

Course Code: TUTORIAL ASSIGNMENT

Course Code: PHYUGSEC1202

Course Title: Basic Computational Skill

1. (a) Write down the linux commands for the following operations: 1x10=10

- i) rename a file,
- ii) copy content of one file into another file,
- iii) create new directory named "your roll-number",
- iv) open new FORTRAN file named "your roll-number",
- v) shutdown computer
- vi) clear screen
- vii) display path of working diectory
- viii) list files and folders in the current directory
- ix) remove a file named GARBAGE.f
- x) display disk space usage status in MB unit

(b) Write down the correct form of the following FORTRAN-77 statements: 1x10=10

- i) Format(2x,2f10.*5,5I3)
- ii) write(*,*)"xyz = go to market'
- iii) int8 i, v, (r)
- iv) p=exp(-x**3)y
- v) piy4=ktan(1.0)
- vi) open(12,file="xyz.dat')
- vii) read(*,\$)x,y,-z
- viii) do 30 f=1,20
 x=f+2
 30 continue
- ix) if(two.gt.5)then
p=q
else
q=p
endif
- x) dimension a(10,20),b(10*5)

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2. (a) Convert the following into FORTRAN-77 programming language statement: 2x5=10

- i) $f(x, y, z) = \frac{x}{y^2} \times \frac{2x^2 - y^3}{xy^2 + y^2z^3}$
- ii) $f(x) = \cos^2 x + x^3 \sin(x^2)$
- iii) $p = \tan^{-1} \frac{\pi}{4}$
- iv) $s = \log(4y*y) + 23.0$
- v) $y = 6\log(x) + \frac{p}{q}$

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- (b) Write a FORTRAN-77 program to display your name, roll number, and registration number on the display screen. 5
- (c) Write a FORTRAN-77 program to display your cell phone Model No, Price, and Year of purchase on the display screen. 5
3. (a) Write down a FORTRAN-77 program to find the sum of the odd integers up to N . 5
- (b) Write down a FORTRAN-77 program to find the product of odd integers 1,3,5,7,.....,11 5
- (c) Write a FORTRAN-77 program to find the smallest number among 6, 1,12,8,33 5
- (d) Write a FORTRAN-77 program to find the largest number among 16, 11,12,85,33 5
4. (a) Write a FORTRAN-77 program to display an array of N^2 elements in the form of an $N \times N$ matrix. 5
- (b) Write a FORTRAN-77 program to find the difference of two 2×2 matrices. 5
- (c) Write a FORTRAN-77 program to find the sum of two 3×3 matrices. 5
- (d) Write a FORTRAN-77 program to display all prime numbers between 1 and 30 5

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