

SEAT No. _____

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SARDAR PATEL UNIVERSITY
S. Y. B.Sc. (III SEMESTER) EXAMINATION

2023

Friday, 1st January
2.00 p.m. to 4.00 p.m.

USO3CENV22 ECOLOGY AND WATER RESOURCES

Total Marks: 70

Q.1. Select the correct answer and write it in the answer sheet (10)

- In a population unrestricted reproductive capacity is called as _____.
(a) Carrying capacity (b) Biotic potential (c) Birth rate (d) Fertility rate
- The formula for exponential growth curve is _____.
(a) $dN/dt = rN$ (b) $dt/dN = rN$ (c) $dN/rN = dt$ (d) $rN/dN = dt$
- _____ dispersion pattern is described by organisms being spaced out equally.
(a) Uniform (b) Random (c) Clumped (d) None of these
- The plants whose buds are situated close to the ground are called _____.
(a) Hemicryptophytes (b) Cryptophytes (c) Geophytes (d) Chamaephytes
- _____ is the pioneer community in Xerosere
(a) Foliose lichen (b) Herb (c) Moss (d) Crustose lichen
- _____ is a process where solid turns into gas without going through a liquid stage
(a) Condensation (b) Percolation (c) Transportation (d) Sublimation
- Infiltration rate is measured in _____.
(a) gm/l (b) kg/hr (c) mm/hr (d) mg/l
- Flooding is _____ type of technique for ground water recharge
(a) Direct sub surface (b) Direct surface (c) Combination (d) Indirect
- Ground water is drawn by _____.
(a) Drilling wells (b) Drip irrigation (c) Check Dams (d) Canals
- On _____ river Sardar sarovar dam has been constructed.
(a) Mahi (b) Sabarmati (c) Tapi (d) Narmada

Q.2. Write true or false for following (08)

- Mortality defines the ability of the individual in the population to produce new individuals.
- Carrying capacity is represented by K.
- Nymphaea is the pioneer community in Hydrosere.
- The stable, self perpetuating and long lived community is called climax community.
- High concentration of nitrate in drinking water causes methaemoglobinaemia.
- Rate of evaporation does not depend upon vapour pressure.
- Poor water quality increases water demand.
- River Ganga rises from Gangotri glacier.

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[P.T.O.]

Q.3. Answer the following in brief (any 10)

(20)

1. Define population with types.
2. State difference between crude density and specific density.
3. What is biotic potential?
4. What is community? Write in brief its structure.
5. Write a note on Life forms.
6. Enlist the stages and their plant community in Hydrosere.
7. Write a short note on physical properties of water.
8. Write in brief about precipitation.
9. Explain types of aquifers.
10. Explain factors affecting water demand.
11. What is integrated water resource management?
12. What is rain water harvesting?

Q.4. Write a detailed note on following (Any four)

(32)

1. Give a note on survivorship curves with proper diagram.
2. Explain age structure and draw the hypothetical diagram showing different types of age group.
3. Give an account of general process of succession
4. Describe the Analytical characters of community
5. Discuss hydrological cycle in detail with appropriate diagram.
6. Explain water table in detail.
7. Write in detail about any four hot spots of surface water.
8. Explain the causes and effects of ground water depletion.

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