Skm's Jashbhai Maganbhai Patel College of Commerce
Programme: F.Y.B.COM.   **Course: Mathematical and Statistical Techniques-II**   **Semester: II**

Sr. No.	Question	Option 1	Option 2	Option 3	Option 4	Correct Answer
1	₹1000 is invested at 8% p.a. compound interest, what is accumulated value after 2 years	1166	1081	1166.40	1081.6	1166.40
2	Abhishek took a loan of ₹ 50,000 with 10% interest per month, to be repayment in 3 months, what will be his EMI. (Given that 0.9091^3=0.75133)	189523.8151	1243	1243.313297	124335	124335
3	An index number constructed to measure the relative change in the price of an item or a group of items is called	Quantity index number	volume index number	composite index number	price index number	price index number
4	Consumer's price index numbers are obtained by	Paasche's formula	Family Budget method formula	Marshal-Edgeworth formula	Fisher's ideal formula	Family Budget method formula
5	For 8 observations if $\sum xy$ = 1155, $\sum x$=56 and $\sum y$ = 134 then what is the value of Cov(x,y)	217	568	-217	-7359.625	217
6	For Poisson distribution with mean =0.5, P(X=1)	1.5	5	3	0.3	0.3
7	for the given function f(x)=x^2-1 what is the functional value f(0) and f(2)	f(0)=1 and f(2)=4	f(0)=0 and f(2)= 3	f(0)= -1 and f(2)= 3	f(0)= 0 and f(2)= 4	f(0)= -1 and f(2)= 3
8	for which of the following distribution : mean=mode=median	Binomial Distribution	Bernouli Distribution	Normal Distribution	Poisson Distribution	Normal Distribution
9	Given that cost of living index number for 2010 with 2008 as base is 150. if the income of a person is 15000in 2010 then what is his real income in this period	100	1000	10000	1	10000
10	If Average cost function (ACF) is given by $2x^2$+3x then what is the Marginal cost function (MCF)	2	4x+3	4	2x+3	4x+3
11	If b_{yx}= 0.5 , b_{xy}= 0.75 then what is value of r	0.6123	-0.375	0.375	-0.6123	0.6123
12	If coefficient of correlation r is lies between 0 to 1 then it is	perfectly positively corelated	negatively corelated	positvely corelated	perfectly negatively corelated	positvely corelated
13	If Covariance between x and y = 217, S.D.$_x$=13.26 and S.D.$_y$ = 17.47then what is the value of Coefficient of corelation	285.8967	-285.8967	-0.9367	0.9367	0.9367
14	If Laspeyer's price index number = 154 and paasche's price index number = 154.54 then what is Dorbish Bowelyprice index number	154.27	160	154.29	154	154.27
15	If the value of any regression coefficient is zero then two variables are	dependant	corelation	qualitative	independent	independent
16	If total cost function is C= 100 + 10 x^2 and total revenue is R = 600 + 6x then what is the profit	100	4	25	125	125
17	In bernouli trials if experiment consisting n trial then n is	dependant	different	independent	same	independent
18	In how many years ₹9000 will amount to ₹ 9540 at 2% p.a. simple interest.	2	1	4	3	3
19	In the regression equation y = 3x-5 what is slope and interceot value	slope= -3 and intercept= - 5	slope= 3 and intercept= -5	slope= 3 and intercept= 5	slope= -3 and intercept= 5	slope= 3 and intercept= -5
20	Let X be a random variable follows binomia distribution with parameter n=3 and p=0.5 then what is mean and variance of X.	mean=1.5 and Variance= 0.75	mean=1.5 and Variance= 0.78	mean=15 and Variance= 0.77	mean=15 and Variance= 76	mean=1.5 and Variance= 0.75
21	Let X be a random variable follows binomial distributio with parameter n, p then probability of X=x is given by	$^nC_x P^x q^{n-x}$	z^{n-p}	$^nC_x P^x$	$P(X=x) = e^{-p}p^x/x!$	$^nC_x P^x q^{n-x}$
