

V P & R P T P SCIENCE COLLEGE-VALLABH VIDYANAGAR

B. Sc. SEMESTER VI

PHYSICS

US06CPHY02

[Atomic - Molecular Physics, Energy Science and Earth Science]

Dt. 13-03-2018, Tuesday

Time: 11:00a.m. To 12:30 p.m.

[Maximum marks: 25]

Instructions:- i. All questions are compulsory.

ii. Figure on right hand side indicates full marks of that question.

Q - 1. Answer the following multiple choice questions. (03)

- 1 In the Franck-Hertz experiment the separation of successive peaks in the graph of collector and grid voltage for Hg is.....V.
(a) 4.09 (b) 40.9
(c) 4.9 (d) 300
- 2 In practice, rotational spectra are observed in.....
(a) emission (b) absorption
(c) translation (d) all of above
- 3 The bumping of two tectonic plates causes
(a) earth quake (b) fault line
(c) mountains (d) valleys

Q-2. Answer the following short questions (Attempt any two). (04)

- 1 Write Ritz combination principle.
- 2 Define rigid rotator providing suitable figure.
- 3 Define epicenter of an earth quake.

Q-3 Explain Stern Gerlach experiment in detail. (06)

OR

Q-3 Discuss atoms of alkaline elements. (06)

Q-4 Write a detail note on the experimental arrangement to observe Raman Spectra. (06)

OR

Q-4 Discuss: Diatomic Molecule as a Non rigid Rotator. (06)

Q-5 Explain how to determine the Epicenter and Focus. (06)

OR

Q-5 Explain Plate tectonics in detail. (06)

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