

**PART-B**  
**PHYSICAL EDUCATION**

51. Sodium bicarbonate ingestion improves middle distance running performance by :
- (A) elevating the pH and buffering capacity of the extracellular fluid allowing a faster efflux of hydrogen ions from muscle
  - (B) reducing the pH and buffering capacity of the extracellular fluid allowing a faster efflux of hydrogen ions from muscle
  - (C) elevating the pH and buffering capacity of the extracellular fluid allowing a faster influx of hydrogen ions into muscle
  - (D) elevating the pre-exercise muscle pH.
52. The beta-oxidation of a molecule of palmitic acid,  $\text{CH}_3(\text{CH}_2)_{14}\text{CO}_2\text{H}$  :
- (A) yields 8 molecules of acetyl-CoA and some ATP and water
  - (B) yields 16 molecules of acetyl-CoA only
  - (C) yields carbon dioxide and water only
  - (D) does not involve oxygen.
53. Substrate-level phosphorylation differs from oxidative phosphorylation in that :
- (A) substrate-level phosphorylation involves the transfer of electrons
  - (B) substrate-level phosphorylation only occurs in the cytosol
  - (C) oxidative phosphorylation only occurs in the cytosol
  - (D) oxidative phosphorylation involves the transfer of electrons.
54. Match List-I with List-II and select the correct option from the codes given below :
- | List-I                  | List-II                    |
|-------------------------|----------------------------|
| (a) Strap muscle        | (i) Flexor pollicis longus |
| (b) Unipennate muscle   | (ii) Deltoid               |
| (c) Bipennate muscle    | (iii) Sternocleidomastoid  |
| (d) Multipennate muscle | (iv) Gastrocnemius         |
- Codes :**
- |           |       |       |       |
|-----------|-------|-------|-------|
| (a)       | (b)   | (c)   | (d)   |
| (A) (i)   | (ii)  | (iii) | (iv)  |
| (B) (ii)  | (iii) | (i)   | (iv)  |
| (C) (iii) | (i)   | (iv)  | (ii)  |
| (D) (iv)  | (ii)  | (i)   | (iii) |
55. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R) :
- Assertion (A) :** Exercise performed in hot, dry conditions is limited because of the rising body core temperature and strain placed on cardiovascular system due to dehydration.
- Reason (R) :** Exercises performed in extreme hot condition can lead to heat disorders like dehydration, heat cramps, heat exhaustion and heat stroke.
- In the context of the above statements, which one of the following is true ?
- Code :**
- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
  - (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
  - (C) (A) is true, but (R) is false.
  - (D) (A) is false, but (R) is true.

56. A Correlation coefficient of 0 means that there is
- (A) a strong negative relationship between the two variables
  - (B) a strong positive relationship between the two variables
  - (C) a perfect positive relationship between the two variables
  - (D) no relationship between the two variables.
57. We wish to test the hypothesis that music improves learning. We compare test scores of students who study to music with those who study in silence. Which of the following is an extraneous variable in this experiment?
- (A) the presence or absence of music
  - (B) the students' test scores
  - (C) the amount of time allowed for the studying
  - (D) silence.
58. Subjects are said to be assigned randomly when
- (A) They are assigned to experimental and control groups from a sample which is representative of the larger population.
  - (B) They each have an equal chance of being assigned to either the experimental or control group.
  - (C) They are assigned to experimental and control groups so that the groups differ on some critical variable before the experiment begins.
  - (D) neither the experimenter nor the subject knows whether the subject is in the experimental or control group.
59. A researcher studying the history of physical education finds a manuscript that purports to be from the 14th century. Before he uses the source, he goes to three other experts who help him identify whether the manuscript is authentic or not. His authentication of the object is referred to as :
- (A) Positive criticism
  - (B) Internal criticism
  - (C) Secondary criticism
  - (D) External criticism.
60. Which of the following statements is/are true according to the logic of hypothesis testing?
- (A) When the null hypothesis is true, it should not be rejected
  - (B) When the null hypothesis is false, it should be rejected
  - (C) When the null hypothesis is false, it should not be rejected
  - (D) Both (A) and (B) are true.
61. Tests like SAT are used to measure
- (A) aptitude
  - (B) intelligence
  - (C) achievement
  - (D) performance.
62. Which of the following tests does not measure performance?
- (A) IQ tests
  - (B) Otis-Lennon
  - (C) Differential Aptitude Test
  - (D) Wechsler.
63. To which country does Primo Nebiolo, the I.A.A.F. president belongs?
- (A) United States
  - (B) Italy
  - (C) France
  - (D) Greece.

