Section-A

I. Choose the correct answer: 8x1=8

1. The five kingdom classification was given by

     a) Whittaker   b) Linnaeus   c) Copeland   d) Haeckel

2. Which of the following is not reported to have any fresh water forms?

   a) Mollusca   b) Sponges   c) Coelenterates   d) Echinoderms

3. Which of the following is the flight adaptation of birds?

     a) Pneumatic bones and strong flight muscles

     b) Homeothermic condition

     c) Migration to distant places

     d) Presence of horny covering on the beak

4. What type of fibres are found in connective tissue matrix?

     a) Collagen   b) Areolar   c) Cartilage   d) Tubular

5. How many abdominal segments are present in male and female cockroaches?

     a) 10, 10   b) 9, 10   c) 8, 10   d) 9, 9

6. Which of the following hormones stimulate the production of pancreatic juice and bicarbonate?

     a) Angiotensin and epinephrine   b) Gastrin and insulin

     c) Cholecystokinin and secretin   d) Insulin and glucagon

7. Protein coated fat globules are called _____.

     a) micelles   b) villi   c) microvilli   d) chylomicrons

8. After a long deep breath, we do not respire for some seconds due to _____.

     a) more CO_2 in the blood   b) more O_2 in the blood

     c) less CO_2 in the blood   d) less O_2 in the blood

II. Answer any 4 of the following: 4x2=8

9. What is the role of typhlosole?

10. What is meant by Gingivitis?

11. What is meant by Cladogram?

12. What is VC expand and give the formula?

13. What is meant by Haematocrit?

14. What is the significance of ospharidium?

III. Answer any 3 of the following: 3x3=9

15. Write a note on the composition of succus entericus and the role of two enzymes.

16. Write a note on Double circulation and its role.

17. Write a note on any three external apertures of earthworm and its function.

18. What is meant by stratified epithelium and explain about its role.

19. What is Deuterostomia and Prostomia?

IV. Answer any 2 of the following: 2x5=10

20. a) Write about the formed elements of blood and their functions.

             (or)

   b) Write in brief the reproductive system of earthworm.

21. a) Write in short note about epithelium.   (or)

   b) Explain in detail about Regulation of Respiration and explain about AMS and its adaptation.

Section-B

I. Choose the correct answer: 8x1=8

1. The end product of Ornithine cycle is _____.

     a) carbon dioxide   b) uric acid   c) urea   d) ammonia

2. Glucose, amino acids, Na^+ and water in the filtrate are

   reabsorbed in the _____.

     a) descending limb of Henle's loop

     b) ascending limb of Henle's loop

     c) proximal convoluted tubule

     d) distal convoluted tubule

3. Number of bones present in an arm is _____.

     a) 30   b) 32   c) 35   d) 40

4. Which of the following cranial nerve controls the movement of eye ball?

     a) trocheclar   b) oculomotor   c) abducen   d) all of the given

5. The maintenance of constant internal environment is referred

   as _____.

     a) Regulation   b) homeostasis   c) co-ordination

     d) hormonal control

6. Which of the following is the exotic species used for vermicomposting?

     a) Eudrilus eugeniae   b) Lampito mauritii

     c) Periyanyx excavatus   d) Oetochaetona serrata

7. Raft based method of aquaponic gardening is known as _____.

     a) Deep water culture   b) Aqua vertica

     c) Media based method   d) Nutrient film technique

8. Induced breeding technique is used in _____.

     a) Marine fishery   b) Capture fishery

     c) Culture fishery   d) Inland fishery

II. Answer any 4 of the following: 4x2=8

9. What is CCK and give its functions.

10. Define Nacre.

11. What is Ootolith and write its functions.

12. Define AriLac and explain about it.

13. Give the functions of Melatonin.

14. What is a podocyte and give its functions.

III. Answer any 3 of the following: 3x3=9

15. Give an account on the "types of Neuron".

16. Give the functions of Glucagon.

17. What is a Game breed, give an example and explain about it.

18. Draw the ornithine cycle.

19. Give the advantages of artificial insemination.

IV. Answer any 2 of the following: 2x5=10

20. a) Explain about the mechanism of urine formation in Human.

                   (or)

   b) Explain about the Regions of Brain and its function in briefly.

