

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Supply Chain & Logistics for Power Industry

Semester: III

Programme: MBA(PM)

CC: LSCM 8010

Time: 03 hrs.

Max. Marks: 100

Instructions: All sections are compulsory

SECTION A (20 Marks)

Attempt all question in this section

1.(A)	Write the full form of the following	(1*2=2 marks)	
(i)	ODC cargo	1	C05
(ii)	EOT	1	C03
(B)	Explain the following	(3*6=18 marks)	
(i)	DLD	3	C03
(ii)	PLD	3	C03
(iii)	Draw the product portfolio matrix	3	C02
(iv)	Expediting process	3	C04
(v)	Blanket purchase order	3	C01
(vi)	Primary freight & secondary freight	3	C01

SECTION B (20 Marks)

Attempt any 4 question, each question carries 5 marks only

(5*4=20 marks)

2 (a)	Discuss the various challenges in construction logistics in power plant?	5	C04
(b)	Explain the following transport definitions (i) Door-to-Door (ii) Air/Port-to-Door (iii) Door-to-Air/ Port	5	C05
(c)	What are the various factors taken into consideration for choosing an INCOTERM? What is the difference between INCOTERM 2000 vs INCOTERM 2010	5	C01
(d)	Discuss the supply chain macro process for IT framework?	5	C02
(e)	Discuss the purchasing strategy development process?	5	C04

SECTION-C (30 marks)

Attempt any 3 question, each question carries 10 marks

(10*3=30 marks)

3(a)	How demand forecasting techniques can be useful for power industry?	10	C02
(b)	Discuss the challenges associated with ODC cargo in Paltana power project?	10	C04

(c)	Explain the basic features of a EPC power project contract & the contractual structure of a project-financed power project using an EPC contract.	10	C03
(d)	Best buy sells three models of smart meters, the Litepro, the Medpro, and the Heavypro. Annual demands for the three products are $D_L = 12,000$ for the Litepro, $D_M = 1,200$ units for the Medpro, and $D_H = 120$ units for the Heavypro. Each model costs Best Buy \$500. A fixed transportation cost of \$4,000 is incurred each time an order is delivered. For each model ordered and delivered on the same truck, an additional fixed cost of \$1,000 is incurred for receiving and storage. Best Buy incurs a holding cost of 20 percent. Evaluate the lot sizes that the Best Buy manager should order if lots for each product are ordered and delivered independently. Calculate the following: (i) Optimal order size (ii) cycle inventory (iii) Annual holding cost (iv) Order frequency (v) Annual ordering cost (vi) Average flow time (vi) Annual cost	10	C01
SECTION-D(30 marks)			
Attempt the following situation & answer all question			
4	Alstom International has decided to manufacture transformer & they decided India as its manufacturing base for the supply of transformers to the European markets. The company offers 3 types of transformers: heavy duty, standard & low end duty. All 3 types of transformers offered by the firm are similar in size & shape. The only difference is in the load handling capacity & robustness. The 3 models of the transformers cost \$ 30000, \$ 20000 & \$ 10000 per unit respectively. If the firm decides to use air as the mode of transport, it can fly the goods in smaller lots of 200 units, while shipping via sea requires a minimum shipment size of 400 units. The demand in Europe is stable at 125 units per week for each of the three types of transformers. Transportation & custom clearances takes 1 week, if air is used as a mode of transport & the same will take 3 week if sea is used as a mode of transport. Freight by air will be \$ 500/unit & freight by sea will be \$ 110/unit. The annual inventory carrying cost for the firm is 15% of the cost of the item.		
(a)	The firm wants to decide upon the optimum mode of transport, when the demand is stable & fixed	(15)	C01, C02
(b)	Also take a decision when each of the three products faces similar demand uncertainty and has standard deviation of demand equal to 30 units & Alstom targets a service level of 98%.	(15)	C04

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2018

Course: Supply Chain & Logistics for Power Industry

Semester: III

Programme: MBA(PM)

Time: 03 hrs.

