



# BK BIRLA CENTRE FOR EDUCATION

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

## MID-TERM EXAMINATION 2024-25

PHYSICAL EDUCATION (048)



Class : XII Sci/Com/Hum

Date : 19/09/2024

Admission No:

Duration: 3 Hrs

Max. Marks: 70

Roll No. :

### General Instructions:

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

### Section-A

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

1. The Summer Paralympics are scheduled to be held in 2024 in \_\_\_\_\_. (1)  
a. China                      b. Italy                      c. Paris                      d. Japan
2. What is the formula to divide an odd number of teams in the upper half for a knock-out fixture? (1)  
a.  $N+1/2$                       b.  $N-1/2$                       c.  $N(N-1)/2$                       d.  $N(N+1)/2$
3. Which asana is used for curing Hypertension? (1)  
a. Kapalabhati                      b. Pawanmuktasana                      c. Dhanurasana                      d. Makarasana
4. Scoliosis is a postural deformity related with (1)  
a. Foot                      b. Leg                      c. Vertebral column                      d. Hand
5. Katichakrasana helps to cure which lifestyle disease? (1)  
a. Hypertension                      b. Back pain                      c. Diabetes                      d. Obesity
6. In a knock-out tournament 3<sup>rd</sup> Bye will be given to: (1)  
a. Last team of Lower half  
b. Last team of Upper half  
c. First team of Upper half  
d. First team of Lower half
7. Which of the following asanas is not performed in standing position? (1)  
a. Tadasana                      b. Urdhwa-Hastottanasana                      c. Katichakrasana                      d. Pawanmuktasana
8. Where were the first Deaflympics held? (1)  
a. London                      b. Rome                      c. Paris                      d. Tokyo

9. What is balanced diet? (1)
- Tasty Food
  - Food that helps in achieving body balance
  - Food that contain every essential nutrient**
  - Food without sugar

10. Which option correctly matches the following columns in context of Summer Paralympics World Games? (1)

Column – A (Venue-Summer Paralympics)	Column – B (Year-Summer Paralympics)
A. Rome, Italy	(i) 2000
B. Tokyo, Japan	(ii) 2022
C. Beijing, China	(iii) 1960
D. Sidney, Australia	(iv) 1964

- A. – (iii), B. – (iv), C. – (ii), D. – (i)**
  - A. – (i), B. – (iv), C. – (ii), D. – (iii)
  - A. – (ii), B. – (i), C. – (iii), D. – (iv)
  - A. – (iv), B. – (iii), C. – (i), D. – (ii)
11. Which is not included in tournament types? (1)
- Composition**
  - Round Robin
  - Knock-out
  - Combination
12. Which food component gives the most energy? (1)
- Fats**
  - Proteins
  - Vitamins
  - Minerals
13. How many types of Amenorrhoea are there? (1)
- 3
  - 5
  - 2**
  - 4
14. The Paralympics were developed in 1948 by: (1)
- Eunice Kennedy Shriver
  - Sir Steve Redgrave
  - Sir Ludwig Guttmann**
  - Sir Bradman
15. Which one of the following is not a part of female Athlete Traid? (1)
- Osteoporosis
  - Amenorrhoea
  - Eating Disorder
  - Social Responsibilities**
16. Deficiency of vitamin A results in \_\_\_\_\_. (1)
- Weak bones
  - Tiredness
  - Obesity
  - Night Blindness**
17. Advantages of physical activities for CWSN does not include \_\_\_\_\_. (1)
- Physical improvements
  - Self esteem
  - Cognitive benefits
  - Getting famous**
18. Scoliosis is the deformity of \_\_\_\_\_. (1)
- Vertebral Column**
  - Legs
  - Arms
  - Feet

