

**CHAROTAR ENGLISH MEDIUM SCHOOL, ANAND**  
**SEMESTER -1/ 2018-19** **STANDARD -8**  
**DATE : 19-10-2018** **SUBJECT : SCIENCE & TECHNOLOGY**  
**(MAXIMUM MARKS: 80)**

**SECTION-A**

**MULTIPLE CHOICE QUESTIONS: (Each carry 1 mark) (40)**

Q1- In which type of plants is leaf transformed into spines?

- a) Hydrophytic      b) Mesophytic      c) **Xerophytic**      d) Insectivorous

Q2 In which organ is cochlea found ?

- a) eye      b) **ear**      c) skin      d) nose

Q3 Against which disease, vaccine of BCG gives protection ?

- a) cholera      b) typhoid      c) small pox      d) **tuberculosis**

Q4 What is the use of harvester?

- a) to plough the land      b) to spray the insecticide to crop  
c) **to harvest the crop**      d) to separate cereals and pulses

Q5 In which form is energy present in coal?

- a) heat energy      b) **chemical energy**      c) light energy      d) mechanical energy

Q6 What is the layer of air around the earth called?

- a) weather      b) climate      c) environment      d) **atmosphere**

Q7 Which of the following has the highest refractive index?

- a) water      b) **diamond**      c) glass      d) air

Q8 Which instrument is used to measure air pressure?

- a) **Barometer**      b) Thermometer      c) Thermograph      d) Voltmeter

Q9 What is broad part located at the base region of the flower called?

- a) corolla      b) stigma      c) **receptacle**      d) anther

Q10 What is used for the fermentation in preparation of idli and dosa?

- a) jelledium      b) **yeast**      c) mushroom      d) blue green algae

Q11 What is the absolute refractive index of water?

- a) 1.5      b) 2/3      c) 5/4      d) **4/3**

Q12 On what is the image of an object formed in the eye ?

- a) lens      b) **retina**      c) optic nerve      d) pupil

Q13 Which animal possesses the characteristic of changing colour?

- a) **chameleon**      b) squirrel      c) rat      d) snake

Q14 Wherein are pollen grains produced?

- a) pollen tube      b) **anther**      c) style      d) stigma

Q15 What is necessary to produce plants of good quality in horticulture ?

- a) hybridization      b) hybrid seeds      c) **grafting**      d) net house

Q16 Which of the following energy is associated with wind and flowing water?

- a) potential energy      b) **kinetic energy**  
c) chemical energy      d) heat energy

Q17 What is the absolute refractive index of ordinary glass?

- a) 1.25      b) 1.33      c) **1.5**      d) 2.4

Q18 How many air-sacs are in the body of birds?

- a) five      b) three      c) seven      d) **nine**

Q19 What is the leaf like structure located on the outermost side of a flower called?

- a) stigma      b) receptacle      c) corolla      d) **sepal**

Q20 Which micro organism causes AIDS?

- a) **virus**      b) bacteria      c) protozoa      d) fungus

Q21 Which gland produces progesterone hormone ?

- a) pancreas      b) thyroid      c) **ovary**      d) testis

Q22 Which of the following devices converts chemical energy into electrical energy?

- a) electric fan      b) **generator**      c) electric cell      d) turbine

Q23 Which is the method of growing plants without soil?

- a) kitchen garden      b) **hydroponics**      c) horticulture      d) traditional method

Q24 What is the shape of amoeba?

- a) **Indefinite**      b) slipper like      c) rectangular      d) square

Q25 To whom does the skull protect?

- a) spinal cord      b) kidney      c) **brain**      d) eye

Q26 Which of the following is a terrestrial animals?

- a) squirrel      b) lion      c) cow      d) **all of these**

Q27 When is the refraction of light ray occur?

- a) when there is an obstacle in the path of light
- b) **when the medium of the path of light changes**
- c) when the light fluctuates
- d) when the light reflects after colliding with an opaque surface

Q 28 Which of the following is a reproductive organ of plant?

- a) stem
- b) root
- c) **flower**
- d) leaf

Q29 When a bomb burst, in which form does chemical energy convert?

- a) **sound energy**
- b) potential energy
- c) mechanical energy
- d) chemical energy

Q30 In which method of irrigation is the wastage of water minimum?

- a) dhoria irrigation method
- b) **drip irrigation method**
- c) sprinkler irrigation method
- d) furrow irrigation method

Q31 By whom is the tuberculosis caused?

