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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATIONS- 2026

BBA IV Semester

COURSE CODE (CREDITS): 24BBWHS431

MAX MARKS: 35

COURSE NAME: PRODUCTION AND OPERATIONS MANAGEMENT

COURSE INSTRUCTOR: ASA

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is ALLOWED.

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Q.No	Question	CO	Marks																																	
Q1	A textile company supplies fabric rolls to a garment manufacturer under a strict just-in-time contract. The annual demand is 18,000 rolls, which is uniform and certain. Since the garment manufacturer runs a continuous production line with zero buffer storage, the textile company must deliver exactly a day's requirement every working day (assume 300 working days per year). Any failure to deliver results in immediate termination of contract, so shortages are not permitted (cost of shortage = ∞). The inventory holding cost is ₹0.15 per roll per month, and the set-up (production run) cost is ₹600 per run. Determine the optimum lot size and the length of the optimum production run.	4	6																																	
Q2	Aditya Hardware Store stocks 10 items. The store manager wants to apply ABC analysis to prioritise inventory control efforts. The annual consumption and unit prices of each item are given below. Classify the items into A, B, and C categories. <table><tr><td>Items</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><td>Usage (units)</td><td>500</td><td>120</td><td>100</td><td>300</td><td>80</td><td>250</td><td>400</td><td>150</td><td>600</td><td>50</td></tr><tr><td>Unit Price (Rs)</td><td>200</td><td>50</td><td>150</td><td>10</td><td>200</td><td>20</td><td>300</td><td>800</td><td>100</td><td>500</td></tr></table>	Items	1	2	3	4	5	6	7	8	9	10	Usage (units)	500	120	100	300	80	250	400	150	600	50	Unit Price (Rs)	200	50	150	10	200	20	300	800	100	500	5	8
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Q3	The quality control manager at Arushi Biscuit Factory recorded 200 defective biscuit packets rejected last week. The defects were grouped into 5 types. Use Pareto Analysis to identify which defects to tackle first. <table><tr><td>Broken Biscuits</td><td>Wrong Weight</td><td>Poor Sealing</td><td>Faded Printing</td><td>Torn Packaging</td></tr><tr><td>20</td><td>10</td><td>80</td><td>50</td><td>40</td></tr></table>	Broken Biscuits	Wrong Weight	Poor Sealing	Faded Printing	Torn Packaging	20	10	80	50	40	3	5																							
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Q4	What do you understand by "Quality Control"? What are its different phases?	5	3
Q5	What is plant layout? Which type of layout is most suitable for mass production and why?	2	3
Q6	Write Short Notes (max 50 words) a) Lean Supply Chain b) JIT c) Re-order Level d) Objectives of Production Planning e) Productivity	1	2x5 = 10

JUIT TEST-3 EXAMINATIONS- MAY-2026