athlete Triad



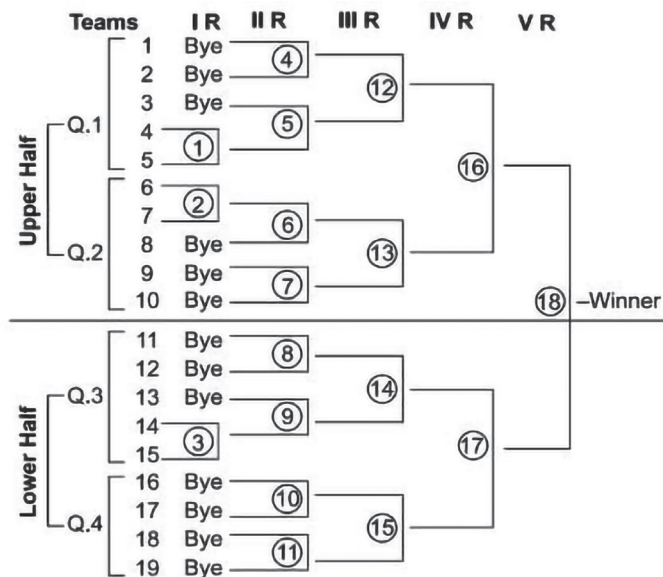
(a) disordered eating

(b) amenorrhea and

(c) osteoporosis

#### SECTION-D

31.



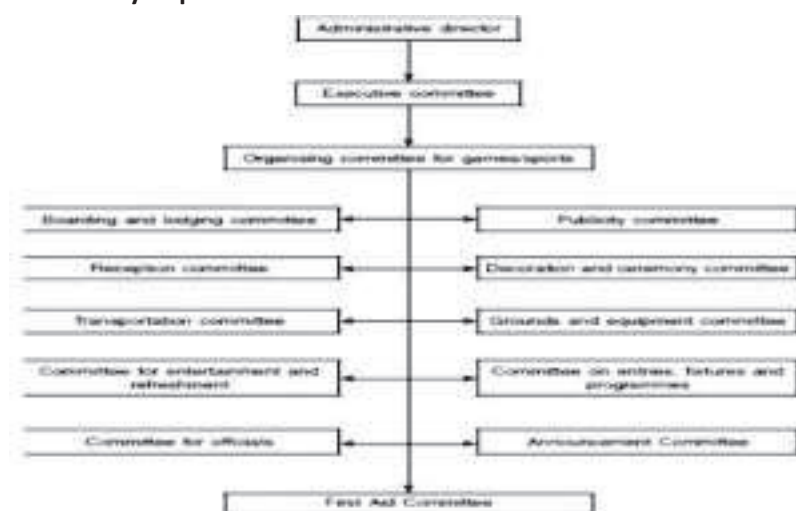
On the basis of above given fixture, answer the following questions:

- Total number of matches in 2nd round are .....
- What is the formula for calculating the total number of matches?
- The fourth round in this case can also be called as .....
- What is the formula for calculating the number of byes?

Ans.

- 8
- N-1
- Semi-final
- 2n-N

### For visually impaired students



Or

The formula for calculating number of rounds is .....

### (Question for visually impaired)

List down any four committees working during conduct of a competition and briefly explain their role.

32. The teachers as well as coaches always make their best efforts to improve the performance of their students in various competitive games and sports. They can help to improve the performance of students if they have adequate knowledge of biomechanics.



- (a) The more force one exerts on the downward bounce, the higher the ball bounces into the air. Which law is this statement being referred to?  
 (b) Among the above given pictures, Newton's 3rd law is depicted in .....  
 (c) Newton's second law is also known as .....  
 (d) The study of human body and various forces acting on it is .....

- Ans. (a) Third law of motion—Action reaction (b) 1st picture  
 (c) Law of Acceleration (d) Kinesiology

Or

A high jumper can jump higher off a solid surface because it opposes his or her body with as much force as he or she is able to generate. This example refers to which law of motion?

Third law of motion—Action reaction

### (Question for visually impaired)

What is equilibrium? Explain its types along with the factors increasing equilibrium.

- Ans. Guiding Principles to determine the Degree of Stability

- (i) **Broader the base, the greater the stability:** Broadening the base of support helps an athlete to achieve greater stability, e.g., while standing, spreading feet in the direction of movement provide stability. Where a stance is required, using both hands and feet creates the widest base.