21. a) Explain about the hormone which plays a role in complete development of human and give the diseases caused by hyper and hypo secretion of this hormone.

                   (or)

   b) Explain about poultry farming and stages involved in rearing.

I. Choose the best answer: 15X1=15

1. In which generation, Microcomputer series such as IBM & APPLE was developed?

   a) Fourth   b) Third   c) Second   d) First

2. The process of loading an OS in a computer RAM is known as.......

   a) POST   b) BIOS   c) Booting   d) All of these

3. 4 bits =...........

   a) Bit   b) Byte   c) Nibble   d) Word

4. 1's Complement of 1001_2 is

   a) 1001_2 b) 0111_2 c) 0110_2 d) 1010_2

5. The speed at which the microprocessor executes instructions is called

   a) Clock Speed   b) Clock Rate   c) Clock Bus   d) Clock Size

6. Which bus in unidirectional?

   a) Address bus   b) Control bus   c) Data bus   d) System bus

7. A portion of secondary memory which can serve as an extension of the main memory is called.

   a)Primary Memory   b)ROM   c) Virtual Memory   d) EEPROM

8. Multiprocessor operating system is also called .... processing

   a) Multiuser   b) Real time   c) Parallel   d) Time sharing

9. Expansion od NTFS is.................

   a) Next Generation Format system   b) Next Generation Function system

   c) Next Generation File System   d) New Generation File System

10. Which key display the Window Desktop

    a) winkey + E   b)winkey + D   c)winkey + C   d)winkey + T

11. Trash icon is equivalent to.............. icon in Windows

    a) Spam   b) Recycle bin   c) Garbage bin   d) Dustbin

12. The default Ubuntu 16.04 theme known as.............

    a) Ambiance   b) Trend   c) Dzire   d) 3D tube

13. Which of the following is a recursive solve case?

    a) Base case   b) Recursive case   c) loop case   d) Both a and b

14. Which of the following is not a programming language?

    a) C   b)C++   c)Ms-office   d)Python

15. Testing a loop condition and executing the loop body once is called.....

    a) alternative   b) sequence   c) condition   d) iteration

II. Answer the following in short (any six)

   (Q.no 16 is compulsory)   6x2=12

16. Define IPO cycle

17. i) What is byte?

    ii) What is word length?

18. What is memory access time?

19. What is an Operating system?

20. What is the advantage of open source?

21. Distinguish between an algorithm and a process.

22. Write a note an alternative statement.

23. What is an invariant?

III.Answer in brief   (Any 6)   6x3=18

(Q.No 25 is compulsory)

24. Write the merits of fifth generation computers.

25. a. add the binary numbers 110101_2 and 101111_2

   b. Convert $B2F_{16}$ to Octal.

26. Write a note on RISC processor.

27. Write a note about Time Sharing OS.

28. Write the specific use of Cortana.

29. What is recursive problem solving?

30. Write an algorithm to find the minimum of two numbers.

IV.Explain in Detail   5x5=25

31. a) Explain the following: a. Inkjet Printer b. Multimedia projector c. Bar

     Code/ QR code Reader   (OR)

  b) Find 1's Complement and 2's Complement for the following Decimal

    number a) -98 b) -135.

32.a)Explain the Derived gates with expression and truth table.   (OR)

    b) Explain the following terms in detail. (1) ASCII (2) BCD (3) EBCDIC

33. a)Explain the types of ROM   (OR)

    b) Explain advantages and disadvantages of open source operating systems.

34. a)Explain the versions of Windows Operating System   (OR)

    b) Write the specification of an algorithm hypotenuse whose inputs are the

lengths of the two shorter sides of a right angled triangle, and the output is the

length of the third side.

35 a) Decanting problem. You are given three bottles of capacities 5, 8 and 3

litres. The 8L bottle is filled with oil, while the other two are empty. Divide the

oil in 8L bottle in to two equal quantities. Represent the state of the process by

appropriate variables. What are the initial and final states of the process?

Model the decanting of oil from one bottle to another by assignment. Write a

sequence of assignments to achieve the final state.

                                (OR)

b) A-single-square-covered board is a board of 2n x 2n squares in which one

square is covered with a single square tile. Show that is possible to cover this

board with triominoes without overlap.