



# BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS  
SENIOR SECONDARY/CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL



## PRE BOARD – 3 (AS)

### PHYSICAL EDUCATION (048) SET-1

Class : **XII Sci/Com/Hum**

Date : **17/01/2025**

Admission No.:

Duration: **3 Hrs**

Max. Marks: **70**

Roll No.:

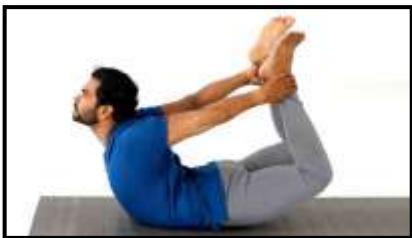
#### General Instructions:

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

#### Section-A

**Section A consists of Multiple Choice Type questions of 1 mark each**

1. Identify the asana: [1]



- a. Paschimottanasana
- b. Halasana
- c. Vajrasana
- d. Dhanurasana

2. Which of the following is not a spinal curvature deformity? [1]

- a. Kyphosis
- b. Scoliosis
- c. Lordosis
- d. Flat Foot

3. Identify the non-nutritive component of a diet. [1]

- a. Carbohydrate
- b. Fats
- c. Protein
- d. Water

4. The force produced when the surfaces of two objects comes in contact with each other & tends to move but there is no relative motion between them, this is known as \_\_\_\_\_. [1]

- a. Static Friction
- b. Sliding Friction
- c. Rolling Friction
- d. Fluid Friction

5. Self-talk refers to our \_\_\_\_\_, consisting of statements we say to ourselves, either in our mind or out loud. [1]

- a. Internal thoughts
- b. Internal behaviour
- c. Internal soul
- d. Internal emotions

6. Deaflympics cannot be guided by \_\_\_\_\_. [1]

- a. Light
- b. Camera
- c. Whistle**
- d. Signboard

7. Abnormal bleeding in the absence of intra cavitary or uterine pathology. [1]

- a. Menstrual Dysfunction**
- b. Menstrual function
- c. Menstrual abnormal
- d. Menstrual normal

8. Identify the asana: [1]



- a. Pawanmuktasana**
- b. Sukhasana
- c. Chakrasana
- d. Gomukhasana

9. Match the following: [1]

I.	Plate Tapping Test	1.	Upper body strength endurance of boys
II.	Push-up	2.	Speed and coordination of limb movement
III.	Partial Curl up	3.	Upper body strength in endurance of girls
IV.	Modified Push up	4.	Abdominal strength

Codes:

	I	II	III	IV
a.	<b>2</b>	<b>1</b>	<b>4</b>	<b>3</b>
b.	2	3	1	4
c.	1	3	2	4
d.	2	3	4	1

10. A bowler throwing a bouncer to deliberately injure the batsman or to shake up his concentration comes under: [1]

- a. Hostile aggression**
- b. Instrumental
- c. Assertion
- d. None of these

11. In which method, no bye is given? [1]

- a. Staircase
- b. League
- c. Round Robin
- d. Combination

12. The \_\_\_\_\_ Games are the world's largest sporting event for people with special needs. [1]

- a. Summer Olympics
- b. Winter Olympics
- c. Deaflympics
- d. Paralympics**

13. The law of Acceleration is also known as: [1]

- a. Law of Inertia
- b. Law of action and reaction
- c. Law of Momentum**
- d. Boyle's Law

14. The period which consist rehabilitation and recreation through different games and sports or vacations for the proper rest and recovery or mental relaxation is. [1]

- a. Competitive period
- b. Transitional period**
- c. Preparatory period
- d. None of these

15. Complete responsibility for success of completion is taken care by \_\_\_\_\_. [1]

- a. Announcement Committee
- b. Administrative Director**
- c. First Aid Committee
- d. Committee for Officials

16. Which of these physiological factors determine strength? [1]

- a. Explosive Strength
- b. Flexibility
- c. Muscle Composition**
- d. Aerobic Capacity

17. Which amongst these is not a method to improve flexibility? [1]

- a. Ballistic
- b. Static stretching
- c. PNF
- d. Fartlek**

18. Match the following: [1]

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

Codes:

	I	II	III	IV
<b>a.</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>2</b>
b.	2	3	1	4
c.	1	3	2	4
d.	2	3	4	1

**Section-B**  
**Attempt any 5 questions**

19. Which fitness component can be assessed by partial curl-up test? [2]

Ans: Muscular strength and endurance of the abdominals and hip flexors can be assessed by partial curl-up test.