- (ii) **Body weight is directly proportional to stability:** The athlete or an object which weighs more will have greater stability, e.g., it is difficult to move a heavier person than a lighter one. Combative sports like judo, wrestling, taekwondo and boxing are played according to the bodyweight principle.
- (iii) **Lower the Centre of gravity, Higher the stability:** When a player does an activity that needs stability, the player usually lowers his centre of gravity by bending, e.g., when a player bends his knees while running, he can stop sooner and more efficiently. Similarly, a wrestler half sits to maintain his stability. Even a shot-put thrower bends his knees in the end so that he may avoid a foul.
- (iv) **The nearer the centre of gravity to the centre of the base of support, the more will be the stability:** If the centre of gravity extends beyond the base of support, balance is lost. Keeping the body's weight centred over the base will support and help maintain stability, e.g., when a gymnast walks on a balance beam one requires a small base of support. During the performance, if the balance is lost, the gymnast raises the arm or legs on the opposite sides to shift the centre of gravity back towards the base of support.
- (v) **Direction of acting force:** During a competition, if the direction of an acting/applied force is known, stability can be increased by moving the line of gravity as close as possible to the edge of the base where the force is expected, e.g., when in a judo match the judoka shifts his foot in the line of direction of the force applied by the opponent to use the force of the opponent as a counterforce to throw him down.

33. In relation to the pictures, answer the following questions.



- (a) What is the mission of the first organisation?
- (b) What is the Motto of the first organisation?
- (c) Until 1965 the games in the second picture were known as .....
- (d) Second picture games are conducted after every ..... years.

**(Question for visually impaired)**

Write a brief note on Paralympics including its origin, describing the various categories and criteria.

- Ans.**
- (a) The mission of Special Olympics is to provide year-round sports training and athletic competition in a variety of Olympic-type sports for children and adults with intellectual disabilities, giving them continuing opportunities to develop physical fitness, demonstrate courage, experience joy and participate in events.
  - (b) "Let me win. But if I cannot win, let me be brave in the attempt."
  - (c) International Games for the Deaf International Silent Games
  - (d) 4 years

**For visually impaired students**

**Paralympics**

Paralympics is a mega sports event involving athletes with a range of disabilities and is organized by the International Paralympic Committee. The range of disabilities includes impaired muscle power (e.g., paraplegia and quadriplegia, muscular dystrophy, post-polio syndrome, spina bifida), impaired passive range of movement, limb deficiency (e.g., amputation or dysmelia), leg-length difference, short stature, hypertonia, ataxia, athetosis, vision impairment and intellectual impairment. These disabilities are further divided into classifications which vary from sport to sport. The word Paralympics is derived from the Greek word para which means beside or alongside and Olympic. Combined, Paralympics means an international games competition that is parallel to the Olympics. Thus, the word Paralympics refers to "a series of international contests for athletes with disabilities that are associated with and held following the summer and winter Olympic Games." There are Winter and Summer Paralympic Games, which since the 1988



Summer Games in Seoul, South Korea, are held almost immediately following the respective Olympic Games. All paralympic Games are governed by the International Paralympic Committee (IPC).



**Paralympics**

International Paralympic Committee (IPC) was formed on 22 September 1989 and is situated in Germany. IPC organises Summer and Winter Paralympic Games and coordinates world championships and other competitions. The vision of IPC is “To enable para athletes to achieve sporting excellence and inspire and excite the world.”

#### **The purpose of the criteria**

- Defining the impairment group in which an athlete can compete in various sports.
- Grouping athletes in classes defined by the degree of activity-limitation related to the impairment and/or specific to the task in the sport.

The IPC has established ten disability categories, including physical, visual and intellectual impairment. Athletes with one of these disabilities can compete in the Paralympics though not every sport can allow for every disability category.

These categories apply to both Summer and Winter Paralympics.

- (i) Physical Impairment – There are eight different types of physical impairment:
  - Impaired muscle power – With impairments in this category, the force generated by muscles, such as the muscles of one limb, one side of the body or the lower half of the body is reduced, e.g., spinal cord injury, spina bifida, post-polio syndrome.
  - Impaired passive range of movement – The range of movement in one or more joints is reduced in a systematic way. Acute conditions such as arthritis are not included in this category.
  - Loss of limb or limb deficiency – A total or partial absence of bones or joints from partial or total loss due to illness, trauma, or congenital limb deficiency, e.g., amputation, dysmelia.
  - Leg-length difference – Significant bone shortening occurs in one leg due to congenital deficiency or trauma.
  - Short stature – Standing height is reduced due to shortened legs, arms and trunk, which are due to a Musculo-skeletal deficit of bone or cartilage structures, e.g., achondroplasia, growth hormone deficiency, osteogenesis imperfecta.
  - Hypertonia – Hypertonia is marked by an abnormal increase in muscle tension and reduced ability of a muscle to stretch. Hypertonia may result from injury, disease, or conditions which involve damage to the central nervous system, e.g., cerebral palsy.
  - Ataxia – Ataxia is an impairment that consists of a lack of coordination of muscle movements, e.g., cerebral palsy, Friedreich’s ataxia, multiple sclerosis.
  - Athetosis–Athetosis is generally characterised by unbalanced, involuntary movements and a difficulty maintaining a symmetrical posture (e.g., cerebral palsy, choreoathetosis).
- (ii) Visual Impairment – Athletes with visual impairment ranging from partial vision, sufficient to be judged legally blind, to total blindness. This includes impairment of one or more components of the visual system – eye structure, receptors, optic nerve pathway and visual cortex. The sighted guides for athletes with a visual impairment are such a close and essential part of the competition that the athlete with visual impairment and the guide are considered a team. Since 2012, these guides, along with sighted goalkeepers in 5-a-side football, became eligible to receive medals of their own.
- (iii) Intellectual Disability – Athletes with a significant impairment in intellectual functioning and associated limitations in adaptive behaviour fall under the category of intellectual disability. The IPC primarily serves athletes with physical disabilities but the Intellectual Disability group has been added to some Paralympic Games. This includes only athletes with exceptional athletic ability who have intellectual disabilities diagnosed before the age of 18. However, the IOC-recognised Special Olympics World Games are open to all people with intellectual disabilities.

