

**Metropolitan University, Sylhet**  
**Department of Computer Science and Engineering**  
**Midterm Examination Spring - 2021**  
**Program: CSE, Batch: 50(A+B)**  
**Course: STA 215: Basic Statistics and Probability**

**Time: 1 hour 35 minutes**

**Total Marks: 30**

**Part A**

(Time: 25 Minutes                      Marks: 15)

Answer the questions provided in the following link

<https://forms.gle/P1ApaabC4ssCEVSw7>

**Part B**

(Time: 1 Hour 10 minutes                      Marks: 15)

**Question XX** Calculate the value of (i) Arithmetic mean, (ii) Geometric mean, (iii) Harmonic mean, (iv) Median, (v) Mode, (vi) Standard deviation and (vii) Co-efficient of variation for the given data corresponds to your student ID as listed in the following **Table**.

**(2+2+2+2+2+4+1 = 15)**

**Table:** Particulars for question XX correspond to the individual student IDs

ID	Name	Batch	Question no.
201-115-001	Fahmida Yeasmin Toma	50A	1
201-115-002	Sadia Islam	50A	2
201-115-003	Agnila Roy Promi	50A	3
201-115-006	Misbaul Kadir	50A	4
201-115-008	Arnob Sutradhar	50A	5
201-115-009	Md. Shuhayel Alom Shanto	50A	6
201-115-010	sabbir islam	50A	7
201-115-011	Afzal Hossan Masum	50A	8
201-115-012	Jaima Jubaida Sharni	50A	9
201-115-013	Anika Tabassum	50A	10
201-115-015	Afjol Ahmed	50A	11
201-115-016	Irin Akter	50A	12
201-115-017	Rakibul Hasan Rumon	50A	13
201-115-018	Nuzhat Tabassum Prokrity	50A	14
201-115-019	nabila bilkis shimla	50A	15
201-115-020	Tanzina Aranya Islam	50A	16
201-115-022	Nadia Sultana Chowdhury	50A	17
201-115-024	Tasnim Hassan Talukder Meem	50A	18
201-115-025	Md. Mehanur Rahman Showmik	50A	19
201-115-027	Nowshin Sharmin	50A	20
201-115-028	Mamunur Rashid Mamun	50A	21
201-115-029	Nasir Ahmed Chowdhury	50A	22

201-115-030	Pious Ghose Choudhury	50A	23
201-115-032	Abdullah Al Hadi Mahdi	50A	24
201-115-033	MD. Monsuruzzaman	50A	25
201-115-034	Tamanna Akther Rima	50A	26
201-115-035	Tahmina akter ami	50A	27
201-115-036	Falak Ahmed Shakib	50A	28
201-115-037	Sarbajit Das Pantho	50A	29
201-115-038	Pinak Das	50A	30
201-115-039	Md. Hadi Un Nahyan Chowdhury	50A	31
201-115-040	Mithun Ghosh Mishu	50A	32
201-115-041	Mahfuzur Rahman Shanto	50B	33
201-115-042	MD. Abdulla Amin Chowdhury	50B	34
201-115-043	Abdullah Al Jaber	50B	35
201-115-047	Afruj Siddiky Ashar	50B	36
201-115-049	Nujhat Fariha	50B	37
201-115-050	Umma Abrar Tabassum Mim	50B	38
201-115-051	Md Ripon Ahmed	50B	39
201-115-052	Adreja Senapoti Mou	50B	40
201-115-053	Zareen Atia Supti	50B	41
201-115-055	MD.Jahangir Alam Sabbir	50B	42
201-115-056	Aditya Singha	50B	43
201-115-057	S.M Tuhin	50B	44
201-115-059	Shahriar Ahmod	50B	45
201-115-060	Nazifa Tasnim Chowdhury	50B	46
201-115-061	Akram Rashid	50B	47
201-115-062	Tahiya Ahmed Chowdhury	50B	48
201-115-063	Rezwanul Islam	50B	49
201-115-066	MD. Lukman-un-Naeem	50B	50
201-115-067	Lukman Ahmed	50B	51
201-115-068	Shilpa Das	50B	52
201-115-069	Tajbin Jahan	50B	53
201-115-070	Md. Yahya Mahfuj	50B	54
201-115-071	Moumita Debnath Mou	50B	55
201-115-072	Juwel Ahmed	50B	56
201-115-073	Yasmin Firuza Ema	50B	57
201-115-074	Pollab Dey	50B	58
201-115-075	Abdullah Al Hadi Mahfuz	50B	59
201-115-076	Tahmida Haque Marjana	50B	60
201-115-077	Ashfaqur Rahman	50B	61
201-115-078	Bijoy Biswas	50B	62
201-115-079	Arif Ahmed Tanvir	50B	63
201-115-080	Humayra Khan Faiza	50B	64
133-116-068	Anhar Ahmed	BBA	65
181-116-008	Sumya Akter Shimu	BBA	66

