Anjuman-I-Islam's
Akbar Peerbhoy College of Commerce and Economics
NAAC ACCREDITED COLLEGE
M. S. Ali Road, Do Taki, Mumbai-400 008.

22-02-2024

PROFESSIONAL SECTION

REGULAR EXAMINATION NOTICE

FY & SY SEM-II & IV

All the students of First Year & Second Year (BMS/BAMMC/BScIT/BScDS) are hereby informed that their Semester End Examination for Sem-II & IV (Regular) will be commencing from 27th March 2024.

Timetable will be displayed on notice board.

Prof. Shahid Pervez
Chairman Exam Committee
Professional Courses

Prof. (Dr.) Hanif Lakdawala
Asst. Director
Professional Courses

Prof. (Dr.) Shaukat Ali
Principal

Anjuman I Islam's

AKBAR PEERBHOY COLLEGE OF COMMERCE AND ECONOMICS

PROFESSIONAL SECTION

22/02/2024

Time Table - F. Y. B. Sc. (I.T.) Semester-II (Regular) March-2024

Sr. No.	Date	Day	Name of the Subjects	Time	Duration
1	27-03-2024	Wednesday	Object Oriented Programming with C++	11:30 am to 02:00 pm	2 ½ Hrs
2	28-03-2024	Thursday	Fundamentals of Microprocessor Architecture	11:30 am to 02:00 pm	2 ½ Hrs
3	30-03-2024	Saturday	Web Appl. Development	11:30 am to 02:00 pm	2 ½ Hrs
4	01-04-2024	Monday	Green IT	11:30 am to 02:00 pm	2 ½ Hrs
5	02-04-2024	Tuesday	Numerical Methods	11:30 am to 02:00 pm	2 ½ Hrs

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F. Y. B. Sc. IT SEM II CBGS 75 Marks **Subject:** Microprocessor & Microcontrolle

Date: _____ **Duration: 02 ½ Hours** **Roll Number:** _____

Note: All questions are compulsory.

Q1	**Attempt any three**	**[15]**
(a)	Define the following terms– i) Microprocessor ii) Monitor program iii) Microcomputer iv) Assembler v) Compiler	
(b)	Differentiate between microprocessor and microcontroller.	
(c)	With a suitable diagram explain System bus structure of microprocessor 8085 in detail.	
(d)	Compare between EPROM and EEPROM.	
(e)	Write the functions of the following pins of IC 8085. i) SOD ii) TRAP iii) S0, S1 iv) READY v) $\overline{RD}$	
(f)	Write the functions of the following pins of IC 8085. i) HOLD ii) A_8 to A_{15} iii) ALE iv) S0,S1 v) $\overline{RESET\ IN}$	
Q2	**Attempt any three**	**[15]**
(a)	With a neat diagram explain the programming model of 8085 microprocessor	
(b)	Explain one byte, two byte and three-byte instructions. Give at least two examples for each.	
(c)	Explain following types of instructions in detail with suitable examples: i) MOV Rd, Rs ii) ADD R	
(d)	Explain different conditional jump instructions of microprocessor 8085 in detail.	
(e)	Write an assembly program for microprocessor 8085 to subtract a 16-bit number stored at memory locations 4200H and 4201H from another 16-bit number stored at 4202H and 4203H. Store the result in memory locations 4204H and 4205H. Assume the most significant bytes of the respective numbers are in memory locations 4201H, 4203H and 4205H.	
(f)	Write an assembly program for microprocessor 8085 to find 1's complement and 2's complement of number stored at memory location 2000H. Store the 1's complement at memory location 3000H and 2's complement at memory location 4000H.	
Q3	**Attempt any three**	**[15]**
(a)	Explain following instructions in detail with suitable examples: i) SHLD 16-bit address ii) CPI 8-bit data	
(b)	Explain following instructions in detail with suitable examples: i) RRC ii) RAR	
(c)	An 8-bit data is stored at a memory location C050H. Write three different ways of moving this data segment to Accumulator.	
(d)	List and describe the working of various Call instructions in microprocessor 8085.	
(e)	Write an assembly language program to multiply the two 8-bit numbers stored in memory locations 2200H and 2201H. Store the 16-bit result in memory locations 2300H and 2301H.	
(f)	Differentiate between Hardware and Software interrupts.	
	Please Turn Over] Page 1 of 2	

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F. Y. B. Sc. IT SEM II CBGS **75 Marks** **Web Application Development**

Date: _____ **Duration: 02 ½ Hours** **Roll Number:** _____

Note: All questions are compulsory.

