

Class 10<sup>th</sup>

Portfolio Assignment

Subject:- Science

General instructions:-

- The question paper or assignment can be in a printed format.
- The answers must be hand written. And handwriting must be same in the whole assignment file.
- The diagrams must be drawn and well labelled. Any mistake can make a negative impact to your progress report.

Chapter – How Do Organisms Reproduce?

**Section A: Multiple Choice Questions**

(5 × 1

= 5 marks)

**Q1.** Which of the following is asexual reproduction?

- a) Fertilisation
- b) Binary fission
- c) Pollination
- d) Gamete formation

**Q2.** Which part of the flower develops into fruit after fertilisation?

- a) Ovule
- b) Ovary
- c) Stamen
- d) Petal

**Q3.** Hydra reproduces asexually by:

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

**Q4.** The fusion of male and female gametes is called:

- a) Pollination
- b) Fertilisation
- c) Reproduction
- d) Germination

**Q5.** Which disease is caused by a bacterial sexually transmitted infection?

- a) AIDS
- b) Syphilis
- c) Herpes
- d) Hepatitis B

**Section B: Very Short Answer Questions**

(2 × 2 = 4 marks)

**Q6.** Define ovulation.

**Q7.** Name the male and female gametes in human beings.

**Section C: Short Answer Questions**

(4 × 3 = 12 marks)

**Q8.** Differentiate between asexual and sexual reproduction. (Any three points)

**Q9.** What is vegetative propagation? Mention any two methods of vegetative propagation.

**Q10.** Describe the process of fertilisation in human beings.

**Q11.** Write any three advantages of sexual reproduction.

**Section D: Long Answer Question**

(5 × 1 = 5 marks)

**Q12.** Answer the following subparts related to human reproduction:

- a) Name the site of fertilisation in humans.
- b) Name the hormone responsible for secondary sexual characters in males.
- c) What is the function of the placenta?
- d) Name one contraceptive method used by males.
- e) What is the gestation period in humans?

**Section E: Case-Based Question**

(4 × 1 = 4 marks)

**Q13.**

Rahul observed that bread kept in a warm and moist place develops a cotton-like growth after a few days.

- a) Which type of reproduction is seen in this organism?
- b) Name the reproductive structure involved.
- c) Write one condition necessary for this type of reproduction.
- d) Name the organism growing on the bread.

## **Answer Key**

### **Section A**

**A1.** b) Binary fission

**A2.** b) Ovary

**A3.** c) Budding

**A4.** b) Fertilisation

**A5.** b) Syphilis

### **Section B**

**A6.** Reproduction is the biological process by which organisms produce new individuals of their own kind.

**A7.**

Male gamete – Sperm

Female gamete – Ovum

### **Section C**

**A8.**

- Asexual reproduction involves one parent; sexual involves two parents
- No gamete formation in asexual; gametes involved in sexual reproduction
- Offspring are identical in asexual; variation present in sexual reproduction

**A9.**

Vegetative propagation is a type of asexual reproduction in plants where new plants grow from vegetative parts.

Methods: Cutting, layering, grafting, tissue culture (any two)

**A10.**

Fertilisation in humans occurs when the sperm fuses with the ovum in the fallopian tube, forming a zygote which later develops into an embryo.

**A11.**

- Produces variation
- Helps in evolution
- Increases chances of survival

### **Section D**

**A12.**

a) Fallopian tube

b) Testosterone

c) Provides nourishment and oxygen to the embryo

- d) Condom
- e) About 9 months (280 days)

## **Section E**

### **A13.**

- a) Asexual reproduction
- b) Spores
- c) Warm and moist conditions
- d) Bread mould (Rhizopus)