KENDRIYA VIDYALAYA SANGATHAN

(AHEMDABAD REGION)

MULTIPLE CHOICE QUESTIONS(MCQs)
QUESTION BANK

CLASS- XII

SUBJECT: COMPUTER SCIENCE (083)

SESSION 2024-25

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INDEX

KENDRIYA VIDYALAYA, AFS, SAMANA

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CLASS : XII SUBJECT: COMP. SCI.

UNIT – I **TOPIC- Python Revision Tour**

.....0

1. Python programs are executed by which language processor?
   1. Compiler
   2. Interpreter
   3. Assembler
   D. All of the above
2. Which of the statement is correct?
   A. Python is not portable and platform independent.
   B. Python is portable and platform dependent.
   C. Python is portable and platform independent.
   D. Python is not portable and platform dependent
3. Which function can be used to display the output in python
   A. show()
   B. print()
   C. display()
   D. output()
4. Tick the correct statement to print Hello World.
   A. print(hello)(world)
   B. Print("hello world")
   C. Print(hello world)
   D. print("Hello World ")
5. Which of the following is String literal?
   A. "ABC"
   B. "123"
   C. Both of the above
   D. None of the above
6. Python code can run on a variety of platforms, it means Python is a ..... language.
   A. Graphical
   B. Cross-platform
   C. Independent
   D. All of these

7. Python uses a/an ..... to convert source code to object code.
   A. Interpreter
   B Compiler
   C. Combination of Interpreter and compiler
   D. Special virtual engine
8. The interpreter is also called ……
   A. Python Editor
   B. Python Kernel
   C. Python shell.
   D. None of the Above
9. Python interpreter executes ……. statement (Command) at a time.
   A. Two
   B. Three
   C. One
   D. All command
10. The process of removing errors from programs is called __
   A. Programming
   B. Documentation
   C. Debugging
   D. None of the above
11. IDLE stands for_____
   A. Integrated Development Learning
   B. Integrated Development Learning Environment
   C. Intelligent Development Learning Environment
   D. None of the above
12. program written in a high-level language is called ……
   A. Compile code
   B. Object code
   C. Source code
   D. Binary Code
13. Numbers = [4, 8, 9, 2.6, 5] is a type of which data type in python?
   A. List B. Tuple C. Set D. None of these
14. x=3.123, then int (x) will give?
   A. 3.1 B. 0 C. 1 D. 3

15. What data type is the object below? L = {1:”One”,2:”Two”}

A. list

B. dictionary

C. array

D. tuple

16. What is the output of the following code? a, b=8/4/2, 8/(4/2) print(a, b)
A. Syntax error
B. 1.0,4.0
C. 4.0,4.0
D. 4,4

17. What is the result after executing the following:
>>>print (20/4 *5+8-10)
A. 1 B. 23 C. 23.0 D. 2

18. Evaluate the following expression and identify the correct answer.
16 // (4 + 2) * 5 + 2**3 * 4
A. 42
B. 46
C. 18
D. 32

19. **Assertion:** It is interpreted language.
Reason: Python programs are executed by an interpreter.
(A) Both Assertion and reason are true and reason is correct explanation of assertion.
(B) Assertion and reason both are true but reason is not the correct explanation of assertion.
(C) Assertion is true, reason is false.
(D) Assertion is false, reason is true

20. **Assertion:** Python is portable and platform independent.
Reason: Python program can run on various operating systems and hardware platforms.
(A) Both Assertion and reason are true and reason is correct explanation of assertion.
(B) Assertion and reason both are true but reason is not the correct explanation of assertion.
(C) Assertion is true, reason is false.
(D) Assertion is false, reason is true

21. **Assertion:** Python has a rich library of predefined functions.
Reason: Python is helpful in web development.
(A) Both Assertion and reason are true and reason is correct explanation of assertion. Learning Objective (if Provided) Understanding Evaluation Application
(B) Assertion and reason both are true but reason is not the correct explanation of assertion.
(C) Assertion is true, reason is false.
(D) Assertion is false, reason is true

22. Assertion: Python programs are easy to understand.
Reason: Python programs have a clearly defined syntax and relatively simple structure.
(A) Both Assertion and reason are true and reason is correct explanation of assertion.
(B) Assertion and reason both are true but reason is not the correct explanation of assertion.
(C) Assertion is true, reason is false.
(D) Assertion is false, reason is true.

23. Assertion: Python is case-sensitive.
Reason: Python does not use indentation for blocks and nested blocks.
(A) Both Assertion and reason are true and reason is correct explanation of assertion.
(B) Assertion and reason both are true but reason is not the correct explanation of assertion.
(C) Assertion is true, reason is false.
(D) Assertion is false, reason is true

24. Assertion: Python program is executed line by line.
Reason: Python is compiled language.
(A) Both Assertion and reason are true and reason is correct explanation of assertion.
(B) Assertion and reason both are true but reason is not the correct explanation of assertion.
(C) Assertion is true, reason is false.
(D) Assertion is false, reason is true

25. Variable names can be of any length.
A. True B. False

26. A tuple can only have positive indexing.
A. True B. False

27. Logical operator not has highest precedence among all the logical operators:
    A. True B. False
28. Expression 'Ab'+2 will result into 'Ab2'
    A. True B. False
29. "is" is a membership operator in python
    A. True B. False
30. Following code will produce True as output:
    x=10>5>1 and -3<-2<-1
    print(x)
    A. True B. False

: SOLUTION:

1	B	**18**	A
2	C	**19**	A
3	B	**20**	A
4	D	**21**	B
5	C	**22**	A
6	B	**23**	C
7	A	**24**	C
8	C	**25**	A
9	C	**26**	B
10	C	**27**	A
11	B	**28**	B
12	C	**29**	B
13	A	**30**	A
14	D		
15	C		
16	B		
17	C		

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CLASS : XII SUBJECT: COMP. SCI.

UNIT – I **TOPIC- Working with Functions**

.....0

1. Study the following program and select the possible output:

   import random

   X=random.random()

   Y=random.randint(0,4)

   print(int(x),":",y+int(x))

   a) -1:0

   b) 1:6

   c) 2:4

   d) 0:3

2. What will be the output of the following Python code?

   def change(one, *two):

   print(type(two))

   change(1,2,3,4)

   a) Integer

   b) Tuple

   c) Dictionary

   d) An exception is thrown

3. If a function doesn't have a return statement, which of the following does the function return?

   a) int

   b) null

   c) None

   d) An exception is thrown without the return statement

4. What will be the output of the following Python code?

```
def find(a, **b):
    print(type(b))
find('letters', A='1',B='2')
```

a) String

b) Tuple

c) Dictionary

d) An exception is thrown

5. Which of the following functions header is correct?

a) def study(a=2, b=5, c) :

b) def study(a=2, b, c=5) :

c) def study(a, b=2, c=5):

d) none of the above

6. Find the output of following code:

```
x=100
def study(x):
    global x
    x=50
print("Value of x is :", x)
```

a. 100

b. 50

c. Error

d. None of the above

7. A function is said to be_____ if it calls itself

a. Built function

b. Pre-defined function

c. recursive function

d. None of the above

8. The _____ of a variable is the area of a program where it may be referenced
   a. External
   b. Global
   c. Scope
   d. Local
9. A Function that does not have any return value is known as…….
   a. Library function
   b. Void function
   c. Fruitful function
   d. None of the above
10. when large programs are broken down into smaller units known as……
   a. sub program
   b. functions
   c. class
   d. None of the above
11. The default value for a parameter is defined in function .....?
   a. Definition
   b. Return statement
   c. Header
   d. None of the above
12. Function randint() is available under which module of python_____?
   a. random
   b. math
   c. statistics
   d. None of the above

13. **Assertion:** The function header 'def read (a=2, b=5, c):' is not correct.

