QUESTION PAPERS

BRANCH: Bachelor of Science (Economics)	SEM: II
ATKT	JUN-2026

Sr. No.	Subject	Available
1.	Microeconomics	
2.	Statistics for Economics II	
3.		q
4.		
5.		
6.		
7.		
8.		
9.		
10.		

LIBRARY

ATKT
BSc. Economics
Sem-II

SOMAIYA VIDYAVIHAR UNIVERSITY

March 2026 Examination: In Semester Examination (UG/PG Programmes)		
Programme code: **Programme:**	**Class:** FY	**Semester:** II
Name of the School: SSHSS	**Name of the Department** : Economics	
Course Code:	**Name of the Course: Microeconomics**	
Duration : 2 Hr.	**Maximum Marks : 60**	
Instructions: 1)Draw neat diagrams 2)Assume suitable data if necessary 3)		

Question No.		Max. Marks	CO
Q1	Answer the following question 1.What are the features of Perfect Competition? 2.Explain short run & long run equilibrium of firms under Perfect Competition. OR 1.Explain short run & long run equilibrium of firm under Monopoly. 2.What are the characteristics of Monopolistic Competition?	 7 8 8 7	1
Q 2	Answer the following question What arc the features of oligopoly? 2.Write a note on kinked demand curve under oligopoly. OR 1.Explain Edgeworth box & general equilibrium. 2.Examine general equilibrium in production.	 7 8 8 7	2
Q3	Answer the following question 1.Describe the first theorem of welfare economics. 2.Discuss perfect competition and second theorem of welfare economics. OR 1.Explain market for lemons & adverse selection. 2. What is the problem of modern hazard? Explain it with example.	 7 8 8 7	3
Q4	Answer any three from followings Types of oligopoly Wastages of monopolistic competition. General equilibrium in trade and exchange.	15	 1 2 3

	Spence moral of signaling. 5. Role of government in market failure.		3 4

ATKT
BSc. Economics
Sem-II

SOMAIYA VIDYAVIHAR UNIVERSITY

April 2026 Examination: End Semester Examination (UG Programme)		
Programme code: **Programme: Bsc Economics**	**Class: FY**	**Semester: II**
Name of the School: Somaiya School of Humanities and Social Sciences	**Name of the Department: Economics**	
Course Code:	**Name of the Course: Statistics for Economics-II**	
Duration: 2 Hrs.	**Maximum Marks: 60**	
Instructions: 1) Draw neat diagrams. 2)Assume suitable data if necessary		

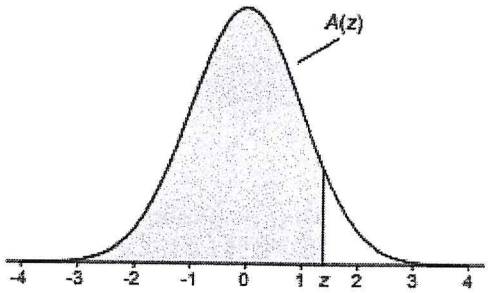
Question No.		Max. Marks	Co Attainment
Q.1	Answer the following questions		
A	Four pair of coins are tossed, X is the number of heads that occurs. a. Find the probability function of X. b. Find the probability distribution of X and its expected value.	08	01
B	Let A and B be the two events such that $P(A) = 1/2, P(B) = 1/3$, and $P(A \cap B) = 1/4$. Find a. $P(A\|B)$ b. $P(A \cup B)$ c. $P(\bar{A} \cap \bar{B})$	07	01
	OR		
C	A problem in statistics is given to three student A, B, and C whose chances of solving it are 1/3, 1/4, and 1/5 respectively. Find the probability that the problem will be solved if they all try independently.	07	01
D	The average number of articles produced by two machines per day are 200 and 210 with standard deviations 20 and 15 respectively on the basis of 25 days of production. Can we regard both the machine equally efficient? Test the hypothesis at 5% and 1% level of significance.	08	03
Q.2			
A	A random sample of 100 students gave a mean weight of 58kg with standard deviation 4kg. Test the hypothesis that mean weight in the population is 60kg.	07	03

