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**B.Sc(PCM)-20**  
**3<sup>rd</sup> Year Examination, Calendar Batch 2015**  
**Physics-VI (Electronics)**

*Time : 3 Hours ]*

*[ Max. Marks : 100*

*Note. Attempt any **five** questions. Each questions carry equal marks.*

- Q.No.1 What is MOSFET? Give its construction and working principle. How does it differ from FET.
- Q.No.2 What do you understand by hybrid parameters? What are their dimensions? How will you measure h-parameters of a linear circuit?
- Q.No.3 Explain the working of a transformer coupled transistor amplifier. Discuss its frequency response curve.
- Q.No.4 Define atomic packing fraction. Calculate its value for simple cubic, face centred cubic and body centred cubic lattices.
- Q.No.5 What do you mean by feedback? Discuss the principles of negative feedback in amplifiers.
- Q.No.6 Discuss the characteristics of common emitter p-n-p transistor.
- Q.No.7 How are h-parameters of a CE transistor amplifier measured experimentally? Write the limitation of h- parameters.
- Q.No.8 What is bipolar junction transistor? Distinguish between two types of transistors and explain their working.