1. Attempt *any three* of the following: **15**

a. What is Internet? List any five applications of Internet.

b. What is E-Commerce? Explain.

c. What is the structure of an HTML file? Explain using suitable example.

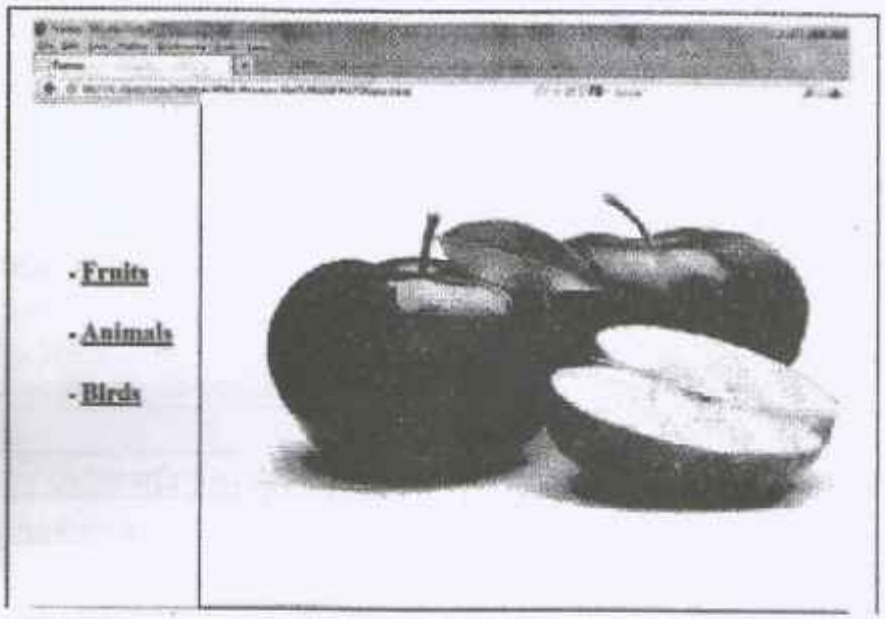
d. Explain the following HTML Tags
1) <Title> 2) <H1> 3) <p> 4) <HR> 5)

e. Write a code using HTML to redirect a page to another www.google.co.in

f. What is CSS. How to format text and link CSS in HTML Pages.

2. Attempt *any three* of the following: **15**

a. Create an HTML page using Hyper-links and images to display images from gallery based on Users choice.



b. Write an HTML Code to represent the following data in tabular form:

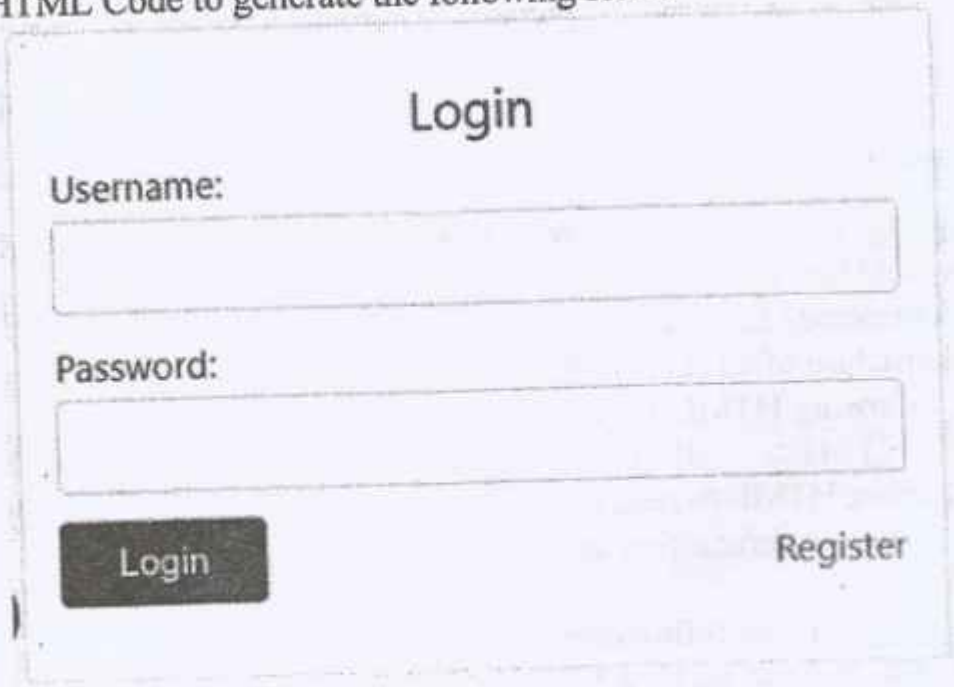
Subject	Theory	Practical
OOP	56	22
WAD	58	32
Green IT	42	42
Microprocessor	57	
Numerical Math	63	

