Series &RQPS

प्रश्न–पत्र कोड SET-4

Q.P. Code 75

अनुक्रमांक
Roll No.

परीक्षार्थी प्रश्न–पत्र कोड को उत्तर–पुस्तिका के मुख–पृष्ठ पर अवश्य लिखें।
Candidates must write the Q.P. Code on the title page of the answer-book.

PHYSICAL EDUCATION (Theory)

शारीरिक शिक्षा (सैद्धान्तिक)

निर्धारित समय : 3 घण्टे — अधिकतम अंक : 80

Time allowed : 3 Hours — Maximum Marks : 80

(i) Please check that this question paper contains 15 printed pages.
कृपया जॉच कर लें कि इस प्रश्न –पत्र में मुद्रित पृष्ठ 15 हैं।

(ii) Please check that this question paper contains 37 questions.
कृपया जॉच कर लें कि इस प्रश्न– पत्र में 37 प्रश्न हैं।

(ii) Q.P. Code given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
प्रश्न पत्र में दाहिने हाथ की ओर दिए गए प्रश्न–पत्र कोड को परीक्षार्थी उत्तर-पुस्तिका के मुख्य-पृष्ठ पर लिखें।

(iv) **Please write down the serial number of the question in the answer-book before attempting it.**
कृपया प्रश्न का उत्तर लिखना शुरू करने से पहले, उत्तर–पुस्तिका में प्रश्न का क्रमांक अवश्य लिखें।

(v) 15 minutes time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the candidates will read the question paper only and will not write any answer on the answer-book during this period.
इस प्रश्न–पत्र को पढने के लिए 15 मिनट का समय दिया गया है। प्रश्न–पत्र का वितरण पूर्वाह्न मे 10.15 बजे किया जाएगा। 10.15 बजे से 10.30 बजे तक परीक्षार्थी केवल प्रश्न–पत्र को पढ़ेंगे और इस अवधि के दौरान वे उत्तर नहीं लिखेंगे।

General Instructions :

Read the following instructions very carefully and strictly follow them :

(i) The question paper consists of 5 sections and 37 questions. ' ..

(ii) **Section-A** consists of question 1-18 carrying 1 mark each and are multiple choice questions. All questions are compulsory.

(iii) **Section-B** consists of question 19-24 carrying 2 marks each and are Very Short Answer Types and should not exceed 60-90 words. Attempt any 5.

(iv) **Section-C** consists of question 25-30 carrying 3 marks each and are Short Answer Types and should not exceed 100-150 words. Attempt any 5.

(v) **Section-D** consists of question 31-33 carrying 4 marks each and are case studies. There is internal choice available.

(vi) **Section-E** consists of question 34-37 carrying 5 marks each and are Long Answer types arid should not exceed 200-300 words. Attempt any 3.

सामान्य निर्देश :

निम्नलिखित निर्देशों को बहुत सावधानी से पढ़िए और उनका सख्ती से पालन कीजिए :

(i) प्रश्न–पत्र में पाँच खण्ड हैं तथा 37 प्रश्न हैं।

(ii) **खण्ड–अ** में प्रत्येक 1 अंक वाले 1-18 बहुविकल्पी प्रश्न हैं। सभी प्रश्न अनिवार्य हैं।

(iii) **खण्ड–ब** में 19-24 तक अति लघु–उत्तरीय प्रकार के प्रश्न हैं, जिसमें से 5 प्रश्न करने हैं। प्रत्येक प्रश्न 2 अंक का है और 60-90 शब्दों में होना चाहिए।

(iv) **खण्ड–स** में 25-30 तक लघु–उत्तरीय प्रकार के प्रश्न हैं, जिसमें से 5 प्रश्न करने हैं। प्रत्येक प्रश्न 3 अंक का है और 100-150 शब्दों में होना चाहिए ।

(v) **खण्ड–द** में 31-33 प्रकरण अध्ययन प्रश्न हैं। प्रत्येक प्रश्न 4 अंक का है। आन्तरिक विकल्प उपलब्ध है।

(vi) **खण्ड–य** में 34-37 दीर्घ–उत्तरीय प्रश्न हैं, जिसमें से 3 प्रश्न करने हैं। प्रत्येक प्रश्न 5 अंक का है और 200-300 शब्दों से अधिक नहीं होना चाहिए ।

खण्ड–क (SECTION – A)

(All Questions are compulsory)
(सभी प्रश्न अनिवार्य हैं)

1. Which of the following pranayama is helpful to reduce obesity? **1**

(A) Kapalbhati Pranayama (B) Anulom Vilom Pranayama
(C) Suryabhedan Pranayama (D) Sitili Pranayama

निम्नलिखित में से कौन सा प्राणायाम मोटापे को कम करने में सहायक है ?

(A) कपालभाति प्राणायाम (B) अनुलोम–विलोम प्राणायाम
(C) सूर्यभेदन प्राणायाम (D) शीतली प्राणायाम

Sol. **(C) Suryabhedan Pranayama**

2. International Paralympic Committee was formed in __ **1**

(A) 1985 (B) 2003
(C) 1989 (D) 2001

अंतर्राष्ट्रीय पैरालंपिक समिति का गठन _____ में किया गया था ।

(A) 1985 (B) 2003
(C) 1989 (D) 2001

Sol. **(C) 1989**

3. Which of the following is NOT the cause of Food Intolerance? **1**

(A) Toxins formation due to food poisoning
(B) Absence of an enzyme
(C) Roughage
(D) Gluten

निम्न में से कौन सा भोजन असहिष्णुता का कारण नहीं है ?

(A) खाद्य विषाक्तता के द्वारा टक्सिन बनना
(B) एंजाइम्स का न होना
(C) रुक्षांश (रफेज)
(D) ग्लूटेन

Sol. **(C) Roughage**

4. Given below are two statements labelled Assertion (A) and Reason (R). **1**

Assertion (A) : The Basal Metabolic Rate (BMR) is the number of calories needed to maintain body function at resting condition.

Reason (R) : A person who does not engage in any work, still requires energy for the functioning of their internal organs.

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

(A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).
(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
(C) Assertion (A) is true, but Reason (R) is false.
(D) Assertion (A) is false, but Reason (R) is true.

