UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

UPES
THE NATION BUILDERS UNIVERSITY

End Semester Examination, May 2017

Program/course: BBA/LM   Semester – II
Subject: Operations Management   Max. Marks   : 100
Code   : BBCG 114   Duration   : 3 Hrs.
No. of page/s: 3

Section A   Maximum Marks: 20

Note: Attempt all questions.

1.   Mark True/False (T/F) for the following

a)   All things being equal, facilities with higher best operating levels require greater investments.   (T/F)

b)   Production (Action) Planning is thinking in advance to furnish all production functions.   (T/F)

c)   Quality assurance is the emphasis on finding and correcting defects before reaching market   (T/F)

d)   Capacity is the rate of productive capability of a facility.   (T/F)

e)   One of the principles of scheduling is Optimum sequence   (T/F)

2.   Fill in the blanks

i.   A measure that relates output measure to inputs available is _____.

ii.   _____ type of layouts are designed to accommodate processing one or a few variety of related products.

iii.   _____ is a set of international standards for assessing a company's environmental performance

iv   _____ is the start of cycle of purchasing procedure

v   The major function of _____ is translating the aggregate plans into specific end items

Section B

Note: Attempt any 4 questions. Each question carries 5 marks.

3. What do you understand by aggregate planning?

4. What are the techniques used in routing?

5. What are the various dimensions of quality?

6. What are the limitations of 100% inspection?

7. What are the various types of maintenance management?

8. What are the three aspects covered for vendor rating?

Section C

Note: Attempt any three questions. Each question carries 10 marks.

9. What are the various elements of Total quality management?

10. What are the 8 pillars of total productive maintenance? Explain.

11. What are the 10 system parameters of production planning and control?

12. What are the symbols that are used in method study? Explain.

Section D   Maximum Marks: 30
Note: Attempt any three questions. Each question carries 10 marks.

13. ABC company produces toilet soaps at their works. Aggregate Planning measures used by ABC is tonnes of soap which includes making and packing of the soap. The planning is done for a time horizon of one year or four quarters.

Quarter	1	2	3	4
Demand	35	55	60	45

The company has a regular workforce which can produce 35 tonnes of output per quarter.If the workers are allowed to work overtime with the restriction that the extra time cannot be more than 20% of the regular time. The output rate is 25% higher than regular time during overtime but the overtime expenses are 40% more than the regular time. The company subcontracts the soap making and packing operation but only at a cost of 50% premium than the cost of production. The regular time production costs are Rs. 10000/- per tonne.

No shortages are allowed as per company policy. Inventory carrying costs are Rs. 5000/- per tonne per annum.

Design the cost efficient aggregate plan assuming zero starting inventory. Compute the total production cost.

14. An oil engine manufacturer purchases lubricants at the rate of Rs. 42 per piece from a vendor. The requirements of these lubricants are 1800 per year. What should be the ordering quantity per order, if the cost per placement of an order is Rs. 16 and the inventory carrying charges per rupee per year 20 paise. Also calculate the optimum total cost.

15. Following datas were obtained by a work study. Man from a study conducted by hours

      i) Maintenance time

Get out and put away tools = 12 min/day

Cleaning of machine = 5 min/day

Oiling of machine = 5 min/day

Replenish coolant supply = 3 min/day

      ii) Interruption

Interruption by foreman = 5 min/day

Interruption by porter = 4 min/day

Delay time due to power failure = 6 min/day

Personal time = 20 min/day

Calculate total allowances, total available cycle time, productive hours, considering a working day of 8 hours