LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)

L.B. Reddy Nagar :: Mylavaram-521 230 :: Krishna Dist. :: A.P
Approved by AICTE, New Delhi.   Affiliated to JNTUK, Kakinada

## MCA (I Semester) (R17) Supplementary Examinations, August - 2021

TIME TABLE

Time: 10.00AM to 01.00PM

A.Y. 2020-21

Date	Course Code	Course Name
04-08-2021	Wednesday	17MC01 - Accounting and Financial Management
05-08-2021	Thursday	17MC02 - C Programming and Data Structures
06-08-2021	Friday	17MC03 - Digital Logic and Computer System Organization
07-08-2021	Saturday	17MC04 - Discrete Structures and Graph Theory
09-08-2021	Monday	17MC05 - English Language for Communication
10-08-2021	Tuesday	17MC06 - Probability and Statistics

Note: Any omissions or clashes in the time table may please be informed to the Controller of Examinations immediately.
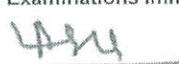
CONTROLLER OF EXAMINATIONS

PRINCIPAL

Date: 23-07-2021

Copy to: 1. Vice-Principal, Deans & HoD
2. Transport in-charge & Librarian
3. Canteen, Security & Hostels
4. All Notice Boards

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MCA (I Semester) ~~Regular~~/Supplementary Examinations

17MC06-PROBABILITY AND STATISTICS

Time : 3 hours   Max.Marks : 60

Answer one question from each unit.
All questions carry equal marks

1(a)	A committee of 6 persons is to be formed from 5 Lecturers and 3 Professors. Find the probability that there will be a majority of lecturers in the committee.	6M
(b)	A restaurant serves two special dishes A and B to its customers consisting of 60% Men and 40% Women. 80% Men order dish A and rest B. 70% Women order dish B and rest A. In what ratio A to B should the restaurant prepare the two dishes?	6M
(OR)		
2 (a)	The odds that person X speaks the truth are 3:2 and the odds that person Y speaks the truth are 5:3. In what percentage of cases are they likely to contradict each other on an identical point?	6M
(b)	A person speaks truth 4 out of 5 times. A die is tossed. He reports that there is a six. What is the chance that actually there was six?	6M
3(a)	A random variable X has the following probability function	6M
(b)	Define Binomial and Poisson distributions.	6M
(OR)		
4(a)	Fit a binomial distribution and calculate the expected (theoretical) frequencies from the following data.	12M
5(a)	A sample of nine items had the following values 45,47,50,52,48,47,49,53 and 51. Does the mean of the nine items differ significantly from the assumed population mean of 47.5? Test at 1% level of significance.	6M
(b)	A certain stimulus administered to each of the 12 patients resulted in the following increase in blood pressure, 5,2,8,-1,3,0,-2,1,5,0,4 and 6. Can it be concluded that the stimulus will in general, be accompanied by an increase in blood pressure at 5% level of significance.	6M
(OR)		
6(a)	A random sample of size 100 is taken from an infinite population having the mean $\mu=76$ and variance $\sigma^2 = 256$. What is the probability that the sample mean $\bar{x}$ will be between 75 and 78?	6M

3(a) table:

X	0	1	2	3	4	5	6	7
P(X)	a	3a	5a	7a	9a	11a	13a	15a

(i) Find the value of ' a '
(ii) Calculate mean and variance.

4(a) table:

x	0	1	2	3	4	5
f(x)	10	20	30	15	15	10

(b)	Determine a 95% confidence interval for the mean of a normal distribution with variance $\sigma^2 = 0.25$, using a sample of size n=100 with mean $\bar{x}$=212.3.	6M

7(a)	Two independent random samples of 7 and 6 items respectively have the following values:	

Sample 1:	16	26	27	23	24	22	23
Sample 2:	33	42	35	32	28	31	---

	Test whether the difference between the variances is significant at 1% level of significance.	6M
(b)	A sample of heights of 6400 soldiers has a mean height of 67.25 inches and with a standard deviation of 2.56 inches. While a simple sample of heights of 1600 sailors has a mean height of 68.55 inches and a standard deviation of 2.52 inches. Does the data indicate that the sailors are on the average taller than the soldiers? Test at 5% level of significance.	6M

(OR)

8.	The following data is for a sample of 300 car drivers who were classified with respect to age and the number of accidents they had during past two years. Test whether there is any relationship between the age of drivers and the no. of accidents they had. Use 5% level of significance.	

