PH 101

Mid-Semester Examination

Indian Institute of Technology Guwahati

Date: 22/09/2017 Time: 120 minutes Maximum Marks: 30

Solution-Sheet

Your NAME:

Your ROLL NUMBER:

Part-I: Each from Q.1 to Q.20 carries 1 mark

Put the correct option (i.e. a, b, c or d) in the box against each Question:

1.	C	-

2. a

3. c

4.

5.



7. d

8. a

9.

10.



12.

d

13. _C

14.

6

15.

17.

a

18. c

19.

C

20.

Part-II

1. (a)

$$T = \frac{1}{4} \text{ mg}$$

1. (b)

$$I = \begin{pmatrix} 10 & 0 & 0 \\ 0 & 6 & -4 \\ 0 & -4 & 6 \end{pmatrix}$$

$$I_{xx} = 10, \quad I_{xy} = 0 = I_{xz}$$

$$I_{yx} = 0, \quad I_{yy} = 6, \quad I_{yz} = -4$$

$$I_{zx} = 0, \quad I_{zy} = -4, \quad I_{zz} = 6$$

2.