Name : ....

Roll No. : ....

Invigilator's Signature : ....

CS/BBA(H)BIRM/BSCM/SEM-4/BBA-401/2012
2012
PRODUCTION MANAGEMENT

Time Allotted : 3 Hours   *Full Marks :* 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP – A
(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :

                                                              10 × 1 = 10

    i)   Tactical planning is done over a

          a)   long time horizon   b)   medium time horizon

          c)   short time horizon   d)   none of these.

    ii)   TQM stands for

          a)   Total Quantity Management

          b)   Total Quality Management

          c)   Total Qualitative Management

          d)   None of these.

4020   [Turn over

iii) Process layout is also called

a) straight-line layout

b) layout for serialized manufacture

c) functional layout

d) all of these.

iv) Break-down maintenance is a form of

a) corrective maintenance

b) preventive maintenance

c) predictive maintenance

d) routine maintenance.

v) The symbol ▢ in method study indicates

a) Operation   b) Transportation

c) Inspection   d) Storage.

vi) Which one among the following is a fixed type of material handling system ?

a) Industrial trolleys   b) Conveyors

c) Industrial trucks   d) Wheel Barrow.

vii) Standard time is equal to

a) normal time

b) average time

c) average time + allowance

d) normal time + allowance.

viii) Time allowed to an operator to carry out a specified task under specified condition and at the defined level of performance is called

   a)   observed time   b)   normal time

   c)   standard time   d)   none of these.

ix) The work done by hand and body movements could be classified according to Gilbreth into fundamental motions and are termed as

   a)   Line Balancing   b)   Therbligs

   c)   Controlled Movements d)   Cycle Time.

x)   Low product variety and high production volume are characteristics of

   a)   Job shop production   b)   Batch production

   c)   Mass production   d)   none of these.

xi) Ship building industry will be best fitted for

   a)   Process layout   b)   Product layout

   c)   Fixed position layout d)   none of these.

xii) Gantt chart is used for

   a)   inventory control   b)   material handling

   c)   production schedule   d)   none of these.

GROUP – B

(Short Answer Type Questions)
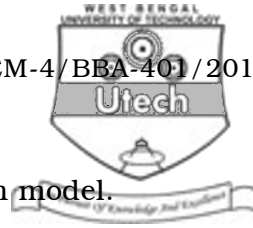
Answer any *three* of the following. 3 × 5 = 15

2. Distinguish between Inspection and Quality control.

3. Highlight the concept and importance of work measurement.

4. a) Pinpoint the differences between process and product layout.

   b) Name two major criteria for a good plant layout. 3 + 2

5. Discuss the factors you would consider for selection of Materials Handling Equipment.

6. State the principle of *X*-bar chart, and its use in statistical quality control.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. a) Define production planning and control.

   b) Discuss briefly the steps involved in production control process.

   c) Write a note on line balancing technique. 3 + 7 + 5

8. a) Explain any three methods of Location model.

   b) State the relative importance of Location factors.

   c) A company has to decide on the location of a new plant. It has narrowed down the choice to 3 locations A, B and C, data in respect of which is furnished below :

Data	Locations		
	A (Rs.)	B (Rs.)	C (Rs.)
Wages and Salaries	20,000	20,000	20,000
Power and water supply expenses	20,000	30,000	25,000
Raw materials and other supplies	80,000	75,000	60,000
Total initial investment	2,00,000	3,00,000	2,50,000
Distribution expenses	50,000	40,000	60,000
Miscellaneous expenses	40,000	25,000	30,000
Expected sales per year	2,25,000	2,50,000	2,25,000

   Use a suitable criterion and advise the company on the best choice.   6 + 3 + 6

9. a) Discuss in brief the various categories of maintenance undertaken in plants.

   b) A machine is set to deliver packets of a given weight. Ten samples of size 5 each were recorded. The mean and the range of individual samples are given below :

Sample No.	1	2	3	4	5	6	7	8	9	10
Mean $\overline{X}$	15	17	15	18	17	14	18	15	17	16
Range R	7	7	4	9	8	7	12	4	11	5

   Calculate the values for the central line and the control limits for mean chart and the range chart and comment on the state of control. (Conversion factors for n = 5, are $A2$ = 0·58, $D3$ = 0 and $D4$ = 2·11). 8 + 7

10. a) What is work sampling ? What are its merits ? A group of 10 workmen working 8 hours per day (one shift) on a group of engine lathes produced 320 pieces of a component. During the study, it was observed that workmen were idle for 20% of the total available time and 80% of the time they worked at an average performance of 75%. Calculate Standard Time for the

job assuming :

    (i)   the operation to be completely manual

    (ii)   the workmen are entitled to 20% allowance for this type of work.

b)   Differentiate between gravity and power conveyors.

$$(3 + 3 + 6) + 3$$

11. Write short notes on any *three* of the following : 3×5

    a)   Kaizen philosophy

    b)   Objectives of work study

    c)   Acceptance sampling

    d)   Aggregate planning

    e)   Space determination in plant layout exercise.