SEAT No._____ No. of Printed Pages: 2

[108]

SARDAR PATEL UNIVERSITY

M. Sc. ZOOLOGY (SEMESTER III) EXAMINATIONS

Day and Date: Saturday, 2nd January, 2021 Time: 2.00 pm to 4:00 pm

PS03CZOO22: BIOLOGY OF ANIMAL BEHAVIOUR

MAXIMUM MARKS: 70

Q.1. A. Select the most appropriate answer. 8x1 = 8 M

1. Nest building represents _____ type of behavior.
   (a) Pre-parturient (b) Allelomimetic (c) Parental care (d) Epilemeletic
2. _____ propounded behaviourism.
   (a) Konrad Lorenz (b) Frederic Skinner (c) Ivan Pavlov (d) Karl Von Frisch
3. Forward-backward movement on axis is known as _____.
   (a) Pitching (b) Yawing (c) Rolling (d) Kinesis
4. _____ communication can wider distance range in a given time unit.
   (a) Acoustic (b) Chemical (c) Tactile (d) Visual
5. Dominance hierarchy is regulated by _____.
   (a) Adrenaline (b) Progesterone (c) Testosterone (d) Thyroxin
6. Peacock feathers are an example of _____.
   (a) Runaway selection (b) Chase away selection (c) Mate assistance (d) Handicap principle
7. Damage to _____ can disrupt circadian rhythm.
   (a) Neurosecretory cells (b) Neurons (c) Synapse (d) Receptors
8. _____ strategy states that set of behavior rules when adopted by certain proportion of population cannot be replaced by any other strategies.
   (a) Behavioural (b) Genetical (c) Conditional (d) Evolutionary steady

Q.1. B. Do as directed: 1x16=16 M

(a) **Fill in the blanks:** 1x8 =8M

1. _____ is a measure of reproductive/ genetic success of an individual based on the number of offspring live to reproduce.
2. Eavesdropping indicates _____.
3. Wernick's area is responsible for _____ in humans.
4. Lek polygyny refers to _____.
5. Cuckoo parental care describes _____ globally.
6. Monarch butterfly is an example of _____.
7. Bout explains _____ in terms of behavior.
8. Lee Bruce effect signifies _____ in rodents.

[P.T.O.]

(b) Write the answers in one/ two sentences: **1x8 =8M**

1. Four questions of 'Tinbergen' with reference to behavior.
2. Write the contributions of Konrad Lorenz.
3. Differentiate taxis and kinesis.
4. Define Prisoner's dilemma.
5. What is Jet lag?
6. Song learning in birds has both proximate and ultimate value- Validate.
7. Territorial behavior
8. 'Stress can alter behavior'- Justify.

Q.2. Briefly answer the following questions. (Seven out of Nine) **7x 2=14 M**

1. What is innate releasing mechanism?
2. Write a short note on social learning.
3. Describe different modes of pheromones.
4. Differentiate frequency modulated and constant frequency.
5. Explain: Hamilton's rule.
6. Write briefly on social aggregation in animals.
7. Honey bee communication.
8. Describe different types of orientation based on their functions.
9. How learning and memory are correlatable?

Q.3 (a) Describe animal identification methods in field and laboratory conditions. **8 M**
(b) Write a short note on sensory receptors.

OR

Q.3 (a) Give an overview of brain imaging techniques to study animal behavior. **8 M**
(b) Describe different criterions according to Altman's methodology.

Q.4 Describe the components of acoustic communication. Write briefly about advantages and disadvantages of acoustic communication. **8 M**

OR

Q.4 What is navigation? Explain various navigation signals with exemplifying animals. **8 M**

Q.5 (a) Enlist fitness consequences of social interactions between two animals. **8 M**
(b) Write a short note on significance of monogamy.

OR

Q.5 Explain cost and benefits of Parental care. Write briefly about forms of parental care. **8 M**

Q.6 Write briefly about migration in animals. Add a note on biological rhythm with reference to migration. **8 M**

OR

Q.6 Provide details about 'Law of Association' with appropriate examples. **8 M**