Strictly Confidential: (For Internal and Restricted use only)
Senior Secondary &Secondary School Examination
Comptt.Examination, 2021
Marking Scheme – PHYSICAL EDUCATION (048)

(PAPER CODE –75 –Set 4)

General Instructions: -

1. You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully. **Evaluation is a 10-12 days mission for all of us. Hence, it is necessary that you put in your best efforts in this process.**
2. Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one's own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. **However, while evaluating, answers which are based on latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and marks be awarded to them.**
3. The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.
4. If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totaled up and written in the left-hand margin and encircled.
5. If a question does not have any parts, marks must be awarded in the left hand margin and encircled.
6. If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out.
7. No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
8. A full scale of marks 0-70(example 0-80) has to be used. Please do not hesitate to award full marks if the answer deserves it.
9. Every examiner has to necessarily do evaluation work for full working hours i.e. 8 hours every day and evaluate 25 answer books per day.
10. Ensure that you do not make the following common types of errors committed by the Examiner in the past:-
    - Leaving answer or part thereof unassessed in an answer book.
    - Giving more marks for an answer than assigned to it.
    - Wrong transfer of marks from the inside pages of the answer book to the title page.
    - Wrong question wise totaling on the title page.
    - Wrong totaling of marks of the two columns on the title page.
    - Wrong grand total.
    - Marks in words and figures not tallying.
    - Wrong transfer of marks from the answer book to online award list.

- Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.)
- Half or a part of answer marked correct and the rest as wrong, but no marks awarded.

11. While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as (X) and awarded zero (0) Marks.

12. Any unassessed portion, non-carrying over of marks to the title page, or totaling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.

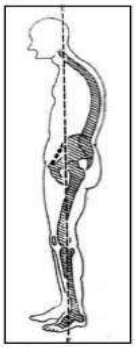
13. The Examiners should acquaint themselves with the guidelines given in the Guidelines for spot Evaluation before starting the actual evaluation.

14. Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totaled and written in figures and words.

15. The Board permits candidates to obtain photocopy of the Answer Book on request in an RTI application and also separately as a part of the re-evaluation process on payment of the processing charges.

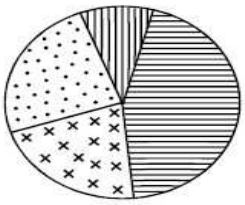
PHYSICAL EDUCATION (048)
CLASS XII – SESSION 2020 – 21 (Code No 75)
MARKING SCHEME

Q.No	ANSWER	MARKS DISTRIBUTION	TOTAL
1.	League tournament is also known as : **Ans: (A) Round robin**	1	1
2.	Which of the following is a group of macro-nutrients? **Ans: (A) Carbohydrates, Fats, Protein**	1	1
3.	A disease associated with respiratory tract is _____ **Ans: (A) Asthma** **OR** Which one of the following asanas is not performed in standing position? **Ans: (C) Sukhasana**	1	1
4.	The full form of SPD is : **Ans: (B) Sensory Processing Disorder**	1	1
5.	Psychology is the study of : **Ans: (B) Behaviour**	1	1
6.	The amount of blood pumped by the heart in one minute is called ____ **Ans: (B) Cardiac output** **OR** The aid we give before doctors arrive, is termed as : **Ans: (C) First-aid**	1	1
7.	Newton's second law of motion, is known as **Ans: (C) Law of acceleration**	1	1
8.	Match List I with List II and select the correct answer from the code given below : List I — List II i. Sit and reach test — 1. Speed ii. Standing broad jump — 2. Endurance iii. 600 mt. run/walk — 3. Strength iv. 50 mt. run — 4. Flexibility **Ans: (D) 4 3 2 1**	1	1

9.	_____is the range of motion of joints. **Ans: (C) Flexibility**	1	1
10.	Intrinsic motivation is related to : **Ans: (D) pleasure**	1	1
11.	Given below are two statements labelled Assertion (A) and Reason (R) : Assertion (A): Strength is the force that a muscle or group of muscles can exert against a resistance in one maximum effort. Reason (R): There are two types of strength---Dynamic and Static. In the context of above two statements, which one of the following is correct? **Ans: (B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).**	1	1
12.	Behaving properly with divyang (disabled) is called **Ans: (A) disability etiquettes** **OR** Which one of the following is not the corrective measure for Round shoulders? **Ans: (C) Vajrasana**	1	1
13.	**Identify the following postural deformities and write their names :** (A)  (B)  (C)  (D)  **Ans:** (A)-Kyphosis (B)-Lordosis (C)-Knock Knees (D)-Bow Legs	½ X4	2
14.	**Identify the following sports injuries and write their names :** (A)  (B)  (C)  (D) 	½ X4	2

