1. Which of the following lines have syntax errors:

   A: print "Saturnus","Jupiter"
   B: "print" Venus
   C: "Neptunus".print()
   D: print "Mars"
   X: None of the above.

2. What do the following lines print?
   ```
   start = "stone "
   end = "planet"
   print start + end
   ```

   A: planetstone
   B: startend
   C: sp
   D: stone planet
   X: None of the above.

3. Where in a program can you write a comment?

   A: In the middle of the program
   B: At the top of a function
   C: At the beginning of the program
   D: Last in a function
   X: None of the above.

4. Which of the following lines inputs the number of moons as an integer?

   A: "Number of moons" = input(n)
   B: n = int(raw_input("Number of moons: "))
   C: n = input("Number of moons: ")
   D: n.input("Number of moons: ")
   X: None of the above.

5. Which of the following are legal variable names?

   A: diameter3
   B: 9gravitaty
   C: rotation-time
   D: mass
   X: None of the above.

6. Which number/numbers can you get from the function call random.randrange(1,4)?

   A: 1
   B: 2
   C: 3
   D: 4
   X: None of the above.

7. What does the following if-statement print, when gravity = 0.0637
   ```
   if gravity < 0.1:
       print "Do not jump!"
   else:
       print "Jump if you like."
   ```

   A: Jump if you like. Do not jump!
   B: Do not jump!
   C: Jump if you like.
   D: Do not jump! Jump if you like.
   X: None of the above.

8. What do the following lines print?
   ```
   galaxies = 0
   while galaxies <= 12:
       galaxies += 4
       print galaxies,
   ```

   A: 12
   B: 4 8
   C: 4 8 12
   D: 4 8 12 16
   X: None of the above.

9. Which of the following statements print all the elements in the tuple JUPITER = ("Io","Europa","Ganymedes","Callisto")?

   A: ```
   for m in JUPITER:
          print m
   ```
   B:  print JUPITER[0:4]
   C:  print JUPITER[5]
   D:  print JUPITER[4]
   X:  None of the above.

10. What do the loops below print?
```
for planet in ["Venus","Earth","Mars"]:
    for m in [1, 2]:
        print planet,m,
```

A: Venus Earth Mars
B: Venus Earth Mars 1 2
C: Venus 1 Venus 2 Earth 1 Earth 2 Mars 1 Mars 2
D: Venus 1 2 Earth 1 2 Mars 1 2
X: None of the above.

11. An astronomy program can print distances in lightyears or parsec. Which of the following constructions may be used for the choice?

A: for-loop
B: tuple
C: if-statement
D: sorting
X: None of the above.

12. What is printed by the statements below:
```
satellitemass = [[23],[22,16],[21,22,23]]
print satellitemass[1]
```

A: [23]
B: 22
C: 21
D: [21,22,23]
X: None of the above.

13. What does the list galaxy contain after these statements?
```
galaxy = ["elliptic","spiral"]
galaxy.append("irregular")
```

A: ["irregular", "spiral", "elliptic"]
B: ["irregular", "elliptic"]
C: ["elliptic", "spiral", "irregular"]
D: ["irregular"]
X: None of the above.

14. What value will giant have after the following statements?
```
sun = ["Rigel"]
giant = sun
sun[0] = "Betelgeuse"
```

A: [0]
B: [sun]
C: ["Betelgeuse"]
D: [0,"Rigel"]
X: None of the above.

15. Given the dictionary planetsize below, which of the following statements are corret?
```
planetsize =
{"Jupiter":143,"Saturnus":120,
"Uranus":52}
```

A: print size
B: print size["Uranus"]
C: size["Neptunus"] = 49
D: print size[49]
X: None of the above.

16. For which of the following tasks can one write a function?

A: Printing a table
B: Calculating rotation time
C: Sorting stars according to luminosity
D: Calculating an orbit
X: None of the above.

17. Given distance and orbit time for a satellite, it is possible to calculate the mass of the planet it orbits. What input (parameters) och output (return values) does such a function need?

A: Input: distance, orbit time, mass.
   Output:-
B: Input: distance, orbit time.
   Output: mass.
C: Input: mass.
   Output: distance, orbit time.
D: Input: distance.
   Output: massan.
X: None of the above.

18. The function below calculates Drakes equation for approximating the number of contactable civilizations in the (50e9 is 50 billion).

```
def drake(R=50e9, fp=0.2, ne=3, fl=0.5,
         fi=0.5, fc=0.2, fL=1e-6):
    N = R*fp*ne*fl*fi*fc*fL
    return N
```

How does one call this function?
A: answer= drake(1,2,3,4,5,6,7)
B: answer = drake
C: answer = drake(fi=0.4)
D: answer = drake(R=20e9)
X: None of the above.

19. How could you use use a datafile in your program?

A: Save all function comments in a file.
B: Write numbers to a file.
C: Add data to an existing file.
D: Save data on file between program executions.
X: None of the above.

20. Which exception/s are caught here?
```
try:
    tal = int(raw_input("A number: "))
except(ValueError):
    print "Wrong type of value."
else:
    print "Talet OK!"
```

A: print
B: int
C: else
D: ValueError
X: None of the above.

21. We want do declare a class to represent a planet. Which of the alternatives below would be suitable attributes?

A: rotation time
B: gravity
C: diameter
D: gases
X: None of the above.

22. We want to declare a class that is to simulate a telescope. Which of the alternatives below would be good method names?

A: focus
B: rotate
C: turn
D: diameter
X: None of the above.

23. Given class Spaceship:
```
class Spaceship(object):
    def start(self,warp=1):
        print "Pschooie", warp
```
Imagine that voyager is a Spaceship-object. With which of the following lines can you call the method "start"?

A: start(voyager)
B: start(Spaceship)
C: voyager.start(warp=2)
D: voyager.start(6)
X: None of the above.

24. What do you write if you want the class Asteroid to inherit attributes and methods from the class Celestial?

A: Asteroid.Celestial
B: def Himlakropp=Asteroid
C: class Celestial(Asteroid)
D: def Asteroid=Celestial
X: None of the above.

25. What does the following program print?
```
class Meteorite(object):

    def __init__(self,mass,speed):
        self.mass=mass
        self.speed=speed

    def __str__(self):
        return str(self.mass)

x=Meteorite(8,200)
print x
```

A: 8
B: 200
C: 8 200
D: 208
X: None of the above.