

## **RAN-1007**

## Third Year B.Sc. Semester - V Examination

March / April - 2019

**Physics: Paper - VI** 

Mechanics and Mathematical Method

[ Total Marks: 50

## સૂચના : / Instructions

નીચે દર્શાવેલ 🖝 નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the details of 🖝 signs on your answer book	Seat No.:
Name of the Examination:	
★ Third Year B.Sc. Semester - V	
Name of the Subject :	
Subject Code No.: 1 0 0 7	Student's Signature

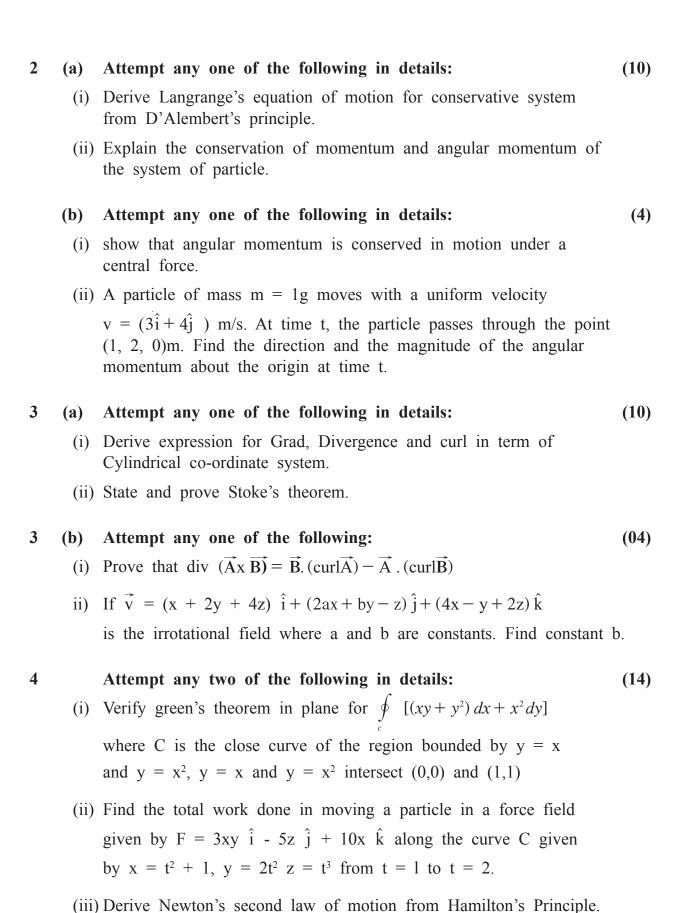
- 1) Draw neat diagrams wherever necessary.
- 2) Symbols used in the paper have their usual meaning.
- 3) Figures to the right indicate full marks of the question.
- 4) Scientific calculator may be used.

## 1. Answer the following questions in brief:

(08)

- [1] What do you mean by constrain motion?
- [2] Give physical significance of a curl of a vecor point function?
- [3] Write any one limitation of Newton's law
- [4] If 'a' is a constant vector then value of  $\vec{\nabla}(\vec{a} \times \vec{r}) = \dots$
- [5] What is an isolated system?
- [6] Define line integral of a vector field.
- [7] When the vector is said to be solenoidal vector?
- [8] Define scleronomic constrain.

**RAN-1007** ] [1] [P.T.O.]



RAN-1007 ] [2] [100]

(iv) Derive Gauss' formula of electrostatic from Gauss Divergence theorem.