

EASTERN PROVINCE
BUGESERA DISTRICT
SUBJECT: COMPUTER SCIENCE
COMBINATION: S.6 MCE & MPC
DATE & TIME: ... / 03 /2021, (3h)

END OF 2ND TERM EXAM (100 MARKS)

Instructions:

- Section A: Attempt ALL questions (70 marks)
- Section B: Attempt THREE questions (30 marks)

Section A: attempt all questions /70 Marks

1. a) What is a protocol? /2marks
b) Explain how does protocol work /3 marks
2. What is the purpose of “**using namespace**” in C++ program? /2 marks
3. Your computer starts, you hear sound and see video. BIOS conduct POST and everything seems fine but the following error message appears: Operating system missing. Which components could be missing or damaged? /2marks
4. Give three disadvantages of paper based information system?/3 marks
5. What are the responsibilities of Network Layer? /2marks
6. When **output of an OR** operator and **AND** operator return **FALSE**? /4 marks
7. Compute the following:
 - a) Find the binary equivalent of (255.45)₁₀. /2marks
 - b) Convert (FADE)₁₆ to octal system. /2 marks
 - c) Represent “-32” in sign magnitude form. /2 marks
8. What are outputs of the following C++ program code: /2 marks

```
#include<iostream>
using namespace std;
void swap (int m, int n) {
int x = m;
m = n;
```

```

n = x;
}
int main() {
int x = 5, y = 3;
swap(x,y);
cout<<"x="<<x<<"\n"<<"y="<<y;
return 0;
}

```

9. Write an algorithm that read two numbers from keyboard and inform the user if the sum of those numbers is odd or even. **/5 marks**
10. What is difference between:
 - a) Snifing and spoofing? **/4 marks**
 - b) Authorization and Authentication. **/4 marks**
11. What will be the results of the following instructions? **/6 marks**
 - a) var a, b, sum1, sum2 as integer
start:
a=b=2;
sum1=b + (++a);
Write ("sum1: ", sum1);
sum2=a + 7;
Write ("\n sum2: ",sum2);
End
12. a) What are the difference between stack and queue? **/6marks**
 - b) List the basic operations carried out on the stack. **/3 marks**
13. What are the different between DELETE and DROP SQL Statement? **/4 marks**
14. What are the components of Visual Basic IDE? **/6 marks**
15. Discuss the operations that can be performed on the computer memory. **/4 marks**
16. Give four conditions that must hold simultaneously for a deadlock to occur. **/4 marks**

SECTION B: Choose three questions (10 marks for each question)

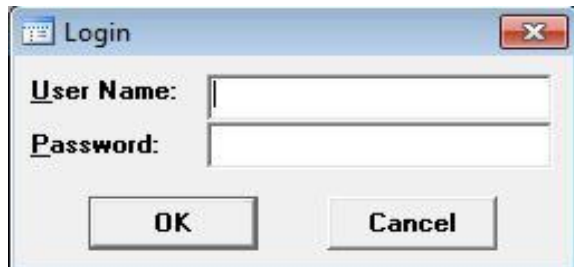
17. Rewrite the following code using for

```
loop { inti,j;  
  
i=1;  
  
while(i<4)  
  
{ j=1;  
  
while(j<=i)  
  
{ System.out.print(j);  
  
j++; }  
  
i++;  
  
System.out.print("\n");  
  
}  
  
return 0; }
```

18. In writing the program, programmer meets with an error in his source code. Help him to identify the type of error he made and how to handle it in order to display numbers from 1 to 10

```
#include<iostream>  
using namespace std;  
main()  
{  
int i=1;  
do  
{  
  
}  
while (i<=10);  
return 0;  
}
```

19. The diagram below show the log-in screen on network. To gain access to the internet the user name and password must be entered.



- a. What is a password?
- b. Write VB code for login when Ok button is clicked. For example if user set user name as “**User**” and Password as “**Password**” and Ok button is clicked, he will receive a message for **Logged successful** else **Logged unsuccessful, Try again**, Form 2 will appear on screen and Login form disappear .
20. Discuss different operations that can be performed on a File?

I wish you the best. Good luck!!!