

Code No: R05410310

R05**Set No. 2****IV B.Tech I Semester Examinations, NOVEMBER 2010****POWER PLANT ENGINEERING****Common to Mechanical Engineering, Mechatronics****Time: 3 hours****Max Marks: 80****Answer any FIVE Questions****All Questions carry equal marks**

1. Explain the working of a fuel cell and list out its advantages over other non conventional systems of power generation. [16]
2. What are the factors considered in selecting a prime mover for a hydro electric power plant? [16]
3. (a) Describe with a neat sketch fast breeder reactor.
(b) What do you understand by thermal shielding? Explain the arrangement of the components of a hydro electric power plant with a neat sketch. [8+8]
4. (a) Briefly explain fossil fuel pollution.
(b) What are the effects of SO₂, NO₂ and hydrocarbons on the human and crop lives? [8+8]
5. (a) Explain different types of equipments used for transferring coal.
(b) List out their advantages and disadvantages. [8+8]
6. (a) Give the lay out of a diesel engine power plant.
(b) Name the essential components of a diesel engine. [10+6]
7. (a) Classify the gas turbines.
(b) What are the essential components of a simple open cycle gas turbine plant? How inter cooling and regeneration help in improving thermal efficiency of the plant? [6+10]
8. (a) What are the advantages of pulverised coal?
(b) Explain the working of Ball and Race mills. [6+10]

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R05**Set No. 4****IV B.Tech I Semester Examinations, NOVEMBER 2010****POWER PLANT ENGINEERING****Common to Mechanical Engineering, Mechatronics****Time: 3 hours****Max Marks: 80****Answer any FIVE Questions
All Questions carry equal marks**

1. (a) What are the advantages of pulverised coal?
(b) Explain the working of Ball and Race mills. [6+10]
2. (a) Classify the gas turbines.
(b) What are the essential components of a simple open cycle gas turbine plant? How inter cooling and regeneration help in improving thermal efficiency of the plant? [6+10]
3. (a) Briefly explain fossil fuel pollution.
(b) What are the effects of SO₂, NO₂ and hydrocarbons on the human and crop lives? [8+8]
4. What are the factors considered in selecting a prime mover for a hydro electric power plant? [16]
5. (a) Explain different types of equipments used for transferring coal.
(b) List out their advantages and disadvantages. [8+8]
6. (a) Describe with a neat sketch fast breeder reactor.
(b) What do you understand by thermal shielding? Explain the arrangement of the components of a hydro electric power plant with a neat sketch. [8+8]
7. (a) Give the lay out of a diesel engine power plant.
(b) Name the essential components of a diesel engine. [10+6]
8. Explain the working of a fuel cell and list out its advantages over other non conventional systems of power generation. [16]

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R05**Set No. 1****IV B.Tech I Semester Examinations, NOVEMBER 2010****POWER PLANT ENGINEERING****Common to Mechanical Engineering, Mechatronics****Time: 3 hours****Max Marks: 80****Answer any FIVE Questions****All Questions carry equal marks**

1. (a) Classify the gas turbines.
(b) What are the essential components of a simple open cycle gas turbine plant? How inter cooling and regeneration help in improving thermal efficiency of the plant? [6+10]
2. What are the factors considered in selecting a prime mover for a hydro electric power plant? [16]
3. (a) Briefly explain fossil fuel pollution.
(b) What are the effects of SO₂, NO₂ and hydrocarbons on the human and crop lives? [8+8]
4. (a) What are the advantages of pulverised coal?
(b) Explain the working of Ball and Race mills. [6+10]
5. (a) Explain different types of equipments used for transferring coal.
(b) List out their advantages and disadvantages. [8+8]
6. (a) Describe with a neat sketch fast breeder reactor.
(b) What do you understand by thermal shielding? Explain the arrangement of the components of a hydro electric power plant with a neat sketch. [8+8]
7. Explain the working of a fuel cell and list out its advantages over other non conventional systems of power generation. [16]
8. (a) Give the lay out of a diesel engine power plant.
(b) Name the essential components of a diesel engine. [10+6]

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R05**Set No. 3****IV B.Tech I Semester Examinations, NOVEMBER 2010****POWER PLANT ENGINEERING****Common to Mechanical Engineering, Mechatronics****Time: 3 hours****Max Marks: 80****Answer any FIVE Questions****All Questions carry equal marks**

1. Explain the working of a fuel cell and list out its advantages over other non conventional systems of power generation. [16]
2. (a) Describe with a neat sketch fast breeder reactor.
(b) What do you understand by thermal shielding? Explain the arrangement of the components of a hydro electric power plant with a neat sketch. [8+8]
3. (a) What are the advantages of pulverised coal?
(b) Explain the working of Ball and Race mills. [6+10]
4. (a) Explain different types of equipments used for transferring coal.
(b) List out their advantages and disadvantages. [8+8]
5. (a) Briefly explain fossil fuel pollution.
(b) What are the effects of SO₂, NO₂ and hydrocarbons on the human and crop lives? [8+8]
6. What are the factors considered in selecting a prime mover for a hydro electric power plant? [16]
7. (a) Give the lay out of a diesel engine power plant.
(b) Name the essential components of a diesel engine. [10+6]
8. (a) Classify the gas turbines.
(b) What are the essential components of a simple open cycle gas turbine plant? How inter cooling and regeneration help in improving thermal efficiency of the plant? [6+10]