नीचे दो कथन दिए गए हैं जो कि अभिकथन (A) तथा कारण (R) के रूप में हैं।

अभिकथन (A): आराम की स्थिति में शरीर के कार्य को बनाए रखने के लिए आवश्यक कैलोरी की संख्या श्वेसल चयापचय दरश है ।

कारण (R) : एक व्यक्ति जो कि किसी भी कार्य में संलग्न नहीं होता है, उसे भी आंतरिक अवयवों के कार्यों के लिए ऊर्जा की आवश्यकता होती है।

उपर्युक्त दो कथनों के संदर्भ में निम्नलिखित में से कौन सा विकल्प सही है ?

(A) अभिकथन (A) और कारण (R) दोनों सही हैं और कारण (R), अभिकथन (A) की सही व्याख्या करता है।

(B) अभिकथन (A) और कारण (R) दोनों सही हैं, परन्तु कारण (R), अभिकथन (A) की सही व्याख्या नहीं करता है।

(C) अभिकथन (A) सही है, परन्तु कारण (R) गलत है।

(A) अभिकथन (A) गलत है, परन्तु कारण (R) सही है।

Sol. **(A)**

5. Given below are function of Sports Management in List-I and their Explanation in List-II : **1**

List – I	**List - II**
I. Planning	1. It is a function of guiding, inspiring and instructing people to accomplish organizational goals.
II. Controlling	2. Preparing a layout for the future course of action.
III.Directing	3. Ensuring that proper talent is serving that specific job.
IV.Staffing	4. Establishing performance standards, measuring actual performance and comparing them for irregularities.

Match the items of List-I with List-II and choose the correct option from he following:

	I	II	III	IV
(A)	1	2	3	4
(B)	1	2	4	3
(C)	2	4	1	3
(D)	2	4	3	1

सूची-I में खेल प्रबन्धन के कार्य तथा सूची-II में उनका स्पष्टीकरण दिया गया है:

सूची-I	**सूची-II**
I. योजना	1. यह संगठनात्मक लक्ष्यों को पूरा करने के लिए लोगों को मार्गदर्शन, प्रेरणा और निर्देश देने का कार्य है।
II. नियंत्रण	2. भविष्य में होने वाले कार्य की रूपरेखा तैयार करना।
III.निर्देशन	3. यह सुनिश्चित करना कि उचित प्रतिभा उस विशिष्ट कार्य को पूरा कर रही है।
IV. स्टाफिंग	4. प्रदर्शन मानकों की स्थापना करना, वास्तविक प्रदर्शन को मापना और अनियमितताओं की तुलना करना।

सूची-I की मदों का मिलान सूची-II से कीजिए तथा निम्नलिखित में से सही विकल्प का चुनाव करें:

	I	II	III	IV
(A)	1	2	3	4
(B)	1	2	4	3
(C)	2	4	1	3
(D)	2	4	3	1

Sol. **(C)**

6. Given below are two statements labelled Assertion (A) and Reason (R). **1**

Assertion (A) : In a normal standing posture, both knees touch each other, while there is a gap of 3-4 inches between the ankles.

Reason (R) : It occurs due to Genu Valgum and it can develop due to an injury or infection in the knee or leg, rickets, severe lack of vitamin D and calcium, obesity, or arthritis in the knee.

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

(A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).

(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(C) Assertion (A) is true, but Reason (R) is false.

(D) Assertion (A)is false, but Reason (R) is true

नीचे दो कथन दिए गए हैं जो कि अभिकथन (A) तथा कारण (R) के रूप में हैं।

अभिकथन (A) : सामान्य खड़े होने की स्थिति में दोनों घुटने एक–दूसरे को छूते हैं जबकि टखनों के बीच 3-4 इंच का अंतर होता है।

कारण (R) : यह जेनू वेलगम के कारण होता है और यह घुटने या पैर में चोट या संक्रमण, रिकेट्स, विटामिन–डी और कैल्सियम की गंभीर कमी, मोटापा या घुटने में गठिया के कारण विकसित हो सकता है।

उपर्युक्त दो कथनों के संदर्भ में निम्नलिखित में से कौन सा विकल्प सही है ?

(A) अभिकथन (A) और कारण (R) दोनों सत्य हैं और कारण (R), अभिकथन (A) की सही व्याख्या करता है।

(B) अभिकथन (A) और कारण (R) दोनों सत्य हैं, परंतु कारण (R), अभिकथन (A) की सही व्याख्या नहीं करता है।

(C) अभिकथन (A) सत्य है, परन्तु कारण (R) गलत है।

(D) अभिकधन (A) गलत है, परन्तु कारण (R) सत्य है।

Sol. **(A)**

7. In which of the following fitness component an athlete gives better performance, if he/she has more slow twitch fibre in comparison to fast twitch fibres. **1**

(A) Speed (B) Strength (C) Endurance (D) Flexibility

निम्नलिखित पुष्टि घटकों में से एक धावक किसमें बेहतर प्रदर्शन करता है, यदि उसमें तीव्र विच तन्तुओं (फास्ट विच फाइबर) की तुलना में धीमे विच तन्तुओं (स्लो विच फाइबर) की संख्या अधिक है ?

(A) गति (B) शक्ति (C) सहनक्षमता (D) लचीलापन

Sol. **(C) Endurance**

8. Identify the factor which decreases equilibrium. **1**

(A) Larger base (B) Greater weight

(C) Lower centre of gravity (D) Higher centre of gravity

उस कारक को पहचानें जो संतुलन को कम करता है।

(A) बड़ा आधार (B) अधिक वजन

(C) निम्न गुरुत्वाकर्षण केन्द्र (D) उच्च गुरुत्वाकर्षण केन्द्र

Sol. **(D) Higher centre of gravity**

9. Identify the characteristic of introvert personality. **1**

(A) Meet unknown people easily (B) Self - centered

(C) Highly socialized (D) Expressive nature

अंतर्मुखी व्यक्ति के व्यक्तित्व की विशेषता को पहचानें।

(A) अनजान लोगों से आसानी से मिलना (B) आत्म–केन्द्रित

(C) अत्यधिक सामाजिक (D) अभिव्यक्त प्रति

Sol. **(B) Self - Cantered**

10. Jump for smash in volleyball is an example of _____. **1**

(A) Static strength (B) Maximum strength

(C) Explosive strength (D) Strength endurance

वलीबल में स्मैश मारने के लिए उछलना _____ का एक उदाहरण है।

(A) स्थैतिक शक्ति (B) अधिकतम शक्ति

(C) विस्फोटक शक्ति (D) शक्ति सहनक्षमता

Sol. **(C) Explosive Strength**

11. Which of the following is the objective of Intramural competition? **1**

(A) To achieve high performance

(B) To provide career opportunities

(C) To promote health and fitness

(D) To promote cultural and economic development

निम्न में से कौन सा अंतःप्राचीर प्रतियोगिता का उद्देश्य है ?

