

# MT

2017 \_\_\_ \_\_\_ 1100

Seat No. 

--	--	--	--	--	--	--

**MT - SCIENCE & TECHNOLOGY - II (72) - SEMI PRELIM - II : PAPER - 3**

**Time : 2 Hours**

**(Pages 3)**

**Max. Marks : 40**

---

**Note :**

- (i) All questions are compulsory.
- (ii) All questions carry equal marks.
- (iii) Draw neat and labelled diagrams wherever necessary.

**Q.1. (A) Fill in the blanks: 3**

- (1) The digested food is absorbed by the ..... in the small intestine.
- (2) The gap between the neurons is known as .....
- (3) When sugarcane stalks are crushed to extract juice, the biomass left behind is called .....

**Q.1. (B) State whether the following statements are true or false 2  
and if false, write the correct statement:**

- (1) Aquatic animals breathe at a slower rate than the terrestrial animals.
- (2) The medulla oblongata controls vital involuntary activities like blood flow, breathing, sneezing, etc.

**Q.2. Rewrite the following statements by selecting the correct alternative: 5**

- (1) When a student observed a stomatal epidermal peel of a leaf under microscope, it appeared pinkish red in colour. The stain used was .....
  - (a) iodine                      (b) acetocarmine
  - (c) safranin                      (d) eosin

- (2) A portion of each of four destarched leaves of a plant was covered with paper strips of various colours. The plant was exposed to sunlight for five hours. Thereafter, the strips were removed and the leaves tested for starch in the covered portion. Which one out of the four leaves gave the starch test in the covered portion ?
- (a) covered with black paper strip
  - (b) covered with green paper strip
  - (c) covered with white paper strip
  - (d) covered with transparent paper strip
- (3) The movement of the root system towards the stimulus of water is called ..... movement.
- (a) gravitropic
  - (b) hydrotropic
  - (c) phototropic
  - (d) chemotropic
- (4) ..... is mixed with petrol or diesel as an alternative source of energy.
- (a) Methanol
  - (b) Benzene
  - (c) Ethanol
  - (d) Castor oil
- (5) The enzyme salivary amylase breaks down starch into the simple sugar .....
- (a) glucose
  - (b) sucrose
  - (c) fructose
  - (d) maltose

**Q.3. Answer the following in short : (Any 5)**

**10**

- (1) Give scientific reason :  
It is necessary to separate oxygenated blood from deoxygenated blood in mammals.
- (2) Draw neat and labelled diagram Vertical section of human heart.
- (3) Describe the function of platelets present in blood.
- (4) Distinguish between Voluntary movements and involuntary movements

- (5) How do we smell?
- (6) Give scientific reason :  
A plant kept near a window bends towards light.
- (7) What is the fundamental duty of each citizen regarding environment?

**Q.4. Answer the following in brief : (Any 5)**

**15**

- (1) State work of WBCSD.
- (2) What are objectives of sustainable development?
- (3) Describe the structure of central nervous system in human beings.
- (4) What is seismomastic movement? Give two examples of seismomastic movement.
- (5) Write a note on Blood pressure.
- (6) Explain the process of digestion of food in the mouth.
- (7) What is homoeostasis? How is it maintained in an individual's body?

**Q.5. Answer in detail: (Any 1)**

**5**

- (1) With the help of a diagram explain the structure and function of a nephron.
- (2) Describe the basic steps of nutrition in all animals.

*Best Of Luck* 🍀