

# HOLIDAY HOMEWORK

## CLASS-12

## SUB-PHYSICS

Question 1.

A glass lens of refractive index 1.5 is placed in a trough of liquid. What must be the refractive index of the liquid in order to mark the lens disappear?

Question 2.

A converging lens of refractive index 1.5 is kept in a liquid medium having same refractive index. What would be the focal length of the lens in this medium?

Question 3.

Name the part of the electromagnetic spectrum of wavelength  $10^{-2}$  m and mention its one application.

Question 4. Write the following radiations in ascending order in respect of their frequencies ; X-rays, Microwaves, UV rays and radiowaves.

Question 5

The instantaneous current and voltage of an a.c. circuit are given by  $i = 10 \sin 300 t$  A and  $V = 200 \sin 300 t$  V. What is the power dissipation in the circuit?

Question 6

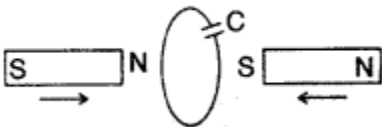
Mention the two characteristic properties of the material suitable for making core of a transformer.

Question 7.

A plot of magnetic flux ( $\phi$ ) versus current ( $I$ ) is shown in the figure for two inductors A and B. Which of the two has larger value of self inductance?

Question 8.

Two bar magnets are quickly moved towards a metallic loop connected across a capacitor 'C' as shown in the figure. Predict the polarity of the capacitor. (All India 2013)



## AUTUMN BREAK HOMEWORK

### CLASS-XII Biology

1. Draw and label the followings
  - a. T.S of a young anther
  - b. Microsporogenesis
  - c. Ovule
  - d. Female gametophyte
  - e. Male and Female Human Reproductive System
  - f. Replication in Retroviruses
  - g. Life cycle of an Anopheles
  - h. L.S of embryo of grass
  - i. Structure of a human sperm
  
2. Write short notes on
  - a. Double fertilisation
  - b. Spermatogenesis
  - c. Oogenesis
  - d. Spermeogenesis
  - e. Pollination
  - f. Sex determination in – Human, Birds and Honey bees.

**Q1. MULTIPLE CHOICE QUESTIONS**

A) Which of the following operator cannot be used with string data type?

- (a) +
- (b) in
- (c) \*
- (d) /

B) Given : s="ComputerExam". What will be the output of print(s[2]+s[8]+s[1:5])?

- (a) mEOMUU
- (b) mEompu
- (c) mEomPU
- (d) MEompu

C) Which of the following types of files will need the pickle module for working on it? [1]

- (a) Binary' files
- (b) Text files
- (c) CSV files
- (d) All of these

D) In the following code, which lines will give error? (Assume the lines are numbered starting from 1.)

```
mul=3
value=10
for i in range (1, 6, 1):
    if (value % mul = 0):
        print (value * multiply)
    else
print (value + multiply)
```

- (a) 4, 5
- (b) 4,5,6
- (c) 4,5,6,7
- (d) No errors

E) Which of the following functions will read lines of a text file as list elements? [1]

- (a) read()
- (b) get()
- (c) readline()
- (d) readlines()

F) Which of the following will be the output of the statement given below? [1]

```
print([12,34,56,78,90] . pop( ))
```

- (a) 78
- (b) 90

(c) 12

(d) 12,34,56,78,90

G) Identify the output of the following Python statement:

```
b = 1
```

```
for a in range(1, 10, 2):
```

```
    b += a + 2
```

```
print(b)
```

(a) 31

(b) 33

(c) 36

(d) 39

H) Given s="AISSE@2023". What will be the output of

```
print (s [-1: : -1 ] ) ?
```

(a) '3202@ESSIA'

(b) 3

(c) AISSE

(d) ESSIA

I) Which of the following functions write data to a binary file?

(a) pickle()

(b) writer()

(c) load()

(d) dump()

J) Which of the following is not an inherent application of stack ?