**20. Write short note on Deaflympics.****[2]**

Ans: The Deaflympics (previously called World Games for the Deaf and International Games for the Deaf) are an International Olympic Committee (IOC) sanctioned event at which deaf athletes compete at an elite level. Unlike the athletes in other IOC sanctioned events (the Olympics, the Paralympics and the Special Olympics), the Deaflympics cannot be guided by sounds (e.g., the starter's guns, bullhorn commands or referee whistles).

**21. Write about the self-talk and its types.****[2]**

Ans: Self-talk refers to our internal thoughts, consisting of statements we say to ourselves, either in our mind or to say others. Most of the athletes or players use self-talk in their sports career, like boosting by the thought and by the chanting of mantras. This practice helps players apprise and regulate thoughts and emotions. It can help to reduce stress and anxiety level in certain situations. Athletes also engage in self-talk during training and in competition. There are three types of self-talk:

- a. Self-expression
- b. Interpretive
- c. Self-regulatory.

**22. How many byes will be given, if 21 teams are participating in a knock-out tournament?****[2]**

Ans: If 21 teams are participating in a tournament, the number of byes given will be 11.

Number of byes = next higher number which is in the power of 2 – number of teams.  $32 - 21 = 11$  byes.

**23. Write in brief about macro & micro nutrients.****[2]**

Ans: Macro Nutrients: Macro nutrients are required by body in large quantities. Carbohydrates, fats, proteins and water are macro nutrients. These help to produce energy for body.

Micro Nutrients: Micro nutrients are required by the body in small quantities. It helps in repairing and checking wear and tear of tissues and cells in our body. Vitamins and minerals are micro nutrients.

**24. Define kyphosis and bow legs.****[2]**

Ans: Kyphosis is a deformity of the spine in which there is an increase of exaggeration of a backward curve or a decrease of a forward curve. It is also called round upper back.

Bow legs is a deformity just the reverse of the knock-knee position. In fact, if there is a wide gap between the knees, the deformity can be observed easily when individual walks or runs.

**Section-C**  
**Attempt any 5 questions**

25. How goal setting is essential in sports for the effective sports performance? [3]

**Ans.** Goal setting is essential in games and sports for the effective sports performance. Some statements are as follows:

- Proper Goal setting is helpful in optimising sports performance.
- It can help them focus on what is important and essential in sports performance.
- Correct goal directs them and give a sense of control and positive self-direction.
- If goals are specific, measurable, attainable and realistic it can help athletes to gain confidence and believe in their ability to succeed.
- Goal setting can improve overall sports performance.
- It influence motivation when the goal setting is based on time.
- It helps athletes to reach their potential.

26. Write down the important points to be remembered while performing Pavanmuktasana. [3]

**Ans:**

- It causes pressure and contraction at lower abdomen, hence practice it smoothly.
- Knees should be together while pressing at chest.
- Forehead should be stable while touching the knees.

27. What is general training? [3]

**Ans.** **General Training** : It is a method to improve general and specific performance in games and sports. These training methods are based upon scientific principles in a systematic order. It guides us on how to improve further through different ways. In general training, we achieve physical fitness and skill efficiency for competitions. In this, we develop general speed, endurance, flexibility, coordination, and basic skills according to activity requirements. We can say that it is a method of preparation of training program of sports person for effective results. It brings about improvement in general physical fitness, coordinative abilities, general coordination, and skills.

28. Explain any three types of fractures.

[3]

**Ans.** The three types of fractures are as follows:

(A) **Comminuted** : Comminuted fractures are a type of broken bone. The term comminuted fracture refers to a bone that is broken in at least two places.

(B) **Transverse** : Transverse fractures occur when your bone is broken perpendicular to its length.

(C) **Oblique** : A fracture of long bone in which the fracture line runs obliquely to the shaft of the bone. (1 + 1 + 1)

29. List the components of SAI Khelo India Fitness test.

[3]

**Ans. SAI Khelo India Fitness Test**

(1) Age group 5-8 yrs/ class 1-3:  
(a) BMI,  
(b) Flamingo Balance Test,  
(c) Plate Tapping Test

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

30. Explain 'Flat Foot' and 'Knock knees' and also suggest corrective measures for both postural deformities.

[3]

**Ans** **Flat Foot**

Babies have flat foot but the feet begin to arch as the infants start walking. However, if there is flat foot even in later childhood, it is postural deformity called flat foot.

It is a deformity of the feet. In this deformity, there is no arch in the foot and the foot is completely flat. The individual faces problem in standing, walking, jumping and running.

