UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec 2021

Course: Operations and Materials Management   Semester: I
Program: BBA LM   Time: 03 hrs.
Course code: LSCM 1004   Max. Marks: 100

SECTION A

1. **Each Question will carry 2 Marks**
2. **Instruction: Complete the statement / Select the correct answer(s)**

S.No	Questions 1 to 10 (Total 20 marks)	CO
Q.	1) TQM stands for _____. 2) MRP _____. 3) ORACLE_____. 4) ERP _____. 5) ATO _____. **True/False Statements:** 6) Price is the attractiveness of a product relative to its affordable quality. 7) Inventory carrying cost is associated with the mixed type of aggregate planning. 8) Routing indicates the unloading and sequencing of the shipments. 9) Fast delivery focused on shorter time between order placement and delivery. 10) 3PL refers to hiring out or subcontracting some of the work that a company needs to do.	CO1

SECTION B

1. **Each question will carry 5 marks**
2. **Instruction: Write short / brief notes in your own words only.**

Q 11	Explain BEP with example.	CO2
Q 12	A factory uses annually 24,000 units of a raw material, which costs Rs. 1.25 per unit. Placing each order costs Rs. 25 and carrying cost is 6% per year of the average inventory. Find the economic order quantity.	CO2
Q 13	Discuss the store functions with example. **OR** Discuss cellular layout with example.	CO3
Q 14	How firms can get benefit with the machine productivity?	CO4

SECTION C

1. **Each Question carries 10 Marks.**
2. **Instruction: Write long answer.**

Q 15	Explain the use of LPP approach in aggregate planning.	CO1

Q 16	Fill up the blanks:			CO2

Date	Contribution	Contributor
1. _____	Specialization of labour in manufacturing	Adam Smith
2. _____	Interchangeable parts, cost accounting	Eli Whitney and others
1832	Division of labour by skill; assignment of jobs by skill; basics of time study	3. _____
4. _____	Scientific management time study and work study developed; dividing planning and doing of work	Frederick W. Taylor
1900	5. _____	Frank B. Gilbreth
1901	Scheduling techniques for employees, machines jobs in manufacturing	6. _____
1931	7. _____	W. A. Shewart
8. _____	Statistical sampling applied to quality control : inspection sampling plans	H.F. Dodge and H.G. Roming
1940	9. _____	P.M. Blacker and others
1947	10. _____	G.B. Dantzig, Williams and others

Q 17	a) What are the factors affecting location decisions? b) Differentiate between Agglomeration and Degglommeration with relevant examples. **OR** a) Discuss the Weber's Model of Manufacturing Industry Production. b) You are an analyst for AC Delco. You are considering a new manufacturing plant in Akron, Bowling Green, or Chicago. Fixed costs per year are $30k, $60k, & $110k respectively. Variable costs per case are $75, $45, & $25 respectively. The selling price per case is $120. What is the best location for an expected volume of 2,000 cases per year?	CO4

SECTION D
1. **Each Question carries 15 Marks.**
2. **Instruction: Write long answer.**

Q 18	a) An oil manufacturer purchases lubricants at the rate of Rs. 42/- per piece. The requirements are 1800 p.a. What should be the ordering quantity, if the cost per order is Rs. 16/- and inventory carrying charges per rupee per year is 20 paisa. Also, calculate the total cost.	CO3

	b) Draw the diagram of typical warehouse layout.	
Q 19	Discuss the functions of PPC with the help of diagram. What parameters to consider for PPC functions? **OR** What are the steps to take in scheduling? Explain any four tools of quality control with diagram and example.	**CO4**