(a) Reversing a string

(b) Evaluation of postfix expression

(c) Implementation of recursion

(d) Job scheduling

K) Given an object obj1 = (10, 20, 30, 40, 50, 60, 70, 80, 90). What will be the output of

```
print(obj1[3 : 7 : 2])? [1]
```

(a) (40, 50, 60, 70, 80)

(b) (40, 50, 60, 70)

(c) (40, 50, 60)

(d) (40, 60)

L) Observe the following tuples and choose the correct option

```
t1=(4, 7, 8, 9)
```

```
t2=(0, 4, 3)
```

```
t=t1+t2
```

```
print(t)
```

(a) (4, 7, 8, 9, 0, 4, 3)

(b) (4, 7, 8, 9, 4, 7, 8, 9)

(c) (4, 7, 8, 9)

(d) None of these

### SHORT ANSWER TYPE

A) Differentiate between `readline()` and `readlines()`

B) Write the file mode that will be used for opening the following files. Also, write the Python statements to open the following files:

1. a text file "example.txt" in both read and write mode.
2. a binary file "bfile.dat" in write mode.
3. a text file "try.txt" in append and read mode.
4. a binary file "btry.dat" in read only mode

C) Define pickling in Python. Explain serialization and deserialization of Python object

D) When are the following built-in exceptions raised? Give examples to support your answers.

1. ImportError
2. IOError
3. NameError
4. ZeroDivisionError

E) How is circuit switching differ from packet switching.

F) write a function in python that counts number of "me" or "my" words present in a text file tory.txt.

### Case Study Based Question-1

Rohit, a student of class 12th, is learning CSV File Module in Python. During examination, he has been assigned an incomplete python code (shown below) to create a CSV File 'Student.csv' (content shown below). Help him in completing the code which creates the desired CSV File

#### CSV File

1,AKSHAY,XII,A

2,ABHISHEK,XII,A

3,ARVIND,XII,A

4,RAVI,XII,A

5,ASHISH,XII,A

```
import _____ #Statement-1
```

```
fh = open(_____, _____, newline="") #Statement-2
```

```
stuwriter = csv._____ #Statement-3
```

```
data = []
```

```
header = ['ROLL_NO', 'NAME', 'CLASS', 'SECTION']
```

```
data.append(header)
```

```
for i in range(5):
```

```
roll_no = int(input("Enter Roll Number : "))
```

```
name = input("Enter Name : ")
```

```
Class = input("Enter Class : ")
```

```
section = input("Enter Section : ")
```

```
rec = [_____] #Statement-4
data.append(rec)
stuwriter. _____ (data) #Statement-5
fh.close()
```

- i) Identify the suitable code for blank space in line marked as Statement-1.
- a) csv file
  - b) CSV
  - c) csv
  - d) Csv
- ii) Choose the function name that should be used in the blank space of line marked as Statement-5 to create the desired CSV File?
- a) dump()
  - b) load()
  - c) writerows()
  - d) writerow()
- iii) Identify the suitable code for blank space in line marked as Statement-4
- a) 'ROLL\_NO', 'NAME', 'CLASS', 'SECTION'
  - b) ROLL\_NO, NAME, CLASS, SECTION
  - c) 'roll\_no', 'name', 'Class', 'section'
  - d) roll\_no, name, Class, section

### **LONG ANSWER TYPE.**

A. Write a menu driven program to implement a simple calculator in python. The program reads two integer values and provides choice for the user to perform Addition, Subtraction, multiplication, and division operations on those values. The program continuously gives choice for the user to perform the above operations till the user select exit option.

B. Discuss various types of Guided Media.

C. Write a program to find the factorial of a given number.

D. Find the length of each word in a given string

## पीएम श्री केंद्रीय विद्यालय नंबर 2 बलांगीर

### शरदकालीन अवकाश गृह कार्य

### कक्षा -बारहवीं- विषय हिंदी (2024-25)

प्रश्न-1. शरदकालीन अवकाश में आरोह,वितान, एवं अभिव्यक्ति और मध्यम के जितने अध्याय पढ़ा दिए गए हैं, उसका अभ्यास कार्य ,कक्षा कार्य कापी में पूर्ण करना है।

प्रश्न -2 .शरद कालीन अवकाश गृह कार्य के रूप में दो सैंपल पेपर गृहकार्य काफ़ी में पढ़ाई गए अध्यायों में से प्रश्नों को गृह कार्य कॉपी में सॉल्व करना है।

प्रश्न -3. कमरे में बंद अपाहिज करुणा के मुखौटे में छिपी कूरता की कविता है। इस परिपेक्ष में वर्तमान सामाजिक जनसंचार माध्यम की भूमिका को A4 साइज पेपर में एक परियोजना कार्य तैयार कीजिए।