

29.10.19 Special Test – Computer Science Time: 1 Hr

STD: XI (A-D) Marks: 45

I. Choose the correct answer: 10x1=10

1. Which statements works quite similar to the break statement?

- a) Jump b) continue c) goto d) if

2. What is the output of following code?

```
for (i=13; i<=3; i=3)
  cout <<i<<endl;
```

- a) 3,10,7,4 b) 13,10,7 c) a & b d) none

3. How many times the loop will execute?

```
for (int i=2; i<8; i++)
```

- a) 7 b) 6 c) 8 d) 5

4. _____ is exit control loop.

- a) do-while b) while c) for d) if

5. Which one is counter style loop?

- a) do-while b) while c) for d) a & c

6. _____ statement is used to interrupt the normal flow of program.

- a) nested if b) switch c) jump d) a & b

7. A loop which contains another loop is called as _____ loop.

- a) nested b) separate c) identical d) none

8. The switch statement is more efficient than _____ statement.

- a) if b) if...else c) nested if d) none

9. _____ is a multiway branching statement.

- a) switch b) if c) if...else d) for

10. _____ statement is a multipath decision making statement.

- a) nested if b) if else / adder c) if...else d) if

II. Answer the following:

6x2=12

11. What is null statement and compound statement?

12. What is selection statement? Write its types.

13. Compare and if and a ?: operator.

14. Convert the following to a single conditional statement.

15. Rewrite the following code?

```
v=5;
do;
{
total +=v;
cout << total;
while v<=10
```

16. Write the syntax of if and if.....else statement.

III. Answer the following:

6x3=18

17. Write a c++ program to print multiplication table of a given number.

18. Write the difference between break and continue statement.

19. Write the types of nested form and write the syntax of if nested inside else part.

20. Write any 3 rules of switch statement.

21. Write the difference between switch vs if-else statement (any 4)

22. What is meant by iteration or Looping? Write its types.

IV. Answer any 1 in detail:

1x5=5

23. Write a program to display the days in a week using switch statement.

24. Write a program to find the sum from 1 to 10 using while loop.

29.10.19

Special Test – Biology

Time: 1 Hr

STD: XI (A-D)

Bio-Botany

Marks: 45

I. Answer the following:

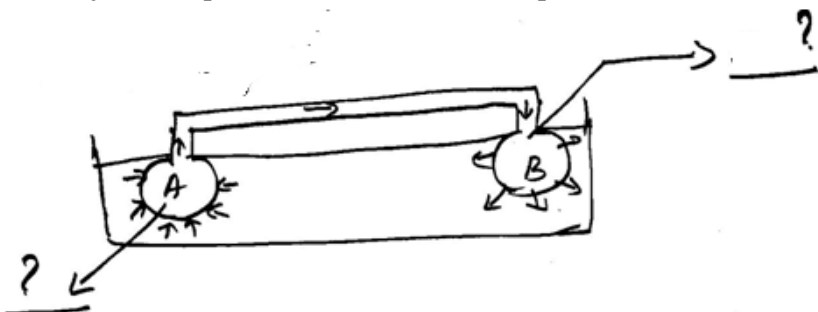
3x1=3

1. Stomata of a plant open due to _____.
2. _____ is not linked to protein-lecithin theory.
 - a) ATP
 - b) Phosphatidic acid
 - c) Dehydrogenase
 - d) Choline
3. Name the routes of water.
 - i) water moves exclusively through cell wall - _____
 - ii) Transport across the tonoplast - _____

II. Answer any 2 of the following:

2x2=4

4. Identify the experiment and label the parts.



5. Explain Cohesion and Adhesion as explained by transpiration pull theory.

6. Explain Ascent of sap.

III. Answer any 2 of the following:

2x3=6

7. What are the steps involved in phloem loading.
8. Explain Donnan equilibrium.
9. Draw a Ganong's photometer and label the parts.

IV. Answer any 2 in detail:

2x5=10

10. Explain cytochrome pump theory.

11. Explain theory of K^+ transport for mechanism of stomatal movement.

12. Explain starch-sugar Inter conversion theory.

Bio-Zoology

I. Answer any 2 of the following:

2x1=2

1. What is the vitamin D deficiency disease caused in children called?
2. What chemical substance accumulates in Gouty arthritis?
3. Efficiency of which chemical substance is prevented in Myasthenia gravis?

II. Answer any 3 of the following:

3x2=6

4. What is meant by Tetany?
5. What is meant by Osteo arthritis?
6. What is meant by Muscle fatigue?
7. Explain Gouty arthritis.

III. Answer any 3 of the following:

3x3=9

8. Differentiate isotonic contraction from isometric contraction.
9. Differentiate Red and White skeletal muscle fibres.
10. Differentiate slow oxidative and fast glycolytic fibres.
11. What is meant by osteoporosis? Explain.