B	A pharmaceutical Company wants to estimate the mean life of a particular drug under typical weather conditions. Following results are obtained from a sample of 64 bottles of drug Sample mean= $20 months$, population standard deviation = $3 months$. Find the confidence interval at 99%, 95% and 90%.	08	03
	OR		
C	A committee of 4 persons to be appointed from 3 officers of the production department, 4 officers from of the purchase department, 2 officers from sales department and 1 CA. Find the probability of forming the committee in the following order. a. There must be one from each department b. It should be at least one from the purchase department c. The CA must be in the committee.	07	02
D	A random variable X is defined as the sum of faces when a pair of dice is thrown. Find the expected value and variance of X.	08	02
Q.3	Answer the following questions		
A	Three items are drawn at random from a box containing 2 defective and 6 non-defective items. Find the expected number of non-defective items drawn.	08	02
B	In a sample of 1000 items, the mean weight and standard deviation are 50 and 10kg respectively. Assuming the distribution is normal, find the number of items weighing a. 40kg and 70kg b. 50kg and 60kg c. More than 75kg	07	04
	OR		
C	Consider a hypothetical population distribution consisting three observations 2, 5, 8. You draw randomly all the possible sample of size of two, calculate the mean and variance for each sample. Examine whether the sample statistic are unbiased estimator of population parameter.	08	04

<table>
<tr><td>D</td><td>The following table give the number of aircraft accidents that occurred during the various days of the week. Find whether the accidents are uniformly distributed over the weeks

<table><tr><th>Days</th><th>No. of Accidents</th></tr><tr><td>Sun</td><td>14</td></tr><tr><td>Mon</td><td>16</td></tr><tr><td>Tue</td><td>8</td></tr><tr><td>Wed</td><td>20</td></tr><tr><td>Thu</td><td>11</td></tr><tr><td>Fri</td><td>9</td></tr><tr><td>Sat</td><td>14</td></tr></table></td><td>07</td><td>04</td></tr>
<tr><td>Q.4</td><td>Explain the Following with appropriate examples (any three)</td><td>15</td><td></td></tr>
<tr><td>A</td><td>Point Estimation Vs. Interval Estimation</td><td></td><td>03</td></tr>
<tr><td>B</td><td>It is given that $P(A \cup B) = \frac{5}{6}$, $P(A \cap B) = \frac{1}{3}$, $P(\bar{B}) = \frac{1}{2}$, determine $P(A) and\ P(B)$. Are A and B independent?</td><td></td><td>01</td></tr>
<tr><td>C</td><td>$Proof\ that\ If\ X\ and\ Y\ are\ independent\ then\ Cov(X,Y) = 0\ and\ r(X,Y) = 0.$</td><td></td><td>02</td></tr>
<tr><td>D</td><td>Find the probability that in 5 tossing, a perfect coin turns up head at least 4 times in succession. Create the probability distribution.</td><td></td><td>03</td></tr>
<tr><td>E</td><td>Critical Region Vs. Region of Acceptance</td><td></td><td>04</td></tr>
</table>

Cumulative Standardized Normal Distribution



$A(z)$ is the integral of the standardized normal distribution from $-\infty$ to z (in other words, the area under the curve to the left of z). It gives the probability of a normal random variable not being more than z standard deviations above its mean. Values of z of particular importance:

z	$A(z)$	
1.645	0.9500	Lower limit of right 5% tail
1.960	0.9750	Lower limit of right 2.5% tail
2.326	0.9900	Lower limit of right 1% tail
2.576	0.9950	Lower limit of right 0.5% tail
3.090	0.9990	Lower limit of right 0.1% tail
3.291	0.9995	Lower limit of right 0.05% tail

