

Kendriya Vidyalaya Sitapur

SUB.: SCIENCE

CLASS-X PT -II

Max. Marks=40

Time-90 Minutes

Instructions:

(i) All questions are compulsory.

SECTION-A-PHYSICS

MCQ Type Questions (1 mark each)

Q.1) A spherical mirror and a thin spherical lens have each a focal length of - 15 cm. The mirror and the lens are likely to be -

- (a) both concave (b) the mirror is concave and the lens is convex (c) both convex
(d) the mirror is convex and the lens is concave

Q.2) In the following which is mirror formula ?

- (a) $1/v - 1/u = 1/f$ (b) $1/v + 1/u = 1/f$ (c) $1/u - 1/v = 1/f$ (d) $1/u \times 1/v = 1/f$

Q.3) Rear – view mirror of a vehicle is of which type -

- (a) plane (b) concave (c) convex (d) either plane or concave

Q.4) The human eye forms the image of an object at its -

- (a) cornea (b) iris (c) pupil (d) retina

Q.5) The least distance of distinct vision for a young adult with normal vision is about –

- (a) 25 m (b) 2.5 m (c) 25 cm (d) 2.5 cm

Short Answer Type Questions (2 marks each)

Q.6) An object 5 cm in length is held 25 cm away from a converging lens of focal length 10 cm. Draw the ray diagram and find the position, size and the nature of the image formed.

Q.7) What is meant by power of a lens ? Write its SI unit. A student uses a lens of focal length 40 cm and another of – 20 cm. Write the nature and power of each lens.

Case Study Based Questions (4 marks)

There are mainly three common defects of vision. These are (i) Myopia or near – sightedness , (ii) Hypermetropia or far – sightedness , and (iii) Presbyopia . These defects can be corrected by the use of suitable spherical lenses.

What is meant by power of accommodation of the eye ?

What is myopia ? Write the type of lens to correct myopia.

What is hypermetropia ? Write the type of lens to correct hypermetropia.

What is presbyopia ? How can this defect corrected ?

SECTION-B-BIOLOGY

Section –A (MCQS)

They carry message from receptor organs to the brain and spinal cord.

Sensory neurons b) motor neurons c) both a and b d) None of these

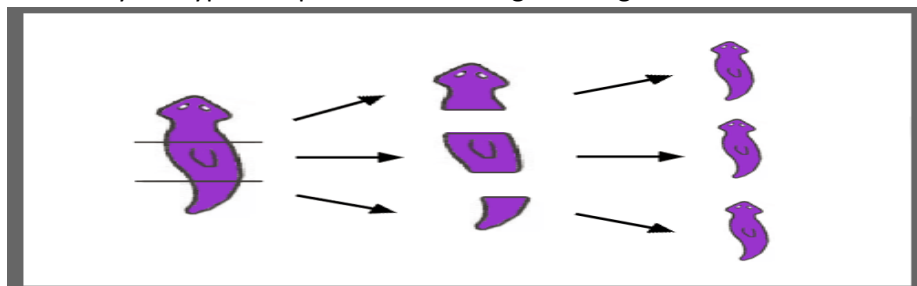
2. Respiration is controlled by which of the following?

- a) cerebellum b) pons c) medulla d) all of these

3. Organisms can produce their carbon copy by:-

- a) Sexual reproduction b) Asexual Reproduction c) Hybridization d) None of these

4. Identify the type of reproduction in the given diagram:-



- (a) Fragmentation b) Budding c) Spore formation d) Regeneration

5. After the pollen grain is transferred to the stigma it produces a pollen tube which passes through the style and enters the ovary and ovule. In the ovule the male germ cell (male gamete) fuses with the female germ cell (female gamete) to form a zygote. This process is called fertilisation.

After fertilisation the zygote divides several times and forms the embryo which then develops into the seed and the ovary develops into the fruit.

The transfer of pollen grains from anther to the stigma is called?

Fertilization b) pollination c) ovulation d) None of these

Which of the following is called as male gametophyte?

Embryo sac b) pollen grain c) PEN d) all of these

Which part of the flower develop in to fruit?

Sepal b) Ovules c) Ovary d) pollen grains

SECTION –C

6. Which organ of our body work as receptor organ when we come in contact of any hot object?

7. Which phytohormone helps in the ripening of fruit and which shows apical dominance?

8. Name any two STDs. 1 mark

9. Draw a diagram to show binary fission in amoeba. 1 mark

10. What is nastic movement? Explain with an example. 2 marks

SECTION-C-CHEMISTRY

Q.1 MCQ (1+1+1+1)

(i) Which of the following substances has the lowest PH value.

(a) Sugar (b) Tomato juice (c) Vinegar (d) Washing Soda

(ii) The acid formed in stomach which help in digestion is dilute solution of

(a) HCl (b) H_2SO_4 (c) CH_3COOH (d) Citric acid

(iii) When a small amount of acid is added to water, the phenomena which occurs are

(a) Dilution (b) Neutralization (c) Formation H_3O^+ ions (d) Salt formation

(iv) Select from the following the statement which are true for bases.

(a) Bases are bitter and turn blue litmus red (b) Bases have a PH less than 7

(c) Bases are sour and change red litmus to blue (d) Bases turn pink when a drop of phenolphthalein is added to them

Q.2 Case base (1+1+1)

One day Komal saw that her mother was roasting peanuts, she was surprised to observed that in spite very high temperature the salt does not melt and the peanuts get roasted.

(i) Common salt is

a) covalent compound (b) soluble in organic solvent (c) Ionic compound (d) None of these

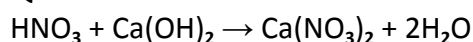
(ii) Common salt is

a) sodium chloride (b) sodium carbonate (c) sodium hydrogen carbonate (d) sodium sulphate carbonate

(iii) Common salt is not a raw material for

a) Bleaching powder (b) plaster of paris (c) Baking soda (d) caustic soda

Q.3 Balance the reaction -----1mark



Q.4 Write the products obtained from electrolysis of brine solution -----1mark

Q.5 Give the name of acids present in -----1 mark

a) Curd (b) vinegar

Q.6 What is the importance of PH in tooth decay -----1 mark

Q.7 Write one property & one use of sodium carbonate -----2 marks