

# ANSWER KEY

FYBA/BCOM/BSC 2018

QP Code :30250

## Q.No.1 (a) Fill in the Blanks

- 1) a
- 2) c
- 3) c
- 4) b
- 5) c
- 6) b
- 7) a

## (b) Match the pair

- 1) 6
- 2) 1
- 3) 2
- 4) 5
- 5) 4
- 6) 7
- 7) 3

## (c) Write the sentence true or false:-

- 1) False
- 2) True
- 3) True
- 4) True
- 5) False
- 6) False
- 7) True

## 2. Explain in details the dimension of the health ?

### Ans:- Health:-

As defined by World Health Organization (WHO), it is a "State of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity."

It is the quality of life that enables an individual to live most and serve best.

-J.F William

### Dimension of Health

Good health is vital to every individual. However, it doesn't mean being physically strong. Other aspects are also involved. This Buzzle write-up provides information on the five dimensions of health and their importance.

The five dimensional model of health includes physical, intellectual, emotional, social, and spiritual aspects. These health parameters were set by the World Health Organization (WHO) in 1948. The quality of life of an individual or the overall well-being of an individual is determined by the interactions between these five dimensions. It's important to understand these dimensions, and find ways to ensure a balance of mind, spirit, and body.

### Physical

Physical health refers to the state of the body, and its ability to perform bodily functions. It refers to the aspects that are essential for keeping the body in the best condition. Physical dimension purely refers to the perfect functioning of the body externally as well as internally. Externally: having good physique, good appearance, good texture and complexion, attractive features, well-structured and strong body parts and limbs, well-groomed posture, graceful carriage and efficient movement. Internally: all systems of human body, i.e., digestive, circulatory, respiratory, nervous, and excretory system, and sensory organs are functioning optimally. The pulse rate, blood pressure and body weight being in normal limits according to the age and sex. Physical dimension i.e. physical health means proper functioning of the systems and physical wellbeing of the body, cumulative result being perfect and harmonious functioning of the human body.

Following are a few ways to ensure good physical health:

- Eat nutritious food to keep the body and mind energized.
- Never skip meals or overeat.
- Water is essential for cleansing the body.
- Fitness through exercise will increase immunity and endurance levels of the body.

- Regular medical check-ups can help in arresting illnesses in their early stages.
- Sleep at least for 7 uninterrupted hours daily.
- Avoid addictive substances.

### **Intellectual**

This is a cognitive ability to develop skills and knowledge to enhance one's life. Our intellectual capacity helps to stimulate our creativity and improve our decision-making ability. Here are ways to maintain intellectual health:

- Setting realistic goals will go a long way in keeping you healthy.
- Explore every opportunity with an open mind.
- Be aware of the demands and expectations others have from you.
- Have a positive outlook, especially when dealing with conflicts.

### **Emotional**

Our ability to accept and cope with our own feelings, as well as emotions experienced by others is defined as emotional well-being. Emotions contribute to almost all aspects of our life, at times, even setting course of actions. Symptoms of emotional problems such as hopelessness, depression, anxiety, and even suicidal tendencies are not always easily detectable, and these can have an adverse effect on one's quality of life.

- Awareness and acceptance of our strength and shortcomings is essential for our emotional well-being.
- One should have the ability to handle stress and seek help, if needed.
- One should build strong communication networks among family, friends, and peers.

### **Social**

Social health is ability to get along with one self and with others, to be independent but at the same time to realise how dependent one is on others. Building and maintaining satisfying relationships comes naturally to us, as we are social animals. Being socially accepted is also connected to our emotional well-being.

- One should improve or enhance one's ability to interact with people, and be receptive to their ideas with an open mind.
- One should accept and understand diverse cultural norms.
- One should build networks among different kinds of people.
- One should adopt a positive self-image.
- One should enhance interpersonal communication skills.

### **Spiritual**

Our good health is incomplete without being spiritually healthy. Being spiritual translates to the ability and desire to seek meaning and purpose of life. Spiritual health refers to our personal beliefs and values. There are no prescribed ways to attain spiritual well-being. It's more a matter of looking inwards to understand the meaning of our existence.

Life as we know is a puzzle; health dimensions are separate pieces that need to be fitted together to understand its meaning. Though we all seek a harmonious balance between the mind, body, and spirit to lead an optimal fulfilled life, it's rarely attained in totality. Our own feelings of weakness and non-acceptance of life's events causes distress in our daily life. Therefore, one needs to make efforts to understand the roles played by these dimensions, as that would help us attain good health and happiness.