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.5000	0.5040	0.5080	0.5120	0.5160	0.5199	0.5239	0.5279	0.5319	0.5359
0.1	0.5398	0.5438	0.5478	0.5517	0.5557	0.5596	0.5636	0.5675	0.5714	0.5753
0.2	0.5793	0.5832	0.5871	0.5910	0.5948	0.5987	0.6026	0.6064	0.6103	0.6141
0.3	0.6179	0.6217	0.6255	0.6293	0.6331	0.6368	0.6406	0.6443	0.6480	0.6517
0.4	0.6554	0.6591	0.6628	0.6664	0.6700	0.6736	0.6772	0.6808	0.6844	0.6879
0.5	0.6915	0.6950	0.6985	0.7019	0.7054	0.7088	0.7123	0.7157	0.7190	0.7224
0.6	0.7257	0.7291	0.7324	0.7357	0.7389	0.7422	0.7454	0.7486	0.7517	0.7549
0.7	0.7580	0.7611	0.7642	0.7673	0.7704	0.7734	0.7764	0.7794	0.7823	0.7852
0.8	0.7881	0.7910	0.7939	0.7967	0.7995	0.8023	0.8051	0.8078	0.8106	0.8133
0.9	0.8159	0.8186	0.8212	0.8238	0.8264	0.8289	0.8315	0.8340	0.8365	0.8389
1.0	0.8413	0.8438	0.8461	0.8485	0.8508	0.8531	0.8554	0.8577	0.8599	0.8621
1.1	0.8643	0.8665	0.8686	0.8708	0.8729	0.8749	0.8770	0.8790	0.8810	0.8830
1.2	0.8849	0.8869	0.8888	0.8907	0.8925	0.8944	0.8962	0.8980	0.8997	0.9015
1.3	0.9032	0.9049	0.9066	0.9082	0.9099	0.9115	0.9131	0.9147	0.9162	0.9177
1.4	0.9192	0.9207	0.9222	0.9236	0.9251	0.9265	0.9279	0.9292	0.9306	0.9319
1.5	0.9332	0.9345	0.9357	0.9370	0.9382	0.9394	0.9406	0.9418	0.9429	0.9441
1.6	0.9452	0.9463	0.9474	0.9484	0.9495	0.9505	0.9515	0.9525	0.9535	0.9545
1.7	0.9554	0.9564	0.9573	0.9582	0.9591	0.9599	0.9608	0.9616	0.9625	0.9633
1.8	0.9641	0.9649	0.9656	0.9664	0.9671	0.9678	0.9686	0.9693	0.9699	0.9706
1.9	0.9713	0.9719	0.9726	0.9732	0.9738	0.9744	0.9750	0.9756	0.9761	0.9767
2.0	0.9772	0.9778	0.9783	0.9788	0.9793	0.9798	0.9803	0.9808	0.9812	0.9817
2.1	0.9821	0.9826	0.9830	0.9834	0.9838	0.9842	0.9846	0.9850	0.9854	0.9857
2.2	0.9861	0.9864	0.9868	0.9871	0.9875	0.9878	0.9881	0.9884	0.9887	0.9890
2.3	0.9893	0.9896	0.9898	0.9901	0.9904	0.9906	0.9909	0.9911	0.9913	0.9916
2.4	0.9918	0.9920	0.9922	0.9925	0.9927	0.9929	0.9931	0.9932	0.9934	0.9936
2.5	0.9938	0.9940	0.9941	0.9943	0.9945	0.9946	0.9948	0.9949	0.9951	0.9952
2.6	0.9953	0.9955	0.9956	0.9957	0.9959	0.9960	0.9961	0.9962	0.9963	0.9964
2.7	0.9965	0.9966	0.9967	0.9968	0.9969	0.9970	0.9971	0.9972	0.9973	0.9974
2.8	0.9974	0.9975	0.9976	0.9977	0.9977	0.9978	0.9979	0.9979	0.9980	0.9981
2.9	0.9981	0.9982	0.9982	0.9983	0.9984	0.9984	0.9985	0.9985	0.9986	0.9986
3.0	0.9987	0.9987	0.9987	0.9988	0.9988	0.9989	0.9989	0.9989	0.9990	0.9990
3.1	0.9990	0.9991	0.9991	0.9991	0.9992	0.9992	0.9992	0.9992	0.9993	0.9993
3.2	0.9993	0.9993	0.9994	0.9994	0.9994	0.9994	0.9994	0.9995	0.9995	0.9995
3.3	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9997
3.4	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9997	0.9998
3.5	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998	0.9998
3.6	0.9998	0.9998	0.9999							

NUMERICAL TABLES

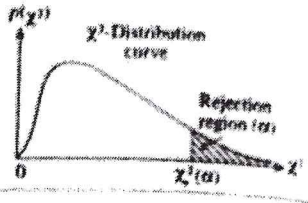
TABLE VIII : CRITICAL VALUES OF STUDENT'S *t*-DISTRIBUTION

