#### *SIMPLE INTEREST*

#### 1.) S.I. = Rs. (15500−12500) =Rs.3000

#### SI= P.N.R100

#### Rate = (100×3000/12500×4) %=6%

#### 2.) The correct option is C Rs 15000 5400=P×12/100×3P= (540000 / (12×3))

#### P=15000

#### 3.) Interest=PNR/100 where P=principle, N=period and R= rate of interest

#### Let principle be =P=100; N=3/5/3 years; R=6%, 9% and 13%

#### Interest for 3 years=100\*3\*6/100=Rs 18

#### Interest for 5 years=100\*5\*9/100=Rs 45

#### Interest for last 3 years=100\*3\*13/100=Rs 39

#### Total interest=18+45+39=Rs 102

#### When interest is Rs 102, the principle is Rs 100

#### When interest is Rs 8160, the principle = Rs 100/102\*8160=Rs 8000

#### Amount borrowed=Rs 8000

#### 4.) Time = (100 x 81) / (450 x 4.5) = 4 years.

**5.) I = (PNR /100) here R =8, P + I = 180**

**(180-P) = (P\*N\*8/100) = (2PN/25) … (1)**

**I(1 = (PNR /100) here R =4 , P + I = 120**

**(120-P) = (P\*N\*4/100) = (PN/25) .. (2)**

**From 1 and 2, 2(120-P) = 180 -P, P = Rs 60**

**We know, (PN /25) = 120-P = 120 -60 =60**

**N = (25\*60/P) = (25\*60/60) = 25 years.**

#### *COMPUND INTEREST*

#### 1.) C.I yearly Principal=5000 Rs. Time =1.5 years Interest rate=4 % Amount=5000(1+4100)(1+2100) ⇒5000×104100×102100 ⇒5304Rs. Then C.I=5304−5000=304Rs. C.I.half yearly Principal=5000 Rs Time=1.5 years=3 quarter Rate =4% Amount=5000(1+2100)(1+2100)(1+2100) ⇒5000×102100×102100102100 ⇒5306.40 Then C.I=5306.40−5000=306.04 Difference between C.I.=306.04−304=2.04Rs.

#### 2.) Principle = Rs400

#### Time=8 months

#### S.I.=(P×R×T)/100

#### S.I.=(400×(9/2)×8)/100

#### S.I.=Rs144

#### Then, amount is

#### A=(P−S.I.) = (400−144)

#### =256Rupees

#### 3.) Principal=30,000  Rs. C.I=4347  Rs. Rate of interest=7 % Amount=Principal + C.I Amount=30,000+4347=34347Rs. Let the time is T years' then ⇒34347=30000(1+7100)^T ⇒34347=30000(107/100)^T (107/100)^T =3434730000 (107/100)^T =1144910000 (107/100)^T =(107100)^2 ∴T=2years.

#### 4.) Re 1 becomes Rs 2 in 4 years Rs 2 becomes Rs 4 in another 4 years Rs 4 becomes Rs 8 in another 4 years ⇒ Re 1 becomes Rs 8 in (4 + 4 + 4) i.e., 12 years.

#### 5.) Rate=20%

#### If the amount became 216/125 of itself in 3 years at CI,

#### P(1+r/100)^3=(216/125)P

#### So, (1+r/100)=6/5

#### r/100=1/5;

#### Thus, r should be=20% CI, compounded annually.