## Data tables for Part B

1. You are given some data related to experience of few employees.

Experience (years)	2-5	5-8	8-11	11-14	14-17
Number of employees	87	89	81	68	78

2. You are given some data related to experience of few employees.

Experience (years)	0-5	5-10	10-15	15-20	20-25
Number of employees	45	51	60	48	34

3. You are given some data related to performance rating of few employees.

Performance rating (100 points)	50-60	60-70	70-80	80-90	90-100
Number of employees	87	88	68	89	78

4. You are given the expenditure in advertising campaign of some companies.

Advertising expenditure (lac Tk)	12-15	15-18	18-21	21-24	24-27
Number of companies	50	86	120	94	72

5. You are given the expenditure in employees' salary of some companies.

Salary expenditure (lac Tk)	10-15	15-20	20-25	25-30	30-35
Number of companies	52	76	112	84	32

6. A data set regarding age and numbers of players are given below.

Age	20-25	25-30	30-35	35-40	40-45
Regular Players	200	320	410	150	60

7. A data set regarding number of matches and numbers of players are given below.

Matches	0-10	10-20	20-30	30-40	40-50
Number of players	16	20	30	32	25

8. A data set regarding score and numbers of players are given below.

Score	50-70	70-90	90-110	110-130	130-150
Regular Players	26	32	41	15	11

9. A data set regarding supply cost and number of agencies are given below.

Supply cost (million Tk)	30-40	40-50	50-60	60-70	70-80
Number of agencies	30	38	40	20	35

10. A data set regarding supply cost and number of agencies are given below.

Supply cost (thousand \$)	4-8	8-12	12-16	16-20	20-24
Number of agencies	37	68	92	110	35

11. A data set regarding investment of some companies are given below.

Investment (lac Tk)	15-20	20-25	25-30	30-35	35-40
Number of companies	13	15	22	28	24

12. A data set regarding investment of some companies are given below.

Investment (thousand \$)	150-200	200-250	250-300	300-350	350-400
Number of companies	16	35	24	27	18

13. A data set regarding profit of some companies are given below.

Profit (million Tk)	30-40	40-50	50-60	60-70	70-80
Number of companies	32	41	20	15	11

14. A data set regarding investment and profit are given below.

Profit (thousand \$)	50-70	70-90	90-110	110-130	130-150
Number of companies	17	22	20	35	11

15. A data set regarding the total marks obtained in 5 courses in final year exams of some students are given below.

Total marks in exam	150-200	200-250	250-300	300-350	350-400
Number of students	62	68	65	70	62

16. A data set regarding the total marks obtained in 5 courses in final year exams of some students are given below.

Total marks in exam	130-190	190-250	250-310	310-370	370-430
Number of students	60	87	61	70	52

17. A data set regarding the marks obtained in Basic Statistics in Final Exam of some students are given below.

Marks in final exam	15-20	20-25	25-30	30-35	35-40
Number of students	14	35	20	21	1

18. A data set regarding the total marks obtained in 2 courses in final year exams of some students are given below.

Total marks in exam	120-130	130-140	140-150	150-160	160-170
Number of students	62	68	65	70	62

