



SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGINEERING, SHEGAON

DEPARTMENT OF MECHANICAL ENGINEERING

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COURSE OUTCOMES OF ALL COURSES OF EIGHTH SEMESTER

BE MECHANICAL ENGINEERING

### **8ME01 Operation Research Techniques**

After successfully completing the course, students will be able to:

- 1 Convert real life situation with limited constraints into a mathematical model
- 2 Solve mathematical models manually and using software for OR problems
- 3 Analyze network models/situations using PERT/ CPM techniques
- 4 Apply queuing theory and sequencing technique for different situations in OR
- 5 Analyze real life situations using simulation and dynamic programming
- 6 Analyze replacement situations using individual and group replacement policies

### **8ME02 I.C. Engines**

After successfully completing the course, students will be able to:

- 1 Evaluate performance parameters of IC engines by using principles of thermodynamics.
- 2 Analyze the major fuel groups for IC engines.
- 3 Distinguish combustion processes in SI and CI engines.
- 4 Demonstrate relevance of environment and emissions from IC engine

### **8ME03 Production Planning & Control**

After successfully completing the course, students will be able to:

- 1 Understand the importance of production planning and control, its functions, advantages.
- 2 Apply the skills of calculating for sales forecasts using various forecasting methods.
- 3 Remember concept of machine capacity, loading of machines and man machine activity charts.
- 4 Understand concept of inventory control & various cases of inventory system and modern techniques/philosophies of management like CIM, JIT, MRP-I and MRP-II.

### **8ME03 Artificial Intelligence**

After successfully completing the course, students will be able to:

- 1 Illustrate the concept of knowledge and knowledge base.
- 2 Apply the skills of development of expert system for industrial problems.
- 3 Describe the design pre-requisites and design procedure of expert system.
- 4 Illustrate the concept of fuzzy logic and will try to implement in project work.

### **8ME04 Refrigeration & Air Conditioning**

After successfully completing the course, students will be able to:

- 1 Examine different types of refrigeration systems.
- 2 Analyze different air conditioning systems.
- 3 Apply psychrometric principles to study moist air properties.
- 4 Solve engineering numerical of refrigeration & air-conditioning.

### **8ME04 Robotics & Industrial Applications**

After successfully completing the course, students will be able to:

- 1 Understand the concept of robotics, its history.
- 2 Remember robot anatomy and various configurations for different industrial applications
- 3 Understand the concept of kinematic analysis of robots.
- 4 Remember the concept robot programming, its methods and programming languages.

### **8ME07 Project**

After successfully completing the course, students will be able to:

- 1 Apply creative process techniques in synthesizing information, problem-solving and critical thinking to demonstrate a sound technical knowledge of their selected project topic.
- 2 Undertake problem identification, formulation and solution.
- 3 Design engineering solutions to complex problems utilizing a systems approach.
- 4 Conduct an engineering project, use sustainable materials and manufacturing processes & Carry out cost and benefit analysis through various cost models.
- 5 Demonstrate the knowledge, skills and attitudes of a professional engineer.