**OR**

## What is fitness index ? How Fitness index will be measure?

**Ans:- Fitness Index (F.I) = (100 x test duration in seconds) divided by (2 x sum of heart beats in the recovery periods).**

**fitness index** For example, if the total test time was 300 seconds(if completed the whole 5 minutes), and the number of heart beats between 1-1.5 minutes was 90, between 2-2.5 it was 80 and between 3-3.5 it was 70, then the long form Fitness Index score would be:  $(100 \times 300) / (240 \times 2) = 62.5$ . Note: you are using the total number of heart beats in the 30 second period, not the rate (beats per minute) during that time.

### **Rating**

Excellent	> 96
Good	83 – 96
Average	68 – 82
low	54 – 67
average	
Poor	< 54

3. Explain in details of the Philips JCR Test ?

### **Ans:- Phillip's JCR Test-**

This test also measures the General Motor ability of the subjects with respect to power, speed, agility and muscular endurance. The test consists of three items namely vertical jump (J), Chinning (C) and shuttle run (R).

**Equipment required:** Vertical jump board or marked wall, marking chalk powder, stopwatch, chinning bar, 2 wooden blocks (2" \*2" \*4").

**Test Administration:** The test procedure of each item is given below.

i. **Vertical Jump:** - The subject is asked to stand erect facing the board. His/her dominant hand's fingertips are marked with chalk powder and the subject is asked to raise the marked fingertips to a maximum height on the blackboard without lifting the heels so as to mark his/her maximum reach point. The fingertips are re chalked. With the chalked hand side towards the wall, a vertical jump is to be performed by the subject to make another mark at the maximal height of the jump. The subject is not allowed to run or hop. However, the subject is properly instructed to take a good jump by bending knees and swinging the arms. The subject may be give three to five trails at his/her will and the best performance is considered.

**Scoring:** - The maximum distance (among all the trails) between the reaching height and the jumping height provide the score of the test.

ii. Chinning (Pull ups): -

□ **Pull- ups for Boys-** The bar is located at such a height so that the feet of the tallest subject do not touch the ground while hanging on the chinning bar. The subject is asked to hang from the bar by his hands with forward grip and to chin up by pulling himself up until his chin is above the bar. Then he has to lower the body until his arms are straight and is asked not to use kick or jerky motion. If he does not straighten his arms completely when lowering the body or if he kicks, jerks or keeps (keeping one's chin on the bar) in performing the movement, then half counts are recorded.

**Scoring:** - The number of complete pull-ups plus one half of the half counts (if any) constitute the scoring.

□ **Pull- ups for Girls-** Either an adjustable horizontal bar or one bar of the parallel bar which permits convenient raising and lowering, is used for this test item. A mat is laid on the floor to prevent the feet from slipping. The bar is adjusted to a height equal to the level of the sternum of the subject so that each has to pull approximately the same portion of her weight. The subject grasps the bar with palms outward and slides her feet under the bar until the body and arms form nearly a right angle when body is held straight. The weight rests on the heels. The subject is asked to pull- up to the bar with the body keeping straight as many times as possible. If the body sags, if the hips rise or if the subject does not pull completely up or go completely up or go completely down, half credits are given, up to four half credits.

**Scoring:** - The number of complete pull-ups plus one half of the half counts (if any) constitute the scoring.

iii. **Shuttle Run-** Two parallel lines are marked on the floor 10 yard apart or the width of the regular volleyball court may be used for the test. The two wooden blocks are placed behind one of the lines. The subject is asked to start from behind the line other than the one behind which the wooden blocks are placed. On the signal ready? go, the timer starts the watch and the subject runs towards the block, picks-up one block, runs back to the starting line, places the block behind the starting line, turns back and picks –up the second block is placed on the ground the timer stops the watch and records the time.

**Scoring:** Two trails are allowed to each subject with some rest in between. The time of the better of the two trails is recorded to the nearest 10<sup>th</sup> of the second as a score of the test item.

## **OR**

Write the components of physical fitness .Explain in details?

### **Ans:- components of Physical Fitness**

Physical fitness is defined as being in a general state of health and well-being or specifically the ability to perform aspects of sports or occupations.

Being at a high level of physical fitness can be achieved through a combination of daily physical activity, exercise, and a healthy diet. The 11 components of physical fitness play an important role in one's daily activities. Improving upon all areas of physical fitness will help you to improve daily activities and maintain a healthy lifestyle.

It is important to know that all components of physical fitness can be improved no matter what stage of life. Children, teens, adults, and the elderly will see improvements in all aspects of physical fitness if the proper exercises and training techniques are implemented into daily exercise routines. Once proper training techniques are established, then exercise consistency, mental focus, and discipline will be most important for improving individuals' overall physical fitness levels.

The 11 components of physical fitness are comprised of 5 components that are considered the "most important" for being healthy and physically fit and 6 components that are more skill-related.

