1.

SPot Price ($)	Profit or loss ($)
1400	650,000
1500	550,000
1560	490,000
1600	450,000
1800	250,000
2050	0
2200	-150,000
2300	-250,000
2400	-350,000

2. a) Profit per bushel = $5.80 − $5.20 = $0.60

Total Profit = $0.60 × 5,000 = $3,000

b) Profit per pound = $1.60 − $1.40 = $0.20

Each Contract covers 37,500 pound

Total profit = $0.20 × 37,500 = $7,500

c) Loss per index point = 7,500 − 7,800
= −300 points

Each contract is worth $25 per index point

Total Loss = (−300 points) × 40 × $25
= −$300,000

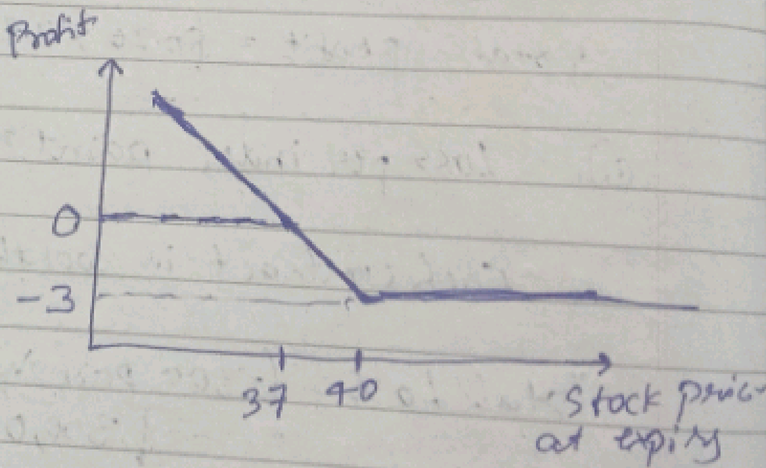
d) LOSS = (15,000 − 13,500) × 3 × 5
= −1,500 × 15 = −22500 $

3. A spot contract involves buying or selling an asset at its current market price while future contract is an agreement to transact at a set price on a future date.

Commodity exchanges enable futures trading by standardizing contracts, providing a secure and transparent trading environment, managing risk, and ensuring proper settlement and delivery procedure.

4. • when the current market price of the stock is less than \$37.

• when at expiration stock price is less than \$40



5. Long forward contract:

$$\text{Payoff}: S_T - F$$

Long european put option

$$\text{payoff}: \max(F - S_T, 0)$$

Combined payoff : $(S_T - F) + \max(F - S_T, 0)$

$= \max(S_T - F, 0)$

6. $C + PV(K) = P + S$

$PV(K)$: Present value of strike price (K)

$$PV(K) = \frac{K}{(1+r)^T}$$

$$PV(K) = P + S - C = 5 + 130 - 20 = 115$$

$$115 = \frac{120}{(1+r)} \Rightarrow r = \frac{120 - 115}{115}$$

$$r = \frac{5}{115} = 4.35\%$$