Maheshwari Public School, Ajmer.
Class Test II; Session: 2018-2019
Class: X; Subject: Science

Time Allowed: 45 Min. Maximum Marks: 20

General Instructions:

1. All 11 questions in this paper are compulsory to attempt.
2. Marks are indicated against each question.

Q1. The magnification produced by a mirror is +1.Which type of mirror is this? (1)

Q2. Where should an object be placed on the principal axis of a concave mirror, so that a magnified and virtual image of the object is formed? (1)

Q3. Chlorine, Bromine and Iodine form a Dobereiner's triad. The atomic masses of Chlorine and Bromine are 35.5 and 126.9 respectively. Predict the atomic mass of Bromine. (1)

Q4. A normal baby girl receives her X chromosome from whom? (1)

Q5. Name an animal which can change sex. What does it indicate? (1)

OR

Give an appropriate term for the trait that an organism has due to inheritance.

Q6. An object 3 cm high is placed at a distance of 10 cm in front of a concave mirror of focal length 20 cm. Find the position and size of the image formed. (2)

Q7. State any two limitations of Newland's law of Octaves. (1+1=2)

OR

State any two limitations of Mendeleev's periodic table.

Q8.With the help of an example explain how proteins control the characteristics of an organism? (2)

Q9.State the type of mirrors preferred as: (3)

(a) Rear view mirror in vehicles.

(b) Headlight of vehicles.

Draw ray diagrams to show formation of image in the above cases.

OR

A concave mirror gives a magnified and real image, and also magnified and virtual image. State the position of object in the two cases. Also draw ray diagrams in the above cases.

Q10.Give an account of the criteria adopted by Mendeleev for the classification of elements in his periodic table. State Mendeleev's periodic law. Also mention the number of vertical and horizontal rows present in his table. (1x3=3)

Q11.Genotype of a plant bearing purple flowers is PP and one with white flowers is pp. When these are allowed to cross: (1x3=3)

(a) What colour of flowers would you find in F_1 progeny?

(b) Give the percentage of white flowers if F_1 plants are self pollinated?

(c) In what ratio would you find PP and Pp in F_2 progeny?

Draw a flow chart in support of your answer.

*****