



PERIODIC ASSIGNMENT -3 2020-21

Grade – 8

Subject- SCIENCE

Syllabus – CH-10, 11, 12

**Q1. Tick the correct options -**

- (i) Two objects repel each other. This repulsion could be due to
- (a) frictional force only
  - (b) electrostatic force only
  - (c) magnetic force only
  - (d) either a magnetic or an electrostatic force

**Ans. (d) either a magnetic or an electrostatic force**

- (ii) During dry weather, while combing hair, sometimes we experience hair flying apart. The force responsible for this is
- (a) force of gravity.
  - (b) electrostatic force.
  - (c) force of friction.
  - (d) magnetic force.

**Ans . (b) electrostatic force.**

- (iii) Which one of the following forces is a contact force?
- (a) force of gravity
  - (b) force of friction
  - (c) magnetic force
  - (d) electrostatic force

**Ans - (b) force of friction**

- (iv) Adolescents should be careful about what they eat, because
- (a) Proper diet develops their brains.
  - (b) Proper diet is needed for the rapid growth taking place in their body.
  - (c) Adolescents feel hungry all the time.
  - (d) Taste buds are well developed in teenagers.

**Ans - (b) Proper diet is needed for the rapid growth taking place in their body.**

- (v) Reproductive age in women starts when their
- (a) Menstruation start.
  - (b) Breast start developing
  - (c) Body weight increases
  - (d) Height increases.

**Ans - (a) menstruation starts.**

- (vi) The right meal for adolescents consist of
- (a) Chips, noodles, coke.
  - (b) Chapatti, dal, vegetables.
  - (c) Rice, noodles and burger.
  - (d) Vegetables cutlets, chips and lemon drink.

**Ans - (b) Chapatti, dal, vegetables.**

**(vii) Four children were asked to arrange forces due to rolling, static and sliding frictions in a decreasing order. Their arrangements are given below.**

Choose the correct arrangement.

- (a) Rolling, static, sliding
- (b) Rolling, sliding, static
- (c) Static, sliding, rolling
- (d) Sliding, static, rolling

Ans. (c) static, sliding, rolling

**(viii) Alida runs her toy car on dry marble floor, wet marble floor, newspaper and towel spread on the floor. The force of friction acting on the car on different surfaces in increasing order will be :**

- (a) Wet marble floor, dry marble floor, newspaper and towel
- (b) Newspaper, towel, dry marble floor, wet marble floor
- (c) Towel, newspaper, dry marble floor, wet marble floor
- (d) Wet marble floor, dry marble floor, towel, newspaper

Ans. (a) Wet marble floor, dry marble floor, newspaper and towel.

**(ix) To sharpen the blade of a knife by rubbing it against a surface, which of the following will be most suitable?**

- (a) stone
- (b) plastic block
- (c) wooden block
- (d) glass block

Ans : (a) stone

**Explanation:**

Stone exerts a greater frictional force which sharpens the blades upon rubbing.

**(x) If we apply oil on door hinges, the friction will**

- (a) increases
- (b) decreases
- (c) disappear altogether
- (d) will remain unchanged