c. Explain the <TABLE> <TR><TD><TH> tag with its attributes. Support your example using suitable code snippet.

d. Write a short note on Responsive Web Design

e. Explain the application of Inline Frames using suitable code snippet.

f. Write an HTML Code to generate the following form:



15

3. **Attempt *any three* of the following:**
a. Differentiate between client side and server side scripting.
b. Write a short note on variables in JavaScript.
c. Define Functions. Write a JavaScript code using function to check whether a number isPOSITIVE, NEGATIVE OR ZERO.
d. List and explain the different Comparison operators in JavaScript.
e. Write a javaScript code snippet to accept a number and show its factorial.
f. Write a short note on JavaSript Srting Object.

15

4. **Attempt *any three* of the following:**
a. Write a short note on PHP Variables and Constants
b. Explain using General Syntax and example while loop in PHP.
c. List any 5 Super Global Variable in PHP. Explain any two using example.
d. Write a PHP code to display transpose of a matrix using array.
e. List any five String functions in PHP. Explain any two.
f. Explain PHP exception handling using suitable code snippet.

15

5. **Attempt *any three* of the following:**
a. Write a short note on PHP Date and Time Object.
b. Define Session. How Sessions are created and destroyed in PHP? Explain.
c. Explain PHP Filters using suitable example.
d. Explain the step-by-step approach to connect a Database in a PHP program.
e. Write a PHP Program to fetch data from MySql EMPLOYEE table (Make your own assumptions)
f. Write a code snippet using PHP include to display Amazon.com page in your HTML Page.

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F. Y. B. Sc. IT SEM II CBGS 75 Marks Subject: GREEN IT

Date: _____ Duration: 02 ½ Hours Roll Number: _____

Note: All questions are compulsory.

1.	**Attempt *any three* of the following:**	**15**
a.	What is Green Technology?	
b.	What is E-waste? What are the toxins generated from E -waste?	
c.	Write short note on Power consumption?	
d.	Explain Basel Action Network?	
e.	Explain Equipment Disposal?	
f.	What are the benefits of recycling electronic equipment	
2.	**Attempt *any three* of the following:**	**15**
a.	What is meant by Virtualization?	
b.	Write short notes on Data duplication ?	
c.	Write short note on Green Servers?	
d.	What are the ways of reducing cooling cost?	
e.	What is meant by Bigger Drivers?	
f.	Explain Datacenters in detail?	
3.	**Attempt *any three* of the following:**	**15**
a.	What are the steps to be taken for recycling the non IT components?	
b.	Write short notes on Going paperless ?	
c.	What are the steps taken to reduce energy consumption	
d.	Write Short notes on PDA?	
e.	What are the ways to clean harddrive?	
f.	Write short notes about good and bad about CD?	
4.	**Attempt *any three* of the following:**	**15**
a.	What are the problems related to E-waste?	
b.	What are the pros and cons for buying the equity?	
c.	What are the benefits of leasing your equipment?	
d.	Explain EPEAT certification program?	
e.	Write short notes on Hard drive recycling?	
f.	Write some ideas which helps to preserve and protect the environment?	
5.	**Attempt *any three* of the following:**	**15**
a.	Write short note on Green supply chain?	
b.	Explain in detail Chief Green Officer?	
c.	Write short note on baseline data with respect to equipment check ups?	
d.	Explain various groups In CRM?	
e.	Explain Data center Cooling Infrastructure?	
f.	Explain Benefits of Green IT business Certification?	
	-X-X-X-X-X-	

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F. Y. B. Sc. IT SEM II CBGS 75 Marks NUMERICAL METHOD

Date: _____ Duration: 02 ½ Hours Roll Number: _____

1 ATTEMPT ANY 3 **15**

a. Round off 0.987250 correct to four significant figures and find out absolute, relative and percentage error.

b. Compute the truncation error in the exponential series given as $e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \cdots + \frac{x^n}{n!}$ for computation of first six terms in the expansion at x =2.5

c. Explain Total Numerical Error.

d. Which of the following number has a largest precision. (a) 3.1425, (b) 3.142592, (c) 3.14, (d) 3.14259265

e. Explain floating point representation.

f. Define Absolute error, Relative and Percentage Error.