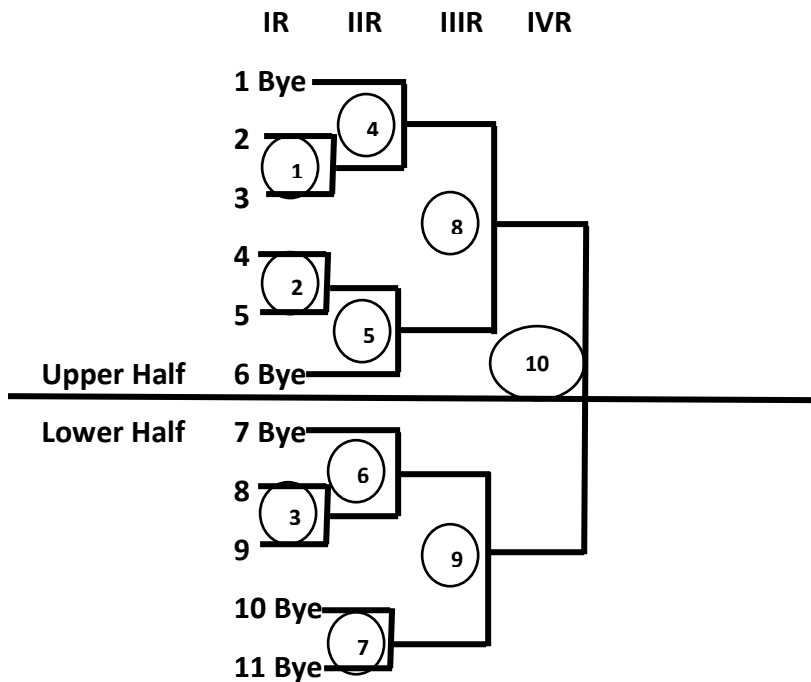
**Section-B**

**Section B consists of 6 questions of 2 marks each**

19. Draw a fixture of 11 basketball teams participating in a tournament on the basis of knock-out. **(2)**

**Ans:** Total number of teams = 11

- Total number of matches =  $N - 1$   
 $= 11 - 1 = 10$
- Teams in upper half =  $\frac{N + 1}{2} = \frac{11 + 1}{2} = 6$
- Teams in lower half =  $\frac{N - 1}{2} = \frac{11 - 1}{2} = 5$
- Number of byes = Next power of two – Total number of teams  
 $= 16 - 11 = 5$



20. How can physical activities be corrective measures for common postural deformities? **(2)**

**Ans:** Physical activities can greatly help in correcting common postural deformities. Physical activities done in the form of exercises, games or sports increase energy and the efficiency to do work. More energy means perfection in the tasks performed. This ensures proper alignment of the body. This also increases flexibility of the body as bones and muscles remain well-toned. The muscles remain in proper position. The spine and bones remain healthy. This greatly reduces the chances of any type of common postural deformity.

21. What do you mean by micro nutrients? **(2)**

**Ans:** Micro nutrients include minerals and vitamins. These are required in a very minute amount. Together, they are extremely important for the normal functioning of the body. Their main function is to enable many chemical reactions to occur in the body. They do not function for the provision for energy.

22. What is osteoporosis? **(2)**

**Ans:** Osteoporosis is a weakening of the bones due to the loss of bone density and improper bone formation. This condition can ruin a female athlete's career because it may lead to bone fractures and other injuries.

23. What are the uses of any two minerals in our diet? (2)

**Ans:**

- a. **Iodine:** It is essential for proper thyroid function. Its deficiency causes goitre and sources are seafood and salt.
- b. **Calcium:** It is helpful in the formation of teeth and bones. It helps in clotting of blood. Its deficiency causes rickets and asthma. Milk, cheese, oranges and green vegetables have a rich amount of calcium.
- c. **Phosphorus:** It is required for the development of strong bones and teeth and also help in synthesising energy from food.

24. Describe any two objectives of planning in sports. (2)

**Ans:** Planning is the process of making plans for future tasks. For achieving a particular goal in any field, it is necessary to have a definite plan to pursue. The two objectives of planning in sports are as follows:

- To enhance existing facilities/amenities by improving their quality, accessibility and management.
- To provide new facilities that are useful for meeting demands for participation now and in the future.

### Section-C

**Section C consists of 6 questions of 3 marks each**

25. Discuss in detail about Paralympic Games. (3)

**Ans:** The Paralympic Games are a major international sports event involving athletes with various disabilities such as mobility disabilities, amputations, blindness and cerebral palsy.