### **11 Components of Physical Fitness that are-**

1. **Strength** - the extent to which muscles can exert force by contracting against resistance (e.g. holding or restraining an object or person)

2. **Power** - the ability to exert maximum muscular contraction instantly in an explosive burst of movements. The two components of power are strength and speed. (e.g. jumping or a sprint start)
3. **Agility** - the ability to perform a series of explosive power movements in rapid succession in opposing directions (e.g. ZigZag running or cutting movements)
4. **Balance** - the ability to control the body's position, either stationary (e.g. a handstand) or while moving (e.g. a gymnastics stunt)
5. **Flexibility** - the ability to achieve an extended range of motion without being impeded by excess tissue, i.e. fat or muscle (e.g. executing a leg split)
6. **Muscle Endurance** - a single muscle's ability to perform sustained work (e.g. rowing or cycling)
7. **Cardiovascular Endurance** - the heart's ability to deliver blood to working muscles and their ability to use it (e.g. running long distances)
8. **Strength Endurance** - a muscle's ability to perform a maximum contraction time after time (e.g. continuous explosive rebounding through an entire basketball game)
9. **Co-ordination**- the ability to integrate the above listed components so that effective movements are achieved.
10. **Body Composition**- It means the ratio of muscle to fat in the body.
11. **Reaction Time**- How quickly an individual respond to a stimulus. Reaction time is a skill-related component of physical fitness.

#### **4. Write importance of physical Education and explain its role to develop wellness of the students?**

##### **Ans:- Importance of Physical Education**

Physical education is an integral part of the total education of every child. Quality physical education programs are needed to increase the physical competence, health-related fitness, self-responsibility, and enjoyment of physical activity for all students so that they can be physically active for a lifetime.

Physical Education is of special importance to students.

1. They are great sources of pleasure to them.
2. They build the body and refresh their mind.
3. They train the mind in many virtues.
4. They teach the players discipline and team spirit
5. Physical education creates in students 'the sporting spirit'. The students learn to play fair and honourably and to keep the rules of the game.
6. They develop pluck and patience.
7. Physical education aims at bringing the best in the students.
8. Improves Physical Fitness that is muscular strength, flexibility, muscular endurance, body composition and cardiovascular endurance.
9. Develops motor skills, which allow for safe, successful and satisfying participation in physical activities.
10. Provides a wide-range of developmentally appropriate activities for all children.
11. Facilitates development of student responsibility for health and fitness.

##### **Role to develop wellness**

- Health experts have identified that CHANGING BEHAVIORS can improve a person's quality of life.
- KNOWING the BENEFITS from changing various behaviors is a motivation for many.
- CONTROLLING Risk Factors will also increase overall wellness.

To live a quality life, a person should change and maintain the following:

Diet

Physical Activity

Resisting Peer Pressure

Improving your Physical Environment

Stress Management

Regular Visits to Doctor

Getting Adequate Rest

12. Quality physical education can influence moral development. Students have the opportunity to assume leadership, cooperate with others; question actions and regulations and accept responsibility for their own behaviour.
13. Physical activity becomes an outlet for releasing tension and anxiety, and facilitates emotional stability and resilience.
14. Physical education can be a major force in helping children socialize with others successfully and provide opportunities to learn positive people skills
15. Physical education instils a stronger sense of self-worth in children based on their mastery of skills and concepts in physical activity. They can become more confident, assertive, independent and self-controlled.
16. Gives children the opportunity to set and strive for personal, achievable goals.

**OR**

**What is Body Compositions? Explain different Techniques of measuring body composition.**

**Ans:-** The definition of health-related fitness involves exercise activities that you do in order to try to improve your physical health and stay healthy.

The components of Health related fitness are a basis from which to measure our general wellbeing. It is the aim of exercise to improve our capabilities in each of these areas.

Different sports will be more demanding in some, and less demanding in others, but athletes usually strive to achieve a reasonable level of health fitness in each area.

There are five health related components of fitness. These are Cardiovascular Endurance, Muscular Strength, Flexibility, Muscular Endurance, Body Composition.

#### **1. Cardiovascular Endurance-**

Cardiovascular endurance is also referred to as aerobic fitness, and is a measure of the athlete's ability to continue with exercise which places demands on the circulatory and respiratory system over a prolonged period of time. This occurs in activities such as running, walking, cycling and swimming.

#### **2. Muscular Strength-**

Muscular strength is the maximal force that can be applied against a resistance. It could be measured by the largest weight a person could lift. or the largest body they could push or pull.

#### **3. Flexibility-**

Flexibility is the measure of free movement in a person's joints. This is especially important in gymnastics.

#### **4. Muscular Endurance-**

Muscular endurance differs from muscular strength in that it is a measure of a person's ability to repeatedly apply maximal force, for example in a series of press ups, over a period of time.

#### **5. Body Composition-**

Body composition is usually measured by the percentage body fat a person carries.

