

**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)  
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

**IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, APRIL-2019**Subject: Renewable Energy Sources

Branch: ME

Time: 3 hours

Max. Marks: 75

**PART – A****I. Answer ALL questions of the following**

5x1Mark=5 Marks

1. What is the value of hour angle at local solar noon?
2. What is flat plate collector?
3. What is gas yield in biomass?
4. What are the two different tides produced in the sea?
5. List the types of nuclear batteries

**II. Answer ALL questions of the following**

10x2Mark=20 Marks

1. Define solar azimuth angle.
2. What is meant by local apparent time
3. What are the advantages of fresnel lens?
4. What is the principle of solar pond?
5. Explain the formation of local and global winds.
6. What is aerobic digestion?
7. What are the advantages of Wave Energy Conversion machines?
8. State the principle of geothermal energy
9. What are the factors affecting the MHD converters
10. Name the different types of polarization of fuel cells.

**PART-B****Answer ALL questions of the following**

5x10 Marks= 50Marks

1. What is the difference between a Pyrheliometer and a Pyranometer? Describe the principle and operation of any one type of Pyrheliometer.

**OR**

2. a) Derive an expression for solar day length.  
b) Describe about Solar Geometry.
3. Explain the working of solar distillation with a neat sketch.

**OR**

4. Explain Parabolic Dish and Power tower concentrating collectors with neat sketch.
5. With the help of a neat diagram, explain the working of Fixed dome type biogas plant.

**OR**

6. Write short note on a) Janata bio gas plant b) Deen bandu bio gas plant.
7. Explain the technologies available for OTEC and list out the major Problems and operational experience.

**OR**

8. Write short notes on hot-dry rock geothermal resources.
9. Explain the working of a Fuel Cell by a schematic diagram.

**OR**

10. Explain the working of ion exchange membrane cell.

**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)  
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

**IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, APRIL-2019**Subject: Production Planning & Control

Branch: ME

Time: 3 hours

Max. Marks: 75

**PART – A****I. Answer ALL questions of the following**

5x1Mark=5 Marks

1. Write about advantages of PPC
2. What is the importance of forecasting?
3. What are the basic assumptions in the EOQ?
4. Discuss a route sheet?
5. Define line balancing

**II. Answer ALL questions of the following**

10x2Mark=20 Marks

1. Mention the roles of the key members in the PPC setup.
2. What is the product strategies in PPC?
3. Explain the importance of forecasting for any organisation.
4. What is the time period for short term forecasting
5. Compare and contrast ABC & VED Analysis.
6. What are the objectives of LOB?
7. What is use of computer for scheduling?
8. Does the routing procedure of Job shop production system differ from batch production system? Discuss.
9. Write about types of follow up.
10. Differentiate between aggregate planning and chase planning

**PART-B****Answer ALL questions of the following**

5x10 Marks= 50Marks

1. a) Define and explain the role of production planning & control in an organization.  
b) Explain different types of production briefly.  
OR
2. Explain the Organization of production planning and control department
3. Among the qualitative and quantitative forecasting which methods are most useful? Discuss.  
OR
4. Explain in detail about sales forecasting with suitable example
5. a) Discuss the basic principles of JIT manufacturing system.  
b) Explain the techniques of Line of Balancing process.  
OR
6. What is meant by ABC analysis? Explain the procedure to classify the items under A,B,C categories.
7. a) How the Route Sheets are prepared? Draw the operation of Route sheet.  
b) What is route sheet explain briefly.  
OR
8. Explain the procedure for “n” jobs and two machines in sequencing
9. a) Explain various types of expediting procedures.  
b) What is difference between an aggregate plan and a master production schedule?  
OR
10. Explain the types of follow up in detail

**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)  
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

**IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, APRIL-2019**Subject: **Total Quality Management**

Branch: ME

Time: 3 hours

Max. Marks: 75

**PART – A****I. Answer ALL questions of the following****5x1Mark=5 Marks**

1. Define Quality
2. Define Quality as per Crosby
3. Cost of quality means?
4. How many tools of TQM
5. Define FMEA?

**II. Answer ALL questions of the following****10x2Mark=20 Marks**

1. Explain the benefits of TQM
2. Give the basic concept of TQM
3. Define the term costumer dissatisfaction.
4. What are the three stages of Taguchi's product development
5. Explain distribution of quality costs
6. What is Appraisal Cost?
7. List out types of maintenance.
8. How will you calculate OEE?
9. Differentiate the terms failure mode and failure effects.
10. What is the importance of FMEA?

**PART-B****Answer ALL questions of the following****5x10 Marks= 50Marks**

1. a) Explain the principles of TQM  
b) Explain the characteristics of TQM

**OR**

2. What are the dimensions of quality? Explain in detail.
3. What are the different definitions given for quality? Explain how it got evolved and what are its prime concerns.

**OR**

4. Explain the process of Deming wheel with suitable example as case study.
5. Write short notes on : a) Prevention cost      b) Failure cost

**OR**

6. Write briefly about a) Quality statement, b) Vision Statement, c) Mission Statement, d) quality policy statement.
7. Explain seven tools of TQM in detail

**OR**

8. What is a critical success factor? How is it important in bench marking?
9. List out step by step procedure to build house of quality.

**OR**

10. Explain quality function deployment with suitable application.