19. A data set regarding the maintenance costs of several cars are given below.

Maintenance costs (\$)	100-200	200-300	300-400	400-500	500-600
Number of cars	23	35	27	11	9

20. A data set regarding the maintenance costs of several households are given below.

Maintenance costs (thousand TK)	20-35	35-50	50-65	65-80	80-95
Number of cars	11	27	20	17	14

21. A data set regarding the aptitude test scores of some workers are given below.

Aptitude test scores	50-70	70-90	90-110	110-130	130-150
Number of workers	68	60	80	62	78

22. A data set regarding the aptitude test scores of some workers are given below.

Aptitude test scores	130-190	190-250	250-310	310-370	370-430
Number of workers	60	62	65	70	50

23. A data set regarding the aptitude test scores of some workers are given below.

Aptitude test scores	150-200	200-250	250-300	300-350	350-400
Number of workers	14	35	20	21	1

24. A data set regarding the production (kg) of some companies are given below.

Production (ton)	120-140	140-160	160-180	180-200	200-220
Number of companies	40	90	82	73	64

25. A data set regarding the production (kg) of some companies are given below.

Production (ton)	30-60	60-90	90-120	120-150	150-180
Number of companies	20	40	57	80	75

26. A data set regarding the daily wages of some workers in a company are given below.

Daily wages (\$)	40-50	50-60	60-70	70-80	80-90
Number of workers	120	140	157	180	165

27. A data set regarding the daily wages of some daily labors in a factory are given below.

Daily wages (Tk)	140-150	150-160	160-170	170-180	180-190
Number of workers	20	40	57	80	65

28. A data set regarding the daily wages of some workers in a company are given below.

Daily wages (Tk)	240-250	250-260	260-270	270-280	280-290
Number of workers	60	62	72	58	50

29. A data set regarding the yearly sales of some companies are given below.

Yearly sales (million \$)	5-10	10-15	15-20	20-25	25-30
Number of companies	110	114	125	116	113

30. A data set regarding the yearly sales of some companies are given below.

Yearly sales (million \$)	0-10	10-20	20-30	30-40	40-50
Number of companies	60	69	92	74	80

31. A data set regarding the yearly purchase of some companies are given below.

Yearly purchase (lac Tk)	10-20	20-30	30-40	40-50	50-60
Number of companies	26	32	39	31	30

32. A data set regarding the yearly purchase of some companies are given below.

Yearly purchase (lac Tk)	5-10	10-15	15-20	20-25	25-30
Number of companies	57	80	83	92	40

33. A data set regarding the marks in Mathematics of some students are given below.

Marks	0-20	20-40	40-60	60-80	80-100
Number of students	46	52	61	72	54

34. A data set regarding the marks in English of some students are given below.

Marks	25-35	35-45	45-55	55-65	65-75
Number of students	56	62	74	87	80

35. A data set regarding the uses of fertilizer in several fields are given below.

Use of fertilizer (kg)	25-35	35-45	45-55	55-65	65-75
Number of fields	15	22	27	34	18

36. A data set regarding the uses of fertilizer in several fields are given below.

Use of fertilizer (kg)	10-20	20-30	30-40	40-50	50-60
Number of fields	12	15	24	20	10

37. A data set regarding the total rainfall in inches for some years are given below.

Rainfall (inches)	140-150	150-160	160-170	170-180	180-190
Number of years	14	13	16	13	8

38. A data set regarding the total rainfall in inches for some years are given below.

Rainfall (inches)	240-250	250-260	260-270	270-280	280-290
Number of years	13	15	17	11	9

39. A data set regarding the productions of the Rabi crop for some years are given below.

Rabi production (tons)	10-20	20-30	30-40	40-50	50-60
Number of years	17	29	26	24	11

40. A data set regarding the productions of the Rabi crop for some years are given below.

Rabi production (tons)	25-35	35-45	45-55	55-65	65-75
Number of years	22	24	37	33	25