### SECTION—E

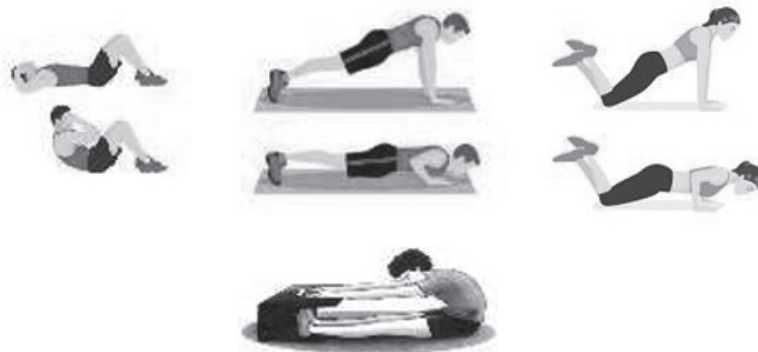
34. List down any four asanas used for prevention of asthma. Explain the procedure for administration of any one of them with the help of a stick diagram.

Ans. Asthma: Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottanasana, Matsyasana, Anulom-Vilom



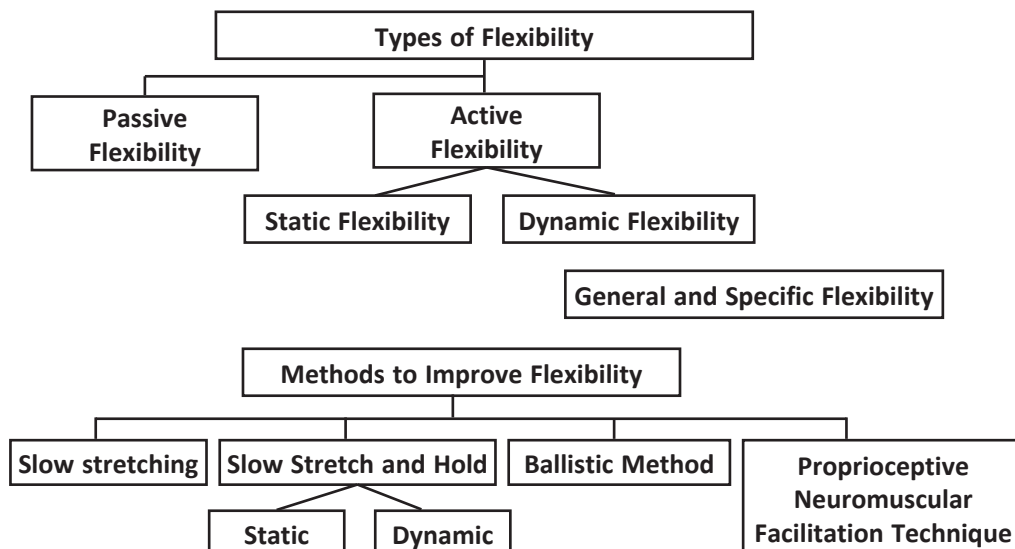
35. Make a table of test items listed under fitness test by SAI (age group 9-18 yrs ) along with the objectives of conducting them. Explain the administration of any one of them.

Ans. Age group 9-18yrs/class 4-12: BMI, 50m, Speed test, 600m, Run/Walk, Sit & Reach flexibility test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls).



36. Define flexibility along with its types. Explain any two methods used to develop flexibility.

Ans.



**37.** Define Projectile and explain any two factors affecting projectile with the help of examples from sports.

**Ans.** Factors Affecting Projectile Trajectory

- Initial velocity
- Angle of Projection
- Projection height relevant to the landing surface
- Air resistance
  - ◆ Surface area of the projectile
  - ◆ Surface-to-volume ratio
  - ◆ Mass
  - ◆ Velocity
- Gravity
- Spin

