

**B.Tech. MECHANICAL ENGINEERING  
(BTMEVI)****Term-End Examination****June, 2013****BIMEE-017 : NUCLEAR POWER ENGINEERING**

00497

*Time : 3 hours**Maximum Marks : 70*

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- Note :** (i) *All the questions are to be answered in English language only.*
- (ii) *Attempt **any five** questions.*
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1. (a) What is chain reaction ? What is the difference between controlled and uncontrolled chain reaction ? 7
- (b) Briefly explain different types of nuclear reactions, and also significance of each in nuclear power generation. 7
2. (a) Explain the principle of Boiler Water Reactor with neat sketch. 7
- (b) Explain the principle of Gas Cooled Reactors with neat sketch. 7
3. (a) Why shielding of a reactor is necessary ? What do you understand by Thermal Shielding ? 7
- (b) Briefly explain Breeder Reactor with help of neat sketch. 7

- 4. (a) Define the unit of Nuclear Radiation and classify the wastage accordingly. 7
  - (b) Explain the principle of gas disposal system with neat sketch. 7
  - 5. (a) Briefly explain coal handling system with neat sketch. 7
  - (b) Briefly explain Ash handling system with neat sketch. 7
  - 6. (a) Briefly explain Electrostatic Precipitator with help of neat sketch. 7
  - (b) Briefly explain the principle of screw conveyor with neat sketch. 7
  - 7. (a) Explain the function of Nuclear Reactor with merits and demerits. 7
  - (b) Explain nuclear power economics. 7
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