

BIOLOGY

2015

Time: 30 Minutes

Max. Marks: 15

SECTION "A" (MULTIPLE CHOICE QUESTIONS)

1. Choose the correct answer for each from the given options: (15)

- (i) The type of lenses of light microscope is:
* Biconcave * Convex * Concave * Electromagnetic
- (ii) Rust and Smut of cereal crop is due to:
* Algae * Fungi * Virus * Bacteria
- (iii) Prokaryotic cells do not contain:
* Nucleus * Ribosomes * Cell membrane * Cell wall
- (iv) Pencillium belongs to:
* Algae * Fungi * Fern * Virus
- (v) Which one of the following is caused by acid rain:
* Green house effect * Stone cancer
* Damage to ozone layer * Denitrification of soil
- (vi) Seed is developed from:
* Ovule * Ovary * Flower * Plant
- (vii) The basic unit of inheritance is:
* Chromosome * gene * gametes * nucleus
- (viii) The part of brain associated with intelligence, memory etc is:
* Cerebrum * cerebellum * Pons * Medulla oblongata
- (ix) Movement of Euglena occurs by:
* Cilia * flagella * pseudopodia * limbs
- (x) Plants gain weight due to:
* Respiration * Photosynthesis
* Transpiration * none of them
- (xi) Nephron are connected with:
* Respiratory system * Circulatory system
* Nervous system * Excretory system
- (xii) Which of the following is gill breather?
* Fish * Frog * Whale * Turtle
- (xiii) They are exclusively marine:
* Protozoa * Echinodermata * Annelida * Mollusca
- (xiv) Whole of the life sustaining area of earth:
* Biosphere * Atmosphere * lithosphere * hydrosphere
- (xv) CO₂ from air is taken by leaf through:
* Stomata * Epidermis * Mesophyll * Lenticle

BIOLOGY

2015

Time: 2 ½ Hours

Max. Marks: 68

SECTION "B" (SHORT-ANSWER QUESTIONS)

ZOOLOGY

(MARKS 21)

NOTE: Answer 7 questions from this section.

- 2. Define bio-chemistry, bio-physics and biometry.
- 3. What are receptors? Name receptor organs of sight, sound, odour and taste.
- 4. Write three characteristics of class Reptilian.
- 5. Define joints. Describe any two defects of skeletal system.
- 6. What do you mean by species? Write scientific name and classification of man or frog.
- 7. Draw a neat and labeled diagram of "Brain of frog" OR "Ventral view of heart of frog".
- 8. Define parasite. Name two parasites and write phylum to which they belong.
- 9. Write the role of skin in excretion.
- 10. Define ecology, population and community.
- 11. What is variation? Write two causes of variation.

BOTANY

(MARKS 21)

NOTE: Answer 7 questions from this section.

- 12. What is chlamydomonas? Describe its properties.
- 13. Write any three differences between bryophyte and tracheophyta.
- 14. Define light reaction and dark reaction.
- 15. Draw a neat and labeled diagram of structure of Bacteriophage.
- 16. Write a short note on cell wall.
- 17. Define a biotechnology. Write one use of bacteria and fungi.
- 18. Briefly describe any one type of plant tissues.
- 19. Define fertilization and double fertilization.
- 20. Write a note on insectivorous plants.
- 21. What are chromosomes? Write down the number of chromosomes in a cell of: Man, frog, Onion, garden pea.

SECTION 'C' (DETAILED-ANSWER QUESTIONS)

ZOOLOGY

(MARKS 14)

NOTE: Attempt 2 questions from this section.

- 22. Draw a neat and labeled diagram of the human respiratory organs.
- 23. Define neurons. Describe the structure of neuron in detail. Draw labeled diagram also.
- 24. What are the components of blood? Describe each of them in detail with labeled diagram.

(DETAILED-ANSWER QUESTIONS)

BOTANY

(MARKS 14)

NOTE: Attempt 2 questions from this section.

- 25. Define asexual reproduction in plants. Describe any three methods of asexual reproduction in detail.
- 26. Draw a neat and labeled diagram of T.S. of the stem of sun flower.
- 27. Describe an experiment to prove that chlorophyll is necessary for photosynthesis. Draw its labeled diagram.