Reason: Non default arguments can't follow default arguments.

Please choose the correct choice out of the four options given below:

a. Both Assertion and reason are true and reason is the correct explanation of assertion.

b. Assertion and reason both are true but reason is not the correct explanation of assertion.

c. Assertion is true, reason is false.

d. Assertion is false, reason is true.

14. **Assertion:** len( ), type( ), int( ), input( ) are the functions that are always available for use.

Reason: Built in functions are predefined functions that are always available for use. For using them we don't need to import any module.

Please choose the correct choice out of the four options given below:

a. Both Assertion and reason are true and reason is the correct explanation of assertion.

b. Assertion and reason both are true but reason is not the correct explanation of assertion.

c. Assertion is true, reason is false.

d. Assertion is false, reason is true.

15. **Assertion:** Every function returns a value if the function does not explicitly return a value, then it will return 'Zero'.

Reason: Zero is equivalent to None.

Please choose the correct choice out of the four options given below:

a. Both Assertion and reason are true and reason is the correct explanation of assertion.

b. Assertion and reason both are true but reason is not the correct explanation of assertion.

c. Assertion is true, reason is false.

d. Assertion is false, reason is true.

16. Consider the following code:

```
x = 100
def study( ):
    global x
     x = 50
print(x)
```

Assertion: 50 will be the output of above code.

Reason: Because the x used inside the function study( ) is of local scope.

Please choose the correct choice out of the four options given below:

a. Both Assertion and reason are true and reason is the correct explanation of assertion.

b. Assertion and reason both are true but reason is not the correct explanation of assertion.

c. Assertion is true, reason is false.

d. Assertion is false, reason is true.

17. **Assertion (A)** : Built in function are predefined in the language that are used directly

Reason (R) : print() and input() are built in functions

a. Both A and R are true and R is the correct explanation for A.

b. Both A and R are true and R is not the correct explanation for A.

c. A is true but R is false

d. A is false but R is true

18. A function code is given as follows:

```
def study (num = 5):
 print(num + 5)
```

Assertion: We can call the above function either by statement 'study(7)' or 'study( )'.

Reason: As the function contains default arguments, it depends on the caller that the above function can be called with or without the value.

Please choose the correct choice out of the four options given below:

a. Both Assertion and reason are true and reason is the correct explanation of assertion.

b. Assertion and reason both are true but reason is not the correct explanation of assertion.

c. Assertion is true, reason is false.

d. Assertion is false, reason is true

19. Value returning functions should be generally called from inside of an expression.

a. True

b. False

20. You can call a function only once after defining it.

a. True

b. False

21. User can change the functionality of a built in functions.

a. True

b. False

22. The variable declared outside a function is called a global variable.

a. True

b. False

23. The default valued parameter specified in the function header becomes optional in the function calling statement.

a. True

b. False

24. Function makes a program more readable and reduces the program size?

a. True

b. False

Tisha is a student of class XII. During examination, she has been assigned an incomplete python code (shown below). The code shows the variable scope in a program. Help her in completing the assigned code.

```
#Definition of fun() function
…. fun(x, y): # Statement-1
……. a # Statement-2
a = 10
x, y = … # Statement-3
b = 20
b = 30
c = 30
print (a, b, x, y) # Statement-4
a, b, x, y = 1, 2, 3,4
……(50, 100) # Statement-5
fun()
print(a, b, x, y) # Statement-6
```

25. Identify the suitable keyword to access variable a globally for blank space in the line marked as Statement-2.

a) local

b) global

c) static

d) None of the above

26. Write down the python to swap the values of x and y for the blank space in the line marked as Statement-3.

a) y, x
b) Y, X
c) swap(x, y)
d) None of the above

27. Mention the output for the line marked as Statement-4.

a) 10 30 100 50

b) 30 10 100 50

c) 100 30 10 50

d) None of the above

28. Identify the missing code for the blank space in the line marked as Statement-5.

a) fun

b) FUN

c) Fun

d) None of the above

29. Mention the output for the line marked as Statement-4.

a) 10 4 3 2

b) 10 3 2 4

c) 10 2 3 4

d) None of the above

30. Identify the suitable keyword for blank space in the line marked as Statement-1.

a) define

b) def

c) DEF

d) Def

SOLUTION:

1	A	16	C
2	B	17	B
3	C	18	A
4	C	19	A
5	C	20	B
6	B	21	B
7	C	22	A
8	C	23	A
9	B	24	A
10	B	25	B
11	C	26	A
12	A	27	A
13	A	28	A
14	A	29	C
15	C	30	B

KENDRIYA VIDYALAYA, VIRAMGAON

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CLASS : XII SUBJECT: COMP. SCI.

UNIT – I **TOPIC- Exception Handling**

.....0

1. Errors resulting out of violation of programming language's grammar rules are known as …….

   (a) Compile time error
   (b) Logical error
   (c) Runtime error
   (d) Exception

2. An unexpected event that occurs during runtime and causes program disruption, is called ……

   (a) Compile time error
   (b) Logical error
   (c) Runtime error
   (d) Exception

3. The errors encountered when a user violates the syntax of a programming language while writing a code are termed as ……

   (a) Compile time error

   (b) Logical error

   (c) Runtime error

   (d) Exception

4. An interrupt or forced disruption that occurs when a program is run or executed is termed as ……

   (a) Compile time error (b) Exception (c) Runtime error (d) Logical error

5. Which of the following keywords are not specific to exception handling?
   (a) try (b) except (c) else (d) finally

6 Which block is a mandatory block in exception handling process?
   (a) try (b) except (c) finally (d) else

7 Forced exceptions are indicated using which of the following keywords?

   (a) try (b) except (c) finally (d) raise

8. …… exception is raised when input() hits an EOF without reading any data
9. …… exception when a local or global name is not found.
10. ……. Exception is raised when an operation is applied to an object of wrong type.
11. When denominator of a division expression is zero, ……. Exception is raised.
12. While accessing a dictionary, if the given key is not found, ……. exception is raised.
13 The code which might raise an exception is kept in …… block.
14 …… Exception is raised when the module given with import statement is not found.
15. …… Exception is raised when the result of an arithmetic operation is too large to be represented.
16. …… Exception is raised when Esc , Del or Ctrl + C is pressed during program execution and normal program flow gets disturbed.
17 …….. and ……. Statement is used when we think that the code might fail.
18. Exception and error are the same. (True/False)
19. All type of errors can be found during compile time (True/False) (True/False)
20. A program running properly but producing wrong output is an exception. (True/False)
21. Unexpected rare condition occurring during runtime which disrupts a program's execution is an exception. (True/False)
22. The except block deals with the exception, if it occurs. (True/False)

23. try , except , finally is the correct order of blocks in exception handling (True/False)

24. An exception may be raised even if the program is syntactically correct. (True/False)

25. Value Error occurs due to wrong indentation in a program (True/False)

26. Which statement is/are true about exception handling?

    i. There can be try block without catch block but vice versa is not possible

    ii. There is no limit on the number of catch block corresponding to try block

    iii. The object must be created of a specific class of which the error has occurred otherwise runtime error will occur

    iv. To execute a code with each and every run of program, the code is written in finally block

    (a) i and ii, iv

    (b) only iii

    (c) ii and iv only

    (d) only ii

***The following questions contain two statements: Assertion and Reasoning. Each question has four choices – (i), (ii), (iii), (iv) – only one of which is correct. In the light of these statements, choose the most appropriate option.**

(i) Both A and R are true and R is the correct explanation of A.
(ii) Both A and R are true but R is not the correct explanation of A.
(iii) A is true but R is false
(iv) A is false but R is true

27 **Assertion (A)**: Exception handling handles all types of errors and exceptions
Reasoning(R): Exception handling is responsible for handling anomalous situations during the execution of a program.

