Subject : Animal Science

Day : Monday

Date : 17/10/2016

31409

Time : 10.00 AM TO 01.00 PM

Max Marks : 60   Total Pages : 1

N.B.:
1) **Q. No. 1** and **Q. No. 5** are **COMPULSORY**. Answer any **TWO** from Questions **2, 3, 4** and from **6, 7, 8**.
2) Answers to both the sections should be written in **SEPARATE** answer book.
3) Draw neat diagrams **WHEREVER** necessary.

SECTION-I

Q.1   Attempt any **FIVE** of the following: (10)

   a) Give systematic position of *Hydra*.
   b) Explain in brief spermatheca of earthworm.
   c) Enlist parts and functions of small intestine in rat.
   d) Explain role of insulin hormone in man.
   e) Sketch and label *Entamoeba histolytica*.
   f) Enlist different types of fish products.
   g) Enlist types of honey bees with their life span.

Q.2   Attempt the following questions: (10)

   a) Describer in brief internal structure of heart of rat.
   b) Describe alimentary canal in earthworm.

Q.3   Attempt the following questions: (10)

   a) Describe female reproductive system of rat.
   b) Describe the life cycle of *Ascaris lumbricoides*.

Q.4   Write short notes on any **TWO** of the following: (10)

   a) Describe in brief structure of pituitary gland in mammals.
   b) Explain in brief significance of classification.
   c) What is digestion? Describe digestive system of rat.

SECTION-II

Q.5   Attempt any **TWO** of the following: (10)

   a) Describe in brief life cycle of *Taenia solium.*
   b) Describe circulatory system in the intestinal region of earthworm.
   c) Explain the role of earthworms in agro-industries.

Q.6   Attempt the following questions: (10)

   a) Explain mode of infection, pathogenicity and control measures in *Entamoeba histolytica*.
   b) Explain how honey bees are economically and ecologically important to farmers.

Q.7   Attempt the following questions   (10)

   a) Explain in brief rsignificance cβf live stock industry.
   b) Describe economic importance of fish as food and leather.

Q.8   Describe male and female sex hormones and explain their roles in mammalian   (10)
body.

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Subject : Plant Science

Day : Wednesday

Date : 19/10/2016

31410

Time : 10.00 AM TO 01.00 PM

Max Marks : 60   Total Pages : 1

N.B.:
1) **Q. No. 1** and **Q. No. 5** are **COMPULSORY.**
2) Attempt any **TWO** questions from **Q. No. 2, 3, 4** in Section –I
3) Attempt any **TWO** questions from **Q. No. 6, 7, 8** in Section -II
4) Figures to the right indicate **FULL** marks.
5) Answer to both the sections should be written in **SEPARATE** answer book.

SECTION-I

Q.1 Answer any **FIVE** of the following: (10)

a) What is endosperm?
b) Write any two functions of root.
c) Define seed germination.
d) Write any two economic importance of *Chlorella*.
e) What is fruit?
f) Define seed dormancy.

Q.2 Answer the following:

a) Give general characteristics of algae. (05)
b) Explain in detail diversity in plants. (05)

Q.3 Answer the following:

a) Describe alternation of generation in *Riccia*. (05)
b) Distinguish between dicotyledons and monocotyledons. (05)

Q.4 Write short notes on any **TWO** of the following: (10)

a) Asexual reproduction in *Aspergillus*.
b) General characteristics of angiosperms.
c) Biotechnological significance of gymnosperms.

SECTION-II

Q.5 Answer the following:

a) Describe types of endosperms in angiosperms. (05)
b) What is lichen? Describe different forms of lichen with suitable examples. (05)

Q.6 Answer the following:

a) Describe structure of typical flower. (05)
b) Explain the process of fertilization in angiosperms. (05)

Q.7 Write short notes on:

a) Applications of ethylene. (05)
b) Types of flower. (05)

Q.8 a) Describe structure and functions of plant tissues (10)

OR

b) Explain the role of mineral elements and their deficiency symptoms in plants.

