Code No.: **203D4**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Maisammaguda, Dhulapally,(Post Via kompally), Secunderabad-500 100.

IV B.TECH II SEM SUPPLEMENTARY EXAMINATIONS, MARCH - 2017
SUBJECT: <u>Plant Layout & Material Handling</u>

Branch: **ME**

Time: **3 Hours**   Max Marks: **75 M**

Answer any FIVE question   **5 X 15 M = 75 M**

1. Explain advantages & limitations of different layouts.

2. Explain selection, specification, implementation and follow up procedure for lalyouts.

3. Explain CRAFT algorithm and its procedure.

4. Explain quadric assignment problem.

5. a) What is unit load concept?
   b) What are the principles of material handling

6. Explain in detail hoisting equipments

7. Explain maintenance of material handling equipment and safety procedure in material handling.

8. Explain design procedure of miscellaneous material handling equipment.

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IV B.Tech II sem Supplementary Examinations, MARCH - 2017
SUBJECT: **Production Planning and Control**
Branch: **Mechanical Engg.**

Time: **3 Hours**   Max Marks: **75 M**

Answer any FIVE of the following   **5 X 15 M = 75 M**

1. a) Define clearly what is PPC? Explain the various functions of PPC.   [7 M + 8 M]

   b) Discuss the various types of production systems.

2. The sales manager of a company needs to forecast accurately the demand for carpets. The manager has collected the following data of demand for the past 8 months.   [15 M]

Month	1	2	3	4	5	6	7	8
Demand	8	12	7	9	15	11	10	12

   a) Compute a 3 month moving average forecast for months 4 through 9.

   b) Compute a weighted 3 month moving average forecast for months 4 through 9. Assign weights of 0.55, 0.33 and 0.12 to the months in sequence, starting with the most recent month.

3. a) Explain about the various costs in Inventory system   [7 M + 8 M]

   b) Write notes on (i) ABC analysis   (ii) VED analysis

4. a)   Discuss briefly about (i) JIT inventory   (ii) Japanese concepts of inventory. [8 M + 7 M]
   b)   Explain the concepts of MRP and ERP.

5. a) Define Routing what information does a route sheet provide. Explain.   [8 M + 7 M]
   b) Explain the need for scheduling how does if differ from loading.

6. a) Explain the difference between loading and scheduling.   [8 M + 7 M]
   b) Elaborate the various standard scheduling methods.

7. Discuss about chase planning and expediting.   [15 M]

8. a) What are the duties and responsibilities of dispatcher in the PPC department?   [8 M + 7 M]
   b) Explain the role of computers in PPC.

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IV B.Tech II sem Supplementary Examinations, APRIL - 2017
SUBJECT: <u>Renewable Energy Sources</u>

Branch: **ME**

Time: **3 Hours**   Max Marks: **75 M**

Answer any FIVE of the following   **5 X 15 M = 75 M**

1. a) Calculate the day length on APRIL 1st, for a south facing surface located at New Delhi (28°38'N, 77°17'E) and tilted at an angle of 40°?   (10 M+ 5 M)
    b) Write short note on solar on radiation measurements?

2. a) Determine the declination and sunset hourangle for Allahabad (24°25'N, 81°58'E) for Feb 8th and July 23rd?   (8 M+ 7 M)
    b) Define collector efficiency of flat plate collector?

3. a) How solar energy can be stored in the form of thermal energy?   (7 M+ 8 M)
    b) Explain about solar distillation and solar pond?

4. a) Explain how do you measure the speed and the direction of a wind?   (8 M+ 7 M)
    b) How do you classify wind mills?

5. a) Explain the process "photosynthesis"?   (7 M+ 8 M)
    b) What are the factors to be considered for the selection of site for the biogas plant?

6. a) Explain how the space heating is done using geothermal energy?   (8 M+ 7 M)
    b) Explain geopressurised system & magma resources?

7. a) Explain the working of wave energy conversion machines?   (7 M+ 8 M)
    b) Explain the basic principle of OTEC?

8. a) Explain the principle of MHD power generation?   (7 M+ 8 M)
    b) Explain about thermoelectric generator?