28 **Assertion (A)** : Exception handling code is separate from normal code.
Reasoning (R) : Program logic is different while exception handling code uses specific keywords to handle exceptions.

29 **Assertion (A)** : Exception handling code is clear and block based in Python.

Reasoning (R) :The code where unexpected runtime exception may occur is separate from the code where the action takes place when an exception occurs

30 **Assertion (A)** : No matter what exception occurs, you can always make sure that some common actions takes place for all types of exceptions.

Reasoning (R) : The finally block contains the code that must execute.

: ANSWERS:

1. (a) Compile time error
2. (c) Runtime error
3. (a) Compile time error
4. (c) Runtime error
5. (c) else
6. (c) finally
7. (d) raise
8. EOFError
9. NameError
10. TypeError
11. ZeroDivisionError
12. KeyError
13. try
14. ImportError
15. OverflowError
16. KeyboardInterrupt
17. try , except
18. False, Syntax Error / Compile time error are not considered as Exception.
19. False, Only syntax errors can be found during compile time and Runtime errors occurs only after we run the program.
20. False, there may be logic error in the program, which may produce wrong output.
21. True, Exceptions are unexpected conditions occurring at run time.
22. True, except block contain the code that should be executed in case of exception is raised.
23. True
24. True, Exception is raised during runtime only, if any unexpected condition occurs at run time

25. False, Due to wrong indentation in a program, IndentationError occurs.

26. (a) i , ii and iv

27. (iv) A is false but R is true

28. (i) Both A and R are true and R is the correct explanation of A.

29. (i) Both A and R are true and R is the correct explanation of A.

30. (i) Both A and R are true and R is the correct explanation of A.

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CLASS : XII SUBJECT: COMP. SCI.

UNIT – I **TOPIC- Data File Handling**

.....0

QUESTIONS :

1. To open a file c:\test.txt for reading, we should give the statement:

   (a) file1 = open("c:\test.txt","r")

   (b) file1 = open("c:\\test.txt","r")

   (c) file1 = open(file="c:\test.txt","r")

   (d) file1 = open(file="c:\\s test.txt","r")

2. To open a file c:\ test.txt for writing, we should use the statement:

   (a) fobj = open("c:\test.txt","w")

   (b) fobj = open("c:\\test.txt","w")

   (c) fobj = open(file="c:\test.txt","w")

   (d) fobj = open(file="c:\\test.txt","w")

3. To open a file c:\ test.txt for appending data, we can give the statement:

   (a) fobj = open("c:\\test.txt","a")

   (b) fobj = open("c:\\test.txt","rw")

   (c) fobj = open(file="c:\test.txt","w")

   (d) fobj = open(file="c:\\ test.txt","w")

4. Which of the following statements is/are true?

   (a) when we open a file for reading, if the file does not exist, an error occurs.

   (b) when we open a file for writing, if the file does not exist, a new file is created.

   (c) when we open a file for writing, if the file exists, the existing file is overwritten with the new file.

   (d) All of these

5. Identify the error in the following code.

1. f = open ("workfile.txt', 'r+')
2. f.write('0123456789abcdef')
3. f.write('xyz8466')
4. f.close()
5. f.seek (0)
6. f.read()

6. To read the entire contents of the file as a string from a file object fobj, the command should be:

(a) fobj.read(2)

(b) fobj.read()

(c) fobj.readline()

(d) fobj.readlines()

7. What will be the output of the following snippet?

```
f=None
for i in range(5):
    with open("data.txt" , "w") as f:
        if i>2:
            break
print(f.closed)
```

(a)True (b) False (c) None (d) Error

8. To read the next line of the file from a file object fobj, we use :

(a) fobj.read(2) (b) fobj.read()

(c) fobj.readline() (d) fobj.readlines()

9. To read the remaining lines of the file from object fobj, we use:

(a) fobj.read(2) (b) fobj.read()

(c) fobj.readline() (d) fobj.readlines()

10. The readlines() method returns:

(a) String (b) A list of integers

(c) A list of single characters (d) A list of strings

11. Which module is required to use the built-in function dump() ?

(a) math (b) flush (c) pickle (d) unpickle

12. which of the following functions is used to write data in the binary mode?

(a) write (b) output (c) dump (d) send

13. Which is/are the basic I/O (input-output) stream(s) in file ?

(a) Standard Input (b) Standard Output (c) Standard Errors (d) All of these

14. Which of the following is the correct syntax of file object 'fobj' to write sequence data type using writelines() function ?

(a) file.writelines(sequence) (b) fobj.writelines()

(c) fobj.writelines(sequence) (d) fobj.writeline()

15. What would be the data type of variable data in the following statements?

(a) data = f.read() (b) data = f.read(10)

(c) data = f.readline() (d) data = f.readlines()

16. Which of the following is not a valid mode to open a file ?

(a) ab (b) rw (c) r+ (d) w+

17. Which statement is used to change the file position to an offset value from the start?

(a) fp.seek(offset,0) (b) fp.seek(offset,1)

(c) fp.seek(offset,2) (d) None of these

18. The difference between r+ and w+ modes is expressed as?

(a) No difference

(b) In r+ mode, the pointer is initially placed at the beginning of the file and the pointer is at the end for w+

(c) In w+ mode, the pointer is initially placed at the beginning of the file and the pointer is at the end for r+

(d) Depends on the operating system

19. Which of the following modes is used for both writing and reading from a binary file ?

(a) wb+ (b) w (c) wb (d) w+

20. Which statement is used to retrieve the current position within the file?

(a) fp.seek() (b) fp.tell() (c) fp.loc (d) fp.pos

21. What happens if no arguments are passed to the seek () method?

(a) file position is set to the start of file

(b) file position is set to the end of file

(c) file position remains unchanged

(d) results in an error

22. import pickle

```
Names = ["First", "second", 'third', 'fourth', 'Fifth']
lst = []
for i in range(-1, -5, -1):
    lst.append(Names[i])
with open("test.dat", 'wb') as fout:
    pickle.dump(lst, fout)
with open("test.dat", 'rb') as fin:
    nlist = pickle.load(fin)
print(nlist)
```

23. What is the output of following code ?

```
fh = file ("poem.txt", "r")
size = len(fh.read())
print (fh.read (5))
```

24. It is necessary to always create the file in the same default folder where Python has been installed. (True / False)

25. In binary file, there is no delimiter for a line. (True / False)

26. A binary file stores information in ASCII or Unicode characters. (True/False)

*** In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:**

(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are true and R is not the correct explanation of A.

(c) A is true but R is false (or partly true)

(d) A is false (or partly true) but R is true.

27. **Assertion:** Python is said to have broadly two types of files – binary and text files, even when there are CSV and TSV files also

Reason: The CSV and TSV are types of delimited text only where the delimiters are common and tab respectively.