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Subject : Foundations of Chemistry & Biochemistry

Day : Friday

Date : 21/10/2016

31411

Time : 10.00 AM TO 01.00 PM

Max Marks : 60   Total Pages : 1

N.B:
1) **Q. NO.1** and **Q.NO.5** are **COMPLSORY.** Answer **ANY TWO** from Questions 2, 3 and 4 and from 6, 7 and 8.
2) Answers the questions of Section I and Section II in separate answer books.
3) Figures to the right indicate **FULL** marks.
3) Draw well-labeled diagrams and structure **WHEREVER** necessary.

SECTION-I

Q.1	Attempt **ANY FIVE** of the following:	(10)

a) Name the different bonds involved in stabilization of bimolecular structure.
b) What do you understand by glycoprotein and glycolipid?
c) What is buffer? Give two examples.
d) What are epimers? Explain with example.
e) Name any two storage polysaccharides and draw the structure of their monomer.
f) What are reducing and non-reducing sugars? Give one example of each.

Q.2	Answer the following:	(10)

a) Why water is called as an Universal solvent?
b) Differentiate between starch and cellulose.

Q.3	Answer the following:	(10)

a) Explain the classification of carbohydrate based on carbon number.
b) Discuss the scope and contribution of biochemistry in human welfare.

Q.4	Write short notes on:	(10)

a) Diffusion and osmosis
b) Storage and structural polysaccharides

SECTION-II

Q.5	Attempt the following questions.	(10)

a) What are lipids? Explain their biological functions.
b) What is colorimetry? Explain Beer-Lambert's Law.

Q.6	Answer the following:	(10)

a) What are colloids? Explain the difference between colloids and emulsion.
b) Define molarity. How will you prepare 2M NaOH solution?
(Molecular weight of NaOH = 40)

Q.7	Write short notes on:	(10)

a) Sphingolipids
b) Chromatography

Q.8	Answer the following:	(10)

a) What are polar and non-polar solvents? Explain their properties.

b) Describe the various biological roles of liposomes.

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Subject : Basics of Computer

Day : Monday

Date : 24/10/2016

31412

Time : 10.00 AM TO 01.00 PM

Max Marks : 60   Total Pages : 1

N.B.:

1) **Q.No. 1** and **Q.No. 5** are **COMPULSORY**. Out of remaining questions attempt **ANY TWO** questions from each section.
2) Answers to both the sections should be written in **SEPARATE** answer books.
3) Draw neat diagram **WHEREVER** necessary.
4) Figures to the right indicate **FULL** marks.

SECTION – I

Q.1   Attempt **ANY FIVE** of the following: **[10]**
   a) Define NIC.
   b) Define Algorithm. List its characteristics.
   c) Enlist three different modes of data transmission.
   d) Define variable, operand and operator.
   e) Enlist five basic operations performed by computer.
   f) What is # include?

Q.2 a) Perform the following conversions: **[05]**
   i) 65477_{10} to hexadecimal   ii) 111010111_2 to decimal.
   b) Enumerate different number systems. Describe any two in details.   **[05]**

Q.3 a) Explain the different type of network topologies.   **[05]**
   b) Differentiate between characteristics of primary and secondary storage of   **[05]**
      computer system.

Q.4   Write short notes on **ANY TWO** of the following: **[10]**
   a) Super computer
   b) WAN
   c) Network protocol

SECTION – II

Q.5   Attempt **ANY FIVE** of the following: **[10]**
   a) System software.
   b) Flow chart.
   c) MAN.
   d) Application software.
   e) Data types.
   f) RAM.

Q.6 a) What is the range of various data types? Discuss the primary data types in   **[05]**
      detail.
   b) Describe various functions of operating system.   **[05]**

Q.7 a) What are the characteristics of word processor?   **[05]**
   b) Draw a flow chart to print sum of digits of number.   **[05]**

Q.8   Write a 'C' program to find sum of the first n numbers.   **[10]**

OR

Explain difference between Do – while and while loop with example.

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