	Ans: (A) Greenstick Fracture/Simple fracture (B) Comminuted fracture (C) Extension (D) Flexion **Note: Since the question says sports injury but the C and D picture are of types of movements hence the students get full marks if attempted**		
13.	Note: The following questions are for the **Visually Impaired Candidates** only**, in lieu of Q.No.13 and 14** **Give any four suggestions to encourage women's participation in games and sports in India.** **Ans:** • Motivation and inspiration to women for participation. • Support from family and parents. • To organize camps, seminar and workshops. • To provide knowledge and media coverage. • Provide better infrastructure and facilities. • Ensuring safety and security of women. • More opportunity for competition. • To build physical and psychological strength. • Better incentives and awards • Employment and career Opportunity • Designing and implementing government policies. **(Any 4 relevant points)**	½ x4	2
14	**Write any two advantages and two disadvantages of league tournament**. **Ans:** Advantage of league Tournament: • Every team will get full opportunity to show its efficiency or performance. • It helps in ranking all the teams. • Sports and games can be made popular through league tournament owing maximum number of matches. • A team need not wait for the competition of the other round as in single knock out tournament. (**Any -1 relevant point)** Disadvantage of League Tournament: • It requires more time. • It costs more. • The team coming from far and wide generally faces more problems because such tournament wastes their time and money. • It requires more arrangement for sports officials and teams. • Teams Losing repeatedly are demotivated. **(Any 1 relevant point)**	2	2

<table>
<tr><td>15.</td><td>(a) According to the syllabus, suggest any four Asanas for curing 'Hypertension'

Ans: Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, Shavasana
(Any 4)
OR
(b) According to the syllabus, suggest any four Asanas for curing' Diabetes'
Ans: Diabetes: Bhujangasana, Paschimottasana , Pavan Muktasana, Ardh Matsyendrasana
(All 4)</td><td>½ x4</td><td>2</td></tr>
<tr><td>16.</td><td>Distinguish between cognitive disability and physical disability on the basis of their characteristics. (any two)
Ans:
<table><tr><th>Cognitive Disability</th><th>Physical Disability</th></tr><tr><td>-Not able to perform the Normal human life mental activities due to mental Problem or disturbance</td><td>Not able of perform the Normal human life activities due to physical Problem or disturbance</td></tr><tr><td>-These limitations will cause a child to learn and develop more slowly than a typical child.</td><td>a limitation on a person's physical functioning, mobility, dexterity or stamina.</td></tr><tr><td>-use relatively more supervisory or standby assistance.</td><td>require more active hands-on assistance with the activities of daily living</td></tr></table>(any relevant 2)</td><td>1x2</td><td>2</td></tr>
<tr><td>17.</td><td>Given below is data of soft tissue injuries collected from a training centre after completion of training :
 
 

Ans: (i) (a)Abrasion
(ii) (b) Ligament
(iii) (d) contusion</td><td>1+1+1</td><td>3</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table>

17.	Note: The following questions are for the **Visually Impaired Candidates** only, in **lieu of Q.No.17** **Wtite any six effects of regular exercise on our Muscular system.** **Ans:** ✓ Increase in shape of muscle ✓ Formation of new capillaries ✓ Increase in strength of connective tissues ✓ Non functioning fibers become active ✓ Increases in the capacity of energy reserve ✓ Reduce extra fat ✓ Muscle remain in tone condition ✓ Improves in body shape ✓ Delay fatigue ✓ Increase in efficiency of movements ✓ Improves reaction ability	½ x6	3
18.	**Sunita is a State level Judo player, who reduces her diet to control her weight. Her coach advised her about pitfalls of dieting and recommended to her to take sufficient amount of simple carbohydrates, fats, proteins, vitamins and minerals** **Based on this case, answer the following questions** : **Ans:** (i) **(**a) simple carbohydrates (ii) (c) Proteins (iii) (d) healthy weight	1+1+1	3
19.	**(a) Illustrate the procedure to measure speed, agility and balance of a Senior Citizen.** **Ans**: 8 Foot Up and Go Test Purpose: To determine physical mobility (power, speed, agility and balance). Procedure: 1. A chair should be placed against the wall or somewhere where the chair gets stabilized. 2. The participant sits on the chair with both feet on the floor. 3. At the command "Go" he/she walks as fast as possible (not running) and returns back after walking to and around the cone which is placed 8 ft away from the chair. 4. There should be enough space around the cone from where participant can take an easy turn. 5. Two attempts will be made and the best score will be taken for record. Fastest time taken between command "Go" and return to the chair will be recorded. **OR**	1+2	3