28. **Assertion:** The file modes "r" , "w" , "a" also reveal the type of file these are being used with.

Reason: The binary file modes have 'b' suffix with regular file modes.

29. **Assertion :** 'Pickling' is the process whereby a Python object hierarchy is converted into a byte-streams.

Reason : A binary file works with byte-streams.

30. **Assertion :** CSV is a file format for data storage which looks like a text file.

Reason : The information is organized with one record on each line and each field is separated by comma.

: ANSWERS :

1. (b) file1 = open("c:\\test.txt","r")
2. (b) fobj = open("c:\\test.txt","w")
3. (a) fobj = open("c:\\test.txt","a")
4. (d) All of these
5. The lines 5 and 6 will raise the error as no operation can take place in a closed file-file is closed at line4. Since the file is opened in read as well write mode, we just need to bring line 4 at the end of the code.
6. (b) fobj.read()
7. (a) True
8. (c) fobj.readline()
9. (d) fobj.readlines()
10. (d) A list of strings
11. (c) pickle
12. (c) dump
13. (d) All of these
14. (c) fobj.writelines(sequence)
15. (a) String type (b) String type (c) String type (d) List type
16. (b) rw
17. (a) fp.seek(offset,0)
18. (b) In r+ mode, the pointer is initially placed at the beginning of the file and the pointer is at the end for w+
19. (a) wb+
20. (b) fp.tell()
21. (d) results in an error
22. ['Fifth', 'fourth', 'third', 'second']
23. No output

Explanation:- The fh.read() of line 2 will read the entire file content and place the file pointer at the end of file. For the fh.read (5), it will return nothing as there are no bytes to be read from EOF thus print() statement prints nothing.

24. False , we can create file in any folder and then write the relative path to that file, as argument of open() function.
25. True , Binary files doesn't have lines, and they are simply sequence of bytes.
26. False , Binary files store data in the form of sequence of bytes, that are not human readable
27. (a)
28. (a)
29. (b)
30. (a)

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CLASS : XII SUBJECT: COMP. SCI.

UNIT – I **TOPIC- Data Structure**

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Sl. No	Question	Learning Objective
	MULTIPLE CHOICE QUESTIONS (1-15)	
1	What is the process of inserting data into a stack called? A. Create B. Insert C. Push D. Evaluate	Knowledge
2	What is the process of deleting data from a stack called? A. Drop B. Delete C. Erase D. Pop	Knowledge
3	Which pointer is associated with a stack? A. First B. Front C. Rear D. Top	Knowledge
4	Assume a stack has size 4. If a user tries to push a fifth element to a stack, which of the mentioned condition will arise? A. Underflow B. Overflow C. Crash D. Successful Insertion	Understanding
5	If a user tries to pop an empty stack, which of the mentioned condition will arise? A. Empty data B. Overflow C. Underflow D. No error	Understanding

6 Assume a stack Stk implemented as a list. Predict the output of the following code.

```
def push_char(ch):
  Stk.append(ch)
def display_stk():
  strdata=""
  if len(Stk)==0:
     print("Empty Stack")
  else:
     for i in Stk:
        strdata+=i
     print(strdata[::-1])
push_char('c')
push_char('b')
push_char('s')
push_char('e')
push_char('2')
push_char('0')
push_char('2')
push_char('1')
```

Analysis

A. 1202esbc
B. cbse2021
C. 1
D. s

7 Which of these is not an application of stack? Application

A. Parenthesis Balancing program
B. Evaluating Arithmetic Expressions
C. Reversing Data
D. Data Transfer between Process

8 Predict the output of the following code: Application

```
def insert_data(stk,num):
      stk.append(num)
stk=[2,3,4]
insert_data(stk,10)
print(stk)
```

A. [2,3,4,10]
B. [10,2,3,4]
C. Overflow
D. Underflow

9 Predict the output of the following code: Application

```
def push(stk,num):
    stk.append(num)
def pop():
    if len(stk)==0:
        print("Underflow")
    else:
        stk.pop()
stk=[10,100,-1,2,4]
push(stk,200)
pop()
pop()
pop()
push(stk,4)
print(stk[-1])
```

A. 200
B. 100
C. -1
D. 4

10 Stack data structure works on the following principle. Knowledge

(A) LILO

(B) DIFO

(C) FIFO

(D) LIFO

11	Which of the following is not an application of stack in real-life. (A) Pile of clothes in an almirah (B) Multiple chairs in a vertical pile (C) Persons buying movie tickets from a counter (D) Bangles worn on wrist	Understanding Application
12	What will the output of the following Python code? result=0 numberList=[10,20,30] numberList.append(40) result=result+numberList.pop() result=result+numberList.pop() print(result) (A) 40 (B) 70 (C) 30 (D) 10	Analysis Evaluation
13	Predict the output of the following Python code. answer=[]; answer.append('T') answer.append('A') answer.append('M') ch=answer.pop() print(answer) (A) ['T', 'A'] (B) ['T', 'A', 'M'] (C) ['A'] (D) IndexError: pop from empty list	Analysis Evaluation
14	In Python, list is used for implementing a stack and its built-in-functions_____ and _____ are used for insertion and deletion, respectively. (A) Insert, delete (B) append, pop (C) append, remove (D) append, delete	

15 In which data type stack is implemented in Python.

A. List
B. Tuple
C. Int
D. Dictionary

ASSERTIONS AND REASONS (16-20)

16 **Assertion :** The start index of a stack is -1 Understanding

Reason : Stack Data structure can be implemented through list in Python

A. Both Assertion and reason are true and reason is correct explanation of assertion
B. Assertion and reason both are true but reason is not the correct explanation of assertion
C. Assertion is true, reason is false.
D. Assertion is false, reason is true.

17 **Assertion:** If the size of a stack is 5 and a sixth element is inserted, then Underflow happens Analysis

Reason: Overflow is a condition which occurs in bounded stack

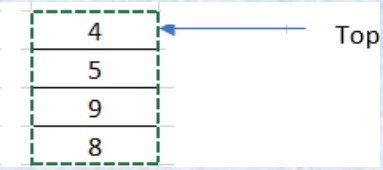
A. Both Assertion and reason are true and reason is correct explanation of assertion
B. Assertion and reason both are true but reason is not the correct explanation of assertion
C. Assertion is true, reason is false.
D. Assertion is false, reason is true.

18 **Assertion:** A stack has 2 elements in it. If the stack undergoes 3 pop operations one after another then Underflow occurs. Analysis

Reason: Underflow is a condition which occurs when deletion happens on an empty stack.

A. Both Assertion and reason are true and reason is correct explanation of assertion
B. Assertion and reason both are true but reason is not the correct explanation of assertion
C. Assertion is true, reason is false.
D. Assertion is false, reason is true.

19 Assertion: if a stack has the following data, then peek function will return 4 — Understanding



Reason: Arithmetic expression can be evaluated using stack

A. Both Assertion and reason are true and reason is correct explanation of assertion
B. Assertion and reason both are true but reason is not the correct explanation of assertion
C. Assertion is true, reason is false.
D. Assertion is false, reason is true.

20 **Assertion:** Stack is a linear data structure. — Understanding Knowledge

Reason: A data structure in which elements are organized in a sequence is called linear data structure.

(A) Both Assertion and reason are true and reason is correct explanation of assertion.

(B) Assertion and reason both are true but reason is not the correct explanation of assertion.

(C) Assertion is true, reason is false.

