Sample Impetus Technical Paper

Q1. Which bitwise operator is suitable for turning off a particular bit in a number?

A. && operator
B. & operator
C. || operator
D. ! operator

Q2. Which bitwise operator is suitable for checking whether a particular bit is on or off?

A. && operator
B. & operator
C. || operator
D. ! operator

Q3. Which bitwise operator is suitable for turning on a particular bit in a number?

A. && operator
B. & operator
C. || operator
D. | operator

Q4. In which numbering system can the binary number 1011011111000101 be easily converted to?

A. Decimal system
B. Hexadecimal system
C. Octal system
D. No need to convert

Q5. In multi-user system files f1, f2, f3, f4, f5 of size 200, 100, 50, 80, 150 are there. In what way files should be stored to improve access time assuming all files are accessed with same frequency.

A. F1,f5,f2,f4,f3
B. F3,f4,f2,f5,f1
C. Ordering of files does not matter bcoz all files are accessed with same frequency

Q6. An alternate key is

A. Candidate key but not primary key
B. Candidate key as well as primary key
C. Primary key but not candidate key
D. None of above

Q7. What is the output of the following program?

```
int main()
{
union
{
char ch;
int i;
}u;
u.i=256;
printf(%d,u.ch);
}
```

A. 0
B. 255
C. -1
D. garbage

Q8. What is the output of the following program?

```
class animal
{
virtual speak(int i)
{
```

```
cout<
}
};
class cow:public animal
{
virtual speak(int i)
{
cout<
}
};
class dog: public animal
{
virtual speak(short a)
{
cout<
}
};
int main()
{
animal *p=new dog;
p->speak(1);
}
```

A. In dog
B. In animal
C. In cow
D. Compile time error.

Q9. What is the output of the following program?

```
Class prog
{
public static void main(String argv[])
{
system.out.println(argv[2]);
}
}
```

A. well
B. done
C. array bound exception

Q10. Which of the following statements are correct about the program?

```
#include
int main()
{
unsigned int m[] = {0x01, 0x02, 0x04, 0x08, 0x10, 0x20, 0x40, 0x80};
unsigned char n, i;
scanf(%d, &n);
for(i=0; i<=7; i++)
{
if(n & m[i])
printf(yes);
}
return 0;
}
```

A. It will put OFF all bits that are ON in the number n
B. It will test whether the individual bits of n are ON or OFF
C. It will put ON all bits that are OFF in the number n
D. It will report compilation errors in the if statement.

Q11. Which of the following statements are correct about the program?

```
#include
int main()
{
unsigned int num;
int i;
scanf(%u, &num);
for(i=0; i<16; i++)
{
printf(%d, (num< }
return 0;
```

```
}
```

A. It prints all even bits from num
B. It prints all odd bits from num
C. It prints binary equivalent num
D. Error

Q12. Which of the following statements are correct about the program?

```
#include
char *fun(unsigned int num, int base);
int main()
{
char *s;
s=fun(128, 2);
s=fun(128, 16);
printf(%s ,s);
return 0;
}
char *fun(unsigned int num, int base)
{
static char buff[33];
char *ptr = &buff[sizeof(buff)-1];
*ptr = ;
do
{
*--ptr = 0123456789abcdef[num %base];
num /=base;
}while(num!=0);
return ptr;
}
```

A. It converts a number to a given base.
B. It converts a number to its equivalent binary.
C. It converts a number to its equivalent hexadecimal.
D. It converts a number to its equivalent octal.

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Q13. In multi-user system a process in RUNNING state will move to .... state after time out.

A. Blocked
B. Suspended
C. Terminated

Q14. A database in BCNF will be in

A. 1nf
B. 2nf
C. 3nf
D. all the above

Q15. What is the output of this line?

printf(foo,bar);

A. foo
B. bar
C. foobar
D. compile time error

Q16. What is the output of the following program?

```
class foo
{
virtual f()
{
cout<
}
};
class foo2:public foo
{
virtual f(int i)
{
```

```
cout<
}
};
void main()
{
foo2 f1;
f1.f();
f1.f(1);
}
```

A. compile time error
B. In foo2
C. In foo

Q17. Which of the following statements are correct about the program?

```
#include
int main()
{
unsigned int num;
int c=0;
scanf(%u, &num);
for(;num;num>>=1)
{
if(num & 1)
c++;
}
printf(%d, c);
return 0;
}
```

A. It counts the number of bits that are ON (1) in the number num.
B. It counts the number of bits that are OFF (0) in the number num.
C. It sets all bits in the number num to 1
D. Error

Q18. Conversion of number from base 2 to base 32.

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Q19. Find out cover of functional dependency.

Q20. What is the output of the following program?

```
int main()
{
int x=11;
int &p=x;
printf(%u %u,&p,&x);
}
```