- a) protozoa
- b) fungi
- c) virus
- d) **bacteria**

Q32 Which endocrine gland occurs in head?

- a) pancreas
- b) adrenal
- c) **pituitary**
- d) thyroid

Q33 Which of the following energy is associated with firecrackers?

- a) **chemical energy**
- b) mechanical energy
- c) potential energy
- d) heat energy

Q34 Who governs the reflex action?

- a) mid brain
- b) **spinal cord**
- c) hind brain
- d) fore brain

Q35 Which type of glass is used in manufacture of endoscope?

- a) **optical fibre**
- b) toughened glass
- c) glass wool
- d) photochromic glass

Q36 From what are tyre and tubes prepared?

- a) acrylic
- b) plastic
- c) **rubber**
- d) glass

Q37 Which disease is caused by bacteria?

- a) malaria
- b) chicken guinea
- c) eczema
- d) **none of these**

Q 38 Which of the following fibres is used in textile industries?

- a) rubber
- b) **terylene**
- c) plastic
- d) acrylic

Q39 After fertilization, ovule is converted into.....?

- a) **seed**
- b) fruit
- c) flower
- d) zygote

Q40 The turbine starts rotating when the water from the dam falls on it. Which transformation of energy takes place in this?

- a) **mechanical energy into electrical energy**
- b) kinetic energy into electrical energy
- c) kinetic energy into mechanical energy
- d) potential energy into kinetic energy

### SECTION –B

**Q1 - Give answers in short: (any five) (10)**

**1- State the various forms of energy.**

. Ans- The various forms of energy is:

- a) heat energy b) electrical energy c) chemical energy
- d) mechanical energy e) sound energy

**2- What are the harmful effects of algae?**

Ans- Harmful effects of algae:

- 1- Algae decreases the depth of waterbodies.
- 2- Water of some waterbodies becomes undrinkable due to algal growth.
- 3- Algae causes accidents by making the surface very slippery.

**3-Explain the function of brain.**

**Ans-** Functions of the brain: Brain consists of three parts.

1- Fore brain: It possesses centers for function like speech, thoughts, memory and identification.

2- Mid brain: The centers for controlling hands, legs and other organs and maintaining the body balance.

3- Hind brain: It controls the vital involuntary function like heart beat, respiration and digestion. Brain also possesses centers for the activities like listening, smelling and tasting.

**4- Explain the types of dry fruit giving examples.**

**Ans-** Legume: It is formed by one chambered ovary. E.g. field bean, cow pea, pea etc.

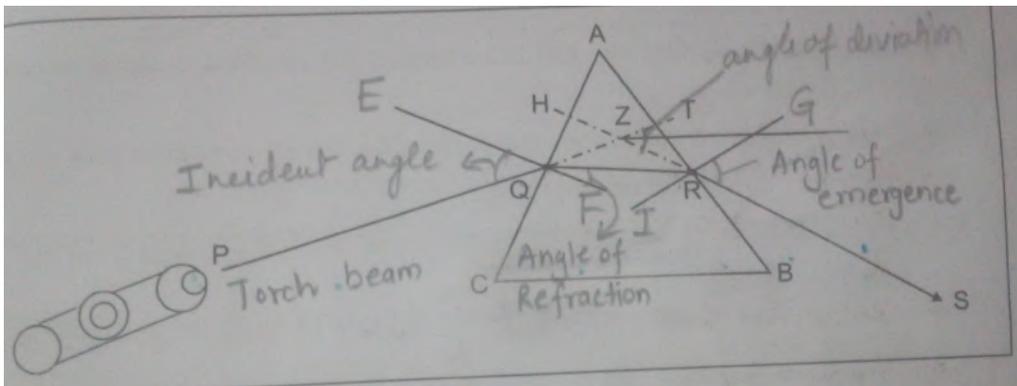
Capsule: They are formed by bicarpellary or polycarpellary ovary e.g. cotton, lady finger.

Caryopsis: The pericarp remains fused with the seed coat. E.g. wheat, maize, pearl millet.

**5- Why does the upper surface of leaf is smooth and the lower surface of the leaf is rough?**

Ans- As the upper surface of leaf is smooth, water falling on it slips. Stomata occurs on the lower surface of leaf. Due to stomata the lower surface of the leaf is rough.

