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AQ–2866

Faculty of Engineering & Technology

M.E. (Mech. Engg.) (Adv. Manu. & Mech. Sys. Desig.) Semester-II (New-CGS) Examination

Elective-II (4) COMPUTER ASSISTED PRODUCTION MANAGEMENT

Paper—2 MMD 5

Sections—A & B

Time—Three Hours] [Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

(1) All questions carry marks as indicated.

(2) Answer **THREE** questions from Section A and **THREE** questions from Section B.

(3) Due credit will be given to neatness and adequate dimensions.

(4) Illustrate your answers wherever necessary with the help of neat sketches.

(5) Use pen of Blue/Black ink/refill only for writing the answer book.

SECTION—A

1. (a) Discuss CAPP system around its approaches in detail. 6

   (b) What is Generative process planning ? Explain its framework in detail. 7

2. (a) State and explain the significance of CAPP over manual process planning. 6

   (b) What is shape function ? Explain in detail about part representation. 7

3. (a) Define capacity planning. Discuss the various factors influencing effective capacity. 6

   (b) Propose a system for automatic sizing and sorting of the manufactured items. 7

4. (a) Enlist the different post inspection softwares used in CMM. Explain in brief. 7

   (b) Discuss "optical inspection methods" in detail. 6

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5. (a) Discuss in detail about working principle of machine vision. 7

(b) Compare traditional and modern quality control system. 7

SECTION—B

6. (a) What type of layout is most suitable for JIT ? Justify. 6

(b) Discuss the various stones of corner of Japanese manufacturing system. 7

7. (a) What do you mean by Gross and Net requirements ? Explain with suitable example. 6

(b) State the imperative emphasized by JIT to eliminate waste. 7

8. (a) What is BOM ? State and explain in detail. 6

(b) Discuss various components of MRP in detail. 7

9. (a) What is CMM ? Discuss any three types of CMM. Also enlist its advantages. 7

(b) What is Computer Integrated Materials Management ? Explain in detail with suitable example. 6

10. The XYZ dealer keeps a stock of Refrigerator. The daily demand is given as below :

Daily Demand	0	19	23	35	41	55
Probability	0.01	0.10	0.25	0.49	0.13	0.02

consider the sequence of random numbers :

21, 27, 47, 54, 60, 39, 43, 91, 25, 20.

Using this sequence simulate the demand for the next 10 days. Find out the stock situation, if the capacity of the dealer is to sale 22 refrigerators every day. Also estimate the daily average demand for refrigerators on the basis of simulated data. 14

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