The following exercises should be performed

- Walk on heels and toes.
- Pick up marbles with toes.
- Perform *Vajrasana*.
- Walk on wooden staircase.
- Perform rope skipping.
- Therapeutic massage, such as rolling a ball under your foot, may help to improve arch flexibility.
- Perform downward dog yoga pose that also aims to lengthen and strengthen the calf muscles and achilles tendon.

**Knock Knee**

Knock knee is a major postural deformity in which both the knees knock or touch or overlap each other in the normal standing position.

Due to this deformity, the gap between ankles goes on increasing and an individual usually faces difficulty during walking and running. People with knock knees cannot be good players or athletes.

For corrective measures, refer to answer no. 70.

## Section-D

31. Read the below passage and answer the following questions:

[4]

School management needs to recognise the essential place activity in the education of children with special needs. In order to develop lifelong habits for fitness and to provide them with many opportunities of socialisation, schools need to understand that physical education is not a secondary subject but it is just as important as other skills.

i. Which of these is not one of the results of physical activities in children with special needs?

- a. Improvement in confidence
- b. Improvement in endurance
- c. **Increase in depression**
- d. Better hand-eye coordination

ii. Match the following:

A. Cognitive	I. Disorder
B. OCD	II. Improvement techniques
C. Physical activities	III. Disability
D. Competition in sports & games for CWSN	IV. Paralympics

Codes:

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

iii. Name the model which refers to bringing students with disabilities and students of general education into the same platform of learning.

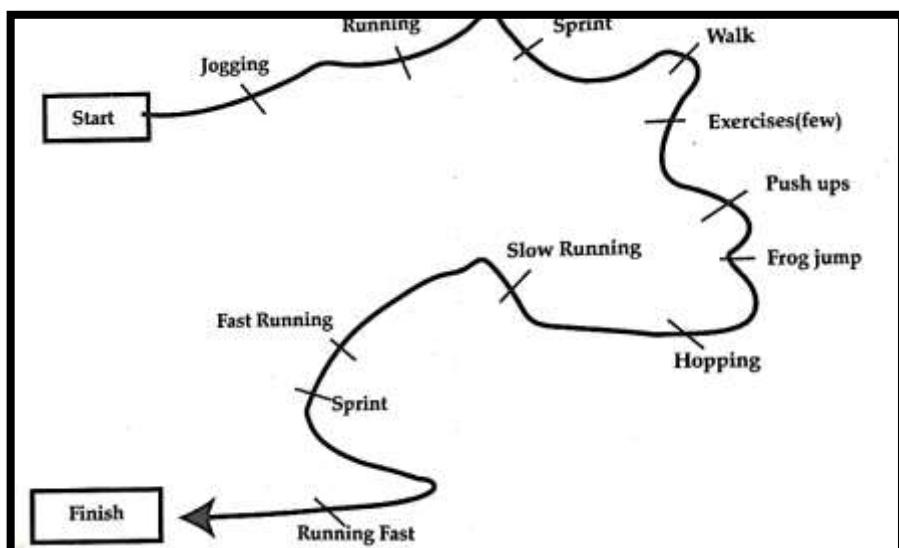
- a. **Inclusive education**
- b. UNESCO
- c. Child Rights and You
- d. Child Rights International Network

iv. Most suitable word used for disable person is:

- a. Disabled person
- b. Retarded
- c. **Divyang**
- d. Blind

32. Study the figure given below:

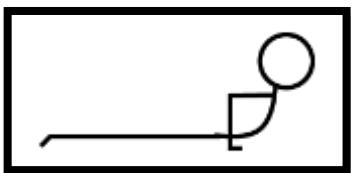
[4]



33. Read the following text carefully and answer the questions that follow:

[4]

Mr Shyam aged 50 years is recommended to practice the given asana as a therapeutic measure. He is a software engineer by occupation and spends lot of time sitting at one place. He developed certain symptoms like frequent urge for urination, tiredness, excessive weight gain along with being anxious and gets easily irritated.



i. From the shape of the body in the given pose, it can be identified as \_\_\_\_\_.

a. Gomukhasana      **b. Bhujangasana**      c. Tadasana      d. Vajrasana

ii. Mr Shyam is diagnosed with \_\_\_\_\_.

a. Only Diabetes

**b. Both Diabetes and Hypertension**

c. Only Hypertension

d. Asthma

iii. Blood sugar levels are controlled by \_\_\_\_\_ hormone.

a. Thyroxin      **b. Insulin**      c. Pituitary      d. Progesterone

iv. This asana should be avoided by people suffering with \_\_\_\_\_.