	(b) **What is the height of a bench for men in Harvard step test? By using short-term method, calculate the fitness index, if duration of exercise is 300 seconds and heart rate is 70 for 1 to 1·5 minutes.** **Ans:** Harvard Step Test: Height of Bench for men: 20 inches Fitness Index= Duration of the exercise in seconds X 100 / 5.5X pulse count of 1-1.5 min. after exercise = 300X100 / 5.5 X 70 = 77.9	1+1+1	
20.	**Enlist any two stages of growth and development. Explain exercise guidelines for anyone of them.** **Ans:** The stages are Infancy, Early childhood, Middle childhood, Later Childhood, Adolescence, Adulthood (any 2 stages) **Infancy and toddler:**(0-3 yrs) • Control on head, • sit and walk on knees. • exercised to move hand and legs • exercise should be given to reach at some object. • Activities like walking, running, jumping, catching, throwing **Early child Hood:** (4-6 yrs) • Exercises to develop movement skills • Emphasis on participation not competition • Exercise related to the fine motor development • Moderate exercise for at least an hour. • Physical activity by entertaining and pleasant methods. • Exercise in safe environment. **Middle child hood:** (7-10 yrs) • Exercise to develop fine & gross motor skills • Exercises to build & improve co-ordination skills • Exercises to develop synchronize the movements of body's parts. • Introduction of major sports activities, cognitive and social skills. **Later Childhood:** (11-12 yrs.) • All children should have physical exercises with moderate intensity. • Must have at least three days in a week to provide sports or exercise • Strengthens muscles and bones. rope jumping, gymnastics and tennis, badminton etc. • The child should be engaged in physical activity rather than spending time sitting up to the target time.	(1+2)	3

	• Participation in sports like football, jogging, running, rope jumping, gymnastics, tennis and badminton etc. • Swimming may be very beneficial for children at this stage. • Exercise increases the heart and respiratory capacity. **Adolescence:** (13 to 19 years) • Moderate to vigorous intensity physical activity. • 60 min to several hrs. everyday. • About of at least 10 minutes of Aerobic activity every day • Muscle strengthening exercise involving major muscles at least 3 times a week. • Bone strengthening exercise and resistance exercise by weight training. • Running swimming etc. for stamina building. • Aerobic Exercises These activities should be given at least for three days and for 60 minutes. • Activity should be from moderate to high level like: • Average strength exercises 1 Fast walking 2. Cycling 3. Cleaning house 4. Playing baseball or softball • Vigorous strength exercises 1. Active Sports like–Running, Football. 2. Jump the rope. 3. Long distance cycling. 4. Martial arts, karate. 5. Sports like—tennis, hockey, basketball, swimming and football. • Exercises to Strengthen Muscles During teenage, the daily routine of the teenager is very busy. • Therefore, they should do such exercises which make muscles able to do more work without fatigue. Such as—cross-country race, work with loads, exercises with weights, exercise with weight on machines, wall climbing and sit-ups etc. • Exercises to Strengthen Bones Adolescents must should do such exercises at least 3 days in a week, which should strengthen their bones. Such as the skipping rope, jumping, running, gymnastics, basketball, volleyball and tennis etc. • Beginning of maturity Regular Exercise keeps you smart and cheerful Children and Women in Sport **Adult Hood:** • Moderate intensity physical exercise every day. • Muscles strengthening exercise at least 2 times a week. • Bone strengthening exercise and resistance exercise. • Running, swimming, etc. for stamina building. **(Any 2 relevant exercise guidelines for any 1 stage of development)**		
21.	**Explain any three corrective measures for 'Scoliosis'.** **Ans:** Corrective Measure for Scoliosis: • hanging on the horizontal bars and swinging should be done on opposite side of the C-shaped curve. • Breaststroke in swimming. • Aerobic exercises in slow pace	1x3	3

