

EVERWIN MATRIC. HR. SEC. SCHOOL

22.10.19 TT Biology Time: 45 Mins
 STD: XI (A-D) Bio-Botany Marks: 15

- I. Answer any 2 of the following: 2x2=4
1. What is Aquaporin?
 2. List out the characteristics of diffusion.
 3. What is Imbibition? Give examples of Imbibants.
- II. Answer any 2 of the following: 2x3=6
4. List out the types of carrier proteins and explain the direction of transport.
 5. Mention the significance of diffusion in plants.
 6. Tabulate the difference between Plasmolysis types.
- III. Answer any 1 in detail: 1x5=5
7. Write a detailed account on water potential.
 8. Write a note on Osmosis.

Bio-Zoology Marks: 15

- I. Answer the following: 5x1=5
1. Name the Regulatory proteins.
 2. Name the contractile proteins.
 3. Where is 'M' line?
 4. Which are the floating ribs?
 5. How many false ribs are there?
- II. Answer any 1 of the following: 1x2=2
6. Give the equivalent terms of muscles.
 - a) Endoplasmic reticulum
 - b) Plasmalemma
 - c) Glycogen
 - d) Haemoglobin
 7. Give the definition for Sarcomere and draw and label the
- III. Answer any 1 of the following: 1x3=3
8. Write a note on actin and myosin protein.
 9. Give any three functions of Skeletal system.
- IV. Answer any 1 of the following: 1x5=5
10. Write a note on the schematic presentation of muscle contraction.
 11. Give an account on the structure of a skeletal muscle fibre.

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22.10.19 TT Computer Application Time: 45 Mins
 STD: XI (F-I) Marks: 30

- I. Answer any 6 of the following: 6x2=12
1. Explain with the help of an example the difference between container and empty elements.
 2. How do you include an image as your web page background?
 3. How do you define comments in HTML?
 4. What is the wrong in the following coding?


```
<html>
<my web page>
<title> Welcome to my web page </body>
</head>
</title>
```
 5. Write a syntax for i) background colour ii) body text colour
 6. Explain Line Breaks and Paragraphs.
 7. i) Write a section of html. ii) What is element?
- II. Answer any 6 of the following: 6x3=18
8. Explain the structural tags of HTML.
 9. Explain the attributes available with <body> tag.
 10. What are the attributes available in <html> tags?
 11. How do you save a file as HTML file?
 12. Write a html program with following condition.
 - i) Add a suitable title
 - ii) Center the heading
 - iii) Change the different Alignment setting for 2 paragraph.
 13. Write a HTML code for a webpage with the following specification.
 - i) Apply background color
 - ii) Apply Heading level (h1)
 - iii) Add background image
 14. Draw a output for the following program:


```
<html>
<head>
<title> class 11 </title>
</head>
<body>
<h1 align=center> Computer Application </h1>
<h2> html </h2>
<h3> head </h3>
<h4> body </h4>
</body>
</html>
```

22.10.19 TT Computer Science Time: 45 Mins
 STD: XI (A-D) Marks: 30

I. Choose the correct answer: 5x1=5

- Which of the following operator returns the size of the datatype?
 a) sizeof () b) int () c) long () d) double
 - What is the output of the following snippet?

```
char ch='A';
ch=ch+1;
```

 a) B b) A1 c) F d) G
 - This can be used as alternate to endl command.
 a) \t b) \b c) \o d) \n
 - Char datatype has _____ byte.
 a) 2 b) 1 c) 3 d) 4
 - _____ manipulator is a member of iostream header file.
 a) endl b) setw c) setprecision d) self
- II. Answer any 4 in short: 4x2=8
- Why is char often treated as integer datatype?
 - What is a reference variable? What is its use?
 - What is the use of setw () format manipulator?
 - What will be the result of following if n=6 initially
 a) cout << n; b) cout << (n==0);
 - Which of the following two statements are valid? Why? Also write their result.

```
int a;
a) a=3,014; b) a=(3,014);
```

III. Answer any 4 in brief: 4x3=12

- Write a note on Modifiers.
 - What is a variable, write the syntax to declare a variable?
 - What is the difference between endl and \n?
 - Write a note on Dynamic initialization.
 - What is meant by type conversion?
- IV. Answer any 1 in detail: 5x1=5
- Explain about Type conversion and its types with examples.
 - Explain in detail about Formatting output with examples.

22.10.19 TT Business Mathematics Time: 45 Mins
 STD: XI (E-I) Marks: 30

I. Choose the correct answer: 5x1=5

- If $f(x) = \frac{1-x}{1+x}$, $1+x \neq 0$, then $f(-x)$ is equal to _____.
 a) $-f(x)$ b) $\frac{1}{f(x)}$ c) $\frac{-1}{f(x)}$ d) $f(x)$
- The graph of $y=e^x$ intersect the y axis at _____.
 a) (0, 0) b) (1, 0) c) (0, 1) d) (1, 1)
- If $f(x)=2^x$ and $g(x)=\frac{1}{2^x}$ then $(fg(x))$ is _____.
 a) 1 b) 0 c) 4^x d) $\frac{1}{4^x}$
- The minimum value of the function $f(x)=|x|$ is _____.
 a) 0 b) -1 c) +1 d) $-\infty$
- If $f(x) = \begin{cases} x^2-4x & \text{if } x \geq 2 \\ x+2 & \text{if } x < 2 \end{cases}$, then $f(0)$ is _____.
 a) 2 b) 5 c) -1 d) 0

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

- If $\sin y = x \sin(a+y)$, then prove that $\frac{dy}{dx} = \frac{\sin^2(a+y)}{\sin a}$
- If $x\sqrt{1+y} + y\sqrt{1+x} = 0$ and $x \neq y$, then prove that $\frac{dy}{dx} = \frac{-1}{(x+1)^2}$
- Differentiate $\sqrt{\frac{(x-3)(x^2+4)}{3x^2+4x+5}}$
- Differentiate the following with respect to x: $(\log x)^{\cos x}$
- Find $\frac{dy}{dx}$ for the function, $xy = \tan(xy)$
- Find $\frac{dy}{dx}$ at (1, 1) to the curve $2x^2 + 3xy + 5y^2 = 10$.

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

- If $4x+3y = \log(4x-3y)$, then find $\frac{dy}{dx}$
- If $x^m \cdot y^n = (x+y)^{m+n}$, then show that $\frac{dy}{dx} = \frac{y}{x}$
- Differentiate the following w.r.t 'x'.
 i) $(\sin x)^{\tan x}$ ii) $xy = e^{x-y}$ prove that $\frac{dy}{dx} = \frac{\log x}{(1+\log x)^2}$