Total No. Pages 3
FIFTH SEMESTER

Roll No. 499

B.E. (COE/EC/EE/IC)

END SEMESTER EXAMINATION (Nov. – Dec.) 2011

COE/EC/EE/IC-305 INDUSTRIAL ORGAINSATION & MANAGEMENT ECONOMICS

Time: 3 Hours

Max. Marks. : 70

Notes: Attempt any FIVE questions. Assume missing data suitably if any.

Q. 1 The fixed cost for the year 1984-85 are Rs. 100000. The estimated sales are Rs. 3,00,000. The variable cost per unit for the single product made is Rs. 5.00. If each unit sells at Rs. 30 and the number of units involved coincides with the expected volume of output, construct the break-even chart: a)Determine B.E.P. b)Determine the profit at a turn over of Rs. 1,60,000 c)Find the margin of safety, d) Measure the angle of incidence

Q.2. A construction company has an opportunity to submit a bid for the construction of a new apartment building. From the specification provided by the developer, the PERT network along with the three time estimate (in week) for each activity are shown in fig. (Q 2). Determine: (a)Critical path and its standard deviation.(b)Probability of completing the work in 38 weeks (c)Completion time duration for which the company should bid to provide 95% probability of completing the project in time.

Q.3. Fig. (Q.3) shown the network for a project, the data for the duration and costs of each activity are given in table (Q.3).The direct cost of the project is Rs. 3000 per week. Determine the optimum duration of the project and the corresponding minimum cost. Draw the time scaled version of the network at each stage of crashing.

Q.4. (a)A firm believes that its annual profit depends on its expenditures for research. The information for the preceding six years is given Table(Q.4). Estimate the profit when the expenditure is 6 units. Also calculate standard error of estimate and coefficient of Determination.

Q.4. (b) Explain with a suitable example the difference between process layout & cellular layout. (04marks)

Q.5(a) An industrial operation consists of five elements with following observed times and performance ratings.

Elements	1	2	3	4	5
Observed time (min.)	0.15	0.2	0.1	0.12	0.25
Performance Reting (%)	80	85	90	75	80

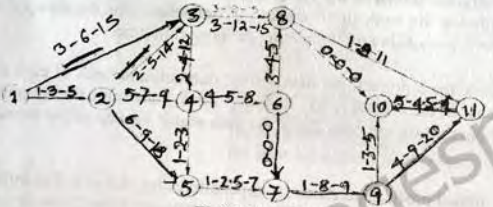
Assuming rest & personal allowances as 12% and contingency allowance as 4% of basic (normal) time, calculate standard time per piece.

Q.5. (b) Write short notes on the following: Loading chart, Route card, Routing , Dispatching. (04marks)

Q.6. (a)Explain with a suitable example the difference between
Line type organization ,Line and staff organization ,Functional organization
(b) Define method study & work study
(c) What do you mean by Therbligs. Write the symbol, color code & description of any six Therbilgs.
(d) Explain the following charts :Multiple activity chart, Two handed process chart, SIMO chart

Q.7 a) Explain "Management is science as well as Arts".
b) Explain "Management & leadership" are different comment.
c) Explain the point method of "job evaluation".
d) What is difference between macro economics & micro economics.
e) What is elasticity of demand.
f) What are the factors affecting the elasticity of demand.
g) What is working capital & fixed capital.

Q.8. a) What is difference between production control & production planning.
b) What is difference between standard time & normal time in connection with "Time Study".
c) Explain Mc-Gregor's theory of X factor & Y factor.
d) Name at least three computer programmes available to facilitate layouts.
e) Explain Taylor's scientific management.
f) Methods for plant locations.
g) Factors for plant layout.



Fig(Q.2)

Fig. (Q.3)

Activity	Normal Duration (weeks)	Normal cost (Rs.)	Crash duration (weeks)	Crash cost (Rs)
1-2	6	7000	3	14500
1-3	8	4000	5	8500
2-3	4	6000	1	9000
2-4	5	8000	3	15000
3-4	5	5000	3	11000

Table(Q.3)

Year	Expenditure for Research (X)	Annual Profit (Y)
1989	2	20
1990	3	25
1991	5	34
1992	4	30
1993	11	40
1994	5	31
1995	6	?

Table(Q.4)