**6- Draw a ray diagram of refraction of light through a glass prism.**



**Q2(A) - Give scientific reasons: (any three) (06)**

**1- Cactus can grow well in desert.**

Ans- Cactus grow in the desert where less amount of water is available and climate is very hot.

2- Root system of this plant is well developed and reaches deep into the soil and absorb water from the deep soil.

3- Leaves are modified into spines, to reduce the rate of transpiration.

4- Stems become bulky and fleshy to stores food and water.

**2- We are not crushed through there is a great pressure of air in our surrounding.**

Ans- There is great pressure of air surrounding us. Moreover, there is air in our body. The pressure of air in our surrounding and air inside the body is balanced, hence we are not crushed.

**3- Horticulture has great importance in present time.**

**Ans- 1-** Agricultural land is less in present time.

- 2- Horticulture can be practiced even in a small plot of land.
- 3- More production in short time can be gained by growing of fruits and flowers in this method.
- 4- One can gain economical benefit by producing ‘cuttings’ of good varieties of fruiting trees in this practice.
- 5- By selling flowers and fruits, good earning can be done.

Hence, horticulture has great importance in present time.

**4- Objects dragged during flood.**

**Ans- During flood,** the speed of river water is very high. Due to higher speed it possesses higher kinetic energy. Because of kinetic energy of river flow things also flow away along with the flow. Hence , objects are dragged during flood.

**Q2(B)- Give difference between . (any two) (04)**

**1- Virus and bacteria**

<b>Viruses</b>	<b>Bacteria</b>
1- As viruses are very minute, they can be seen with an electron microscope only. 2- They do not have cellular structure. 3- They are definitely harmful to human beings.	1- Bacteria can be seen with a compound microscope. 2- They possess cellular structure 3- They are useful as well as harmful to human beings

**2- Natural rubber and Man made (artificial) rubber**

<b><u>Natural rubber</u></b>	<b><u>Man made (artificial) rubber</u></b>
1-As it is soft, it cannot last long. 2- It is affected by heat, cold, acid, petrol, etc.	1- As it is strong, it lasts longer. 2- It is not affected by heat, cold, acid, petrol, etc

### 3. Traditional agriculture and hydroponic agriculture.

<u>Traditional agriculture</u>	<u>Hydroponic agriculture</u>
1- Soil is required for this type of agriculture.	<u>1-</u> This type of agriculture can be practiced without soil.
2- Consumption of water and fertilizers are more in this type of agriculture.	<u>2-</u> Saving of water and fertilizers can be achieved in this type of agriculture.

Q3(A) -Write detailed answer.

(any two)

(06)

#### 1- What are the benefits and harmful effects of Fungi?

**Ans- Benefits of fungi:** Yeast is used in the process of fermentation, in the preparation of food like dhokla, idli, dosa.

- 2- Yeast is also used in the preparation of bread, biscuit and cake.
- 3- Penicillin is used to prepare antibiotics.
- 4- Fungus like mushroom can be directly used as food.
- 5- Fungus can make cheese tasteful.

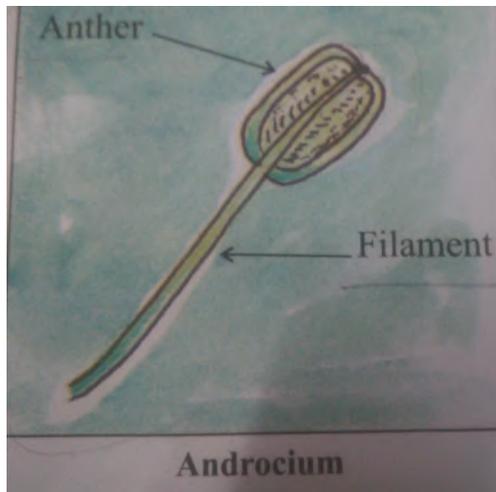
**Harmful effects of fungi:** Some fungi spoil the food material.

2- Fungus is also responsible for the decomposition of leather.

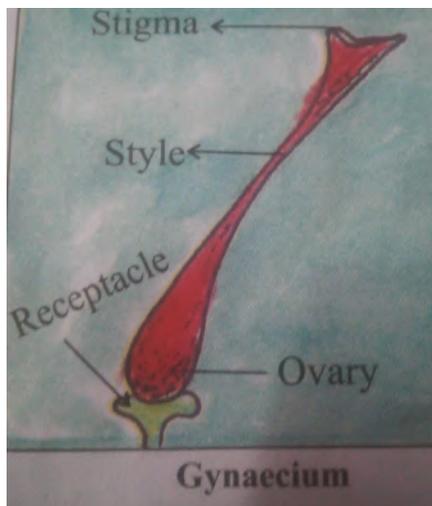
1- Ring worm, Itches, Eczema are caused due to fungi.