a. Obesity      **b. Hernia**      c. Diabetes      d. Hypertension

**Section-E**  
**Attempt any 3 questions**

34. What are advantages and disadvantages of friction?

[5]

**Ans. Advantages of friction:**

- (a) Friction between shoes and ground allows us to run and walk.
- (b) Friction enables us to hold the objects and equipments. Without friction, the equipments would just fall out of the hand.
- (c) **Keeps the object at position :** by friction, the object can be placed at position and shaped.
- (d) **Helps to move:** Friction forces help to move the object e.g.,: running or walking. e) The friction of feet/shoes on the surface, helps to speed.
- (e) **Hold or grip an object:** With the help of friction, the ridges of skin of our fingers and palm enable us to grab or hold objects. For example- In badminton, the players use grip to hold it.
- (f) **Frictional force helps to move the object in the speed.** For Example : Spikes are used by the athletes to run fast.
- (g) **Produce heat:** The law of conservation of energy states that the amount of energy remains constant. Thus, the energy generated due to friction in trying to move the object, gets converted into heat energy.

**Disadvantages of friction:**

- (a) In cycling, if there is more friction between road and tyres, there will be more wastage of energy of the cyclist. The tyres must be properly inflated to reduce force of friction.
- (b) Friction slows down the speed. Rolling shoes and smooth surface are used to minimise friction in roller skating.
- (c) Air resistance has disadvantages to ball games, where speed of ball reduces due to the friction. Example in football, badminton, cricket etc.
- (d) Friction is also the reason for decreased speed of playing objects on ground as well, due to resistance by uneven ground.
- (e) Sliding or movement of fallen person causes increased injury due to friction, as it causes heat and resistance to the movement of body.
- (f) Wear and tear of ball and other objects is also a common example.
- (g) Playing spaces are made as smooth as possible to avoid resistance and hence friction.

35. What points should be keep in mind before, during and after the competition?

[5]

**Ans.** The organizing of sports event is a challenging task and requires a lot of planning. Planning is the first step of managing sports event. Formation of different committees is mandatory to perform all the work smoothly and it depends upon the budget of an event, level of participation, and number of events. All the committees are formed in first priority for proper coordination between members.

These committees perform the work which are categorized in three sub categories:

(i) **Pre-Duties:** These duties are done prior to the tournament. It requires lot of planning in a systematic way. Generally physical education teacher or sports head are appointed for that type of responsibilities by the institutes.

Some Pre-Duties are listed below:

- (a) Formation of different committees.
- (b) Preparation of budget.
- (c) Preparation of tournament schedule.
- (d) Ground location, formation, marking and construction related work.
- (e) Sponsorship related work.
- (f) Team and guest invitation related work.
- (g) Arrangement of food and beverages.
- (h) Arrangement of boarding and lodging.

(ii) **During-Duties:** Smooth working during the competition are the basic need of an event. Some duties are given below:

- (a) Routine monitoring of all committees members with the help of in-charges.
- (b) Teams entry and all related required documents for an event should be checked.
- (c) Program should be conducted according to the fixed schedule.
- (d) Supervision and direction over committees are essential during the event.
- (e) Maintain coordination and communication between officials and other committees members.
- (f) Provide meals and refreshment on schedule time to team and other staff.
- (g) Always announce about the progress of the event.
- (h) Always be ready to provide first-aid and medical service, if required.

(iii) **Post-Duties:** Closing of sports event should be more effective than opening ceremony. There are some duties which are important to be performed after the completion of sports event.

- (a) Proper distribution of awards, medals and certificates.
- (b) News and article publishing in press.
- (c) Return of rented items and equipments.
- (d) To collect all the record of events from committees.
- (e) To prepare correct finance report of all expenses.
- (f) Timely payment to all the officials and members of events.

36. Write in detail about the Dislocation and Fracture among the bones and joint injuries.

[5]

**Ans. Dislocation of Joints:** A dislocation is an injury in which the ends of your bones are forced from their normal positions. Some of the dislocation of joints are mentioned below:

(i) **Dislocation of Lower Jaw:** Generally, it occurs when the chin strikes any other object. It may also occur if the mouth is opened excessively or for a long time.

(ii) **Dislocation of Shoulder Joint:** It may occur due to a sudden jerk or a fall on a hard surface. The end of the humerus comes out of the socket. Extreme rotation of the shoulder joint can pop the upper arm bone (humerus) out of the socket.

**Bone Injuries:** A fracture is a break, usually in a bone. If the broken bone punctures the skin, it is called an open or compound fracture. Some of the fractures are mentioned below:

(i) **Simple Fracture:** The fracture without any wound, where the bone is broken at one place is called simple fracture.