(D) Assertion is false, reason is true.

CASE STUDY BASED QUESTIONS (21-25)

Venkat loves to play cricket. His teacher has given him an assignment on his favourite sport. He has to write 2 functions AddPlayer(player,runs) and DeletePlayer() to add and remove a player from a stack which is implemented using a list. Adding a player to a stack is only possible if the player has secured more than 50 runs. Venkat needs your help in completing the code. — Application and Analysis

Incomplete code:

```
#Creating stack Cricket_Stack=[]
def AddPlayer(player,runs): if runs>50:
    Cricket_Stack _____ # statement 2
  print(Cricket_Stack) def
DeletePlayer():
  if len(Cricket_Stack) ==0: print("Empty
    Stack,Cant pop") return -1
  else:
    pop_item=Cricket_Stack[-1] Cricket_Stack
    _______________ #statement3
    return pop_item
getPlayer= _("Enter the player name:") # stat. 1
getruns=int(input("Enter the runs scored by player:"))
AddPlayer(getPlayer,getruns)
print(DeletePlayer())
```

(Based on the data given above, answer Question No. 21 to 25)

21	Which function will be used in statement 1 to get the player name from the user? A. read() B. input() C. get() D. pop()	Application and Analysis
22	Identify the missing code to complete the statement 2: A. insert(player) B. push(player) C. append(player) D. player(append)	Application and Analysis
23	Identify the missing code to complete the statement 3: A. delete() B. pop() C. pop(0) D. append(-1)	Application and Analysis
24	Assume the current stack position as ['Azhar','Sachin']. If the function AddPlayer() is called with the arguments ('Karan',30) what will be the stack data after the function call? A. ['Azhar','Sachin','Karan'] B. ('Azhar','Sachin','Karan') C. ['Azhar','Sachin'] D. ('Azhar','Sachin')	Application and Analysis

25	Assume the current stack position as ['Don','Virat','Jeff']. If the function DeletePlayer() is invoked ,What will be the data in the stack after the function call? A. ['Don','Virat'] B. ['Virat','Jeff'] C. ['Virat','Jeff'] D. ['Don', 'Virat','Jeff']	Application and Analysis

TRUE / FALSE QUESTIONS (26-30)

26	The peek operation refers to accessing/inspecting the top element in the stack A. True B. False	Understanding
27	The insert operation in stack is known as pop A. True B. False	Knowledge
28	The top operation does not modify the contents of a stack. A. True B. False	Analysis
29	Stack implementation can be performed using a list in Python A. True B. False	Knowledge
30	For loop can be used for traversing a stack A. True B. False	Understanding

: ANSWERS :

Question No	Answer	Question No	Answer	Question No	Answer
1	C	11	C	21	B
2	D	12	B	22	C
3	D	13	A	23	B
4	B	14	B	24	C
5	C	15	A	25	A
6	A	16	D	26	A
7	D	17	D	27	B
8	A	18	A	28	A
9	D	19	B	29	A
10	D	20	A	30	A

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UNIT – II **TOPIC- Computer Networks**

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Sl. No Questions

MULTIPLE CHOICE QUESTIONS (1-15)

1 What is a standalone computer?

(A) A computer that is not connected to a network.

(B) A computer that is being used as a server.

(C)A computer that does not have any peripherals attached to it.

(D)A computer that is used by only one person.

2 Network in which every computer is capable of playing the role of a client, or a server or both at same time is called

(A) peer-to-peer network

(B) Local Area network

(C) dedicated server network

(D) wide area network

3 First computer network was.

(A) NSFNet

(B) FirstNet

(C) ARPANet

(D) Internet

4 Your school has four branches spread across the city. A computer network created by connecting the computers of all the school branches, is a.

(A)LAN

(B)WAN

(C)MAN

(D)PAN

5 Which is not a component of data communication system?

a) Protocol

b) Message

c) Media

d) Diode

6 Transmission media are usually categorized as

a) Fixed and Unfixed

b) Guided and Unguided

c) Determinate and Indeterminate

d) Metallic and Nonmetallic

7 Which of the following cables carry data signals in the form of light?

a) Coaxial

b) Fiber-optic

c) twisted pair

d) All of the these

8 In a fiber-optic cable, the signal is propagated along the inner core by

a) Reflection

b) Refraction

c) modulation

d) Interference

9 Which of the following represents the fastest data transmission speed?

a) Kbps

b) Bps

c) Gbps

d) Mbps

10 What does HTTPS stand for?

a) Hyper Text Protocol Secure

b) Hypertext Transfer Protocol Secure

c) Hidden Text Transfer Protocol Station

d) Hypertext Transfer Protocol Station

11 What is the full form of TCP/IP?

a) Transfer Control Protocol/ Internet Protocol

b) Transfer Communication Protocol/Internet Protocol

c) Transmission Control Protocol/Internet Protocol

d) Transmission Communication Protocol/Internet Protocol

12 A set of rules that need to be followed by the communicating parties in order to have successful and reliable data communication is called

A. Syntax

B. Protocols

C. Medium

D. Semantics

13 Which of the following are components of Data Communication?

A. Sender

B. Receiver

C. Protocol

D. All the above

14 In which of the following switching methods, the message is divided into small packets?

A. Message switching

B. Packet switching

C. Circuit switching

D. None of these

15 The topology in which all nodes are individually connected to a central connection point:

A. Ring

B. Bus

C. Star

D. Tree

FILL IN THE BLANK (16-20)

16 _____Address is assigned to network cards by manufacturer

a. IP

b. MAC

c. unique

d. domain

17 Microwaves are _____.

A) omnidirectional

B) bidirectional

C) unidirectional

D) none of the above

18 Unique physical address of each NIC card is called _____.

(A) IP address

(B) MAC address

(C) HOME address

(D) STATIC address

19 A _____ is a network device that amplifies and restores the signals for long distance communications.

(A) Repeater
(B) Hub
(C) Switch
(D) Router

20 A _____ is a network device that connects dissimilar networks.

(A) Modem

(B) Gateway

(C) Hub

(D) Switch

ASSERTIONS AND REASONS (21-25)

21 Assertion: Wide Area Network spreads across cities, countries, continents etc.

Reason: Internet is an example of Wide Area Network.

(A) Both Assertion and reason are true and reason is correct explanation of assertion.

(B) Assertion and reason both are true but reason is not the correct explanation of assertion.

(C) Assertion is true, reason is false.

(D) Assertion is false, reason is true.

22 Assertion: Microwaves are used for cellular phone, satellite and wireless LAN communications.

Reason: Microwaves are Bidirectional.

a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

b) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

c) Assertion is true but Reason is false.

d) Both Assertion and Reason are false.

23 Assertion (A): UTP is popular in LAN technology.

Reasons (R): UTP is flexible, affordable and easy to install.

A. BOTH A and R are true and R is the correct explanation of A.

B. Both A and R are true and R is the not the correct explanation of A.

C. A is true but R is false.

D. A is false but R is true.

24 Assertion (A): Optical cables are very cheap and easy to install.

Reason (R): Optical cables are badly affected by the noise interference.

A. Both A and R are true and R is the correct explanation of A.

B. Both A and R are true and R is the not the correct explanation of A.

C. A is true but R is false.

D. Both A and R are false.

25 Assertion: Hub is a broadcast device and Switch is a unicast device.

Reason: Hub repeats the incoming traffic to all connections whereas Switch sends traffic only to appropriate connections.