Max. Marks: 100

Instructions: All sections are compulsory

1.(A)	Write the full form of the following	(1*2=2 marks)	
(i)	C-TPAT	1	C01
(ii)	AEO	1	C01
(B)	Explain the following	(3*6=18 marks)	
(i)	“String sales”	3	C02
(ii)	Cross docking	3	C01
(iii)	DDP	3	C01
(iv)	Draw the product portfolio matrix	3	C04
(v)	Blanket purchase order	3	C02
(vi)	Force majeure	3	C03
SECTION B (20 Marks)			
Attempt any 4 question, each question carries 5 marks only		(5*4=20 marks)	
2 (a)	What are the various supply chain drivers?	5	C01
(b)	Explain the following transport definitions (i) Door-to-Door (ii) Air/Port-to-Door (iii) Door-to-Air/ Port	5	C05
(c)	Discuss the value chain components of the electric power sector infrastructure?	5	C04
(d)	Discuss the supply chain macro process for IT framework?	5	C02
(e)	What are the various decision phases in a supply chain?	5	C01
SECTION-C (30 marks)			
Attempt any 3 question, each question carries 10 marks		(10*3=30 marks)	
3(a)	Uttarakhand power corporation limited has seen the demand of electricity consumption in Uttarakhand increase over the last six months. Observed demand has been 5500 MW, 5372 MW, 7314MW, 9808MW, 10413MW and 11961 MW. Forecast demand for period 7 using trend corrected exponential smoothing with $\alpha=0.1$ & $\beta=0.2$	10	C01
(b)	Discuss the challenges associated with ODC cargo in Paltana power project?	10	C04
(c)	Alstom International has decided to manufacture transformer & they decided India as its manufacturing base for the supply of transformers to the European markets. The	10	CO2

	<p>company offers 3 types of transformers: heavy duty, standard & low end duty. All 3 types of transformers offered by the firm are similar in size & shape. The only difference is in the load handling capacity & robustness. The 3 models of the transformers cost \$ 30000, \$ 20000 & \$ 10000 per unit respectively. If the firm decides to use air as the mode of transport, it can fly the goods in smaller lots of 200 units, while shipping via sea requires a minimum shipment size of 400 units. The demand in Europe is stable at 125 units per week for each of the three types of transformers. Transportation & custom clearances takes 1 week, if air is used as a mode of transport & the same will take 3 week if sea is used as a mode of transport. Freight by air will be \$ 500/unit & freight by sea will be \$ 110/unit. The annual inventory carrying cost for the firm is 15% of the cost of the item. The firm wants to decide upon the optimum mode of transport.</p>		
(d)	<p>Best buy sells three models of smart meters, the Litepro, the Medpro, and the Heavypro. Annual demands for the three products are $D_L= 12,000$ for the Litepro, $D_M = 1,200$ units for the Medpro, and $D_H = 120$ units for the Heavypro. Each model costs Best Buy \$500. A fixed transportation cost of \$4,000 is incurred each time an order is delivered. For each model ordered and delivered on the same truck, an additional fixed cost of \$1,000 is incurred for receiving and storage. Best Buy incurs a holding cost of 20 percent. Evaluate the lot sizes that the Best Buy manager should order if lots for each product are ordered and delivered independently. Calculate the following:</p> <ul style="list-style-type: none"> (i) Optimal order size (ii) cycle inventory (iii) Annual holding cost (iv) Order frequency (v) Annual ordering cost (vi) Average flow time (vi) Annual cost 	10	C01
<p>SECTION-D(30 marks) Attempt the following situation & answer all question</p>			
4(a)	<p>Explain the basic features of a EPC power project contract & the contractual structure of a project-financed power project using an EPC contract.</p>	(15)	CO3
(b)	<p>Also discuss what are three main approaches for dealing with the issue of concurrent delay?</p>	(15)	C03