Ans - (b) decreases

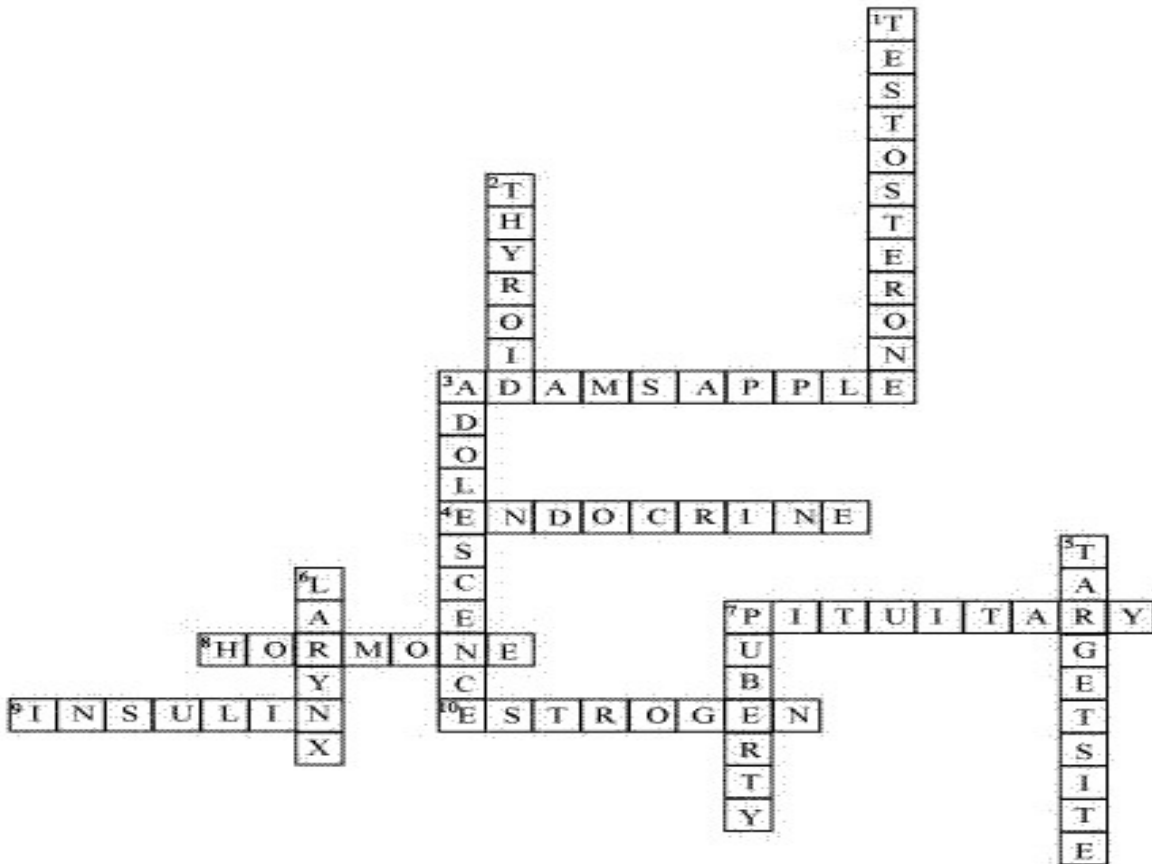
**Q 2. Word game: use the clues to work out the words.**

**Across**

- 3. Protruding voice box in boys
- 4. Glands without ducts
- 7. Endocrine gland attached to brain
- 8. Secretion of endocrine glands
- 9. Pancreatic hormone
- 10. Female hormone

**Down**

- 1. Male hormone
- 2. Secretes thyroxin
- 3. Another term for teenage
- 5. Hormone reaches here through blood stream
- 7. Term for changes at adolescence



**Q 3. Prepare a table having two columns depicting names of endocrine glands and hormones secreted by them.**

Ans.

Name of Endocrine Gland	Hormones Secreted
Testis	Testosterone
Ovary	Estrogen
Adrenal	Adrenaline
Thyroid Gland	Thyroxin
Pituitary Gland	FSH
Pancreas	Insulin

**Q 4. Fill in the blanks –**

- (a) To draw water from a well, we have to **pull** at the rope.
- (b) A charged body **attracts** an uncharged body towards it.
- (c) To move a loaded trolley, we have to **pull** it.
- (d) The north pole of a magnet **repels** the north pole of another magnet.
- (e) Friction is the **relative motion** between the surfaces in contact with each other.
- (f) Friction depends on the **nature** of surfaces.
- (g) Friction produces **heat**.
- (h) At puberty, boys develop a larger voice box called **Adam's Apple**.
- (i) All human beings have **23 pairs** of chromosomes.
- (j) Hormones are chemical substances which are secreted by **endocrine glands**.

**Q 5. Give reasons - i) Why sportsmen use shoes with spikes ?**

**ii) Why sliding friction is less than static friction. ?**

**Q 6. Very short Answer Questions -**

**1. Will force of friction come into play when a rain drop rolls down a glass window pane?**

Ans: Yes, the force of friction will come into play when a rain drop rolls down a glass window pane.

**2. While playing tug of war Preeti felt that the rope was slipping through her hands. Suggest a way out for her to prevent this.**



Ans: Preeti can rub soil between her hands to increase the friction between the rope and her hands. Increased friction will prevent slipping of rope through her hands.

**3. What is Force ?**

Ans - A push or a pull, that changes or tends to change the state of rest or of uniform motion of an object or changes its direction or shape

**4. Where do we apply a force while walking?**

Ans: While walking, we apply a force on the ground against the force of friction.

**5. Name types of Non- Contact forces.**

Ans - (i) Magnetic Force (ii) Electrostatic Force (iii) Gravitational Forces

6. A ball of dough is rolled into a flat chapatti. Name the force exerted to change the shape of the dough.

Ans: The shape of the dough is changed through the action of body muscles. The resulting force is called the **muscular force**.

