

**BARNES SCHOOL AND JUNIOR COLLEGE, DEOLALI**

**HALF YEARLY EXAMINATION, 2011-12**

**BIOLOGY**

**TIME: 1 1/2 hrs**

**CLASS:10**

**MARKS: 80**

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*Answers to this Paper must be written on the paper provided separately.*

*You will **not** be allowed to write during the first 15 minutes.*

*This time is to be spent in reading the question paper.*

*The time given at the head of the Paper is the time allowed for writing the answers.*

*Attempt **all** questions from **Section I** and any **four** questions from **Section II**.*

*The intended marks for questions or parts of questions are given in brackets ( ).*

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**SECTION I**

**(40 Marks)**

*(Answer all Questions)*

1A. Name the following: (1x5)

- (a). Nuclear part of cell division
- (b). Protein other than DNA found in the chromatin matter.
- (c). Tear gland is also called.
- (d). A sheet of fibrous layer connecting the hemispheres of the cerebrum.
- (e). Disease caused by uneven curvatures of the cornea.

1B. Fill in the blanks with the correct choice of words: (1x5)

- (a). Cones: Iodopsim ; Rods : \_\_\_\_\_
- (b). Sound: Eardrums ; Dynamic Balance : \_\_\_\_\_.
- (c). Heart: Pericardium ; Brain : \_\_\_\_\_.
- (d). Aorta: Vena Cava ; Mesenteric Artery : \_\_\_\_\_.
- (e). Cortex: Medulla ; Gyre : \_\_\_\_\_.

1C. Elaborate on the following: (1x5)

- (a). CNS
- (b). SAN
- (c). DNA
- (d). WBC
- (e). ATP

1D. State whether true or false. Rewrite the statements correctly by changing the underlined words: (10)

- (a). The auditory nerve is purely for perceiving sound.
- (b). The blind spot is called so because no image is formed on it.
- (c). The main component of the white matter of the brain is perikaryon.
- (d). Duramatter is the outermost layer of the meninges.
- (e). Malpighian capsule is a part of the Bowman's capsule.
- (f). Stomatas are present in all parts of the shoot system.

1E. Match the following: (1x5)

- | A                            | B                     |
|------------------------------|-----------------------|
| (a). Potassium Hydroxide ( ) | i) Endosmosis         |
| (b). Hypertonic ( )          | ii) Water plant       |
| (c). Mutation ( )            | iii) Young green stem |
| (d). Hydrilla ( )            | iv) Carbon dioxide    |
| (e). Stomata ( )             | v) Genetic change     |
|                              | vi) Exosmosis         |
|                              | vii) Oxygen           |

1F. State the function of the following: (1x5)

- (a) Ciliary muscle.
- (b) Macula lutea.
- (c) Conjunctiva.
- (d) Suspensory ligament.
- (e) Aqueous humor.

1G. Define any five of the following: (1x5)

- (a) Homologous Chromosome.
- (b) Recessive genes.
- (c) Chromatin fiber.
- (d) Mutation.
- (e) Homozygous genes.
- (f) Heterozygous genes.
- (g) X linked inheritance.
- (h) Alleles.

**SECTION II**

**(40 Marks)**

*(Answer any four questions)*

2. Name the hormones secreted from the pituitary (anterior and posterior) gland. Mention their principal secretions and disorder in a tabular form. (10)
- 3A. Describe the starch test. (5)
- 3B. Draw L.S of an eye and label its parts. (5)
- 4A. Give five differences between Diffusion and Osmosis. (5)
- 4B. Draw and label Metaphase in a Mitotic cell division of an animal cell having six chromosomes. (5)
- 5A. Give any five differences between Mitosis and Meiosis. (5)
- 5B. Draw and label the following parts in a plant cell: (5)
- (a). Osmotic pressure
  - (b). Turgor pressure
  - (c). Wall pressure
  - (d). Plasma membrane
  - (e). Cell wall
- 6A. Explain with the help of a diagram the root pressure. (5)
- 6B. Describe different types of WBC. (5)
- 7A. Draw and label a diagrammatic uriniferous tubule with the blood supply and arrows showing the direction of the flow. (5)
- 7B. What are the functions of the following parts of the ear: (5)
- (a). Incus
  - (b). Tympanum
  - (c). Vestibule (Utriculus and Sacculus)
  - (d). Organ of corti
  - (e). Eustachian tube.
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