#### 2- Explain Androecium and Gynoecium with their parts, giving diagram.

**Ans- Androecium:** A group of stamens are called androecium. Stamen is a male reproductive organ of the flower. Flower has more than one stamen. It is located in the interior of corolla. Each stamen has mainly two parts: (1) Anther (2) Filament.



**Gynoecium:** A group of carpels are called gynoecium. Carpel is a female reproductive organ of the flower. One or more carpels are found in the flower. The gynoecium is attached with the receptacle and is located on the interior of corolla. Gynoecium has mainly three parts: (1) Stigma (2) Style (3) Ovary.



**3- What is thermosetting plastic? Write its types and uses.**

**Ans-** In spite of heating at a high temperature the plastics, which do not become soft are called 'Thermosetting plastic'

Its different types and uses are as follows:

**Bakelite:** It is useful in preparing telephones, light switches, and also electrical instruments.

**Melamine:** It is used in preparing crockery, unbreakable cups and saucers, different types of trays. It is also used in preparation of certain parts of aeroplane engine.

**Q3(B) Classify the following into Xerophytes, Hydrophytes, and Mesophytes. (04)**

. Calotropis, Vinca rosa, Opuntia, Water chestnut, Zizyphus, Mango tree, Acacia, Neem, Money plant, Lotus, Hydrilla, Typha.

**Xerophytes:-** Zizyphus, Calotropis, Acacia, opuntia.

**Hydrophytes:-** Lotus, typha, water chest nut, money plant, hydrilla.

**Mesophytes:-** Neem, vinca rosa, mango tree

**Q4(A)- Write short notes. (any three) (06)**

**a. Gravel culture method**

**Ans-** In this method the roof of the building is covered with plastic sheet and a layer of soil (sand) is spread over it. To keep the plants erect, a layer of gravel one foot is arranged over the layer of sand. Plants are sown at a proper distance in the gravel layer. Water having nutrients is spread on these plants.

**b. Recycling of paper.**

**Ans-** The process of dissolving the used papers and making them into paste and preparing of newspapers is called reproduction (recycling) of papers.

**c. Refraction of light.**

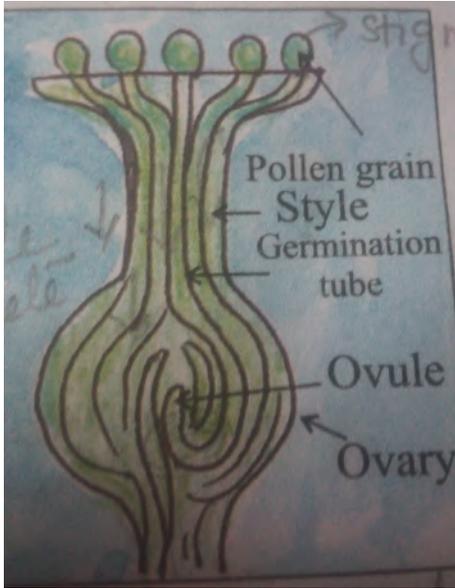
**Ans-** When light rays pass from rarer medium to denser medium it changes its direction at the surface separating the mediums, this phenomenon is called refraction of light.

**d. Spinal cord**

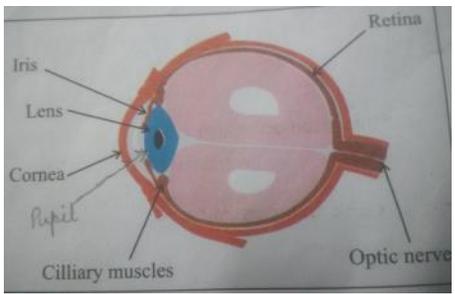
**Ans-** Spinal cord is protected by the vertebral column. Spinal cord extends from the base of posterior end of brain and it is a cord like structure made up of many nerves. It passes through vertebral column and reaches till the end of waist. It acts as the link between the brain and the nerves which connect various parts of the body.

**Q4(B)- Draw a well labeled diagram: (any one) (04)**

1- Fertilisation in flower



## 2- Human eye



**“The End”**