(A) उच्च प्रदर्शन को प्राप्त करना।

(B) रोजगार के अवसर प्रदान करना।

(C) स्वास्थ्य एवं पुष्टि को बढ़ावा देना।

(D) सांस्कृतिक एवम् आर्थिक विकास को बढ़ावा देना।

Sol. (C) To promote health and fitness

12. According to W.H.O. (World Health Organisation) recommendations, children of _____ should be engaged in physical activities for 180 minutes and should have 10 -13 hours of good quality sleep per day. **1**

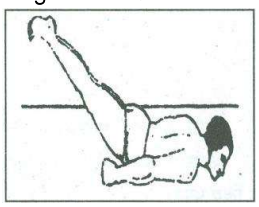
(A) Less than 1 year (B) 1 – 2 year (C) 3 – 4 year (D) 5 – 17 year

विश्व स्वास्थ्य संगठन (W.H.O.) की अनुशंसा अनुसार शारीरिक गतिविधियों में शामिल होना चाहिए और 10-13 घंटे के बच्चों को प्रतिदिन 180 मिनट तक की अच्छी गुणवत्ता वाली नींद लेनी चाहिए।

(A) 1 वर्ष से कम (B) 1-2 वर्ष (C) 3-4 वर्ष (D) 5-17 वर्ष

Sol. **(C) 3-4 year**

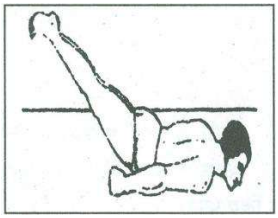
13. Identify the asana shown in the picture given below and choose the correct option from the following: **1**



(A) Bhujangasana (B) Katichakrasana

(C) Pawanmuktasana (D) Shalbhasana

नीचे दिए गए चित्र में आसन की पहचान कीजिए तथा निम्न में से सही विकल्प चुनिए:



(A) भुजंगासन (B) कटिचक्रासन

(C) पवनमुक्तासन (D) शलभासन

Sol. (D) Shalbhasana

(For Visually Impaired Candidates Only)
(केवल दृष्टिबाधित छात्रों के लिए प्रश्न)

Which of the following asana is useful for relaxation and removing fatigue? **1**

(A) Chakrasana (B) Shavasana

(C) Makarasana (D) Uttanpadasana

शिथिलीकरण व थकान को दूर करने के लिए, निम्न में से कौन सा आसन उपयोगी है ?

(A) चक्रासन (B) शवासन

(C) मकरासन (D) उत्तानपादासन

Sol. (B) Shavasana

14. Which is the main governing body responsible for the organization of Deaflympics? **1**

(A) World Deaf Champions Committee

(B) National Sports Federation

(C) International Co-ordinating Committee for Disabled Sports.

(D) International Committee of Sports for the Deaf

डेफलिम्पिक के आयोजन के लिए जिम्मेदार मुख्य प्रबंध निकाय कौन सा / सी है ?

(A) विश्व बधिर चौम्पियन्स समिति

(B) राष्ट्रीय खेल महासंघ

(C) दिव्यांग खेलों के लिए अंतर्राष्ट्रीय समन्वयक समिति

(D) बधिरों के लिए अंतर्राष्ट्रीय खेल समिति

Sol. (D) International Committee of Sports for the Deaf

15. Body mass index is one of the common way of assessing healthy body weight. Which of the following MI range is considered for healthy weight? **1**

(A) 25.0 – 29.0 (B) 30.0 – 34.9 (C) 18.5 – 24.9 (D) 35.0 – 39.9

बडी मास इंडेक्स (BMI), स्वस्थ शरीर के वजन का आंकलन करने के सामान्य तरीकों में से एक है। स्वस्थ–भार के लिए निम्नलिखित में से कौन सी बी. एम. आई. श्रेणी को लिया जाता है ?

(A) 25.0 – 29.0 (B) 30.0 – 34.9 (C) 18.5 – 24.9 (D) 35.0 – 39.9.

Sol. (C) 18.5 - 24.9

16. In particle curl up test the different between two parallel lines is..... **1**

(A) 8 incehs (B) 4 incehs (C) 6 incehs (D) 10 incehs

आंशिक कर्ल अप परीक्षण में दो समानांतर रेखाओं के बीच का अंतर_____होता है।

(A) 8 इंच (B) 4 इच (C) 6 इंच (D) 10 इंच

Sol. **(C) 6 inches**

17. Goal settin is a _____approach, under motivational technique. **1**

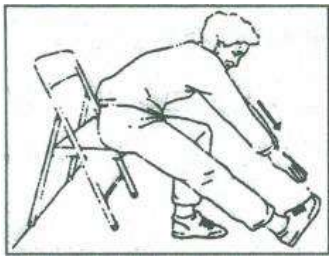
(A) Cognitive (B) Pedagogical (C) Social (D) Facilitation

प्रेरणा तकनीक के अंतर्गत, लक्ष्य निर्धारण एक_____दृष्टिकोण है।

(A) संज्ञानात्मक (B) शैक्षणिक (C) सामाजिक (D) सुविधाजनक

Sol. **(D) Facilitation**

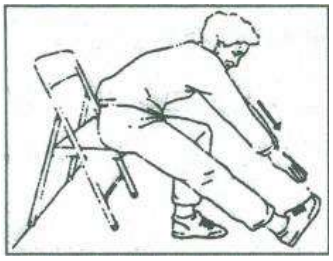
18. Which functional fitness component of senior citizens is determined in the test shown below? **1**



(A) Physical Mobility (B) Upper Body Flexibility

(C) Lower Body Flexibility (D) Upper Body Strength

नीचे दिखाए गए परीक्षण में, वरिष्ठ नागरिकों का कौन–सा कार्यात्मक पुष्टि घटक निर्धारित किया जाता है?