IV. Answer any 1 in detail:

1x5=5

12. Write a detailed note on the structure of typical long bone.
13. Write a note on Disorders of Muscular system on these sub headings.
 - a) Duchene Muscular Dystrophy
 - b) Myasthenia gravis
 - c) Atrophy

29.10.19 Special Test – Computer Application Time: 1 Hr
 STD: XI (F-I) Marks: 45

I. Choose the correct answer: 10x1=10

1. Pick odd one from the list
 a) <tr> b) <th> c) <dh> d) <td>
2. Definition list has how many parts?
 a) 5 b) 4 c) 3 d) 2
3. A list block can be defined inside another list is _____.
 a) Inner List b) Nested List c) Outer List d) Listing List
4. A named set of certain style of character and number is _____.
 a) Style b) Character c) Font d) List
5. Which feature is used to call attention to the reader?
 a) Highlight b) Bold c) Italics d) Underline
6. To create internal link, which of the following attribute should be used?
 a) link b) name c) local d) inter
7. _____ is used to define important text.
 a) Bold b) Strong c) Brave d) Both a & b
8. _____ tag is used to define the text bigger in size than the normal size. It is often used to call attention a text.
 a) small b) big c) subscript d) superscript
9. The horizontal line is displayed in _____ color by default.
 a) Red b) Yellow c) Gray d) Black
10. _____ tag defines title for the table.
 a) <tr> b) <th> c) <td> d) <caption>

II. Answer any 5 of the following: 5x2=10

11. What is pixel?
12. What are the types of list in HTML?
13. How will you define numbered list?

14. What is thematic break?
 15. What is the use of <mark> tag?
 16. What is Inserting and Delting tag, give with an example?
- III. Answer any 5 of the following: 5x3=15
17. Briefly explain the attributes of <hr> tag.
 18. Difference between and tags.
 19. Write HTML code to create the following output:

1. Tamil
2. Telugu
3. English

20. Write HTML code to create the following output

The Scientific notation of water is H₂O
 $(a+b)^2=a^2+2ab+b^2$

21. What is Highlighting text?
22. Explain the attributes of table.

IV. Answer any 2 in detail: 2x5=10

23. Explain the types of list with suitable HTML code.
24. What is Link and explain the types of links?
25. Write HTML code to create the following table.

Class	Boys	Girls
XI	150	160
XII	140	170

1. If $y = \log x$, then $y_2 =$
 - a) $\frac{1}{x}$
 - b) $-\frac{1}{x^2}$
 - c) $-\frac{2}{x^2}$
 - d) e^2
2. $\frac{d}{dx} \left(\frac{1}{x}\right)$ is equal to _____.
 - a) $-\frac{1}{x^2}$
 - b) $\frac{1}{x}$
 - c) $\log x$
 - d) $\frac{1}{x^2}$
3. $\frac{d}{dx} (5e^x - 2 \log x)$ is equal to _____.
 - a) $5e^x - \frac{2}{x}$
 - b) $5e^x - 2x$
 - c) $5e^x - \frac{1}{x}$
 - d) $2 \log x$
4. $\frac{d}{dx} (a^x) =$ _____.
 - a) $\frac{1}{x \log_e a}$
 - b) a^a
 - c) $x \log_e a$
 - d) $a^x \log_e a$
5. If the function $f(x)$ is continuous at $x=a$, then $\lim_{x \rightarrow a} f(x)$ is equal to _____.
 - a) $f(-a)$
 - b) $f\left(\frac{1}{a}\right)$
 - c) $2f(a)$
 - d) $f(a)$
6. $\lim_{\theta \rightarrow 0} \frac{\tan \theta}{\theta} =$
 - a) 1
 - b) ∞
 - c) $-\infty$
 - d) θ
7. If $y = e^{2x}$, then $\frac{d^2y}{dx^2}$ at $x=0$ is _____.
 - a) 4
 - b) 9
 - c) 2
 - d) 0
8. $\lim_{x \rightarrow 0} \frac{e^x - 1}{x} =$
 - a) e
 - b) nx^{n-1}
 - c) 1
 - d) 0
9. If $y=x$ and $z = \frac{1}{x}$, then $\frac{dy}{dz} =$ _____.
 - a) x^2
 - b) 1
 - c) $-x^2$
 - d) $-\frac{1}{x^2}$
10. For what value of x , $f(x) = \frac{x+2}{x-1}$ is not continuous?
 - a) -2
 - b) 1
 - c) 2
 - d) -1

II. Answer any 5 of the following: 5x3=15

11. If $y = 500 e^{7x} + 600 e^{-7x}$, then show that $y_2 - 49y = 0$
12. If $y = A \sin x + B \cos x$, then prove that $y_2 + y = 0$

13. Find $\frac{dy}{dx}$ of the function, $x = \log t$, $y = \sin t$

14. Let f be defined by $f(x) = x^3 - kx^2 + 2x$, $x \in \mathbb{R}$ find k , if ' f ' is odd function.

15. If $f(x) = x + \frac{1}{x}$, then show that $(f(x))^3 = f(x^3) + 3f\left(\frac{1}{x}\right)$

16. Differentiate $\sin^3 x$ with respect to $\cos^3 x$.

III. Answer any 4 of the following: 4x5=20

17. i) Differentiate $\frac{x^2}{1+x^2}$ with respect to x^2

ii) Find $\frac{dy}{dx}$, $x = ct$, $y = \frac{c}{t}$

18. If $y = (x + \sqrt{1+x^2})^m$, then show that $(1+x^2) y_2 + xy_1 - m^2 y = 0$

19. i) If $y = 2 + \log x$, show that $xy_2 + y_1 = 0$

ii) Find second order derivative of $3 \cos x + 4 \sin x$

20. i) If $f(x) = \frac{x+1}{x-1}$, then prove that $f(f(x)) = x$.

ii) Determine whether odd or even $f(x) = x + x^2$

21. If $f(x) = x$, $g(x) = |x|$ then find i) $(f+g)(x)$

ii) $(f-g)(x)$

iii) $(fg)(x)$