	• yoga Trikonasana and Adhomukhasana should be performed • Downward facing Dog stretches • Sideways bending exercises • If caused due to difference in leg length, step up exercises using the longer leg can be performed. • Lie down in prone position (on your chest) Raise the opposite leg and arm up to the position where they are parallel to the ground and repeat the exercise. • Pelvic tilts • Cat pose • Double leg abdominal press • Single leg balance • Planks (any other 3 relevant corrective measures)		
22.	**Knowledge of bio-mechanics helps to enhance the performance of sportspersons .Explain** **Ans**:- Biomechanics helps enhance performance: • To develop new training method • In Selection and Improvement of Technique • To develop advanced sports equipment • To improve sports skill • For efficiency in movement • To speedup recovery process • To prevent sports Injuries (Any 3 points explained)		3
23.	**Describe any three disability etiquettes in detail.** **Ans:-** • Always respect the dignity of a disabled person's, individuality and desire for independence. • Treat a person with disability in the same manner and with the same respect and courtesy as with others. • Speak directly to the person rather than through the friend, attendant or sign-language interpreter who may also be present. • Never speak about the person as if they are invisible, can't understand what is being said. • Don't put people with a disability on a pedestal or talk to them in demeaning terms. • Etiquettes to be followed while interacting with Visually impaired person ➢ When entering the room, indicate who is there. Let the person know when leaving the room. ➢ When offering your assistance, do not grab the person's cane or		3

	arm. ➢ If you are walking with a person who is blind, offer your arm for him/her to hold. ➢ Walk at the normal pace. It is helpful to speak casually and naturally about the environment, objects and buildings you are passing as you walk. (Any three points Explained)		
24.	**Explain the procedure of any one cardio-vascular fitness test in detail.** **Ans:-** Harvard Step Test: Purpose: To determine aerobic fitness. Objective: To perform step test continuously without break for 5 minutes or until exhausted. Equipment: Bench or wooden block 20 inches in height; stopwatch; metronome. Procedure: Student will start test at the command "Go" and will step up and down, on and off the wooden block or bench at the rate of 30 steps per minutes for 5 minutes. If the student is unable to maintain the pace, then she/he is considered to be exhausted and the test is brought to an end. After completion of the test student sits down and tester takes the hearts beats between 1 to 1½ minutes. Scoring: Fitness Index score will be determined by applying following equation: Fitness Index score= $\frac{\text{Duration of the exercise in seconds X 100}}{\text{5.5X pulse count of 1-1.5 min. after exercise}}$ OR $\frac{\text{Duration of the exercise in seconds X 100}}{\text{2 X (sum of pulse count of 1-1 ½ min.;2 – 2 ½ min.; 3 – 3 ½ min.)}}$ (Or Explanation of Rockport one mile test) **OR** **Explain the procedure for administering chair sit and reach test and chair stand test in detail.** **Ans:** Chair Sit and Reach Test Equipment Required: Scale and a chair with approximately (44 cm) high seat and straight back. Procedure : The subject sits on the edge of a chair (placed against a wall for safety). One foot must remain flat on the floor. The other leg is extended forward with the knee straight, heel on the floor, the ankle bent at 90°. Place one hand on top of the		3

	other with tips of the middle fingers even. Instruct the subject to inhale, and then as they exhale, reach forward towards the toes by bending at the hip. Keep the back straight and head up. Avoid bouncing or quick movements, and never stretch to the point of pain. Keep the knee straight, and hold the reach for seconds. The distance is measured between the tip of the Chair sit & reach test for lower body flexibility fingertips and the toes. If the finger tips touch the toes, then the score is zero. If they do not touch, measure the distance between the fingers and the toes (a negative score), if they overlap, measure by how much (a positive score). Scoring: Perform two trials. A score is recorded to the nearest inch or 1 cm as the distance reached, Chair Stand Test Required Equipment : Straight back chair approximately 44 cm high and a stop watch (stop clock). Procedure: In this process, the chair should be placed against the wall. The participant should sit in the middle of the chair so that the chair does not slip and the feet should remain on the flat floor about shoulders width. Both hands should be crossed near chest in shape of 'X', as soon as the instructions for getting up from the chair given the trial starts and the person should stand upright and sit again in the same state. This exercise should be repeated for 30 seconds. The number of the stand completed (stand and sit) during the 30-second period is considered as a person's score.		
25.	**(a) Acceleration Run and Pace Run methods can be used to increase the speed of an athlete. Justify.** **Ans: -** 1. **Acceleration Runs:** This method is generally used to develop speed while attaining maximum speed from a static position. In acceleration run, a sportsperson is required to run a specific distance. After the start, the athlete tries to gain maximum speed at the earliest and finishes the specified distance at that speed. These runs are repeated with sufficient rest between the runs. It usually takes 50-60 meters for a sprinter to attain maximum speed after the start. According to the researchers, it is observed that even well-trained athletes can maintain their maximum speed for 20 meters only. The number of acceleration runs can be set according to the age, capacity and level of fitness of an athlete. It may vary from 6-12 repetitions with intervals for complete recovery in between. The acceleration runs must be done after proper warm up. 2.**Pace Runs:** Unlike acceleration runs, pace runs incorporate the method of running the set distance at a uniform speed. It usually includes races of 800 meters and above. It is a fact, that an athlete can run a distance of 300 meters at full speed and in case of longer races he must conserve his energy by reducing speed. Therefore, in middle and long- distance races it is important to keep the pace in mind. In the beginning of such races the speed should not be too high and the pace should be maintained throughout the race. For this type of training the athlete should run at a		3