(A) शारीरिक गतिशीलता (B) शरीर के ऊपरी भाग का लचीलापन

(C) शरीर के निचले भाग का लचीलापन (D) शरीर के ऊपरी भाग की शक्ति

Sol. **(C) Lower Body Flexibility**

(For Visually Impaired Candidates Only)

(केवल दृष्टिबाधित छात्रों के लिए प्रश्न)

Which of the following test determines the upper body strength of a senior citizen? **1**

(A) Chair Stand Test (B) Back Scratch Test

(C) Arm-Curl Test (D) Chair sit and Reach test

निम्न में से कौन सा परीक्षण वरिष्ठ नागरिकों के शरीर के ऊपरी भाग की शक्ति निर्धारित करता है ?

(A) चेयर स्टैंड परीक्षण (B) बैक स्क्रेच परीक्षण

(C) आर्म–कर्ल परीक्षण (D) चेयर सिट एण्ड रीच परीक्षण

Sol. **(C) Arm-Curl Test**

खण्ड–ब SECTION - B

(Attempt any 5 questions)

19. Describe the second class lever with suitable example from sports. **2**
खेलों से उचित उदाहरण देते हुए, द्वितीय श्रेणी उत्तोलक (लीवर) की व्याख्या कीजिए ।

Sol. Class -2 levers have load (resistance) between the effort (force) and the fulcrum. Examples of class -2 levers are when an individual stands on tiptoe to play a smash; the length of the foot is the arm of the lever, the ball of the foot acts as the fulcrum and achilles tendon and calf muscles provide the effort (force), lifting the weight of the body by the back of the heel and calisthenics that use the body as class-2 lever include push ups and leg lifts. The second class lever is also used when taking off for a jump (it may be a jumping in Volleyball to block a shot) or pushing against the blocks in a sprint start.

20. Enlist four test items of Johnson - Metheny Test of Motor Educability. **½ × 4**
गामक शिक्षा–योग्यता (मोटर ऐडुकेबिलिटी) के जनसन मेथेनी परीक्षण के चार परीक्षण मदों को सूचीबद्ध करें।

Sol.
1. Front roll
2. Back roll
3. Jumping half turn
4. Jumping full turns

21. Write a short note on 'Menarche'. **2**
'रजोदर्शन' पर संक्षिप्त टिप्पणी लिखिए ।

Sol. Menarche is defined as the first menstrual period in a female adolescent. Menarche typically occurs between the ages of 10 and 16, with the average age of onset being 12.4 years. The determinants of menarcheal age are continuously being researched; socioeconomic conditions, genetics, general health, nutritional status, exercise, seasonality, and family size are thought to play a role.

22. Enlist four asanas those help to control asthma. **½ × 4**
चार आसनों को सूचीबद्ध करें जो अस्थमा को नियंत्रित करने में मदद करते हैं।

Sol.
1. Tadasana
2. Bhujangasana
3. Dhanurasana
4. Ustrasana
5. Vakrasana
6. Gomukhasana
7. Anulom-Vilom (Any four)

23. Write any two advantages of physical activities for Children With Special needs (CWSN). **1+1**
दिव्यांग बच्चों (सी.डब्ल्यू.एस.एन.) के लिए शारीरिक गतिविधियों के कोई दो लाभ लिखिए।

Sol. **Physical improvements:** Children, who suffer from cognitive disabilities are most likely to suffer from physical activities enhance the hand eye coordination, flexibility, strength, endurance and even cardiovascular efficiency.
Self-esteem: Physical activities are beneficial for children with special needs a matter of fact, interaction and involvement with other students in physical activities help to give children a sense of accomplishment and confidence.

24. Mention any two types of friction by giving suitable examples from sports. **1+1**
खेलों से उचित उदाहरण देते हुए, घर्षण के किन्हीं दो प्रकारों का उल्लेख कीजिए ।

Sol. **Sliding friction:** The opposing force that comes into play when one body is actually sliding over the surface of the other body is called sliding friction.
Eg. Ice-skating
Rolling friction: The opposing force that comes into play when one body is actually rolling over the surface of the other body is called rolling friction.
Eg. When a hockey or cricket ball is hit, it rolls on the surface of the ground. It stops after some time due to rolling friction. Such type of friction is widely seen in games and sports.

खण्ड–ग (SECTION – C)

SECTION - C
(Attempt any 5 questions)
(किन्हीं पाँच प्रश्नों के उत्तर दें)

25. Mr. X performs the Harvard step test for 275 seconds· and his pulse in 1 – 1.5 min after exercise was 100. Write the formula of fitness index score for Harvard step test and calculate the fitness index score of Mr. X. **1+2**
मिस्टर X ने 275 सेकण्ड के लिए हार्वर्ड स्टेप टेस्ट किया और व्यायाम के बाद 1 – 1.5 मिनट में उसकी पल्स (हृदय दर) 100 थी। हार्वर्ड स्टेप टेस्ट के लिए फिटनेस इंडेक्स स्कोर का सूत्र लिखें और मिस्टर X के फिटनेस इंडेक्स स्कोर की गणना करें।

Sol. **Fitness index score**
= (100 × test duration in seconds) divided by (2×sum of heartbeats in recovery periods).

According to Mr. X performance his pulse in 1-1.5 min after exercise was 100 and we assume that 2-2.5 min after exercise his pulse rate was 90 and 3-3.5 min after exercise his pulse rate was 80.
so,

$$= \frac{100 \times 275}{2 \times 270}$$

= 50.92

Fitness Index Score		Rating
Male	Female	
> 90.0	> 86.0	Excellent
80.0–90.0	76.0–85.9	Good/Above average
65.0–79.9	61.0–75.9	Average
55.0–64.9	50.0–60.9	Below average
< 55	< 50	Poor

26. Comment on the concept of 'Talent Identification' and 'Talent Development'. **1½+1½**
'प्रतिभा पहचान' व 'प्रतिभा विकास' की अवधारणा की विवेचना कीजिए।

Sol. **Talent Identification.** Talent identification can be defined as that process by which children are encouraged and motivated to participate in sports at which they are most likely to get success in future. They are tested on the basis of selected parameters. These parameters are designed to predict their performance capacity. In this process, their current level of fitness and maturity is taken into consideration. Talent identification is the first step in the progression from beginner to successful international athlete.

Talent Development: Talent development provides suitable learning environment so that athletes' talent can be realized. It is the first step in the progression from the beginner to successful international athlete. This phase provides such a learning environment which convert young athletes into sporting stars of the future. Talent development is the next significant phase in the achievement of sporting success.