(A) Both Assertion and reason are true and reason is correct explanation of assertion.

(B) Assertion and reason both are true but reason is not the correct explanation of assertion.

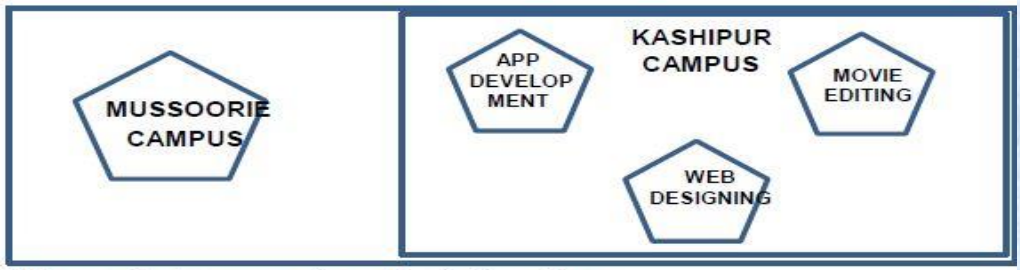
(C) Assertion is true, reason is false.

(D) Assertion is false, reason is true.

CASE STUDY BASED (26-30)

Vinayak Corporation, an Uttarakhand based IT Training company, is planning to set up training centres in various cities in next 2 years. Their first campus is coming up in Kashipur district. At Kashipur campus, they are planning to have 3 different blocks for App development, Web designing and Movie Editing. Each block has number of computers, which are required to be connected in a network for communication, data and resource sharing. As a network consultant of this company, you have to suggest the best network related solutions for them for issues/problems raised in question nos. (26)

to (30), keeping in mind the distances between various blocks/locations and other given parameters.



Distance between various blocks/locations:

Block	Distance
App development to Web designing	28 m
App development to Movie editing	55 m
Web designing to Movie editing	32 m
Kashipur Campus to Mussoorie Campus	232 km

Number of Computers :

Block	Number of Computers
App development	75
Web designing	50
Movie editing	80

26 Suggest the most appropriate block/location to house the SERVER in Kashipur for effective connectivity.

(A) App Development

(B) Movie Editing

(C) Web Designing

(D) None of the above

27 Suggest a device/software to be installed in the Kashipur Campus to take care of data security.

(A) Modem

(B) Firewall

(C) Repeater

(D) Switch

28 Suggest the best suitable Network topology to economically connect various blocks within the Kashipur Campus.

(A) Bus

(B) Star

(C) Ring

(D) Mesh

29 Suggest the location(s) for the placement of Switch / Hub.

(A) App Development

(B) Movie Editing

(C) Web Designing

(D) All of the above

30 Suggest the protocol that shall be needed to provide Video Conferencing solution between Kashipur Campus and Mussoorie Campus.

(A) TELNET

(B) PPP

(C) VoIP

(D) SMTP

ANSWERS:

Question No	Answer	Question No	Answer	Question No	Answer
1	A	11	C	21	B
2	A	12	B	22	C
3	C	13	D	23	A
4	C	14	B	24	D
5	D	15	C	25	A
6	B	16	B	26	B
7	B	17	C	27	B
8	A	18	B	28	B
9	C	19	A	29	D
10	B	20	B	30	C

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CLASS : XII SUBJECT: COMP. SCI.

Unit – III Name of Chapter : Database Management- Concepts

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MULTIPLE CHOICE QUESTIONS

Q. 1 The term _____is used to refer to a record in a table.

(a) Attribute (b) Tuple

(c) Field (d) Instance

Q. 2 A relational database consists of a collection of

(a) Tuple (b) Attribute

(c) Relation (d) Keys

Q. 3 Which of the following is not a legal sub-language of SQL?

(a) DDL (b) QAL

(c.) DML (d) TCL

Q. 4. What is the full form of DBMS ?

(a) Data of Binary Management System

(b) Database Management System

(c) Database Management Service

(d) Data Backup Management System

Q. 5. Which type of data can be stored in the database?

(a) Image oriented data

(b) Text, files containing data

(c) Data in the form of audio or video

(d) All of the above

Q.6 The ability to query data, as well as insert, delete, and alter tuples, is offered by _____

(a) TCL (Transaction Control Language)

(b) DCL (Data Control Language)

(c) DDL (Data Definition Langauge)

(d) DML (Data Manipulation Langauge)

Q.7 Which command is used to remove a relation from an SQL?

(a) Drop table
(b) Delete
(c) Purge
(d) Remove

Q.8 Which of the following is not the utility of DBMS?

(a) Backup

(b) Data Loading

(c) Process Organization

(d) File organization

Q.9 Which of the following is a component of the DBMS?

(a) Data

(b) Data Languages

(c) Data Manager

(d) All of the above

Q.10 Which of the following is the subset of SQL commands used to manipulate Database Structures, including tables ?

(a) Data Described Language

(b) Data Retrieval Language

(c) Data Manipulation Language

(d) Data Definition Language

Q.11 DML stands for

(a) Data Manageable Language

(b) Domain Manipulation Language

(c) Data Manipulation Language

(d) None of the above

Q. 12 Which is the following not a DDL command ?

(a) CREATE

(b) UPDATE

(c) ALTER

(d) TRUNCATE

Q. 13 Which is the following not a DML command ?

(a) SELECT

(b) UPDATE

(c) DELETE

(d) CREATE

Q. 14 Which is the following considered as DBMS ?

(a) Access

(b) Oracle

(c) SQL Server

(d) All of the above

Q.15 A row is also called _____

(a) Field

(b) Tuple

(c) both a and b

(d) None of the above

FILL IN THE BLANKS

Q.16 A pool of values wherefrom a field can draw values is called ____

Q.17 A raw in a relation is called _____

Q.18 The number of attribute in a relation is called its _____

Q.19 Collection of logically related data tables is called _____

Q.20 A non-key attribute derived from the primary key of some other relation is called _____

TRUE / FALSE QUESTIONS

Q. 21 The duplication of data is known as data redundancy.

Q.22 A table in a relational database can store empty values.

Q.23 Common attribute of two tables is called a foreign key.

Q.24 The DDL commands are used to define or redefine schema objects.

Q.25 A primary key can store empty values in it.

ASSERTIONS AND REASONS

Directions :

In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false (or partly true)
(d) A is false (or partly true) but R is true.

Q. 26 **Assertion (A).** A database is centrally stored data and a DBMS is a system to manage the database.

Reason(R). DBMS is a database management system, which is a software managing the databases.

Q. 27 **Assertion (A).** Data redundancy may lead to data inconsistency.

Reason (R). When redundant data or the multiple copies of data mismatch, it makes the data inconsistent.

Q. 28 **Assertion (A).** Data redundancy may lead to may problems.

Reason (R). In RDBMS, data redundancy is 100% removed.

Q. 29 **Assertion (A).** A primary key is used to uniquely identify the rows in a data table.

Reason (R). A primary key is a field or attribute which has a unique value for each row or tuple.

Q. 30 **Assertion (A).** A data table can have only one primary key.

Reason (R). In a data table, there can be only one attribute/field containing unique values for each row.

