

**Shri Shivaji Education Society Amravati's  
Science College, Congress Nagar, Nagpur.  
Department of STATISTICS  
Class :- B. Sc. II ( Semester-III)  
Session: - 2023 - 2024  
Unit Test I**

**Name of the Teacher: -Shivani U. Patil  
Subject :- Statistics (Paper- I)**

**Date: 03/10/2023  
Batch :- M8-M9(SCSM)**

<b>S.no.</b>	<b>Students Full Name</b>	<b>Unit Test Marks (out of 20)</b>
1	BANGRE ARPIT MANOJ	A
2	BATWE HRUSHIKESH SANJAY	10
3	BISEN SAGAR ARUN	15
4	KU.BISWAS APARAJITA APURBA	13
5	KU.BHAYDE PRATEEKSHA PRAVIN	A
6	BHENDARKAR KHUSHRANG JAIPRAKASH	10
7	KU.BHUJADE RUTUJA RAJRNDRA	11
8	CHOUHAN SOMAY SATISH	10
9	DEWANGAN MAHANDRA GANESH	A
10	KU.DUDHANKAR RUPALI RAJESH	8
11	FULMALI HITESH SANTOSH	7
12	GAJBHIYE YASH RAJU	8
13	KU GAWANDE AMRUTA VIJAY	16
14	KU GAWANDE NEHA GAJENDRA	7
15	KU GONDANE ISHA DINESH	A
16	KU.GUPTA VAISHNAVI BHARAT	14
17	KU.GUPTA PRINCY ASHOK	9
18	INGLE AJINKYA MAHENDRA	12
19	KU.LICHADE AYUSHI KRISHNA	11
20	KU.LOKHANDE AKANSHA ARVIND	14
21	KU KARANDE ASTHA GANGADHAR	12
22	KHAN FAISAL NAYEEMUDDIN	A
23	KHODE YASH SANJAY	A
24	KU.KUITE ANUSHKA VINOD	13
25	KU.MOHADIKAR AKSHITA PUSHPARAJ	8
26	KUNAGARIKAR ANUJA JAYANT	14
27	KU.PANDEY KAMAL BRIJESH	8
28	KU.PARATE PRANJAL JEEVAN	13
29	KU.RAUT RAKSHA GAJANAN	8
30	KU.SATFALE RAKSHA SANJAY	17
31	KU.SINGALWAR FALGUNI ANIL	14
32	TIWARI SHUBHAM	A
33	TOMAR ATHARVA JITENDRA	11
34	WAGDE ASHLESHA YUVRAJ	12
35	WAGHE SAKSHI SANDIP	8
36	YADAV SEJAL ASHOK	A



**Signature of Teacher**



**Head  
Head**

**Department of Statistics  
Shivaji Science College  
Congress Nagar, Nagpur.**

**Bachelor of Science (B.Sc.) Semester—III Examination 2023**  
**STATISTICS**  
**Unit Test -I**  
**Semester III Paper—I**

**Time :45 minutes]**

**Maximum Marks : 20.**

**Date: 03/10/2023**

**Q1.i)** State Karl Pearson's correlation coefficient with diagram.

ii) Show that  $\text{cov}(ax, by) = ab\text{cov}(x, y)$

**Q.2.** Define i) Joint pmf and pdf ii) marginal pmf and pdf iii) conditional mean and variance  
iv) stochastically independent.

**Q.3.** Derive m.g.f of multinomial distribution.

**Q.4.** Derive p.d.f., m.g.f. of bivariate normal distribution find its mean and variance.



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Department of STATISTICS  
Class :- B. Sc. II ( Semester-III)  
Session: - 2023 – 2024  
Unit Test II**

**Name of the Teacher: -Shivani U. Patil  
Subject :- Statistics (Paper- I)**

**Date: 10/10/2023  
Batch :- M8-M9(SCSM)**

<b>S.no.</b>	<b>Students Full Name</b>	<b>Unit Test Marks (out of 20)</b>
1	BANGRE ARPIT MANOJ	A
2	BATWE HRUSHIKESH SANJAY	12
3	BISEN SAGAR ARUN	14
4	KU.BISWAS APARAJITA APURBA	A
5	KU.BHAYDE PRATEEKSHA PRAVIN	A
6	BHENDARKAR KHUSHRANG JAIPRAKASH	10
7	KU.BHUJADE RUTUJA RAJRNDRA	11
8	CHOUHAN SOMAY SATISH	10
9	DEWANGAN MAHANDRA GANESH	A
10	KU.DUDHANKAR RUPALI RAJESH	8
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31	KU.SINGALWAR FALGUNI ANIL	14
32	TIWARI SHUBHAM	A
33	TOMAR ATHARVA JITENDRA	A
34	WAGDE ASHLESHA YUVRAJ	12
35	WAGHE SAKSHI SANDIP	15



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**Bachelor of Science (B.Sc.) Semester—III Examination 2023**  
**STATISTICS**  
**Unit Test -II**  
**Semester III Paper—I**

**Time :45 minutes]**

**Maximum Marks : 20.**

**Date: 10/10/2023**

**Q1.** Define i) Statistics ii) Random sample iii) Sampling distribution


**Q.2.** Let  $x_1, x_2, \dots, x_n$  be a random sample of size  $n$  from geometric distribution, find its probability distribution.

**Q.3.** State the p.d.f. find mode of chi square distribution find its mean and variance.

**Q.4.** State and prove additive property of chi square distribution.

  
**Signature of Teacher**



  
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