Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

FT-605 (GS)

B.E. VI Semester

Examination, November 2018

Grading System (GS)

Nuclear Safety and Radioactive Materials

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Discuss the calculation of absorbed dose in media from ionization chamber using exposure dose in air.
   b) What type of controllers are useful to control nuclear chain reaction explain?

2. a) Describe the facilities for cold and hot radiological laboratories.
   b) Explain radio activity, starting from basic experiments and principle, suggest some steps to control the bad effect of radioactivity.

3. a) What are the sources of radioactive waste and how we can minimize it?
   b) Give one case study of any one of the nuclear power plant.

4. a) Explain handling and shipping of radio isotope also give schematic layout of building.
   b) What are the measures to be taken for protection in case of any hazard?

5. a) Write down importance of fire alarms and need for easy detection of fire.
   b) Describe various types of automatic fire detectors.

6. a) Describe in detail the safety requirements in a nuclear power plant.
   b) Discuss fixed fire extinguishment system.

7. a) How quality assurance is important in nuclear power plant from safety point of view?
   b) What are the three safety objectives defined for nuclear power plant? Explain them.

8. Write short note on the following:
   a) Half life period
   b) α, β, γ - radiation properties
   c) Hot bituminization

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