The originator of the Paralympic Games is Sir Ludwig Guttman. He started Paralympic movement that finally developed into Paralympic Games.

The Paralympic Games are governed by the International Paralympic Committee who holds the responsibility of organising the games at an interval of four years. It organises both summer and winter Olympics.

The first Paralympic Games were held in Rome in 1960. However, the 'Paralympic' word was officially used in 1988 Summer Olympics, which were held in Seoul.

The motto of Paralympic Games is 'Spirit in motion' which was introduced in 2004 at the Paralympic Games Athens. Its earlier motto was 'Mind, Body and Spirit' which was introduced in 1994.

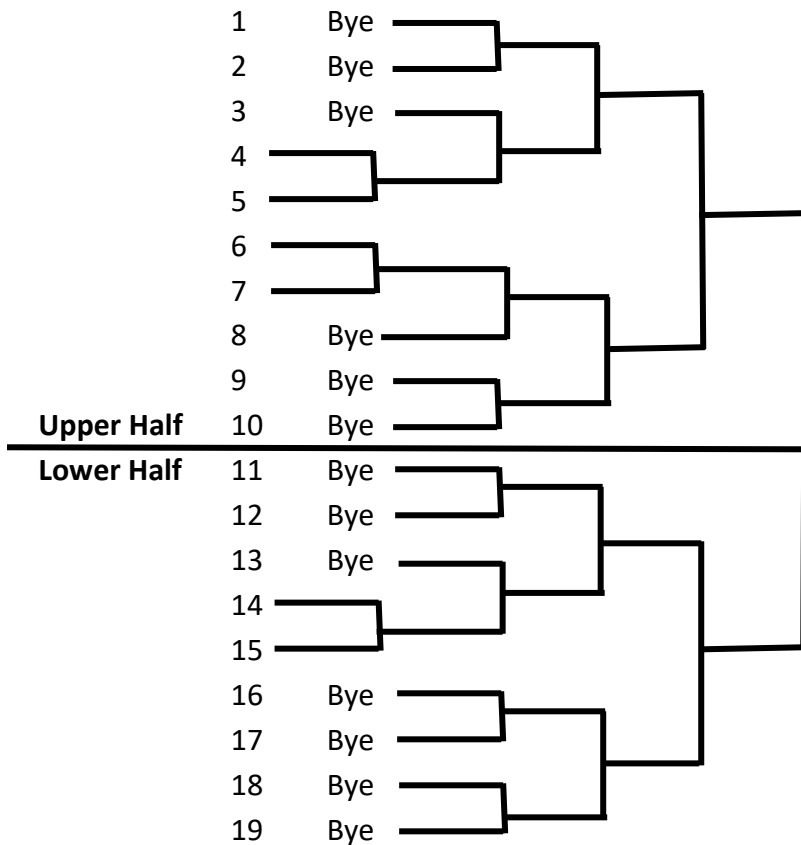
The Paralympic Games are truly inspirational as the athletes in these games display great determination and courage to overcome mental and physical obstacles.

26. Draw a knock-out fixture for 19 teams, mentioning all the steps involved. (3)

**Ans:** The total number of matches to be played in this tournament will be equal to the numbers of teams participating minus one (N-1). So, the total number of matches  $19-1=18$ .

- No. of byes = Next power of two – Number of team =  $32 - 19 = 13$
- No. of teams upper half  $\frac{N + 1}{2} = \frac{19 + 1}{2} = 10$
- No. of teams lower half  $\frac{N - 1}{2} = \frac{19 - 1}{2} = 9$

- A fixture of 19 teams on knock-out basis is as follows:



27. Write about the deformities of spinal curvature.

(3)

**Ans: There are three types of spinal curvature:**

- Lordosis:** It is the inward curvature of the spine or a deformity of spinal curvature. It is an increased forward curve in the lumbar region. It creates problems in standing and walking.
- Kyphosis:** It is a deformity of the spinal curvature in which there is an increase or exaggeration of a backward curve or a decrease of a forward curve. It is also called as round upper back.
- Scoliosis:** It is an abnormal curvature of the spine. It is a sideways curvature of the spine that occurs most often during the growth spurt before puberty.