64. Which is the name of trophy awarded to the winners of National Men's Championship in Basketball?
- (A) B.L. Gupta trophy  
(B) Sullivan Cup  
(C) Todd memorial Trophy  
(D) None of the above.
65. Hick's Badminton Test Consists of three items. Identify the test items from the options given below :
- (a) Standing backward jump  
(b) Clear Test  
(c) Smash Test  
(d) Shuttle Run  
(e) Strategy Test
- (A) (a), (b) and (d)  
(B) (b), (c) and (e)  
(C) (a), (b) and (e)  
(D) (b), (c) and (d)
66. The inferior surface of the clavicle gives attachment to all of the following EXCEPT :
- (A) Conoid ligament  
(B) Trapezoid ligament  
(C) Costoclavicular ligament  
(D) Pectoralis major muscle.
67. The momentum of a body of mass 5 kg is 500 kgm/s. Find its kinetic energy?
- (A)  $2 \times 10^5$  J  
(B)  $2.5 \times 10^4$  J  
(C)  $2.5 \times 10^5$  J  
(D) 2.5 J
68. A ball is thrown vertically upward, its velocity at the highest point is :
- (A)  $-10 \text{ mS}^{-1}$   
(B)  $10 \text{ mS}^{-1}$   
(C) Zero  
(D)  $100 \text{ mS}^{-1}$
69. Which of the following is kinetic energy's formula?
- (A)  $\text{KE} = 0.5 \cdot m \cdot v$   
(B)  $\text{KE} = 0.5 \cdot m \cdot v^2$   
(C)  $\text{KE} = m \cdot v^2$   
(D)  $\text{KE} = 0.6 \cdot m \cdot v^2$
70. For a particle moving along a circular path, the angular velocity vector is directed
- (A) along the radius towards the centre  
(B) along the radius but away from the centre  
(C) along the tangent to the circular path  
(D) along the axis of rotation.
71. Match List-1 and List-II and select the correct option using the codes given below :
- | <b>List-1</b>                     | <b>List-II</b> |
|-----------------------------------|----------------|
| a. Classical Theory of Management | 1. Henry Fayol |
| b. Administrative Theory          | 2. F.W. Taylor |
| c. Human Resource Theory          | 3. Max Weber   |
| d. Scientific Management Theory   | 4. Elton Mayo  |
- Codes :**
- |     | a | b | c | d |
|-----|---|---|---|---|
| (A) | 1 | 2 | 3 | 4 |
| (B) | 3 | 1 | 4 | 2 |
| (C) | 2 | 3 | 1 | 4 |
| (D) | 4 | 2 | 3 | 1 |

72. Match List-I and List-II and select the correct option using the codes given below :

**List-I**

- Classical conditioning to a task being rewarded
- Operant conditioning and find a way to respond effectively
- Trial & error learning
- Problem solving

**List-II**

- Involves the correct response
- Need to see the whole situation
- Repeated stimulus response
- Testing various methods of achieving a goal until found one that works

**Codes :**

	a	b	c	d
(A)	1	2	3	4
(B)	3	1	4	2
(C)	2	4	1	3
(D)	4	3	2	1

73. Given below are the two statements, one labelled as assertion (A) and other as reason (R).

**Assertion (A) :** The original noble idea of Coubertin to develop International Understanding and good will among youth of the world has not been attained so far.

**Reason (R) :** Organizers have used Olympic Games to establish their economic power and political supremacy instead of translating the noble idea of Coubertin.

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

**Codes :**

- Both (A) and (R) are right, but (R) is the correct explanation(A).
- (A) is right, but (R) is wrong.
- (A) is wrong, but (R) is right.
- Both (A) and (R) are right and (R) is not the correct explanation of (A).

74. Given below are the two statements, one labelled as assertion (A) and other as reason (R).

**Assertion (A) :** Psychological core of Personality is the deepest component which includes attributes, value, interests, motives and self-worth of an individual.