ANSWER KEY

1.Ans : Tuple

2. Ans : Tuple

3. Ans : QAL

4. Ans : Database Management System

5. Ans : All of the above

6. Ans : DML (Data Manipulation Langauge)

7. Ans : Drop table

8. Ans : Process Organization

9. Ans : All of the above

10. Ans : Data Definition Language

11. Ans : Data Manipulation Language

12. Ans : UPDATE

13. Ans : CREATE

14. Ans : All of the above

15. Ans : Tuple

16. Ans : Domain

17. Ans : Tuple

18. Ans : Degree

19. Ans : Database

20. Ans : Foreign key

21. Ans : True

22. Ans : False

23. Ans : False

24. Ans : True

25. Ans : False

26.A

27.A

28.c

29.A

30.C

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CLASS : XII SUBJECT: COMP. SCI.

Unit – III Name of Chapter : MYSQL - Querying using SQL

.....0

Q.1 Which of the following is/are the DDL Statement ?

(a) Create (b) Drop (c) Alter (d) All of these [ ]

Q.2 A Table can have _____

(a) Many primary keys and many unique keys.

(b) One primary key and one unique key

(c) One primary key and many unique keys.

(d) Many primary keys and one unique key. [ ]

Q.3 Which of the following types of table constraints will prevent the entry of duplicate rows?

(a) Unique (b) Distinct (c) Primary Key (d) Null [ ]

Q.4 Consider the following SQL Statement. What type of statement is this ?

INSERT INTO instructor VALUES (10211, 'SHREYA' , 'BIOLOGY', 69000);

(a) Procedure (b) DML (c) DCL (d) DDL [ ]

Q. 5 Which of the following statements will delete all rows in a table namely *mytable* without deleting the table's structure.

(a) DELETE FROM mytable;'

(b) DELETE TABLE mytable;

(c) DROP TABLE mytable;

(d) None of these. [ ]

Q.6 Which of the following query will drop a column from a table ?

(a) DELETE COLUMN column_name;

(b) DROP COLUMN column_name;

(c) ALTER TABLE table_name DROP COLUMN column_name;

(d) None of these [ ]

Q. 7 Logical operator used in SQL are:

(a) AND, OR, NOT (b) &&, ||, ! (c) $,|,! (d) None of these [ ]

Q. 8 Which of the following requirement can be implemented using a CHECK constraint?

(a) Student must be greater than 18 years old.

(b) Student must be form a BRICS Country (Brazil, Russia, India, China)

(c) Student's roll number must exist in another table(say, namely Eligible)

(d) None of these [ ]

Q.9 The statement in SQL which allows to change the definition of a table is

(a) Alter (b) Update (c) Create (d) select

Q.10 The statement in SQL which allows to change the definition of a table is

(a) Alter (b) Update (c) Create (d) select

Q.11 Key to represent relationship between tables is called

(a)Primary key (b) Secondary Key (c) Foreign Key (d) None of these

Q.12 _____ produces the relation that has attributes of R1 and R2

(a) Cartesian product (b) Difference (c) Intersection (d) Product

Q.13 It is better to use files than a DBMS when there are

(a)Stringent real-time requirements.

(b) Multiple users wish to access the data.

(c) Complex relationships among data.

(d) All of the above.

Q.14 The conceptual model is

(a)dependent on hardware.

(b)dependent on software.

(c)dependent on both hardware and software .

(d)independent of both hardware and software.

Q.15 What is a relationship called when it is maintained between two entities?

(a) Unary (b) Binary (c) Ternary (d) Quaternary

Q.16 Which of the following operation is used if we are interested in only certain columns of a table?

(a) PROJECTION (b) SELECTION (c) UNION (d) JOIN

Q.17 Which of the following is a valid SQL type?

(a) CHARACTER (b) NUMERIC (c) FLOAT (d) All of the above

Q.18 The RDBMS terminology for a row is

(a)tuple (b) relation (c) attribute (d) degree.

Q.19 State whether the following statement is True or False :

In MYSQL, you can write multiple statements in a single line.

Q.20 State whether the following statement is True or False :

In MYSQL, you can change the column name using UPDATE command.

Q.21 State whether the following statement is True or False :

In MYSQL, PRIMARY KEY and UNIQUE KEY both are the same.

Q.22 State whether the following statement is True or False :

By default, the result of an order by clause is always displayed in ascending order.

Q.23 Fill in the blank :

_____ operator checks whether the particular condition record exists in the table or not.

Q.24 Fill in the blank:

SELECT is a type of _____ SQL command.

Q.25 Which MySQL function is used to get the current date and time?

(a) DATETIME( ) (b) TODAY( ) (c) DATE( ) (d) NOW( )

Q.26 to 30 are Assertion (A) and Reasoning (R) based questions. Mark the correct choice as :

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not correct explanation of A.
(c) A is true but R is false (or partly true).
(d) A is false (or partly true) but R is true.

Q.26 **Assertion (A) :** There is a difference between a field being empty or storing NULL value in a field.

Reason (R) : The NULL value is a legal way of signifying that no value exists in the field.

Q. 27 **Assertion (A) :** DDL and DML both are part of SQL.

Reason (R) : Both DDL and DML are interchangeable.

Q. 28 **Assertion (A)** : both WHERE and HAVING clauses are used to specify conditions.

Reason (R) : Both WHERE and HAVING are interchangeable.

Q.29 **Assertion (A) :** DDL and DML both are not the same.

Reason (R) : DDL and DML are two subcategories of SQL where DDL creates the objects and DML manipulates the data.

Q.30 **Assertion (A) :** both BETWEEN and IN operators can choose from a list of values.

Reason (R) : The value ranges and a list of values are interpreted in the some way in SQL.

****

Answers

Question No	Answer	Question No	Answer	Question No	Answer
1	D	11	C	21	FALSE
2	D	12	A	22	TRUE
3	B	13	B	23	EXITS
4	B	14	D	24	DML
5	A	15	B	25	D
6	C	16	A	26	A
7	A	17	D	27	B
8	A	18	A	28	B
9	A	19	TRUE	29	A
10	A	20	FALSE	30	C

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Unit – III TOPIC- GROUPING RECORD, JOIN IN SQL

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1. Which clause is used with "aggregate function?

a) Group by b) Select c) where d) both a and c

2. A _____ is a query that retrieves rows from more than one table or view?

a) Start b) End c) Join d) All of these

3 Aggregate function can be used in the select list or the ___ clause of a select statement . They cannot be used in a _____ clause?

a) Where , having b) Having, where

c) Group by, having. d) Group by, where

4. A Cartesian product is returned when ?

a) A join condition is omitted.

b) A join condition is invalid.

c) All the rows in the first table are joined to all the rows in second table.

d) All of these.

5. All Aggregate function ignore NULLs except for _____ function?

a) Distinct b) count (*) c) Average d) None of these

6. SQL applies condition on the groups through _____ clause after groups have been formed ?

a) Group by b) with c) where d) having

7. Which of the following group function ignore NULL values?

a) MAX b) COUNT c) SUM d) All of these

8. Which SQL function is used to count the number of rows in a SQL query?

a) COUNT ( ) b) Number ( ) c) SUM( ) d) COUNT (*)

9. Function count ( ) is an _____ function ?

a) Single row b) Multiple rows c) Aggregate d) None of these

10. Which of the following is not an aggregate function?

a) Avg b) Sum c) With d) Min

11. Which of the following is a SQL aggregate function?

a) Left b) Avg c) Join d)Len

12. The Sum ( ) if used in condition is used with _____ clause ?

a) Group by b) With c) Where d) Having

13. The Where and Having clause can be used interchangeable in SELECT queries?

a) True b) False c) only in view d) with order by

14. What is the meaning of HAVING clause in select query?

a) To filter out the summary groups.

b) To filter out the column groups.

c) To filter out the row and column values.

d) None of the above.