2 ATTEMPT ANY 3 **15**

a. Solve the equation $x^3 + 2x^2 - 8 = 0$, using false-position method by two iteration.

b. Find the approximate root of $x^3 - 2x - 3 = 0$, by bisection method (perform three iteration only).

c. Using Newton's forward difference interpolation formula find f(8) from the following data:

X	5	10	15	20
F(x)	50	70	100	145

d. Find missing term in the following table:

X	0	1	2	3	4
Y	1	3	9	---	81

e. Using lagranges interpolation formula find the value of y when x = 8 :

X	1	2	3
y	12	13	14

f. By using Newton Raphson's Method find approximate root of the equation $x^3 - 3x - 5 = 0$, upto two approximation by taking initial root 1.

3 ATTEMPT ANY 3 **15**

a. Solve by gauss- Jordan method : 2x + 3y - 4z= 1, 5x + 9y +3z=17, -8x - 2y +z = -9.

b. Solve the following system of equation by Guass Seidel Method perform two iterations only 10x + y +z =12 ,2x +10y +z =13, x+y+5z=7.

c. The following data gives the velocity of a partied for 20 seconds at an interval of '5 seconds. Find initial acceleration using the following data.(numerical differentiation)

Time t (sec)	0	5	10	15	20
Velocity v(m/sec)	0	3	14	69	228

(22)

d. Evaluate $\int_0^6 \frac{dx}{1+x}$ dx by using Trapezoidal rule taking h=1.

e. Evaluate $\int_0^6 x^2 dx$ by using simpson's 1/3rd rule taking h =1

f. Evaluate $\int_0^6 \frac{dx}{1+x^2}$ by using simsons 3/8th rule taking h = 0.2 .

4 ATTEMPT ANY 3 **15**

a. By the method of least Squares. Find the Straight line that best fits the following data.

X	1	2	3	4	5
Y	4	9	15	22	3

b. Explain Correlation and its type.

c. fit a second order polynomial to the data given below.

X	1	2	3	4
Y	6	11	18	27

d. Solve by Euler's modifier method $\frac{dy}{dx} = y^2$, y(0)=2 find y(0.1) when h= 0.1.

e. Use second order runge-kutta method to solve $\frac{dy}{dx} = y - x$, y(0) = 2 at y(0.1) and y(0.2).

f. Use fourth order runge-kutta method to solve $\frac{dy}{dx} = x + y^2$, y(0) = 0 at x = 0.2.

5 ATTEMPT ANY 3 **15**

a. Solve the following LPP maximum z =2x +5y subject to $x + y \leq 5$, $2x + y \leq 6$, $(x, y \geq 0)$.

b. Classify the following partial differential equations: $3\left(\frac{d^2u}{dx^2}\right) + 5\left(\frac{d^2u}{dxdy}\right) + 4\left(\frac{d^2u}{dy^2}\right) = 2$

c. Consider a steel plate of size 15cm x 15 cm. If two of the sides are held at 100^0C and the other two sides are held at 0^0C, what are the steady- state temperature at interior points assuming a grid size of cm x 5cm.

d. Consider a steel plate of size 15cm x 15 cm. If two of the sides are held at 100^0C and the other two sides are held at 0^0C, solve the problem by using liebmann's iterative method correct to one decimal place.

e. Solve the following LPP maximum z=5x +2y subject to $10x + 2y \geq 20$, $5x + 5y \geq 30$, $((x, y) \geq 0)$.

f. A manufacturer produces two types of toys I and II using raw materials R1 and R2. one toy of type I is produced by using 4 units of raw material R1 and 6 units of raw matrial R2 and one toy of type II is produced by using 5 units of raw material R1 and 9 units of raw material R2. there are 320 units of R1 and 540 units of R2 in the stock. The profit per toy type I and type II is Rs.20 and Rs.25 respectively. How many toys of type I and type II be produced so as to maximize profit?

-x-x-x-x-x-