maximum steady speed for a distance 10-20% more than the actual racing distance. Repetition for pace run training can be fixed as per the fitness level of the athlete with complete recovery in between repetitions.

OR

(b) State any three differences between isotonic and isometric exercises.

Ans: -

Isometric	Isotonic
Muscular Contractions against a stationary resistance of load	Muscular Contractions against a dynamic resistance of load
It is required in limited sports Skills	It required in Maximum Skills of various sports
It develops maximum strength	It develops explosive and strength endurance
No change in muscle length and size	It makes change in muscular length and size
No Mobilization of Joints	Mobilization of Joint
Strength can- not be retained for longer duration	Strength retains for longer duration
Less beneficial for neuromuscular coordination	Excessively beneficial for neuromuscular coordination
less development of endurance and speed	Very high level of development of endurance and speed
Example Pushing the wall Two arm plank position Hand stand position	Example Push-ups, Pull-ups Bench press Rope climbing

(Any 3 differences)

26. **Differentiate between Abduction and Adduction by giving suitable example from sports.** 3

Ans:- Differentiate between Abduction and adduction:

Abduction	Adduction
Abduction is a movement away from the midline	Adduction is a movement towards the midline.
Laterally away from the centre of the body	Movement towards the centre of the body
Arms /legs – sidewards away from the body	Arms/legs movement close to the body

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27.	**(a) Briefly explain the following :** **(i) Vitamins** **(ii) A healthy weight** **(iii) The pitfalls of dieting** **(iv) Food intolerance** **(v) Food myths** **Ans:- Vitamins** Vitamin is an element which is required for physical development and prevents from diseases. It is present in very less quantity in body and lack of it can cause various diseases, like–lack of vitamin A causes night blindness, lack of vitamin B causes beri–beri and vitamin C – scurvy. Vitamins are not produced in body. So they are taken through diet. Vitamins are either water or fat soluble. They are divided in two categories. Vitamins Soluble in Fat Vit. A Vit. D Vit. E Vit. K Soluble in Water Vit. B Vit. B1 Vit. B2 Vit. B3 Vit. B5 Vit. B6 Vit. B12 Vit. B7 Vit. B9 Thiamine Riboflavin Niacin Pantothenic Pyridoxine Cobalamin Biotin Folic acid Vit C **A Healthy Weight** Healthy weight is considered to be when one can live life in a healthy way without any fear of disease. And this can be assessed by two different methods 1 BMI Calculation formula by WHO (Height and weight) 2 Standard Normative Table by National Institute of Health (Age, Gender, Height and weight) Can be controlled by following methods • Regular Physical Activity • Balance Calories • Eat Meal in Intervals • Change in life style • Set a appropriate goal • Cut down calories • Adopt Yoga	1x5	5

- Avoid Junk food
- Avoid rich Carbohydrate
- Stop Alcohol and Tobacco

The Pitfall of Dieting

In Present scenario of society every personhas a desire to look impressive. For an effective personality, a strong body is required. In these cases, a person on heavier side tend to adopt various methods to lose weight. Dieting have some positive development initially but later it can result in change of weight. Without proper guidance there may be many pit falls of dieting.