28. What do you mean by balanced diet and nutrition? Explain.

(3)

**Ans: Balanced Diet:** A balanced diet is that which contains the proper amount of each nutrient. A balanced diet consists of all essential food constituents i.e. protein, carbohydrates, fats, vitamins and minerals in correct proportion.

**Salient features of balanced diet are as follows:**

- A balanced diet must contain all the essential constituents in adequate amount.
- There must be definite proportion between the different constituents of food.
- The food should be easily digestible.

**Nutrition:** It is a dynamic process in which the body is made healthy by the consumption of food. It is the essential substances or the chemical compositions present in the food that are essential for the growth and replacement of tissues. If a person takes proper nutrition, he/she will be physically fit and healthy.

29. Explain about the procedure and advantages of 'Bhujangasana'.

(3)

**Ans: The procedure of Bhujangasana is:**

- This is done in lying posture
- Lie on the stomach and rest forehead on the floor.
- Keep the feet and toes together and touch the ground.
- Place the hands at shoulder level and palms on floor.

- Inhale and lift the head, chest and abdomen up towards roof and keep the naval on the floor.
- Pull your torso back and off the floor with support of your hands.

**The advantages of Bhujangasana are:**

- It improves the blood circulation in body.
- It decreases menstrual irregularities in females.
- It strengthens muscles of chest, shoulders, arms and abdomen.
- It is effective in urine disorder.
- It improves the functioning of reproductive organ.
- It improves the function of liver, kidney, pancreas and gall bladder.
- It helps to lose weight.

30. Briefly write about Special Olympic symbol and Olympic flame. (3)

Ans: The Special Olympic symbol (logo) is based on the sculpture "Joy and Happiness to All Children of the World".

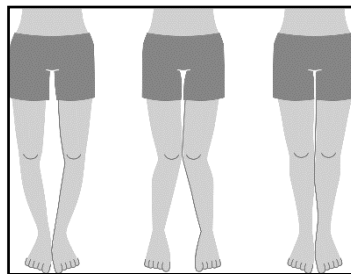
The logo is a symbol of growth, confidence and joy among children and adult with disabilities who are learning coordination, mastery skill, participating in competitions and preparing themselves for richer and more productive lives.

Its Olympic flame is known as the 'Flame of Hope'. It is carried to and lit at Special Olympic Games. It is used in the same spirit as the Olympic flame in the Olympic Games.

**Section-D**

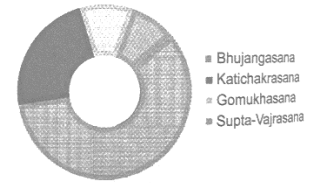
**Section D consists of 3 case based questions of 4 marks each**

31. Posture plays a very significant role in our daily activities. Correct posture means the balancing of body in accurate and proper manner. Various types of postural deformities can be identified in individuals. (4)



- From the above given picture, the deformities seen on the left most is caused due to deficiency of \_\_\_\_\_.
  - Iron
  - Calcium
  - Vitamin D
  - Both (b) and (c)**
- Walking on the inner edge of the feet can be a remedy for \_\_\_\_\_.
  - Bow legs**
  - Flat foot
  - Overweight
  - Leg deformity
- The person in the middle is suffering with \_\_\_\_\_.
  - Rickets
  - Flat foot
  - Knock knees**
  - Elephant foot
- Horse-riding is the best exercise for clearing this deformity.
  - Knock-knees**
  - Bow legs
  - Flat foot
  - All of these

32. Shruti, a yoga instructor at XYZ School, conducted a survey on the favorite asana of students. She was able to make a pie chart on the basis of the data. On the basis of the pie chart, answer the following questions: (4)



- A. Which is the most famous asana?
- Bhujangasana
  - Katichakrasana
  - Gomukhasana
  - Supta-Vajrasana**
- B. Which amongst these is a standing asana?
- Supta-Vajrasana
  - Bhujangasana
  - Katichakrasana**
  - Gomukhasana
- C. Which amongst these is used to prevent Diabetes?
- Bhujangasana
  - Gomukhasana
  - Chakrasana
  - All of these**
- D. Which of these is a sitting asana?
- Bhujangasana
  - Gomukhasana**
  - Katichakrasana
  - Supta-Vajrasana