**Reason (R) :** Psychological core of Personality is dynamic and external and make adjustment to the environment.

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

**Codes :**

- Both (A) and (R) are right, but (R) is the correct explanation (A).
- Both (A) and (R) are right and (R) is not the correct explanation of (A).
- (A) is wrong, but (R) is right.
- (A) is right, but (R) is wrong.

75. Match List-I and List-II and select the correct option from the code given below :

**List-I**

- Iron
- Sodium
- Phosphorus
- Iodine

**List-II**

- Proper thyroid function
- Development of strong bones
- Functional of nervous system
- Formation of Haemoglobin

**Codes :**

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

76. The study of how learning occurs is mainly a part of :

- I. Neuropsychological
- II. Physiology of Exercise
- III. Educational Psychology
- IV. Sociology of Sports

Find the correct combination :

- (A) I, III
- (B) II, III
- (C) III, IV
- (D) I, II

77. Which Hepatitis is a slow Killer?

- (A) Hepatitis-A
- (B) Hepatitis-C
- (C) Hepatitis-B
- (D) Hepatitis-D.

78. Fetal alcohol syndrome is associated with which of the following?

- (A) Leukaemia
- (B) Developmental disabilities
- (C) Phenylketonuria
- (D) Hepatitis.

79. Match List-I with List-II and select the correct option from the codes given below :

List-I	List-II
I. NSNIS Centre, Bangalore	1. 1987
II. NSNIS Centre, Gandhinagar	2. 1983
III. NSNIS Centre, Calcutta	3. 1984
IV. LNCPE, Trivandrum	4. 1975

**Codes:-**

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

80. Match the terms of List-I with that of List-II and indicate perfect matching out of abcd below :

List-I	List-II
I. Haemoglobin	1. Blood Grouping
II. Thromboplastin	2. Leucocytes
III. Albumin	3. Erythrocytes
IV. Agglutinin	4. Thrombocytes
V. Phagocytosis	5. Plasma Protein

**Codes:-**

	I	II	III	IV	V
(A)	3	4	5	1	2
(B)	1	2	3	4	5
(C)	5	3	4	1	2
(D)	5	1	3	4	2

81. Find the correct sequential order of a muscle contraction to occur :

- I. Release of acetylcholine
- II. Action Potential
- III. Depolarization
- IV. Acto-myosin complex
- V. Nerve impulse generated

**Codes :**

- (A) V, II, III, IV, I
- (B) II, III, V, I, IV
- (C) V, III, II, I, IV
- (D) II, I, V, IV, III

82. Match List-I with List-II and indicate perfect matching out of (A), (B), (C) and (D) below :

List-I (Deficiency Disease)	List-II (Vitamin)
1. Wernicke-Korsakoff syndrome	(i) Retinol
2. Arobinflavinoss	(ii) Thiamine
3. Hyperkeratosis	(iii) Riboflanin
4. Paresthesia	(iv) Pantothenic acid
	(v) Scurvy

**Codes :**

	1	2	3	4
(A)	(i)	(iii)	(ii)	(v)
(B)	(iii)	(i)	(ii)	(iv)
(C)	(iv)	(ii)	(iii)	(i)
(D)	(ii)	(iii)	(i)	(iv)

83. International Society of Sports Psychology was established in :
- (A) 1974
  - (B) 1953
  - (C) 1944
  - (D) 1960
84. Respiratory exchange ratio for carbohydrate is :
- (A) 0.80
  - (B) 1.50
  - (C) 1.40
  - (D) 1.00
85. The trunk line of nervous system is :
- (A) Axon
  - (B) Ganglia
  - (C) Thalamus
  - (D) Spinal cord.
86. Word "Diskos" in greek meant
- (A) A thing of playing
  - (B) A thing of throwing
  - (C) A thing of pushing
  - (D) A thing of eating.
87. What role conflict lead to teacher-coach burnout?
- (A) Demands of society
  - (B) Demands of Institution
  - (C) Expectations of being a teacher-coach
  - (D) Demands of Peer Groups.
88. Sequence of twelve graceful exercises comes under :
- (A) Circuit Training
  - (B) Aerobics
  - (C) Weight Training
  - (D) Sun Salutation.
89. Must rest in between periods of strength training is :
- (A) 72 hours
  - (B) 48 hours
  - (C) 24 hours
  - (D) 2 hours.
90. Flexibility considered important for physical health because :
- (A) It prevents muscle pulling.
  - (B) Makes a good impression on others.
  - (C) Helps lift heavy weights.
  - (D) Helps Fight diseases.
91. Physiological improvement brought about by psychological mechanism is :
- (A) Ergometry
  - (B) Placebo effect
  - (C) Aggression
  - (D) Goniometer.
92. Hamstring and back flexibility is measured by :
- (A) Cooper Test
  - (B) Bass Stick Test
  - (C) Boomrang Test
  - (D) None of the above.