- Dehydration
- Dental and Blood Related Disorder
- Weakness in eyes
- Deficiency of minerals
- Memory loss
- Loss of weight
- Feeling Fatigue
- Deficiency of Vitamins
- Lack of confidence
- Deficiency of calories
- Affects on digestive system
- Reduces Immunity

Food Intolerance

- Some of the food products are not accepted by body due to :-
- Weakness of Digestive system
- Absence of activity of enzyme
- Not be able to digest by digestive system
- A negative symptom appears for a short span of time which indicates non acceptance by body.
- Symptoms– Vomiting , Formation of Excessive acid, Diarrhea, pain in abdomen, headache ,heartburn and bloating.

Food Myths

Each country & society have various myths regarding food. Due to tradition of society or lack of knowledge about food content, these are not scientifically proved. Some myths are described below :

- Avoid heavy breakfast
- Do not eat frequently
- Sweet are not good for health
- Do not drink water during meal
- Do not take milk after eating fish
- Exercise make you feel hungry
- Rice and potato increase obesity
- Eggs increases cholesterol level

OR

	(b) **Enlist the nutritive and non-nutritive components of diet and write about any two nutritive components in detail.** **Ans:-** Enlist Nutrient and non- nutrient components (Nutritive components) ➢ Carbohydrate ➢ Protein ➢ Fats ➢ Vitamins ➢ Minerals (Non- Nutritive components) Water Fiber and roughage Flavor compound Color compound Plant compound **Protein** Protein contains nitrogen, hydrogen, oxygen and sometimes sulphur. It is base of life. It produces amino acids and creates base for formation of new tissues. After water protein is present in most quantity in body. On the basis of sources it is divided into two catagories. **Animal source :** Protein derived from animals are like egg. milk products, meat, fish etc. **Vegetable source :** Protein derived from vegetable are like pulses, soyabean, cereals, nuts etc. Functions of Proteins (a) It makes new tissues. (b) It helps in growth of the body. (c) It helps in repairing of tissues of body. (d) Many hormones likes insulin, adernaline, thyroxine are made up of protein. (e) Protein present in blood provides oxygen and haemoglobin to muscles. (f) It produces antibodies to fight the diseases. (g) In absence of fat, protein provides energy to the body. (h) It maintains body temperature. Lack of protein can cause physical and mental tiredness. Lack of protein can cause Marasmus and Kwashiorkor diseases in children. **Carbohydrates** Carbohydrates It is most important and essential nutrient. It is a compound made up of carbon, hydrogen and oxygen. Its main function is to provide energy at instant rate. It helps in excretory system. If there is excess of carbohydrates in diet, then it	1+1+1 ½ +1 ½	

	accumulates as fat in our body tissues, which causes lethargy and tiredness in body. The skin gets dry and loose. Constipation problem arises. Lack of carbohydrate causes weight loss and the person affected becomes weak. Source of Carbohydrates: Starch, rice, wheat, pulses, soyabean, honey. **Fats** It is best source of energy in diet. It regulates the body temperature and rescues from excess heat and cold. It accumulates easily in body. It makes a layer beneath adipose tissues. The fat not utilized get stored in body which affect functioning of internal organs. It protects vital organs from any external injury. Sources of fats. Animal Sources: Ghee, butter, curd, fish oil, paneer, meat, egg. Vegetable Soures : Coconut, soyabean, cereals. **Vitamins** Vitamins are important for growth of healthy body. It does not belong to any structural composition of our body. It is required less but it is essential. It provides immunity from many diseases, like–lack of vitamin A causes night blindness, vitamin B causes beriberi and vitamin C causes scurvy. Types of Vitamins (a) Fat Soluble Vitamin : Vitamins which get dissolved in fat are called Fat soluble vitamins.: (i) Vitamin A (ii) Vitamin D (iii) Vitamin E (iv) Vitamin K Water Soluble Vitamin : Vitamins which dissolved in water are called water soluble vitamins. Those are : (i) Vitamin B complex (ii) Vitamin C **Minerals** Minerals are inorganic elements which are required by the body for physiological function. They maintain balance of acid and base in the body Macro Minerals — Micro Mineral Calcium — Iodine Potassium — Iron Sodium — Chromium Magnesium — Cobalt Phosphorus — Copper		
28.	**Define Personality. Explain Sheldon's classification and its importance in sports.** **Ans-** Personality: Personality is defined as individual's unique and relatively stable pattern of behaviour, thoughts and feelings.	1+3+1	5

- Personality means build up ideas, feelings, emotions, social coordination and displayed performance from time to time.
- Personality refers to one's physical appearance, his habits, way of dressing up, his manners, his reputation and other similar characteristics. It is not mere appearance or outward behaviour but more beyond this.
- Sum total of inherited and acquired abilities.