33. School management needs to recognize the essential place of physical activity in the education of children with special needs. In order to develop lifelong habits for fitness and to provide them with many opportunities of socialization, schools need to understand that physical education is not a secondary subject, but it is just as important as other skills. (4)

- i. Which of these is not one of the results of physical activities in children with special needs?
- Improvement in confidence
  - Improvement in endurance
  - Increase in depression**
  - Better hand-eye coordination

ii. Match the following

A.	Intellectual	i.	Impairment
B.	Visual	ii.	Improvement techniques
C.	Physical activities	iii.	Disability
D.	Competition in sports and games for CWSN	iv.	Paralympics

Codes:

- |    |            |          |           |           |
|----|------------|----------|-----------|-----------|
|    | A          | B        | C         | D         |
| a. | <b>iii</b> | <b>i</b> | <b>ii</b> | <b>iv</b> |
| b. | iv         | ii       | I         | iii       |
| c. | ii         | iii      | iv        | i         |
| d. | iv         | iii      | I         | ii        |

- iii. Name the model which refers to bringing students with disabilities and students of general education into the same platform of learning.
- Inclusive education**
  - UNESCO
  - Child Rights and You
  - Child Rights International Network
- iv. Most suitable word used for disable person is:
- Disabled person
  - Retarded
  - Divyang**
  - Blind

### Section-E

*Section E consists of 4 questions of 5 marks each*

34. Vitamins are very essential for working of the body and are divided into two groups. Explain about them. (5)

**Ans:** There are two groups of vitamins

- Fat Soluble Vitamins:** The fat soluble vitamins are those vitamins which are soluble in fat. These include Vitamins A, D, E and K stored in the liver and in body fat.
  - **Vitamin A:** It is also known as retinol. This is essential for normal growth of the body and development of eyes and skin. Deficiency of Vitamin A leads to night blindness and also affects the kidneys, nervous system and digestive system.
  - **Vitamin D:** This is essential for the formation of healthy teeth and bones. The presence of this vitamin in the body enables it to absorb calcium and phosphorus. It maintains the normal functioning of parathormone, the hormone secreted by parathyroid gland. Its deficiency causes rickets, softness of bones and teeth diseases.
  - **Vitamin E:** This is essential in increasing the fertility among men and women as well as proper functioning of adrenal and sex glands. Its deficiency causes weakness in muscles and heart.
  - **Vitamin K:** This is helpful in the clotting of blood. Its deficiency may cause anaemia and blood does not clot easily.
- Water Soluble Vitamins:** The vitamins that are composed of nitrogen, sulphur and are soluble in water, such as Vitamin B-complex, Vitamin C.
  - **Vitamin B Complex:** There are 8 vitamins in this group. It includes B1, B2, B3, B5, B6, B7, B9 and B12. They are necessary for growth, proper functioning of heart, liver, kidney and maintains smooth skin. Its deficiency causes Beri-Beri disease, Pellagra and also decreases immunity.
  - **Vitamin B1 (Thiamin):** This vitamin is also called thiamine and it is colourless in nature. It helps in growth and development of body. It also plays significant role in the assimilation of Vitamin A and synthesis of carbohydrate in our body. Its deficiency causes Beri-Beri.
  - **Vitamin B2 (Riboflavin):** It is also referred as riboflavin. It is essential to keep the eyes, nose, mouth, lips and tongue in healthy states. Its deficiency causes Pellagra.
  - **Vitamin B3 (Niacin):** Vitamin B3 or Niacin works with other B-complex vitamins to metabolise food and provide energy for the body. It is involved in energy production, normal enzyme functioning, digestion, promoting normal appetite and healthy skin.
  - **Vitamin B5 (Pantothenic acid):** It is also called pantothenic acid. It helps in breakdown of fats and carbohydrates to release energy.