#### **5. Explain the role of physical fitness in daily healthy life ?**

**Ans:- Physical Fitness**

Physical fitness is a general state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations and daily activities. Physical fitness is generally achieved through proper nutrition, moderate-vigorous physical exercise, and sufficient rest. Physical Fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypokinetic diseases, and to meet emergency situations.

The main concept of Physical fitness is **F.I.T.T** that is-

**F.I.T.T.** = Frequency, Intensity, Time, and Type

**Frequency** - how often you do physical activity.

**Intensity** - how hard you perform physical activity.

**Time** - how long do you do physical activity?

**Type** - what is the activity you are involved in?

#### **Types of Physical Fitness-**

Physical fitness comprises the **3s - stamina, strength and suppleness**. One exercise can benefit more than one area. For instance, jogging can improve your stamina and suppleness at the same time. Most forms of sports, work, and recreational activities include elements of aerobic fitness. A range of physical activities thus ensures total fitness.

**Stamina-:**

Stamina or endurance involves the ability to sustain physical activity for prolonged periods. Generally speaking, any activity which lasts more than 12 minutes is considered aerobic. The term "aerobic" implies that the oxygen utilization by the body was the principle factor in accomplishing the task.

**Strength Fitness-:**

Stronger muscles can mean either more powerful muscles that can do better jobs (such as lifting heavier objects) or muscles that will work longer before becoming exhausted (stamina).

As you increase your muscle strength, you will notice that you can carry heavier grocery bags more easily; pick up children without feeling as much strain; or carry heavy item longer before becoming too tired to continue.

**Suppleness-:**

Your muscles are repeatedly shortened when they are used, especially when exercising. They need to be slowly and regularly stretched to counteract the repeated shortening.

This stretching results in suppleness or flexibility - the ability to move joints and muscles through their full range of motion. As you become more flexible, you will find it easier to reach things on high shelves, to bend lower and perhaps, tie your shoe lace.

**OR**

**Write short notes on any three of the following\**

**1.Importance of Physical Education.****Ans:-**

Physical education is an integral part of the total education of every child. Quality physical education programs are needed to increase the physical competence, health-related fitness, self-responsibility, and enjoyment of physical activity for all students so that they can be physically active for a lifetime.

Physical Education is of special importance to students.

1. They are great sources of pleasure to them.
2. They build the body and refresh their mind.
3. They train the mind in many virtues.
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7. Physical education aims at bringing the best in the students.
8. Improves Physical Fitness that is muscular strength, flexibility, muscular endurance, body composition and cardiovascular endurance.
9. Develops motor skills, which allow for safe, successful and satisfying participation in physical activities.
10. Provides a wide-range of developmentally appropriate activities for all children.
11. Facilitates development of student responsibility for health and fitness.

**2. Environment on health**

**Ans:-** The social and economic environment, The physical environment, and The person's individual characteristics and behaviours. The context of people's lives determines their health, and so blaming individuals for having poor health or crediting them for good health is inappropriate. Individuals are unlikely to be able to directly control many of the determinants of health. These determinants—or things that make people healthy or not—include the above factors, and many others:

Physical environment – safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health. Employment and working conditions – people in employment are healthier, particularly those who have more control over their working conditions



### 3. Basic fitness components.

- Ans:-** 1. **Strength** - the extent to which muscles can exert force by contracting against resistance (e.g. holding or restraining an object or person)
2. **Power** - the ability to exert maximum muscular contraction instantly in an explosive burst of movements. The two components of power are strength and speed. (e.g. jumping or a sprint start)
3. **Agility** - the ability to perform a series of explosive power movements in rapid succession in opposing directions (e.g. ZigZag running or cutting movements)
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9. **Co-ordination**- the ability to integrate the above listed components so that effective movements are achieved.
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11. **Reaction Time**- How quickly an individual respond to a stimulus. Reaction time is a skill-related component of physical fitness.

### 4. Aerobic Exercise

**Ans:-**Aerobic (or cardiovascular exercise, a term attributed to this kind of exercise because of its various benefits in cardiovascular health) refers to exercise that involves or improves oxygen consumption by the body. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy-generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. This intensity can vary from 50-80% of maximum heart rate.

There are various types of aerobic exercise. In general, aerobic exercise is one performed at a low to moderate level of intensity over a long period of time. For example, running a long distance at a moderate pace is an aerobic exercise, but sprinting is not. Playing tennis, with near-continuous motion, is generally considered aerobic activity, while doubles tennis, with their brief bursts of activity punctuated by more frequent breaks, may not be predominantly aerobic. Examples are cycling, walking, running, hiking, and playing tennis, focus on increasing cardiovascular endurance.

### 5.Spiritual wellness

**Ans:-** Spiritual Wellness is the ability to establish peace and harmony in our lives. The ability to develop congruency between values and actions and to realize a common purpose that binds creation together contributes to our Spiritual Wellness.