According to Sheldon's theory, Personality is classified into 3 major categories:

(a)Endomorph -who are rounded and soft,

- Short arms and legs
- Wide hips narrow shoulders
- Pear shaped body
- Lot of fat spread across the body including upper arms and thighs
- Slim ankles and wrist
- Sociable, fun loving, tolerant, relaxed, love of food, good humoured

(b) Mesomorph -

- square and muscular
- Large head, broad shoulders, narrow waist,
- Strong forearms and Thighs
-Very little body fat
- Generally considered well proportioned
- Adventurous, courageous, bold, competitive, desire for dominance, love of risk

(c) Ectomorph -who are thin and bony

- narrow shoulders and hips
- thin and narrow face, high forehead
- thin and narrow chest and abdomen
- thin legs and arms
- self-conscious, private, introvert, artistic, socially anxious and emotionally restrained

Importance in sports;

Endomorphs: Increased muscle mass more easily - therefore can excel in power sports.

Eg.: Wrestling, power lifting, Discuss, Shot put ect.

Mesomorphs: Due to minimal body fat and tendency to build muscles quickly, they respond well to cardio and resistance training.

Eg: Boxing, Athletic sprints, short distance cycling, etc.

Ectomorphs: due to their light frame they are more suited for endurance sports

Eg.: Marathon running, swimming, soccer, Basketball, Tennis, Gymnastics etc.

29.	**(a) Explain the procedure, benefits and contraindications of any two Asanas to prevent asthma.** **Ans:-** List of asana which helps to control Asthma : 1. Sukhasana 2. Chakrasana 3. Parvatasana 4. Paschimotanasan 5. Gomukhasana 6. Bhujangasana 7. Matsyasana **Sukhasana** **Method** : • Sukhasana is simply sitting in the normal form. • Keep the left foot folded under the right leg's thigh. • Fold right and place it under the Left thigh. • Keep head, neck and waist straight. Keep both hands in meditation (palms stacked up in lap) posture. • You can use it for longer periods of meditation. • One can change feet for sitting. **Contraindications :** • Avoid if arthritis • Avoid if backache. • Avoid if spinal disc problem. • Do not practice if migraine or Anxiety occurs. • Do not practice if week digestive system. **Chakrasana** • **Procedure***:* • **Starting position:** Lie on your back. Bend the legs at knees, heels touching the buttocks. Keep the feet 12 inches apart. • Raise the arms up, bend them at the elbows, and take them behind over the head. Place the palms on the floor beside the head, fingers pointing towards the shoulders. • Slowly, raise the body and arch the back. • Straighten the arms and legs. Move the hands further towards the feet as far as you feel comfortable. • Maintain the position comfortably for 5-10 seconds. **Benefits** • It makes spine flexible. • It removes rigidity of the bones and joints in the middle part of the back. • It is good for digestion. • It improves the functioning of heart.		5

- Increases the supply of oxygen in the lungs.

Contraindication :

- Avoid practicing if any back injury or weak wrist.
- A person with heart problem should not do this pose.
- If having high/ low blood pressure, Vertigo, Abdominal problem do not try this posture.
- If undergone cataract surgery, avoid this Asana.
- Do not practice if any cervical injury.

(Any 2 other Asanas listed above)

OR

(b)Elaborate the procedure, benefits and contraindications of Trikonasana and Vajrasana to prevent obesity.

Ans:- Obesity Prevention:

Trikonasana(Triangle Pose)

Procedure:

Starting position: Stand erect, legs together and hands by the side of the thighs.

1. Move your legs 1-2 feet apart.
2. Stretch the arms sideways and raise them to shoulder level.
3. Bend to the left side from the waist.
4. Place the left hand on the left foot.
5. Stretch the right arm up. Here, the two arms will be at 180°. Maintain this position with normal breathing comfortably for 5-10 seconds.

Benefits

• It stretches up the muscles of trunk, legs and hips.

• It improves the flexibility of spine.

• It helps in increasing the height of growing children.

• It relieves the pain in the neck and back.

- Help women during their menstrual cycle
- Contraindication :
- Avoid if having low or high blood pressure.
- Avoid this pose if having any kind of neck injury.
- Avoid if having back injury.
- Avoid if an athlete has a hamstring injury.