d.f.	LEVEL OF SIGNIFICANCE FOR ONE-TAILED TEST						
	.25	.10	.05	.025	.01	.005	.0005
	LEVEL OF SIGNIFICNCE FOR TWO-TAILED TEST						
υ	.50	.20	.10	.05	.02	.01	.001
1	1.000	3.078	6.314	12.706	31.821	63.657	636.619
2	.816	1.886	2.920	4.303	6.965	9.925	31.599
3	.765	1.638	2.353	3.182	4.541	5.841	12.924
4	.741	1.533	2.132	2.776	3.747	4.604	8.610
5	.727	1.476	2.015	2.571	3.365	4.032	6.869
6	.718	1.440	1.943	2.447	3.143	3.707	5.959
7	.711	1.415	1.895	2.365	2.998	3.499	5.408
8	.706	1.397	1.860	2.306	2.896	3.355	5.041
9	.703	1.383	1.833	2.262	2.821	3.250	4.781
10	.700	1.372	1.812	2.228	2.764	3.169	4.587
11	.697	1.363	1.796	2.201	2.718	3.106	4.437
12	.695	1.356	1.782	2.179	2.681	3.055	4.318
13	.694	1.350	1.771	2.160	2.650	3.012	4.221
14	.692	1.345	1.761	2.145	2.624	2.977	4.140
15	.691	1.341	1.753	2.131	2.602	2.947	4.073
16	.690	1.337	1.746	2.120	2.583	2.921	4.015
17	.689	1.333	1.740	2.110	2.567	2.898	3.965
18	.688	1.330	1.734	2.101	2.552	2.878	3.922
19	.688	1.328	1.729	2.093	2.539	2.861	3.883
20	.687	1.325	1.725	2.086	2.528	2.845	3.850
21	.686	1.323	1.721	2.080	2.518	2.831	3.819
22	.686	1.321	1.717	2.074	2.508	2.819	3.792
23	.685	1.319	1.714	2.069	2.500	2.807	3.768
24	.865	1.318	1.711	2.064	2.492	2.797	3.745
25	.684	1.316	1.708	2.060	2.485	2.787	3.725
26	.684	1.315	1.706	2.056	2.479	2.779	3.707
27	.684	1.314	1.703	2.052	2.473	2.771	3.690
28	.683	1.313	1.701	2.048	2.467	2.763	3.674
29	.683	1.311	1.699	2.045	2.462	2.756	3.659
30	.683	1.310	1.697	2.042	2.457	2.750	3.646
40	.681	1.303	1.684	2.021	2.423	2.704	3.551
60	.679	1.296	1.671	2.000	2.390	2.660	3.460
120	.677	1.289	1.658	1.980	2.358	2.617	3.373
∞	.674	1.282	1.645	1.960	2.326	2.576	3.291

TABLE VII : CRITICAL VALUES $\chi_{\upsilon}^2(\alpha)$ OF CHI-SQUARE DISTRIBUTION (RIGHT TAIL AREAS) FOR GIVEN PROBABILITY α.

where $$P\left[\chi^2 > \chi_{\upsilon}^2(\alpha)\right] = \alpha$$

AND υ IS DEGREES OF FREEDOM (*d.f.*)



Degrees of Freedom (υ)	Probability (α)							
	.99	.975	.95	.90	.10	.05	.025	.01
1	0.000	0.001	0.004	0.016	2.706	3.841	5.024	6.635
2	0.020	0.051	0.103	0.211	4.605	5.991	7.378	9.210
3	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345
4	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277
5	0.554	0.831	1.145	1.610	9.236	11.070	12.833	15.086
6	0.872	1.237	1.634	2.204	10.645	12.592	14.449	16.812
7	1.239	1.690	2.167	2.833	12.017	14.067	16.013	18.475
8	1.646	2.180	2.733	3.490	13.362	15.507	17.535	20.090
9	2.088	2.700	3.325	4.168	14.684	16.919	19.023	21.666
10	2.558	3.247	3.940	4.865	15.987	18.307	20.483	23.209
11	3.053	3.816	4.575	5.578	17.275	19.675	21.920	24.725
12	3.571	4.404	5.226	6.304	18.549	21.026	23.337	26.217
13	4.107	5.009	5.892	7.042	19.812	22.362	24.736	27.688
14	4.660	5.629	6.571	7.790	21.064	23.685	26.119	29.141
15	5.229	6.262	7.261	8.547	22.307	24.996	27.488	30.578
16	5.812	6.908	7.962	9.312	23.542	26.296	28.845	32.000
17	6.408	7.564	8.672	10.085	24.769	27.587	30.191	33.409
18	7.015	8.231	8.231	10.865	25.989	28.869	31.526	34.805
19	7.633	8.907	10.117	11.651	27.204	30.144	23.852	36.191
20	8.260	9.591	10.851	12.443	28.412	31.410	34.170	37.566
21	8.897	10.283	11.591	13.240	29.615	23.671	35.479	38.932
22	9.542	10.982	12.338	14.042	30.813	33.924	36.781	40.289
23	10.196	11.689	13.091	14.848	32.007	35.172	38.076	41.638
24	10.856	12.401	13.848	15.659	33.196	36.415	39..364	42.980
25	11.524	13.120	14.611	16.473	34.382	37.652	40.646	44.314
26	12.198	13.844	15.379	17.292	35.563	38.885	41.923	45.642
27	12.879	14.573	16.151	18.114	36.741	40.113	43.194	46.963
28	13.565	15.308	16.928	18.939	37.916	41.337	44.461	48.278
29	14.256	16.047	17.708	19.768	39.087	42.557	45.722	49.588
30	14.953	16.791	18.493	20.599	40.256	43.773	46.979	50.892

rge values of υ, the quantity $\sqrt{2\chi^2} - \sqrt{2\upsilon - 1}$ may be used as a standard normal variable.