27. Explain the responsibilities of any two committees during sports competition. **1½+1½**
खेल प्रतियोगिता के दौरान किन्हीं दो समितियों के दायित्वों की व्याख्या करें।

Sol.

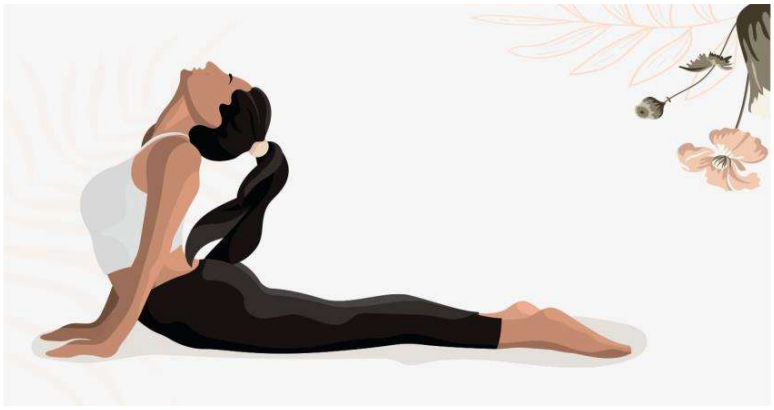
1.	**Record award committee:**	To keep record intact To make positions. To declare winners To provide medals and certificate
2.	**First Aid Committee**	Make sure first Aid kit and doctor available on the field for an emergency.
3.	**Boarding and lodging committee**	To ensure good accommodation for everyone To ensure arrangement of meals for all To provide refreshment coupons to teams and officials.
4.	**Ground Equipment**	To provide safe and quality equipment Make sure all fields and grounds are safe and perfectly make.

28. Explain the procedure and benefits of anyone asana for back pain. **2+1**
कमर दर्द के लिए किसी एक आसन की प्रक्रिया व लाभों का वर्णन कीजिए।

Sol. **Bhujangasana**

Procedure

- Lie down flat on your abdomen, in the relaxation posture. Cross your hands in front of you so you can place your head on them.
- Slowly bring your legs close together. Place your forehead on the floor.
- Move your arms so that they are folded at the elbow and your palms are close to your shoulders.
- Raise your elbows off the floor slightly. Inhale. Raise your forehead with your chin pushed out.
- Raise your torso from the ground.
- Ensure that your abdomen remains pressed to the floor.
- Reflect on the movement of a snake raising its hood and gradually feel the stretch of your spine. Maintain posture.
- Unwind slowly till your body is back flat against the floor. Keep your head lifted till your torso completely unrolls.



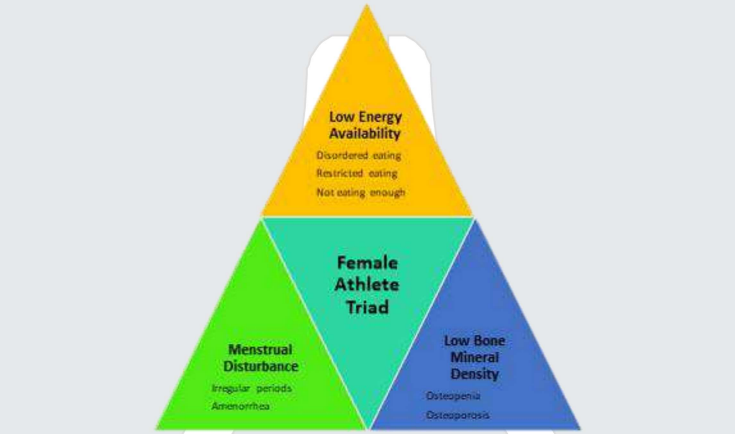
Some of the main benefits of Bhujangasana are listed below:

- Increases Flexibility. As mentioned above, this yoga pose stretches many body parts. ...
- Reduces Body Fat. ...
- Boosts Digestion. ...
- Unblocks Chakras. ...
- Improves Blood Circulation. ...
- Strengthens Muscles. ...
- Reduces Respiratory Problems. ...
- Regulates Menstrual Problems.

29. Write short note on Female Athlete Triad. **3**

महिला–धावक त्रय पर संक्षिप्त टिप्पणी लिखिए।

Sol. **Female Athlete Triad**



Osteoporosis :- Osteoporosis refers to decreased bone mineral density. It is a skeletal disorder. A reduction in bone mass may cause fracture. In fact, low oestrogen levels and poor nutrition, especially low calcium intake can lead to osteoporosis. It is one of the significant triad of female athlete.

Amenorrhoea :- Is a menstrual disorder or illness in women where girls of 18 years and above either never began menstruating or there is an absence of menstruation for three months or more than that in women with a history of normal menstrual cycle. Amenorrhoea can also be defined as the cessation of woman's menstrual cycle for more than three months or more.

Types of Amenorrhoea

(1) Primary Amenorrhoea

(2) Secondary Amenorrhoea

Eating Disorder :- Most of the girls with female athlete triad try to lose their body weight as a way to improve their performance in the field of games and sports. In order to lose weight, they may practice unhealthy weight-control methods, including restricted food intake, self-induced vomiting.

There are following types of eating disorders :-

1. Anorexia Nervosa
2. Bulimia Nervosa

30. Describe any three physiological changes due to ageing. **1+1+1**
बुढ़ापे के कारण होने वाले किन्हीं तीन शरीर क्रियात्मक परिवर्तनों का वर्णन करें।

Sol. Physiological Changes Due to Ageing

Changes in Senses:- With advancing age, the senses such as vision, hearing, taste, smell, touch etc. may become less acute. Vision and hearing are most affected by ageing. The main changes in senses are:-

- Changes in Vision
- Changes in Hearing
- Changes in Taste
- Changes in Smell

Cardiovascular System:- Blood vessels tend to lose elasticity, leading to increased arterial stiffness. Buildup of fatty deposits (plaques) in arteries may occur, potentially affecting blood flow. The heart may pump less blood per beat.

Respiratory System:- Lung capacity and elasticity may decline, leading to decreased respiratory efficiency. The chest wall may become less flexible.

