During the exam you are allowed to use a HP17 or HP 19 calculator. For the Dealing Certificate you can use the following equations:

1. AVRATE = (P1 x R1 + P2 x R2 + P3 x R3) / (P1 +P2 +P3)
2. CPN = NOMxD/BxC%
3. FRASET=(NOTxD/Bx(FIX%-FRA%))/(1+D/BxFIX%)
4. PDR%=Y%/(1+D/BxY%)
5. PRBILL = NOM x (1 – DR% x D /B)
6. PRCD=NOMx(1+DT/BxC%)/(1+DR/BxY%)
7. PV=FV/(1+D/BxY%)
8. SWAP = SPOTx(1+D/BQx Y%Q)/(1+D/BBxY%B) – SPOT
9. Y%FW=((1+DL/BxY%L)/(1+DS/BxY%S)-1) x B/(DL-DS)
10. Y%P=((1+Y%)^(1/P) -1) x P

Instructions for entering the equations:

1. Push the SOLVE button in the main MENU
2. Next, push the NEW button (HP17) or just start entering your equation (HP19)
3. To enter an 'A' for example push the ABCD button and next the A button (HP17) of enter 'A' on the left hand key board of your machine (HP19)
4. To enter an operator (+, - and so on) just use the regular operator buttons
5. If you are finished with entering your formula, push the large INPUT button
6. To use an equation, scroll with the arrows on the left hand side of your machine up and down the list of equations and press the CALC button

Example: enter the A + B = C equation

1. Push the SOLVE button
2. Push NEW
3. Push ABCD in the main menu and next A, then '+' ,next ABCD and B, next '=', next ABCD and C
4. Push the INPUT button INPUT
5. Push CALC
6. Enter for example 4 and next A in the menu, enter for example 6 and next B in the menu, next, ask for C
7. Enter the EXIT button on the upper right hand side of your machine (always use this one if you are in trouble)
8. Next push DELET to delete this simple equation

Legenda

AVRATE = average rate for a spot position
B = year basis
BB = year basis in the base currency
BQ = year basis in the quoted currency
C% = annual coupon rate (for entering 2% enter either 0.02 or 2 and button '%')
COUP = coupon amount
D = # days
DL= # days until the maturity date of a forward period (Days Long)
DR= remaining term in days (Days Remaining)
DS = # days until the start date of a forward period (Days Short)
DT = original term in days (Days Total)
FRA%= contract rate of an FRA
FIX% = fixing rate
FRASET = settlement amount of an FRA
FV = future value or face vale of a commercial paper
N = number of coupons a year / number of remaining coupons / number of data (in the VOL equation)
NOM = nominal amount
NOT = notional amount
DR% = discount rate
P_i = amount of transaction ‘i’
PRBILL = price of a bank bill or treasury bill
PRCD = present value/price of a CD
PV = present value or price of a commercial paper
R_i = rate of transaction í’
SPOT = FX spot rate
SWAP = number of swap points (e.g. 20 points should be entered as 0.0020)
Y% = current annual interest rate / yield
Y%B = interest rate in the base currency
Y%FW = forward interest rate
Y%P = bi-annual/quarterly/monthly interest rate (depending on 'P')
Y%L = spot interest rate over the period that ends at the maturity date of a forward period
Y%Q = interest rate in the quoted currency
Y%S= spot interest rate over the period that ends at the start date of a forward period

Note: every parameter that contains the % character should be entered in decimals, e.g. 2% should be entered as 0.02

EXAMPLES

1. P1 = -5, R1 = 1.4520, P2 = +3, R2 = 1.4476, P3 = +4, R3 = 1.4436 →
   AVRATE = 1.4286

2. NOM = 100,000,000 ; D = 45; B = 360 ; CPN% = 0.02 → CPN= 250,000

3. NOM = 50,000,000 ; D = 90 ; B = 360 ; FIX% = 0.0132, FRA% = 0.0125 →
   FRASET = 8,721.22

4. Y% = 0.05 ; D = 91 ; B = 365 → PDR% = 0.0494

5. NOM = 5,000,000, PDR% = 0.03 D = 30, B = 365, → PRBILL = 4,987,671.23

6. NOM = 50,000,000 ; DT = 91 ; B = 360, C% = 0.05 ; DR = 61, Y% = 0.04; → PRCD
   = 50,291,082.66

7. FV = 100,000,000 ; D = 31 ; B = 360 ; Y% = 0.031 → PV = 99,733,766.25

8. SPOT = 0.9050 ; D = 31 ; BQ = 365 ; Y%Q = 0.025 ; BB = 360 ; Y%B = 0.034 →
   SWAP = - 0.0007

9. DL = 181 ; B = 360 ; Y%L = 0.013 ; DS = 90 ; Y%S = 0.012 → Y%FW = 0.01395

10. Y% = 0.0150 , P = 4 → Y%P = 0.0149