(ii) **Compound Fracture:** In a compound fracture, both the skin and the muscles are damaged along with the bones. Generally, the broken bone comes out of the skin by tearing it.

(iii) **Impacted Fracture:** When the end of the fractured bone enters into another bone, it is called an impacted fracture.

(iv) **Comminuted:** Comminuted fractures are a type of broken bone. The term comminuted fracture refers to a bone that is broken in at least two places.

(v) **Transverse:** Transverse fractures occur when your bone is broken perpendicular to its length.

(vi) **Oblique:** A fracture of long bone in which the fracture line runs obliquely to the shaft of the bone.

37. What are the Nutritive and Non-nutritive components of diet? Explain. [5]

**Ans. Nutritive components of Diet :** Food contains a variety of nutritional components that can be categorised by macro-nutrients and micronutrients. Macro-nutrients are nutrients needed in large amounts that provide calories or energy for growth, metabolism and other functions in our body. These include carbohydrates, fats and proteins. Micro-nutrients, such as vitamins, minerals and antioxidants, are involved with cellular and chemical processes in our body.

- (i) **Carbohydrates :** Carbohydrates give us energy to work. Sugar and starch are carbohydrates. Potato, rice, bread, banana and grapes are rich sources of carbohydrates. These are called energy giving foods.
- (ii) **Fats :** Fats provide us with twice as much energy as carbohydrates. We can store extra fat in our bodies to be used later. Butter, ghee and nuts are rich sources of fats, but too much of fats can lead to diseases like high blood pressure, heart problem and obesity.
- (iii) **Proteins :** Proteins are nutrients that help to build the body and make new cells. They help us in the repair of worn-out tissues. They are especially important for growing children. They are called body building food. Milk, eggs, cheese, pulses, meat and fish have lots of proteins.
- (iv) **Vitamins :** Vitamins are needed by our bodies in a very small amount. They keep us healthy by helping the body to fight against the diseases. They also help our eyes, nerves, gums, skin, etc., to work properly. Vitamins consist of two groups- fat and water soluble groups.

**Vitamin 'A'** : Keeps eyes and skin healthy.

**Vitamin 'B'** : This is good for muscles and nerves.

**Vitamin 'C'** : Makes strong gums and heals our wounds faster.

**Vitamin 'D'** : Makes teeth and bones strong.

- (v) **Minerals :** Minerals are also needed in a very small quantity to keep us fit and healthy. Calcium is a mineral used for building bones and teeth. It is present in milk and green leafy vegetables. Iron is another mineral which helps our blood in carrying oxygen. These are called protective foods.

**Non-Nutritive components of diet:** Food contains some components that are not classified with the basic nutrient groups. All sorts of substances can be found in food natural, intentional and unintentional. Non-nutritive components of diet means, components which do not add or supply energy or calories.

- (i) **Colour components :** Food is made more appetizing and interesting by the wide spectrum of colours made possible through pigments. Most natural pigments are found in fruits and vegetables, the colours of food from animal products and grains are less varied and bright. The dominant pigment found in plants are carotenoid (orange-yellow), chlorophyll (green) and flavonoid (blue, cream and red).
- (ii) **Flavour components :** The flavour in foods are derived from both nutrient and non-nutrient components. These are sometimes too numerous to track as the source of a specific flavour. Among the non-nutrient components in foods are the organic acids that determine whether foods are acidic or basic. An acidic pH in foods not only contributes to a sour taste, but the colour of fruit juices, the hue of chocolate in baked products, and the release of carbon dioxide in a flour mixture. An alkaline pH contributes a bitter taste.
- (iii) **Plant components :** In addition to colour and flavour components, some plants contain other non-nutritive substances that, when ingested, may have either beneficial or normal effects. Many of the possible anti carcinogens, or compounds that inhibit cancer, come from plants. In particular, phytochemical, called in doles is found in vegetables, which is found in plants. The vegetables like cabbage, cauliflower, kale, mustard greens and collards have this. Laboratory animals which were given in doles and then exposed to carcinogens developed fewer tumours than animals exposed to some carcinogens, but not given in doles.
- (iv) **Roughage :** The fibre present in the food which helps to eliminate wastes from the body.
- (v) **Water :** Almost two-third of our body is made up of water. Water helps our body to work well and maintain our body temperature. We need to drink at least 10-12 glasses or approx, 6-7 litres of water every day. [2½ + 2½ = 5]

\*\*\*\*\*All the Best\*\*\*\*\*