- **Vitamin B6 (Pyridoxine):** Vitamin B6 is a key factor in protein and glucose metabolism as well as in the formation of haemoglobin. Haemoglobin is a component of red blood cells-it carries oxygen.
- **Vitamin B7 (Biotin):** It is also known as biotin. It's deficiency may lead to impaired growth, depression, muscle strain, etc.
- **Vitamin B9 (Folic Acid):** It's chemical name is folic acid. It is yellow in colour and is essential for the normal growth and development of the reproductive system.
- **Vitamin B12 (Cobalamin):** It is also known as cobalamin, aids in the building of genetic material, production of normal red blood cells and maintenance of the nervous system.
- **Vitamin C:** It is also called ascorbic acid. It is needed for proper growth, development and to heal wounds. It is used to make the collagen tissue for healthy teeth, gums, blood vessels and bones.

35. Describe the various committees for the organisation of sports events. (5)

**Ans:** The organisation of sports events requires a lot of planning. The planning is executed properly when different committees work together for the smooth conduct of the sports events.

The various committees are:

- **Reception Committee:** The task of this committee is to welcome the Chief Guest along with other guests, players, spectators, etc.
- **Committee for Officials:** This committee selects various officials such as referees, judges, recorders, clerks, marshals, track umpires, time keepers and lap scorers for athletic meet and other events as per requirements.
- **Finance Committee:** This committee manages the finance needed for the event. It prepares the budget, arranges funds and maintain income and expenditure account.
- **Transport Committee:** This committee provides the transportation services to the participants for taking them to the venue to and fro.
- **Entertainment and Refreshment Committee:** This committee takes the charge of supplying refreshments and drinks to the guests, officials, competitors etc. It also makes arrangements for entertainment programmes at the opening and closing ceremony of sports events.

36. Make a list of Nutritive components of Diet and briefly explain the water-soluble vitamins with their sources. (5)

**Ans:**

Nutritive Components of Diet
1. Carbohydrates
2. Proteins
3. Fats
4. Minerals
5. Vitamins

### Water Soluble Vitamins

1. **Vitamin B Complex:** Vitamin B consists of eight soluble vitamins that play important roles in cell metabolism. Earlier they were thought to be single vitamin but later on research showed that they were chemically distinct vitamins. Now they are referred as Vitamin B complex. These are necessary for growth and development. Deficiency of Vitamin B results in diseases called Beri-Beri, Pellagra and Malformation of Red Blood Cells.

**Sources:** The sources of these vitamins are meat, potatoes, bananas, liver oil, beans etc.

2. **Vitamin C:** It is a white crystalline substance and water-soluble vitamin. It helps in healing the wounds. It increases metabolic rate and is helpful in absorbing calcium. It is also a highly effective antioxidant. It is also essential for the growth and repair of bones, skin and connective tissues. It also maintains healthy teeth and gums. The deficiency of vitamin C causes scurvy. Adults may feel tired, weak and irritable due to the deficiency of vitamin C.

**Sources:** This vitamin is usually found in lemons, pineapples, amla, oranges, tomato, green chillies, apples and green leafy vegetables.

37. Briefly explain the administration of Pawanmuktasana along with its contraindications and draw stick diagram. (5)

**Ans: The administration of Pawanmuktasana is:**

- Lie on your back with your feet together and arms besides your body and relax, breathing deeply.
- With a deep inhalation raise your legs to 90° and completely exhale.
- Now with another inhalation bring both the knees close to your chest and press on the lower abdomen, holding the knees with your hands. Exhale completely.
- Remain with bent knees for a few breaths. With every exhalation press the thighs and knees on the abdomen and hold them with your hands.
- With a deep breath raise your head, neck and chest and bring them close to your knees.
- Remain in this position for a few breaths focusing on maintaining the position of the head and neck in place.
- Try to maintain the balance while breathing slowly and keeping the body relaxed.
- Now with an inhalation, release the neck and head and exhale completely. With another inhalation straighten the legs and bring them back to 90° and as you exhale release the leg from 90° to the relaxed posture. With complete exhalation, bring the legs stretched out on the floor and relax the neck.
- Take a few breaths, and then continue with the next round. The longer you hold in this posture the faster the muscles around the abdomen loosen.
- Contraindications of Pawanmuktasana is that it is to avoided by those who are suffering from severe migraine, high or low blood pressure, asthma, slip disc, advanced stages of spondylitis, etc.



**Pawanmuktasana**

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