The Employees' Pension Scheme,



FORM 2 EMPLOYEES' PROVIDENT FUNDS SCHEME, 1952

[Paragraphs 33 AND 61(1)] EMPLOYEES' PENSION SCHEME, 1995

[Paragraphs 18]

DECLARATION AND NOMINATION FORM UNDER THE EMPLOYEES' PROVIDENT FUNDS SCHEME AND EMPLOYEES' PENSION SCHEME

1. UAN : 101703664453

2. Name (in block letters) : ANUJ VERMA

3. Father's / Husband's Name : LATE ASHOK VERMA

4. Date of Birth : 01/01/1998

5. Gender : MALE

6. Marital Status : UN-MARRIED

7. Address (Permanent) : House no 4 Block no 31 , Bhrigu Ashram, Ballia, BALLIA, UTTAR PRADESH,

277001

8. Address (Temporary) : House no 4 Block no 31, Bhrigu Ashram, Ballia, BALLIA, UTTAR PRADESH,

277001

9. (A) Date of Joining of EPF Scheme, : 14/06/2021

(B) Date of Joining of FPS Scheme,(C) Date of Joining of EPS Scheme,:--

PART A (EPF)

I hereby nominate person(s) / cancel the nomination made by me previously and nominate the person (s) mentioned below to receive the amount standing to my credit in the Employees' Provident Fund, in the

Name of the Nominee / Nominees	Address	Nominees's relationship with the Member	Date of Birth	Total amount or share of accumulations in Provident Fund to be paid to each nominee	If the Nominee is minor, name and relationship and address of the guardian who may receive the amont during the minority of nominee
(1)	(2)	(3)	(4)	(5)	(6)
GEETA VERMA AADHAAR: XXXX XXXX 4356 Bank A/c: NOT AVAILABLE	House no 4 Block no 31 , Bhrigu Ashram, Ballia, BALLIA, UTTAR PRADESH, 277001	Dependent Mother	01/01/1970	100%	

- 1. *Certified that I have no family as defined in Para 2(g) of the Employees' Provident Funds Scheme, 1952 and should I acquire a family hereafter the above nomination should be deemed as cancelled.
- 2. *Certified that my father/mother is/are dependant upon me.

(Signature is not required as the document is to be digitally signed)



The Employees' Pension Scheme,

PART B (EPS) (Para 18)

I hereby furnish below particulars of the members of my family who would be eligible to receive widow / children pension in the event of my death:

SI. No.	Name of the Family members	Address	Date of Birth	Relationship with the member
(1)	(2)	(3)	(4)	(5)
1				

*Certified that I have no family as defined in Para 2(vii) of the Employees' Pension Scheme, 1995 and should I acquire a family hereafter I shall furnish particulars thereon in the above form.

I hereby nominate the following person for receiving the monthly widow pension admissible under para 16(2)(a)(i) and (ii) in the event of my death without leaving any eligible family member for receiving

Name and Address of the Nominee	Date of Birth	Relationship with the member
GEETA VERMA AADHAAR: XXXX XXXX 4356 Bank A/c: NOT AVAILABLE	01/01/1970	DEPENDENT MOTHE

Date: 14-Feb-2022

(Signature is not required as the document is to be digitally signed)

Network Biology

Coding Assignment 1

Note: You are responsible for the backup of data as well as results, which will be used for evaluation.

Code for the following tasks. Do not use existing libraries (such as NetworkX/igraph) for network analysis. You need to submit the Jupyter Notebook, its PDF as well we the data files for evaluation.

- 1. Draw a simple network (of ~10 nodes and ~20 edges) of each of the following classes: undirected & unweighted (UD-UW); undirected and weighted (UD-W); directed and unweighted (D-UW); directed and weighted (D-W). Store these networks using (i) adjacency matrix and (ii) edge list representation. [2]
- 2. Write a program to compute the degree (for undirected graphs) and in/out-degree (for directed graphs) of each node. [3]
- 3. Starting from the adjacency matrix (A) of the UD-UW graph, compute A^2 . What information, if any, does it hold in the context of the graph you have drawn in response to exercise 1? What about higher-order matrix multiplications of A?
- 4. Download data of networks available from Mark Newman's page (http://www-personal.umich.edu/~mejn/netdata/). Read the data, and measure the degree of nodes (using the program written in exercise 2). Compute and plot the 'degree distribution'. [2]
- 5. Write a program to create a random graph/network (UD-UW) of n nodes and e edges, and to compute its 'degree distribution'. [5]
- 6. For real-world networks used in exercise 4, create 100 instances of random controls (by preserving the number of nodes and edges). Compute and plot its average degree distribution. Comment on differences in degree distributions observed in real-world networks and their random counterparts.
- 7. Read the data of real-world networks into Cytoscape. Use Cytoscape to compute their degree distributions. Visualize the networks and export their images in JPG. [2]
- 8. Write a program to compute the **clustering coefficient** of node (C_i) and average clustering coefficient of the network (C) starting from the adjacency matrix of an undirected graph. [5]
- 9. Write a program to compute the **shortest path length** between a pair of nodes (L_{ij}) and the characteristic path length of the network (L) starting from the adjacency matrix. (Hint: Look at well-known algorithms such as that by Dijkstra.) [5]
- 10. Download the HPRD data. Compute the number of nodes and edges. Plot the degree distribution of the protein-protein interaction network on a log-log scale. [3]