खण्ड – द (SECTION – D)

(Internal choices available)
(किन्हीं तीन प्रश्नों के उत्तर दें)

31. A survey in an inclusive school setup found the discrepancies between the participation of normal and special child during annual sports meet. Study the table given below carefully–

S.No	Event	Normal Child (150)	Special Child (10)
1.	100 Mtr.	40	5
2.	400 Mtr.	25	2
3.	Long Jump	20	0
4.	High Jump	15	1
5.	Relay Race	8	4

Based on the above study and your knowledge, answer the following questions:

(A) As per the above table, in_____event, there is no participation of Special Child.

(B) Participation of students with disabilities in regular physical education classes is known as_____

(C) Enlist. any two strategies to make physical activities accessible for children with special needs.

(D) Motto of Special Olympic is _____

OR

(D) The motto' of Paralympic is_____

(For Visually Impaired Candidates Only)

Write short notes on 'Paralympics' and 'Special Olympic'

एक सर्वेक्षण में एक समावेशी विद्यालय की वार्षिक खेल प्रतियोगिता के दौरान सामान्य और विशेष बच्चों की भागीदारी के बीच विसंगतियाँ पाई गईं। नीचे दी गई तालिका का ध्यानपूर्वक अध्ययन करें–

क्रम संख्या	प्रतियोगिता	सामान्य छात्र (150)	विशेष छात्र (10)
1.	100 मी.	40	5
2.	400 मी.	25	2
3.	लम्बी कूद	20	0
4.	ऊँची कूद	15	1
5.	रिले दौड़	8	4

उपरोक्त अध्ययन व अपने ज्ञान के आधार पर निम्न प्रश्नों के उत्तर दीजिए

(A) उपरोक्त तालिका के अनुसार_____की प्रतियोगिता में विशेष छात्रों की कोई भागीदारी नहीं है।

(B) नियमित शारीरिक शिक्षा कक्षाओं में दिव्यांग छात्रों की भागीदारी को_____कहा जाता है।

(C) विशेष आवश्यकता वाले बच्चों के लिए शारीरिक गतिविधियों को सुगम बनाने की किन्हीं दो रणनीतियों को सूचीबद्ध कीजिए ।

(D) विशेष ओलिम्पिक का आदर्श वाक्य _____है।

या

(D) पैरालिम्पिक का आदर्श वाक्य _____है।

(केवल दृष्टिबाधित छात्रों के लिए प्रश्न)

'पैरालिम्पिक' व 'विशेष ओलिम्पिक' पर संक्षिप्त टिप्पणी लिखिए ।

Sol. (a) Long Jump
(b) Inclusion in education
(c) 1. Medical check-up
2. Physical activities must be based on interests of children
(d) "Let me win. But if I cannot win, let me brave in the attempt."

OR

"Spirit in Motion"

32. Study the pictures given below:

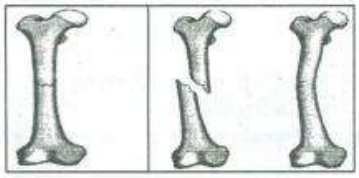


Image-1 Image-2 Image-3

Based on the above study and your knowledge, answer the following questions:

(A) Which type of fracture you see in image-1?

(B) When a bone breaks diagonally as shown in image-2, it is known as_____

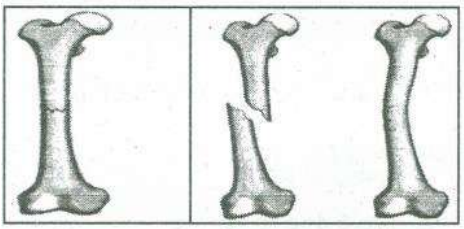
(C) _____fracture occurs when the broken ends of the bones are jammed together by the force of the injury.

(D) In which type of fracture bone is broken, splinted, or crushed into number of pieces?

(For Visually Impaired Candidates Only)

Describe types of fracture. (Any Four)

नीचे दिए गए चित्र का अध्ययन करें



चित्र-1 चित्र-2 चित्र-3

उपरोक्त अध्ययन व अपने ज्ञान के आधार पर निम्न प्रश्नों के उत्तर दीजिए:

(A) चित्र–1 में आप किस प्रकार का अस्थिभंग (फ्रैक्चर) देख रहे हैं ?

(B) जब कोई हड्डी तिरछी टूटती है, जैसा कि चित्र–2 में दिखाया गया है, तो इसे _____के रूप में जाना जाता है।

(C) _____अस्थिभंग तब होता है जब चोट के बल से हड्डियों के टूटे हुए सिरे आपस में धँस जाते हैं।

(D) किस प्रकार के अस्थिभंग (फ्रैक्चर) में हड्डी टूट जाती है, विभाजित हो जाती है या कई टुकड़ों में कुचली जाती है ?

(केवल दृष्टिबाधित छात्रों के लिए प्रश्न)

अस्थिभंगों के प्रकारों की व्याख्या कीजिए । (कोई चार)

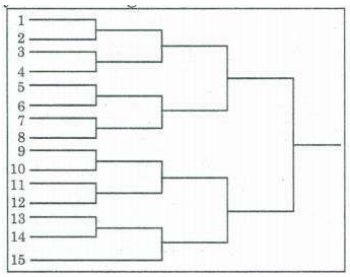
Sol. (a) Simple fracture

(b) Compound fracture

(c) Impacted fracture

(d) comminuted fracture

33. Study the fixture given below: **4+1=4**



On the basis of the above study and your knowledge, answer the following questions:

(A) According to the above fixture total number of rounds will be_____

(B) As shown in the fixture if the winner team plays least number of matches, then which number of team is the winner?

(C) What is the formula for calculating number of matches in a knockout tournament?

(D) If 19 teams are participating in a knockout tournament, then how many byes will be given to draw a knockout fixture?

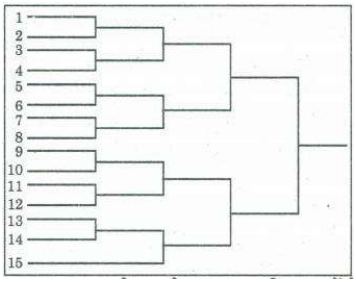
OR

(D) What is the formula for calculating total number of byes in a knockout tournament?

(For Visually Impaired Candidates Only)

How 'Sports Day' and 'Health Run' contribute to spread health awareness and harmony? Explain.