15.For the HAVING clause which of the following phase is/are ture ?

a) Act EXACTLY like a WHERE clause.

b) Act like a WHERE clause but is used for columns rather than groups.

c) Act like a WHERE clause but is used for groups rather than rows.

d) Act like a WHERE clause but is used for rows rather than columns.

16. Consider the following statement and tell if it Ture for all cases or in specific cases.

Having clause is processed after the GROUP BY clause and any aggregate functions.

a) True for all cases

b) False for all cases

c) True when there is no WHERE clause.

d) True only with where clause

17. The following SQL is which type of join:

SELECT CUSTOMER.CUST_ID, ORDER.CUST_ID, NAME, ORDER _ID
FROM CUSTOMER, ORDER
Where CUSTOMER.CUST_ID = ORDER.CUST_ID;

a) Equal-join b) Natural join c) Outer join d) Cartesian product

18.The following SQL is which type of join:

Select customer.cust_id, order.cust_id,name, order_id

From CUSTOMER, ORDER ;

a) Equal-join b) Natural join c) Outer join d) Cartesian Product

19.Which product is returned in a join query having no join condition?

a) Equal-join b) Cartesian product

c) Both (a) and (b) d) none of the mentioned

20.which is a Join condition that contains an equality operator ?

a)Equijoin b) Cartesian Product c) Both a and b d) None of the mentioned.

Fill in the blank:

21. To compare an aggregate value in a condition,_____ clause is used.

22.To create a summary of records based on the common value in a field in different rows of the table _____ clause is used.

23. In equi join, the join condition joins the two tables using _____ operator

24. The equi join uses _____ operator in the join condition.

25. Aggregate function cannot be used in _____ clause of the select query.

True/False Questions:

26. Equi join can use any operator for joining two tables.

27. The HAVING and WHERE clauses are interchangeable.

28. The SQL keyword GROUP BY instructs the DBMS to group together those rows that have same value in a column.

29.The HAVING clause can take any valid SQL function in its conditions.

30.Join can only be created from two tables.

ANSWER KEY

1.(a)
2.(c)
3.(b)
4.(d)
5.(b)
6.(d)
7.(d)
8.(d)
9.(c)
10.(c)
11(b)
12(d)
13(b)
14(a)
15(c)
16(a)
17(a)
18(d)
19(b)
20(a)
21. HAVING
22 GROUP BY
23 =
24 =
25 WHERE
26.F
27F
28T
29F
30.F

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UNIT – III TOPIC-INTERFACE PYTHON WITH MYSQL

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1. In order to open a connection with MYSQL database from within Python using mysql.connection package,_____ function is used ?
   (a) open ( ) (b) database( ) (c) connect( ) (d) connectdb( )
2. A database_____ controls the connection to an actual datadabe, established from within a python program?
   (a) database object (b) connection object (c) fetch object (d) object
3 The set of records retrieved after executing an SQL query over an established database connection is called ?
   (a) table (b) sqlresult (c) result (d) resultset
4. A database _____ is a special control structure that facilities the rows by the row processing of records in the retrieved resultset. ?
   (a) fetch (b) table (c) cursor (d) query
5. Which of the following is not legal method for fetching records from database from within a python program ?
   (a) fetchone( ) (b) fetchwo ( ) (c) fetchall (d)fetchmany( )
6. To fetch one records retrieved you may use <cursor> _____ method.
   (a) fetch( ) (b) fetchone ( ) (c)fetchtuple() (d)fetchmany()
7. To fetch All records retrieved you may use <cursor> _____ method.
   (a) fetch( ) (b) fetchone ( ) (c)fetchall() (d)fetchmany()
8. To run an SQL query from python program you may use <cursor> method.
   (a) query() (b) execute () (c) run() (d) all of these
9. To reflect the changes made in the database permanently, you need to <connection>._____ method.
   (a) done() (b) reflect() (c) commit() (d) final()

10. Which of the following libraries may be used for connecting with a MySQL database from a Python program?

(a) mysql.connector (b) pymysql (c) mMySQLServer (d)MySQLClient

11. After importing the connection library, first thing you do is: establish MySQL database.

(a) Cursor (b) setup (c) Resultset (d) connection

12. Identify the name of connector to establish bridge between Python and MySQL

(a) mysql.connection (b) connector (c) mysql.connect (d)mysql.connector

13. In the following connection string: Identify the elements:

connect(__<<1>>____ = 127.0.0.1, ____<<2>>____ =" root",
_____<<3>>____ = „admin")

(a) <<1>> = User, <<2>> = password, <<3> = host

(b)<<1>> = host, <<2>> = user, <<3> = password

(c)<<1>> = host, <<2>> = password, <<3> = user

(d) <<1>> = IP, <<2>> = user, <<3> = password

14. Which function of connection is used to check whether connection to mysql is successfully done or not?

```
import mysql.connector as msq
con = msq.connect( #Connection String ) # Assuming all parameter
required as passed
if _________________:
print("Connected!")
else:
print(" Error! Not Connected")
```

(a) con.connected()

(b) con.isconnected()

(c) con.is_connected()

(d) con.is_connect()

15. Which of the following component act as a container to hold all the data returned from the query and from there we can fetch data one at a time?

(a) ResultSet (b) Cursor (c) Container (d) Table

16. Identify the correct statement to create cursor:

```
import mysql.connector as msq
con = msq.connect( #Connection String ) # Assuming all parameter required as passed
mycursor = _____
```

(a) con.cursor() (b) con.create_cursor()

(c) con.open_cursor() (d) con.get_cursor()

17. Which attribute of of cursor is used to get number of records stored in cursor (Assuming cursor name is mycursor)?

(a) mycursor.count (b) mycursor.row_count

(c) mycursor.records (d) mycursor.rowcount

18. Which of the Symbols are used for passing parameterized query for execution to cursor?

(a) % (b) { } (c) $ (d) Both a and b

19. Which function is used to fetch n number of records from cursor?

(a) fetch() (b) fetchone() (c) fetchmany() (d) fetchall()

20. Which cursor function is used to send query to connection?

(a) query() (b) execute() (c) run() (d) send()

Fill in the blank:

21. After importing mysql.connector, first of all____ _____ is established using connect().

22. After establishing database connection, database_____ is created so that the sql query may be executed through it to obtain resultset.

23. The _____ returns how many rows have been fetched to far using various fetch methods.

24. The running of sql query through database cursor results into all the records returned in the form of _____.
25. A connectivity package such as_____ must be imported before writing database. connectivity Python code.

True/False Questions:

26. The SQL query upon execution via established database connection returns the result in multiple chunks.
27. The cursor.rowcount gives the count in the resultset.
28. The cursor.rowcount return how many rows have been so far retrieved through fetch() methods from the cursor..
29. A DELETE or UPDATE or INSERT query requires commit( ) to reflect the changes in the database.
30. Unique and Primary key constraints are the same.

ANSWER KEY

1.(C)
2.(B)
3(D)
4(C)
5(B)
6(B)
7(C)
8(B)
9(C)
10(C)
11(D)
12(D)
13(B)
14(B)
15(A)
16(D)
17(D)
18(D)
19(C)
20(B)
21.DATABASE CONNECTION
22 CURSOR
23 CURSOR_ROW COUNT
24 RESLUTSET
25 MYSQL.CONNETOR
26 F
27 F
28 T
29 T
30 F