22	Let z be standard normal variate, then what is the area to the right of z=1.8 if area between z=0 to z=1.8 is 0.284	-0.1	0.216	0.5	1	0.216
23	Mr.Joshi deposited 200000 at the end of every year for 5 years in a bank. The bank charges the rate as 8% p.a., compounded quarterly what is the effective rate of interest	0.0824	0.9224	2.0824	1.0824	0.0824
24	Number of death due to cancer in a day that average number of death is 5, which distribution is applicable for this	Binomial Distribution	Bernouli Distribution	Normal Distribution	Poisson Distribution	Poisson Distribution
25	P(X=0) = $e^{-m}m^x$/x! where e^{-9}=0.000123 what is value P(X=0) where mean of X is -9	0	∞	0.000123	0.1	0.000123
26	The compound interest on ₹ 5000 at 12% p.a. is maximum when the interest is compunded	quarterly	monthly	yearly	half yearly	monthly
27	The difference between the compound and simple interest on an amount at r% p.a. for one year is ₹	1	2	100	0	0
28	What is the rise and fall of a time series over periods longer than one year?	seasonal variation	trend	cyclic variation	irreular variation	cyclic variation
29	The simple interest of ₹ 5000 for 3 years at 7% per annum is	1050	105000	15000	21000	1050
30	The value of coeffecent of corelation lies is between	-0.5 to 0.5	-1 to 1	-1 to 0	0 to 1	-1 to 1
31	Time series has how many components	one	four	three	two	four
32	What is d/dx (e^x + x^2)	1 + e^x	e^x	e^x + 2x	x + e^x	e^x + 2x
33	What is d/dx (xe^x)	x e^x +1	e^x	x + xe^x	x + e^x	x + xe^x

#	Question					
34	What is elasticity of demand η if MR= 50 and AR= 100	1	2	1/2	0	2
35	What is equilibrium price for the given supply and demand function: p = 1-D and p = 2+3D	2	8	10	4	2
36	What is fisher's index number if Laspeyerr's index number= 170 and paasche's index number= 168.96	169.48	175	168	520	169.48
37	What is mean valu of x and y for the given regression lines: 15x-8y= 180 and 15x-18y= -270	x=19, y=54	x= 54, y=-19	x= 54, y=19	x=-19, y=54	x= 54, y=19
38	What is payment at the end of each month if Raj deposited ₹1000 with 12% compound interest for 3 years (Given that 1.01^{36} = 1.4308)	4.308	56920	43080	21540	43080
39	What is rank coefficient of corelation for the given data $6\sum d^2$ = 48 n=10	-0.0475	-0.9515	0.9515	-0.4838	0.9515
40	What is second order derivative of $3x^2$+1	6x	7	6	3x	6
41	What is the method ,when EMI are calculated using present value of the annuity using compound interest	Reducing balance method	Effective rate method	Flate rate method	Repayment method	Reducing balance method
42	What is the total area under the normal curve	0	-1	2	1	1
43	What is the value of standard normal variate z if X=25, mean=35 and Standard deviation= 2.5	50	-4	4	0	-4
44	What is total revenue for the demand function p = 30 - D^2 at D=1	31	1	29	30	29
45	When two regression lines are parallel to each other then their slopes are	Different	negatively corelated	positive	same	same
46	When we will say price elasticity of demand η is elastic	**η =0**	**0 < η < 1**	**η > 1**	**η=1**	**η > 1**
47	Which of the following gives seasonal index	Average seaon/ grand season	Orignal Value *100/Grand Value	Average seaon/ grand season*100	(Average seaon/ grand season) * 100	(Average seaon/ grand season) * 100
48	Which of the following is additive model of time series	T*C*S*I	T+C+S*I	T*C+S+I	T+C+S+I	T+C+S+I
49	Which of the following is correct formula to calculate EMI by using reducing Balance method	E=P*i / [1+ 1/$(1+i)^n$]	E=P*i / [1- 1/$(1+i)^n$]	E=P / [1- 1/$(1+i)^n$]	E=P/ [1+ 1/$(1+i)^n$]	E=P*i / [1- 1/$(1+i)^n$]
50	Which of the following is not component of time series	trend	Univariate	Cyclic variation	seasonal variation	Univariate