Vajrasana (Thunderbolt pose)

Procedure:

Starting position: Sit with legs extended together, hands by the side of the body, resting on the ground.

1. Fold the left leg at the knee and place the foot under the left buttock.
2. Similarly, fold the right leg and place the foot under the right buttock.
3. Place both the heels so that the big toes overlap each other.
4. Position the buttocks in the space between the heels.
5. Keep the hands on respective knees.
6. Keep spine erect, gaze in front or close the eyes. Initially stay for 10–15 seconds.

Benefits

• It is a meditative posture and helps in concentration.

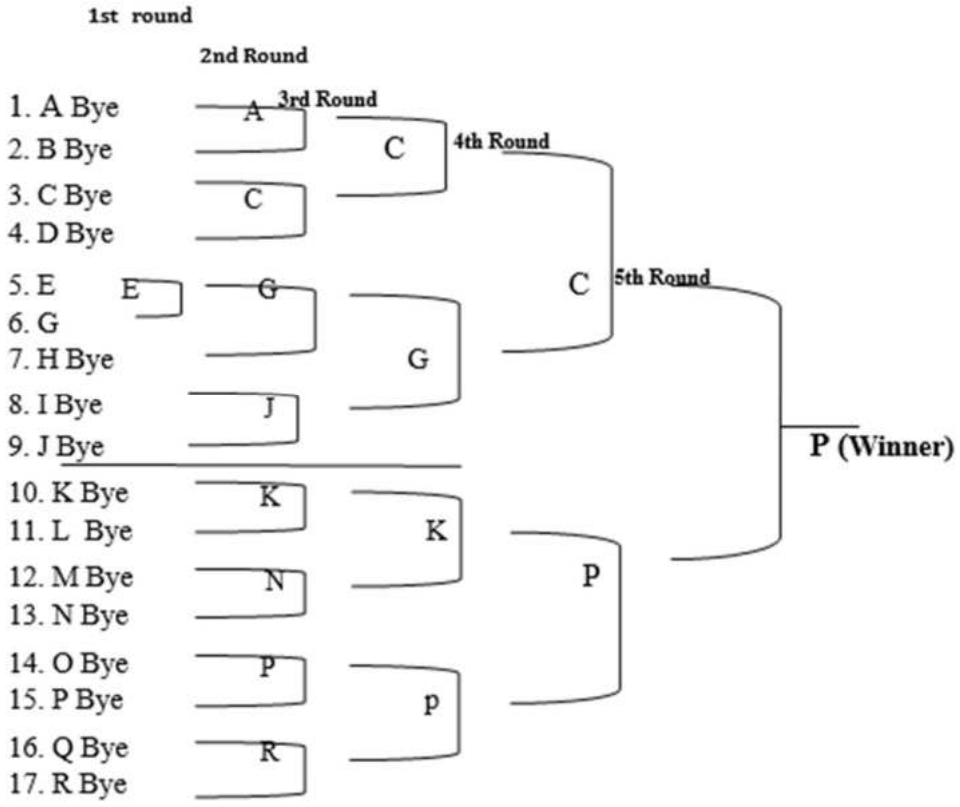
• It improves our digestive system.

• This strengthens muscles of Pelvic, thighs and calf.

- It cures indigestion and improves metabolism.
- Improves flexibility in ankles.
- Improve blood circulation.

Contraindications :

- Vajrasana should not be practiced by the people who have severe arthritis of the knees.
- Should avoid this if they have injury in their hamstrings or the calves or injury of ankle ligament
- This pose may bring unwanted pressure to the intestine so those suffering from Hernia or ulcers should avoid it.

30.	**On the basis of knock-out tournament, prepare a fixture of 17 teams mentioning all thesteps involved** **Ans:-** Steps involved in preparing a knockout fixture for 17 teams: Total no. of teams = 17 No. of Matches = 16 No.fo teams in upper half = $\frac{N+1}{2} = \frac{17+1}{2} = 9$ No. of teams in the lower half = $\frac{N-1}{2} = \frac{17-1}{2} = 8$ Total no. of byes = Next power of 2 – N = 32-17 = 15 No. of byes in upper half = $\frac{NB-1}{2} = \frac{15-1}{2} = 7$ No. of byes in Lower half = $\frac{NB+1}{2} = \frac{15+1}{2} = 8$  (Note: no./alphabet/ any name can be used to represent the teams)	3+2	5