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**3 (Sem-6/CBCS) ZOO HE 3/4**

**2023**

**ZOOLOGY**

(Honours Elective)

**Answer the Questions from any one Option.**

**OPTION-C**

**(Reproductive Biology)**

Paper : ZOO-HE-6036

**OPTION-D**

**(Wildlife Conservation and Management)**

Paper : ZOO-HE-6046

*Full Marks : 60*

*Time : Three hours*

***The figures in the margin indicate  
full marks for the questions.***

*Contd.*

**OPTION-C**

**(Reproductive Biology)**

Paper : ZOO-HE-6036

1. Answer the following as directed :  $1 \times 7 = 7$

(a) All oocytes (primordial follicles) capable of participating in reproduction during a woman's life are present in the ovaries at birth. *(State True or False)*

(b) Dose compensation in human or mammal is achieved by inactivation of one \_\_\_\_\_ in homogametic female (XX). *(Fill in the blank)*

(c) Mullerian duct develops into female reproductive tract. *(State True or False)*

(d) GIFT stands for \_\_\_\_\_.

(e) Production of \_\_\_\_\_ starts with the synthesis of pregnenolone from cholesterol.

(f) Cowper's gland is also known as the  
*(Choose the correct one)*

(i) bulbourethral gland

(ii) prostate gland

(iii) seminal vesicles

(iv) pituitary gland

(g) Population stabilization is also called the stage of zero population growth. *(State True or False)*

2. Answer the following questions very briefly :  
 $2 \times 4 = 8$

(a) What is the purpose of a sperm bank ?

(b) What is ectopic pregnancy ?

(c) Draw the structure of a mature sperm.

(d) What is vasectomy ?

3. Answer the following questions : *(any three)*  
 $5 \times 3 = 15$

(a) Write the process of egg transport in the fallopian tube.

(b) State how hormone controls the process of lactation.

(c) State some of the major causes of infertility in females.

(d) Describe the process of implantation.

(e) Enumerate the factors influencing population growth.

4. (a) Describe in detail the process of folliculogenesis in females. 10

**Or**

(b) Outline the histology of the male reproductive system in human.

5. (a) Write the mechanism of sex differentiation in human. 10

**Or**

(b) What is contraception? What are the modern contraceptive technologies in use?

6. (a) What are gonadotropins? Describe how hormones regulate the reproductive system. 10

**Or**

(b) Elaborate on androgen synthesis and metabolism.

### OPTION-D

#### (Wildlife Conservation and Management)

Paper : ZOO-HE-6046

1. Answer the following : 1×7=7

(a) What is 'habitat'?

(b) Define 'mortality'.

(c) What is a Community Reserve?

(d) Where is the International Ecotourism Society office located?

(e) Give *two* positive values of wildlife.

(f) Who is the father of 'Project Tiger'?

(g) Name *two* remote sensing gadgets used for wildlife studies.

2. Answer briefly : 2×4=8

(a) Write the differences between a 'Wildlife Sanctuary' and a 'National Park'.

(b) Why is cover construction necessary in wildlife?

(c) How can fertility schedule study help in managing wildlife ?

(d) How can you find out density using the mark-recapture method ?

3. Answer in short: **(any three)**  $5 \times 3 = 15$

(a) "Succession should be set back every 2 to 4 years depending on plant response and focal wildlife species"- Explain.

(b) What is the 3<sup>rd</sup> Tiger Crisis ? Explain.

(c) Write short notes on: **(any one)**

(i) Diseases of captive animals

(ii) Biotelemetry

(iii) Pug impression pad (PIP)

(iv) Wildlife corridor

(d) How can topographical studies help in wildlife evaluation ?

(e) Write briefly on the Joint Forest Management (JFM) under the Protected Area Concept.

4. (a) "Wetlands are the most productive ecosystems of the Earth". Explain with suitable examples.  $8+2=10$

**Or**

(b) Comment on the recent controversies regarding the acceptance of Pug marking technique for wild tiger census.  $10$

5. (a) State the principle of Line Transect method. Elaborate the Line Transect principle. Why is this method well accepted by scientists? Mention its limitations.  $2+4+2+2=10$

**Or**

(b) Elaborate different modes of adaptations encountered among the animal community of Tropical Rain Forest.  $10$

6. (a) Write on the different bacterial diseases found in wild animals. 10

**Or**

- (b) Give an account of Census methods involving Tiger Census. Draw and write the differences between the hind pugmark of a Tiger and Tigress.

5+3+2=10