Q1.

A )answer: all required files are named as quest1 and submitted on site.

b) Answer:

Preprocessed file size:16KB(x\_86) and 18KB(ARM)

Compiled file size:1KB for both

Assembled code size:17KB(x\_86) and 8KB(ARM)

For the same code file size(preprocessed file, assembled code size) is different in x\_86 and ARM.

We cannot execute crossed compiled code on native platform as we mention as above the file size is different for different platform (ARM,x\_86) .Binary file of ARM cannot execute on x\_86 giving Exec format error.

saikrishna@SaiKrishnaAvula:/mnt/c/Users/Admin/OneDrive - iitgn.ac.in/Desktop/Madhuri$ ./quest1\_ARM.out

-bash: ./quest1\_ARM.out: cannot execute binary file: Exec format error

saikrishna@SaiKrishnaAvula:/mnt/c/Users/Admin/OneDrive - iitgn.ac.in/Desktop/Madhuri$

Q2. a) and c)book1 document have all time reports and graph both

b)resultexetime document have block time ,execution time and percentage of block time on total execution time is listed down.

Q3.

Answer:

For A:

Clock freq=C1=1GHz

No if Instructions=I1=9 billion=9\*10^9

CPI1=1.5

For B:

Clock freq=C2=2GHz

Also given that 4extm1=extm2,

We have,

Execution time=no of instructions\*CPI/clk freq

4\*9b\*1.5/1Ghz=cpi2\*9b/2GHz

Required CPI(new design)=1.5/2

=0.75

Q4.

Given:

Time A=6s

CPI1=6

Clock freq1=1GHz

For B

Time B=5sec

CPI2=5

Clock freq2=1GHz

By using formula of ex.tm:

Execution time=CPI\*no. of instructions/clock frequency

We get no of instructions in A=1B

And no. of instructions in B=1B

Now throughput of both is 1000/6 and 1000/5,

So the combined throughtput of processor =1000/6+1000/5

=366.66