

BIOLOGY

SECOND GROUP (NEW COURSE)

ACADEMIC SESSION: 2015 -17 to 2016-18

TIME: 20 MINUTES

MARKS: 17

OBJECTIVE

NOTE: You have four choices for each objective type question as A , B , C and D . The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

QUESTION NO. 1

- 1 Liver acts as a store house for
(A) Bile (B) Albumin (C) R.B.Cs (D) Iron
- 2 Excretory structures present in cockroach are
(A) Nephridia (B) Malpighian tubules (C) Flame cells (D) Contractile vacuole
- 3 The earliest form of muscles to evolve is
(A) Cardiac muscles (B) Smooth muscles (C) Skeletal muscles (D) Involuntary muscles
- 4 Which animal shows Digitigrade mode of locomotion?
(A) Bear (B) Deer (C) Rabbit (D) Horse
- 5 Excess of which hormone causes Addison's disease.
(A) FSH (B) MSH (C) LTH (D) TSH
- 6 Corpus luteum starts secreting a hormone called
(A) Oestrogen (B) Progesterone (C) Oxytocin (D) Testosterone
- 7 Plant hormone Florigen is produced in
(A) Flowers (B) Roots (C) Stem (D) Leaves
- 8 In plants which light enhances cell division
(A) Infra red (B) Blue (C) Red (D) Ultra violet
- 9 Okazaki fragments are synthesized by
(A) DNA ligase (B) RNA polymerase (C) DNA polymerase (D) Primase
- 10 Which one is absent in animal cell
(A) Spindle (B) Centriole (C) Chromatids (D) Phragmoplast
- 11 Synapsis occurs during
(A) Pachytene (B) Leptotene (C) Zygotene (D) Diplotene
- 12 ABO blood groups were discovered by
(A) Punnet (B) Landsteiner (C) Bernstein (D) T.H. Morgan
- 13 Meristem is
(A) Virus free (B) Bacteria free (C) Fungus free (D) Pathogen free
- 14 Which one of the following believes in theory of special creation?
(A) Linnaeus (B) Darwin (C) Lyell (D) Lamarck
- 15 In ecosystem ,second trophic level is consisted of
(A) Producer (B) Primary consumer (C) Secondary consumer (D) Tertiary consumer
- 16 Coniferous forests located at high altitude are
(A) Alpine (B) Boreal (C) Taiga (D) Arctic
- 17 The cheapest source of energy is
(A) Fossil fuels (B) Geothermal energy (C) Hydroelectric power (D) Nuclear energy

SECTION-I**QUESTION NO. 2 Write short answers any Eight (8) questions of the following** 16

- 1 Differentiate between re-absorption and secretion in nephron.
- 2 What is counter current multiplier?
- 3 Differentiate between shivering and non-shivering thermogenesis
- 4 What is an exoskeleton? Name its two layers.
- 5 Differentiate between hyaline and elastic cartilage.
- 6 What is sliding filament model?
- 7 Differentiate between lactation and gestation.
- 8 What is Gonorrhoea and who caused it?
- 9 Differentiate between hydrospheric and fresh water ecosystems.
- 10 What is desertification? Quote one example.
- 11 What are endangered species? Give examples.
- 12 What is acid rain? Write its any two effects.

QUESTION NO. 3 Write short answers any Eight (8) questions of the following 16

- 1 Define reflex arc.
- 2 What do you know about Gastrin?
- 3 Define habituation with an example.
- 4 Write down two methods for solving disputed paternity.
- 5 Differentiate between linkage and linkage group.
- 6 How sex is determined in plants?
- 7 What are palindromic sequences?
- 8 Define gel electrophoresis.
- 9 How gene therapy is carried out?
- 10 Define Biotic and A-biotic factors of an ecosystem.
- 11 Differentiate between hydrosere and xerosere.
- 12 Write down two remedies of nitrogen depletion from soil.

QUESTION NO. 4 Write short answers any Six (6) questions of the following 12

- 1 What is discoidal cleavage?
- 2 How area opaca differs from area pellucida?
- 3 What are mutagens? Give one example.
- 4 Differentiate between conservative and semi-conservative replication of DNA.
- 5 Write down the structural formulae of Adenine and Guanine.
- 6 What is metastasis?
- 7 Differentiate between necrosis and apoptosis.
- 8 State Hardy-Weinberg Theorem.
- 9 What are hydrothermal vents?

SECTION-II**Note: Attempt any Three (3) questions from this section**

8 x 3 = 24

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| 5.(A) | Explain urinary system in humans. |
| (B) | What is food web? How it is constructed to show various trophic level. |
| 6.(A) | Define joints. How are they classified? Explain |
| (B) | What is mutation? Describe its types in detail. |
| 7.(A) | Write a note on Auxins. Give its commercial application. |
| (B) | Discuss importance of Forest. |
| 8.(A) | Define reproduction. Compare asexual reproduction with sexual reproduction. |
| (B) | Explain incomplete dominance with an example. |
| 9.(A) | What is aging? How will you explain this process? |
| (B) | What are the endangered species? What measures could be adapted for their preservation? |