Code No.: **403E1** **MR14**

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, NOVEMBER-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. Name two different dry biomass conversion processes.
4. Define geothermal sources.
5. List the types of nuclear batteries.

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

1. Define solar azimuth angle.
2. Write down the equation for calculating the direct radiation compensation pyrheliometer.
3. Write a short note on latent heat storage system.
4. What are the advantages of fresnel lens?
5. What is aerobic digestion?
6. Define lift and drag.
7. Explain about mini-hydel power plants in ocean energy.
8. Define bio-fouling in OTEC.
9. Write note on Hall effect.
10. State the principle of liquid metal system MHD.

PART-B

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

1. Explain with a neat sketch the structure of the SUN.

OR

2. Explain the different needs for the alternative energy sources.
3. Explain the working of packed bed exchanger storage system with neat sketch.

OR

4. Explain the working principle of PV System with neat diagram.
5. a) Define the power coefficient of a wind mill and prove that its maximum value is 16 / 27.
   b) Draw a neat diagram of a horizontal axis wind mill with all required components and explain the function of each.

OR

6. Explain various configuration of KVIC biogas plants with neat sketches.
7. What are the various geothermal resources and explain them.

OR

8. Describe vapour dominated hydrothermal (convective) power plant with neat sketch.
9. What are the advantages and disadvantages of fuel cells.

OR

10. Explain the different types of electrodes used in fuel cells.

Code No.: **40336**

MR14

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Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, NOVEMBER-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. What is significance of control phase in PPC?
2. What is the importance of forecasting?
3. What is ERP?
4. Give one application of scheduling
5. What is the function of dispatching?

II. Answer ALL questions of the following **10x2Marks=20 Marks**

1. Mention some objectives of PPC.
2. Draw the graph between production and operation system
3. Name the quantitative techniques in forecasting
4. What types of forecasting technique is market research
5. Compare and contrast ABC & VED Analysis
6. What are the objectives of LOB?
7. Define 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. What is cycle time?

PART-B

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

1. Give the internal organization of PPC department and Compare job production and Batch production systems.

OR

2. Discuss the ten functions of production Planning Cycle?

3. Distinguish between the qualitative and quantitative methods of sales forecasting techniques.

OR

4. Discuss the forecasting techniques to forecast demand for new products.
5. Compare P system and Q system type of inventory with applications.

OR

6. Explain concept MRP-II in detail.
7. a) Compare and contrast different scheduling policies

   b) What are the factors that affect the process planning.

OR

8. Explain in detail the job shop and flow shop scheduling.

9. What is use of PPC in manufacturing firm? Justify

OR

10. How is chase planning implemented in military application?