



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 206CA

**B.Tech VI Semester Regular/Supplementary Examinations, June 2022**  
**NUCLEAR POWER GENERATION AND SUPPLY**

(Mechanical Engineering)

Maximum Marks: 70

Date:21.06.2022 Duration: 3 hours

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 What is an irradiated fuel?
- 2 Mention most common fissile nuclear fuels.
- 3 Give the functions of moderator.
- 4 What is a cover gas in nuclear reactor?
- 5 Why is PWR safer than BWR?
- 6 Mention the cause of LOCA in reactor.
- 7 Write about radiation hazards on human.
- 8 What are nuclear wastes?
- 9 State the prime objectives of nuclear safety systems.
- 10 Name the nuclear power plants in India.

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 Discuss the various methods of nuclear fuel reprocessing. (10)  
OR
- 12 Describe the primary heat transport system in a nuclear reactor. (10)
- 13 Explain the purpose and principles of reactor shielding and containment. (10)  
OR
- 14 Describe the auxiliary cooling and ventilation system in a nuclear reactor. (10)
- 15 Give a detailed account of various safety measures used in reactor design. (10)  
OR
- 16 Explain the construction of a BWR reactor with a sketch. Mention its merits and limitations. (10)
- 17 Describe the working of a nuclear power plant with a neat layout. (10)  
OR
- 18 Explain the concept and significance of radioactive waste management. (10)
- 19 Give an overview of nuclear processes and hazards involved. (10)  
OR
- 20 Discuss the environmental impact of power production. Compare the effects of conventional power generation with those of nuclear power generation. (10)