

# HONOURS

555/Phs.

SKBU/UG/4th Sem/Phs/HT405/21

## U.G. 4th Semester Examination - 2021

### PHYSICS

Course Code : BPHSSEHT405

Course Title : Computational Physics Skills

Full Marks : 50

Time : 2 Hours

*The figures in the right-hand margin indicate marks.*

Answer all the following questions by choosing correct alternative:  $2 \times 25 = 50$

1. What is a variable?
  - a) An entity whose value can change during the course of execution of the programme.
  - b) An entity that forces other parameters to vary.
  - c) Similar to a constant.
  - d) None of the above.
2. Which is the only function all C programs must contain?
  - a) start()
  - b) system()
  - c) printf()
  - d) main()

3. Which of the following header files contain the standard input-output function declarations in C programming?
  - a) math.h
  - b) conio.h
  - c) stdio.h
  - d) None of the above.
4. Each statement in a C program should end with
  - a) Semicolon (;)
  - b) Colon (:)
  - c) Period . (dot symbol)
  - d) None of the above.
5. What is an algorithm?
  - a) A diagram containing all the instructions in a programme
  - b) A finite sequence of instructions to execute a programme.
  - c) A C programming code.
  - d) None of the above.

[Turn Over]

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6. An Identifier may contain
- Letters a-z, A-Z in Basic character set. Unicode alphabet characters other languages
  - Underscore `_` symbol
  - Numbers 0 to 9, Unicode Numbers in other languages
  - All the above.
7. Find a correct C keyword below:
- breaker
  - go to
  - shorter
  - default
8. Operator `%` in C Language is called
- Percentage Operator
  - Quotient Operator
  - Modulus
  - Division.
9. C language is used in the development of
- databases
  - graphic applications
  - word processors
  - all of the above.
10. What is the relation between the return value and the output value of a C programme?
- They are equal
  - Proportional to each other
  - Inversely proportional
  - None of the above.
11. Which of the following LINUX commands is used to install, update, upgrade or remove a package from the operating system?
- cd
  - apt-get
  - pwd
  - gedit.
12. What is an Array in C language?
- A group of elements of same data type.
  - An array contains more than one element
  - Array elements are stored in memory in continuous or contiguous locations.
  - All the above.

13. What is the role of 'scanf' in a C programme?
- a) does the overall execution of the programme
  - b) allows the programme to accept inputs
  - c) prints the results
  - d) All of the above
14. What role does the 'break' statement play when encountered in a loop?
- a) immediately terminates the loop
  - b) takes the loop to the starting statement
  - c) continues the loop
  - d) None of the above.
15. A C variable cannot start with
- a) A number
  - b) a special symbol other than underscore
  - c) both of the above
  - d) an alphabet.
16. The task of converting the programming language into machine language is done by
- a) compiler
  - b) text editor
  - c) executable file
  - d) debugger.

17. What is the output of the program?

```
int main()
{
int a = 25%10;
printf("%d", a);
return 0;
}
```

- a) 2.5
- b) 2
- c) 5
- d) Compiler error.

18. What is the output of C Program?

```
int main()
{
int k;
for(k=1; k <= 5; k++);
{
printf("%d ", k);
}
return 0;
}
```

- a) 1 2 3 4 5
- b) 1 2 3 4
- c) 6
- d) 5

19. Which of the following is the correct value to return to the operating system upon successful completion of a programme?
- 1
  - 0
  - 1
  - 2
20. gnuplot is
- a graph plotting programme
  - a document preparation software
  - a compiler
  - the newest version of ubuntu.
21. LaTeX is
- a programming language
  - an operating system
  - a document preparation software system
  - a debugging programme.
22. \_\_\_\_\_ command can be used to explicitly specify the logical structure of the document in LaTeX.
- `\chapter`
  - `\section`
  - `\paragraph`
  - All of these.

23. In LaTeX, square root of a number  $x$  is denoted using the command \_\_\_\_\_{ $x$ }.
- `\square`
  - `Squareroot`
  - `\sqrt`
  - `Sqroot`.
24. In LaTeX, the \_\_\_\_\_ command can be used to add the bold effect to the text.
- `\textbf`
  - `\textit`
  - `\emph`
  - All of these.
25. In LaTeX, \_\_\_\_\_ package contains the advanced math extensions for LaTeX originally developed for the American mathematical society.
- `geometry`
  - `amsmath`
  - `setspace`
  - `color`