		No. of accidents		
		0	1 or 2	3 or more
	≤ 21	8	23	14
Age of	22-26	21	42	12
drivers	≥ 27	71	90	19

12M

9(a)	Find the Karl Pearson's correlation coefficient to the given data:	

X	16	21	26	23	28	24	17	22	21
Y	33	38	50	39	52	47	35	43	41

6M

(b)	In a partially destroyed laboratory record of analysis of correlation data, the following results are only legible: Variance of x=9. Regression lines are 8x-10y+66=0 40x-18y-214=0. What were (i) mean values of x and y. (ii) correlation coefficient. (iii) standard deviation of y.	6M

(OR)

10(a)	Fit a second degree parabola of the form $Y=a+bX+cX^2$ to the given data.	

X	0	1	2	3	4
Y	2.4	2.0	4.4	6.2	11.0

6M

(b)	Fit a curve of the form $Y=ax^b$ to the given data.	

X	1	1.5	2	2.5	3	3.5	4
Y	1.1	1.3	1.6	2.6	2.7	3.4	4.1

6M

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M.C.A (I Semester) ~~Regular~~/Supplementary Examinations

17MC05-ENGLISH LANGUAGE FOR COMMUNICATION

Time : 3 hours   Max. Marks : 60

All questions carry equal marks
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1(a)   Give the synonyms of the following words and make sentences of your own.
i) Applaud   ii) Bewilder iii) Competence
iv) Deliberate   v) Poise vi) Contemporary   [6M]

(b)   Rewrite the following sentences making necessary corrections.
i) I am his younger brother; he is elder to me by five years.
ii) Somanath is the eldest man in our village.
iii) This issue requires farther consideration.
iv) The sceneries of Himalayas is beautiful.
v) Suma has got much lesser marks than I.
vi) I am waiting for you since morning.   [6M]

(OR)

2(a)   Select the suitable prepositions / articles for the following sentences.
i) She is doing _____ course on designing robotics.
ii) Daniel was born _____7th January 2002.
iii) I would like to avail myself _____ one day casual leave.
iv) You must refrain _____ talking to such people.
v) _____ Copper is not a precious metal like Gold.
vi) There is _____ University in kukatpally, Hyderabad   [6M]

(b)   Fill in the blanks with the correct form of the verbs given in the brackets.
i) I ____(wait) for you until you come.
ii) He _____(play) flute very well.
iii) She_____(go) to cinema last night.
iv) I _____(solve) two questions so far.
v) The sun_____(rise) in the east.
vi) Did you____(buy) this book yesterday?   [6M]

3(a)   "Communication is effective only if it creates the desired impact on the receiver". Explain.   [6M]

(b)   What do you think are the major objectives of communication? Briefly explain them.   [6M]

(OR)

4(a)   Language is the major tool of communication – Justify.   [6M]

(b)   Write short notes on the following:
i) Formal communication   ii) Role of Tone in Oral Communication.   [6M]

5(a)   Those who are good at speaking are good at writing"- Justify. [6M]

(b)   List out the barriers of good listening. What measures are to be taken to avoid these barriers?   [6M]

(OR)

6(a) Reading skills include vocabulary skills, visual perceptual skills, prediction techniques, and scanning, skimming and intensive reading skills. Explain with suitable examples. [6M]

(b) What are the various types of reading techniques? [6M]

7(a) Write a letter to the editor of a local newspaper describing the sports day celebrations of your college. [6M]

(b) What are the significant features of effective technical writing? Explain them with suitable examples. [6M]

(OR)

8(a) What are presentation skills? How do we make an effective presentation? [6M]

(b) Write a letter to the Municipal Commissioner requesting him to take measures to solve the drainage issues in your area. [6M]

9(a) Write short notes on the following:
(i) Leadership development strategies. (ii) Team-work. [6M]

(b) How can you say that culture effects communication and leads to miscommunication? [6M]

(OR)

10(a) What are the measures to be taken to improve your leadership qualities? [6M]

(b) How interpersonal skills improve your personality? [6M]

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