93. Each Myosin Filament is surrounded by :
- (A) Four Actin Filament  
 (B) Five Actin Filament  
 (C) Six Actin Filament  
 (D) Five Tropomyosin Molecules.
94. Rationalisation theory of management unequivocally advocates :
- (A) Division of authority  
 (B) Right person for the right job  
 (C) Division of responsibility  
 (D) Freedom of thought and action.
95. RMP of a nerve :
- (A) is caused by equal distribution of ions along both sides of the membrane.  
 (B) is caused by selective permeability of the membrane to the ions.  
 (C)  $\text{Na}^+ - \text{K}^+$  pump has no role in RMP.  
 (D) is caused mainly by inward movement of  $\text{Na}^+$  ions.
96. An action potential arriving at the motor endplate causes release of :
- (A) acetylcholine which traverses the neuromuscular junction  
 (B) sodium ions which binds to sodium receptors on the muscle membrane  
 (C) calcium ions which initiate an action potential along the muscle fibre  
 (D) noradrenaline which increases muscle metabolic activity.
97. Which company was the official time keeper of the Beijing Olympics 2008?
- (A) Casio  
 (B) Seiko  
 (C) Swatch  
 (D) Omega.
98. Which of the following groups is the most correct set of core elements of a rational analysis system?
- (A) Action, outcome, position, effect on possession.  
 (B) Player, outcome, position, action  
 (C) Possession, action, position, time  
 (D) Player, position, action, time.
99. Match List-I and List-II and select the correct option from the codes given below :
- | <b>List-I</b> | <b>List-II</b>      |
|---------------|---------------------|
| 1. ADH        | (i) Water retention |
| 2. FSH        | (ii) Aldosterone    |
| 3. STH        | (iii) Metabolism    |
| 4. ACTH       | (iv) Progesteron    |
- Codes :**
- |     | 1    | 2     | 3     | 4     |
|-----|------|-------|-------|-------|
| (A) | (i)  | (iv)  | (iii) | (ii)  |
| (B) | (ii) | (iv)  | (i)   | (iii) |
| (C) | (i)  | (iii) | (ii)  | (iv)  |
| (D) | (iv) | (iii) | (ii)  | (i)   |
100. In classical test theory, an obtained score which comprises a person's true score and error score is
- (A) error score  
 (B) standard score  
 (C) observed score  
 (D) true score.

## ROUGH WORK

Answer Key: Physical Education

<b>51-a</b>	<b>61-a</b>	<b>71-b</b>	<b>81-c</b>	<b>91-b</b>
<b>52-a</b>	<b>62-c</b>	<b>72-b</b>	<b>82-d</b>	<b>92-d</b>
<b>53-d</b>	<b>63-b</b>	<b>73-d</b>	<b>83-c</b>	<b>93-c</b>
<b>54-c</b>	<b>64-c</b>	<b>74-d</b>	<b>84-d</b>	<b>94-d</b>
<b>55-b</b>	<b>65-b</b>	<b>75-c</b>	<b>85-d</b>	<b>95-b</b>
<b>56-d</b>	<b>66-d</b>	<b>76-a</b>	<b>86-b</b>	<b>96-a</b>
<b>57-c</b>	<b>67-b</b>	<b>77-b</b>	<b>87-c</b>	<b>97-d</b>
<b>58-b</b>	<b>68-c</b>	<b>78-b</b>	<b>88-d</b>	<b>98-d</b>
<b>59-d</b>	<b>69-b</b>	<b>79-d</b>	<b>89-b</b>	<b>99-a</b>
<b>60-d</b>	<b>70-d</b>	<b>80-a</b>	<b>90-a</b>	<b>100-c</b>