नीचे दिए गए फिक्सचर का अध्ययन करें:



उपरोक्त अध्ययन व अपने ज्ञान के आधार पर निम्न प्रश्नों के उत्तर दीजिए

(A) उपरोक्त फिक्सचर के अनुसार राउंड्स की कुल संख्या होगी।

(B) उपरोक्त फिक्सचर के अनुसार यदि प्रतियोगिता की विजेता टीम सबसे कम मैच खेलती है, तो किस क्रमांक की टीम विजेता होगी ?

(C) नकआउट टूर्नामेंट में मैचों की संख्या की गणना करने का सूत्र क्या है ?

(D) यदि एक नक–आउट प्रतियोगिता में 19 टीमें भाग ले रही हैं, तो नक आउट फिक्सचर बनाते समय कितनी बाई दी जाएँगी ?

या

(D) नक–आउट प्रतियोगिता में बाई की कुल संख्या की गणना करने का सूत्र क्या है ?

(केवल दृष्टिबाधित छात्रों के लिए प्रश्न)

'खेल दिवस' व 'स्वास्थ्य दौड़' किस प्रकार स्वास्थ्य जागरूकता व सौहार्द फैलाने में मदद करते हैं ? वर्णन कीजिए ।

Sol. (a) 4 rounds
(b) Team - 15
(c) n – 1
(d) 32 – 19 = 13 bye will be there

OR

$(2)^1, (2)^2, (2)^3, (2)^4,$..... – No. of teams.

खण्ड–य (SECTION – E)

(Attempt any 3 questions)
(किन्हीं तीन प्रश्नों के उत्तर दें)

34. What do you understand by Aggression in sports? Explain any 2 types of Aggression by giving suitable examples from sports. **1+2+2**

खेलों में आक्रामकता से आपका क्या तात्पर्य है? खेलों से उपयुक्त उदाहरण देते हुए किन्हीं दो प्रकार की आक्रामकता की व्याख्या कीजिए ।

Sol. **Meaning and Concept of Aggression**

In psychology, the term aggression refers to a range of behaviours that can result in both physical and psychological harm to oneself, others or objects in the environment. This type of social interaction centers on harming another individual either physically or mentally.

1. "Aggression is a behaviour with a goal of harming or injuring another living being who is motivated to avoid such treatment."
2. Aggression is defined as "any form of behaviour directed towards the goal of harming or injuring another living being who is motivated to avoid such treatment." (Baron and Richardson)
3. "Aggression is noun that is generally defined as an act of aggressive behaviour."

Types of aggression

1. Hostile Aggression
2. Instrumental Aggression
3. Assertive Behaviour

1. **Hostile Aggression:** Hostile aggression is inflicting or causing harm whether it is physical or psychological on someone else. It is sometimes referred as reactive aggression and can be accompanied by anger. In hostile aggression, the main aim is to cause injury to other sportsperson. rson. The intention is on causing pain and suffering. In simple words, hostile aggression is when the primary aim is to cause physical harm or injury to your opponent.
   Eg. A good example of hostile aggression is a bowler throwing a bouncer deliberately to shake up the concentration of a batsman. Some cricketers have deliberately done this in the past with the intent towards causing injury.

2. **Assertive Behaviour:** Assertive behaviour is different type of aggression/aggressive behaviour. This is defined as behaviour that involves the use of legitimate physical or verbal force to achieve one's purpose. For example, sledging in cricket to cause psychological discomfort for the batsman. For an act to be assertive it must be goal directed with no specific intention to harm with the use of legitimate force with no rules broken. In assertive aggression or assertive behaviour, the intention is to establish dominance rather than to harm the opponent. Any physical injury that may occur through assertive behaviour is accidental and unintentional. In fact, assertive behaviour is related to four main criteria i.e., it is goal oriented, not intended to harm, uses only legitimate force and does not break any rule of the game or sport. Even when coaches say to their players to be aggressive they mean to say that they be assertive.

35. What is Balanced Diet? What is the significance of pre and post competition meals for an athlete? Explain. **1+2+2**

संतुलित आहार क्या है ? किसी खिलाड़ी के लिए प्रतियोगिता से पूर्व व उसके पश्चात् आहार का क्या महत्त्व है ? वर्णन कीजिए ।

Sol. **Meaning of a Balanced Diet**

A balanced diet refers to the intake of edibles which can provide all the essential food constituents necessary for growth and maintenance of the body, in definite amount in which they are required by the body. A balanced diet means eating the right amount of foods from all food groups.
"A diet which consists of all the essential food constituents, viz., proteins, carbohydrates, fats, vitamins, minerals and water in correct proportion is called a balanced diet."

Nutrition Before the Competition

What a sportsperson consumes before a competition or training is really very important for a good sports performance. As a matter of fact, at least a week before competition, an athlete/sportsperson should take complex carbohydrate foods which usually help in enhancing the glycogen stores. Miller suggests that 500-600 g per day may make muscles store over 20 per cent more glycogen. The fuel for muscles is usually provided in the meals at least 3-4 days prior to competition. Therefore, it is very important to take a high energy meal not only on the day of competition, but also several days before. In fact, the intake of nutrition also depends on the intensity and type of activity being performed. Glucose is usually preferred as the best energy source, especially for the activity of high intensity.
So, before competition, the diet or meal should be rich in carbohydrate and low in fat, protein and fibre. Such type of diet may include bread, cereals, potatoes, pasta, rice, fruits and vegetables for quick energy.

Nutrition After the Competition

Nutrition after the competition is essential for proper recovery. Such nutrition is extremely important, as it will determine the recovery and energy level of the sportsperson for the next day's competition. First of all the preference should be given to replacement of any fluid loss. This can be easily done by the intake of water or fluid replacement drink. It is equally significant to take some carbohydrate immediately within 15 minutes after competition to start restoring glycogen. For this purpose fruits, juices and sports drinks may be included. High carbohydrate drinks may be used. Meals after the competition should be taken within two hours of the competition for the best glycogen restoration. About 100-200 g carbohydrate along with lean protein like meat or chicken should be taken. Intake of protein with carbohydrate after competition will definitely help in building, maintaining and repairing muscles. At least 20 g of protein is required after competition to enhance muscle recovery. It can be derived from the food like cheese, egg, milk, yoghurt, etc.

After two hours of competition, a sportsperson should take a complete balanced meal. In this meal, carbohydrate in the form of grains, rice, potatoes, cereals and vegetables and fruit and protein in the form of meat, fish, soyabeans, bread, peas and egg should be included. Various studies have shown that intake of carbohydrate approximately 2 g per kg of body weight and 40 g of protein within 2 hours after competition speed up the replenishment of glycogen stores and recovery time.