7. Name the hormone that is released by testes at the onset of puberty.

Ans: At the onset of puberty, the testes release the male hormone called **testosterone**.

8. Name the female hormone produced by ovaries that helps in the development of mammary glands.

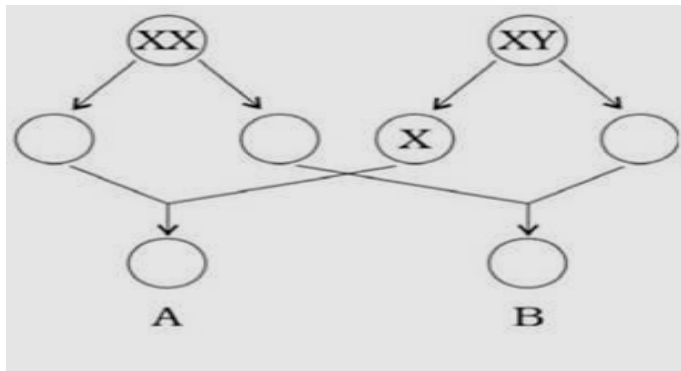
Ans: At the onset of puberty, the ovaries in females release female hormone called **estrogen**.

Q 7. Write notes on any one of the following –

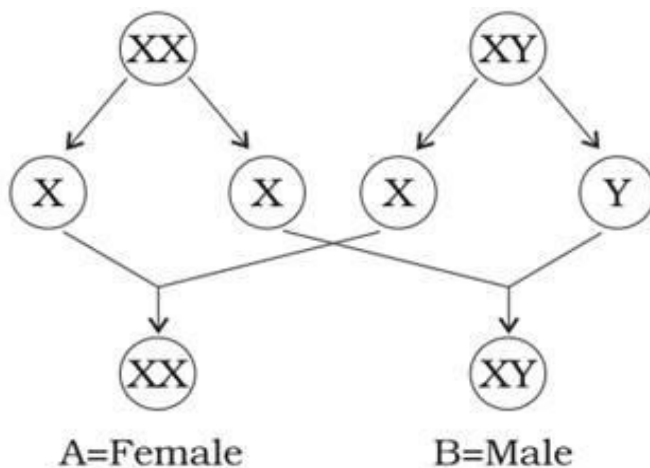
- i) Adam's Apple
- ii) Friction
- iii) Adolescence

Q 8. Picture based questions –

- i) Fill the blank circles in figure and identify the sex of child A and B.



Ans: Child A is female child. Child B is male child.



- ii) Two friends are trying to push a heavy load as shown in given Fig. Suggest a way which will make this task easier for them.



Ans : It would be easier for the friends to roll the load than to slide it. They can put rollers below the heavy load.

**Q 7. Answer the following questions –**

- i) **Explain why sliding friction is less than static friction.**

Ans. When the objects are at rest, the interlocking of irregularities in the two surfaces of the objects is higher than that of when objects are moving. When objects are moving, there is less interaction between their surfaces. That's why sliding friction is less than static friction.

- ii) **Is there a force of friction between the wheels of a moving train and iron rails? If yes, name the type of friction. If an air cushion can be introduced between the wheel and the rail, what effect will it have on the friction?**

Ans: Yes, the force of friction between the wheels of a moving train and iron rails is rolling friction. If an air cushion is introduced between the wheels and the rails, the friction between the two surfaces will decrease.

- iii) **What is Static Friction ?**

**Ans - Static Friction:** When a body is at rest, the force of friction is called the static friction and is always equal and opposite to the applied force. The force of friction which acts when the body is just at the verge of sliding on the surface is called limiting friction.

- iv) **A rocket has been fired upwards to launch a satellite in its orbits. Name the two forces acting on the rocket immediately after leaving the launching pad.**

Ans. The two forces acting on rocket are:

- Force due to gravity acts vertically downward.
- Frictional force of atmosphere.

- v) **Give two examples of situations in which applied force causes a change in the shape of an object.**

Ans. (i) Making a chapati from a ball of dough.  
(ii) Stretching of rubber band.

**vi) What are sex hormones? Why are they named so? State their function.**

Ans. Sex hormones are the hormones that control the development of secondary sexual characteristics and also regulate the proper functioning of the sex organs. They are named so because they are produced in both males and females by the respective sex organs under the influence of the pituitary gland.

**Functions of sex hormones:**

**Testosterone:** This hormone brings about secondary sex characters in boys such as the growth of a beard, the voice becoming hoarse, development of reproductive organs, etc.

**Estrogen:** This hormone is responsible for the development of secondary sexual characters in females such as the enlargement of breasts, development of female reproductive organs, etc.