41. A data set regarding the production of goods and relatively defective items are given below.

Production of goods	200-250	250-300	300-350	350-400	400-450
Number of defective items	57	80	83	92	40

42. A data set regarding the production of goods and relatively defective items are given below.

Production of goods	100-200	200-300	300-400	400-500	500-600
Number of defective items	50	62	70	80	73

43. A data set regarding the production of goods and relatively defective items are given below.

Production of goods	200-250	250-300	300-350	350-400	400-450
Number of defective items	50	80	70	65	73

44. A data set regarding the production of goods and relatively defective items are given below.

Production of goods	100-200	200-300	300-400	400-500	500-600
Number of defective items	50	70	90	80	40

45. A data set of hours worked a week in a factory by some workers are given below.

Working hours	25-35	35-45	45-55	55-65	65-75
Number of workers	15	22	27	34	18

46. The number regarding offenses committed last year by some drivers of a transport company are given below.

Offenses	10-20	20-30	30-40	40-50	50-60
Number of drivers	21	29	40	32	24

47. A data set regarding heart rates (beats per minute) of some swimmers after swimming 2000 yards are given below.

Heart rate	90-95	95-100	100-105	105-110	110-115
Number of swimmers	12	15	27	14	9

48. A data set regarding heart rates (beats per minute) of some patients in a hospital are given below.

Heart rate	55-60	60-65	65-70	70-75	75-80
Number of patients	19	34	22	28	16

49. A data set regarding the body weights of some students are given below.

Body weight (kg)	30-40	40-50	50-60	60-70	70-80
Number of students	25	28	39	31	32

50. A data set regarding the heights of some baseball players are given below.

Height (inches)	66-68	68-70	70-72	72-74	74-76
Number of players	15	28	19	16	11

51. A data set regarding the body weights of some football players are given below.

Body weight (pounds)	140-150	150-160	160-170	170-180	180-190
Number of players	14	16	11	9	6

52. A data set regarding the heights of some baseball players are given below.

Height (cm)	170-173	173-176	176-179	179-182	182-185
Number of players	11	19	22	26	8

53. A data set regarding the monthly expenditure of some families are given below.

Expenditure (thousand Tk)	50-60	60-70	70-80	80-90	90-100
Number of families	26	45	56	37	17

54. A data set regarding the yearly income of some families are given below.

Income (million Tk)	9-13	13-17	17-21	21-25	25-29
Number of families	20	34	47	39	44

55. A data set regarding the yearly expenditure of some families are given below.

Expenditure (thousand \$)	7-9	9-11	11-13	13-15	15-17
Number of families	13	19	28	17	6

56. A data set regarding the monthly income of some families are given below.

Income (thousand Tk)	22-26	26-30	30-34	34-38	38-42
Number of families	42	51	64	72	43

57. A data set regarding the maintenance costs of several cars are given below.

Maintenance costs (\$)	120-220	220-320	320-420	420-520	520-620
Number of cars	21	32	42	26	18

58. The number regarding offenses committed last year by some drivers of a transport company are given below.

Offenses	5-15	15-25	25-35	35-45	45-55
Number of drivers	31	37	45	35	23

59. You are given some data related to experience of few employees.

Experience (years)	1-5	5-9	9-13	13-17	17-21
Number of employees	27	39	58	63	41

60. You are given some data related to experience of few employees.

Experience (years)	2-5	5-8	8-11	11-14	14-17
Number of employees	87	89	81	68	78



61. You are given some data related to experience of few employees.

Experience (years)	0-5	5-10	10-15	15-20	20-25
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Performance rating (100 points)	50-60	60-70	70-80	80-90	90-100
Number of employees	87	88	68	89	78

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Number of companies	50	86	120	94	72

64. You are given the expenditure in employees' salary of some companies.

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Number of companies	52	76	112	84	32

65. A data set regarding age and numbers of players are given below.

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Regular Players	200	320	410	150	60

66. A data set regarding number of matches and numbers of players are given below.

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Number of players	16	20	30	32	25