36. What do you understand by projectile trajectory? Explain the factors affecting projectile trajectory in sports. **1+4**

प्रक्षेप्य पथ से आप क्या समझते हैं? खेलों में प्रक्षेप्य पथ को प्रभावित करने वाले कारकों की व्याख्या करें।

Sol. **Projectile**

An object thrown into the space either horizontally or an acute angle under the action of gravity is called a projectile. There are two forces which act on a projectile gravitational force and air resistance. Air resistance of an object varies greatly and it depends on the object's particular shape and the atmospheric conditions in which the object is released or projected. The path followed by a projectile is called trajectory or parabola. In the field of games and sports there are many examples of projectile such as a bullet fired from a rifle or pistol in shooting, the arrow in archery, putting the shot, throwing a hammer. discus and javelin in athletics and long jumper while performing jump, etc. The description of various examples of projectile motion in sports is given below:

Football kicked in a game: When football is kicked in a game of soccer, it travels a certain distance in the air and it falls at an angle to the ground. This is an example of projectile motion.

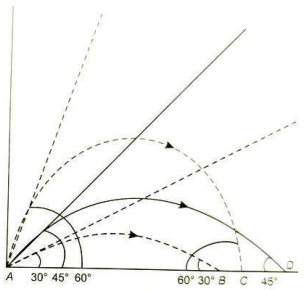
Javelin throw: In javelin throw, a javelin is thrown to the maximum distance. In javelin throw, a thrower runs a short distance to get some amount of momentum and then throws the javelin. The javelin travels a certain distance and then falls down following a parabolic path. The angle of the throw is very crucial as it determines the distance travelled by the javelin. Wind factors like wind speed and the direction of the wind are also crucial as they may affect the motion of the projectile.

Long jumps: In long jump, jumper has to jump to gain maximum distance. In order to increase the distance, the angle of the jump is very crucial. A maximum distance can be covered by a long jumper if he takes jumps at all angle of 45°.

Factors Affecting Projectile Trajectory

There are following factors that affect projectile trajectory or on an object's (an athlete, a hammer, a shot, a javelin or a ball) flight:

1. **Angle of projection:** Any object when projected at different angles, as shown in the adjacent figure, covers different distances. When it is projected or released at the angle of 30°, making a parabolic path, it covers less distance, i.e.. AB. When it is projected at the angle of 60°, it covers a distance, i.e., AC and when it is released at the angle of 45°, making a parabolic path it covers the maximum distance, i.e., AD. Here, it is supposed that the initial velocity in all the cases is same. So, the distance covered by an object (implement such as shot, hammer or javelin, etc.) depends on the angle of release of projectile. Scientifically, it can be said that the angle of 45° is the best angle for achieving maximum distance. If an object is projected at the angle of 90°, it does not cover any distance but falls on the same spot from where it is projected.



The parabolic path of an object at different angles

2. **Projection height relevant to the landing surface:** If the height of the projection and the landing surface is equal then release the object at the angle of 45°. If the level of the landing surface is more than the height of projection, increase the angle of projection, means above than 45°. If the level of landing surface is less than the height of projection, decrease the angle of projection, means less than 45°. So, the horizontal distance of an object depends on the relevancy of projection height and landing surface. For example, a golfer hitting a ball off the top of the hill would hit it farther than a golfer at the bottom of the hill. The ball will stay in the air longer so will have a greater chance to gain distance. In javelin, to gain more distance, throwers hold the javelin up higher to create a greater height of release.

3. **Initial velocity:** The distance covered by an object depends on the initial velocity of the projectile. If the initial velocity is more, the object covers maximum distance. On the other hand, if initial velocity is less, the object covers less distance.

4. **Gravity:** It is the force of attraction exerted by the earth towards its centre on a body or an object. The greater the weight of an object, the greater the influence of gravity upon it. Gravity affects a projectile as it decreases the height of projectile can obtain. The force of gravity acts on the object to stop its upward movement and pulls it back to earth, limiting vertical component of the projectile.

5. **Air resistance:** When a projectile moves through the air, it is slowed down by air resistance. Air resistance decreases the horizontal component of a projectile. The effect of air resistance is very small, but it needs to be taken into consideration if you want to increase the horizontal component of a projectile. There are following factors which are related to the amount of air resistance acting on a projectile:
   (i) Surface of the object.
   (ii) Surface to volume ratio
   (iii) Mass. Air resistance depends on the mass of the object
   (iv) Speed

37. What is Endurance? Explain any two types of Endurance on the basis of duration of the activity with suitable examples from sports. **1+2+2**

सहनक्षमता क्या है? गतिविधि की अवधि के आधार पर सहनक्षमता के किन्हीं दो प्रकारों का खेलों से उचित उदाहरण देते हुए वर्णन कीजिए ।

Sol. **Endurance**

Endurance is the ability to sustain an activity. Barrow and McGee, define endurance as the result of a physiologic capacity of the individual to sustain movement over a period of time. Herre also defines endurance as the ability to resist fatigue. In all sports activities, endurance is directly or indirectly of high importance. It is usually measured by the number of repetitions. For example, the number of sit-ups an individual can complete in one minute is often used to measure the endurance of the stomach muscle.

Types of Endurance According to the Duration of Activity

According to the duration of sports, endurance can be divided into the following types.

(a) Speed Endurance: Speed endurance is the ability to resist fatigue in activities lasting up to 45 seconds. The event of 400 m sprint is the most suitable example of speed endurance. Speed endurance is mainly dependent on the power and capacity of energy production.

(b) Short-Term Endurance: Short-term endurance is needed to resist fatigue in sports activities lasting from about 45 seconds to 2 minutes. This endurance also depends to a large extent on strength endurance and speed endurance. The endurance needed for 800 m race is the most suitable example for short term endurance.

(c) Middle-Term Endurance: The middle-term endurance is needed for such sports activities which last from 2 to 11 minutes. It also depends on strength endurance and speed endurance but to a limited degree. The endurance needed for 1500 m race and steeple chase race by a runner is the most suitable example of middle term endurance.

(d) Long-Term Endurance: Long-term endurance is needed in such sports activities which last for more than 11 minutes. The sports activities such as 5000 m, 10,000 m cross country and marathon races require such type of endurance.