VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST

(Autonomous & Residential)
[Affiliated to Madurai Kamaraj University]
B.A. / B.Sc. Degree (Semester) Examinations, April 2015
Part – IV : NME Subject : Second Semester : Paper – I

WEB PROGRAMMING
Under CBCS – Credit 2

Time: **2** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. Which is correct?
   a) Click Here   b) Click Here
   c) Click Here d) Click Here

2. Which of the following is valid IP address?
   a) 984.12.787.76   b) 192.168.321.10
   c) 10.256.222.1   d) 192.168.56.115

3. Which of the following is an attribute of tag? _____
   a) src   b) Link   c) Cell padding   d) Bold

4. Which of the following is used to explore the Internet?
   a) Browser   b) Spreadsheet   c) Draw   d) Clipboard

5. A homepage is _____.
   a) an index of encyclopedia articles
   b) where all Internet data is stored
   c) required for access to the Internet
   d) the first page of a website

6. HTTP stands for?

7. HTML stands for?

8. URL stands for?

9. Write a marquee tag with an example?

10. List out any two web browsers?

SECTION – B

Answer ALL Questions :   **(4 × 10 = 40)**

11. a) Write short notes on: Introduction of HTML?

(OR)

   b) Write short notes on Structure of HTML.

12. a) Explain an LISTS with an Example?

(OR)

   b) Discuss about on <table> tag with an Example?

13. a) Write short notes on : break tag?

(OR)

   b) Briefly discuss on Image tag and its attributes?

14. a) Explain about the Anchor tag<a href> with an Example.

(OR)

   b) Explain about the Form tag<form> and Input tags with an Example.

SECTION – C

Answer any TWO Questions :   **(2 × 12½ = 25)**

15. Explain Table <table> tags and its attributes with an Example.

16. Explain Frames <frameset> tag with an Example?

17. Explain about the Lists and form tags with an Example?

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015

Part – IV : Skill Based Subject : Fourth Semester : Paper – I

SYSTEM SOFTWARE
Under CBCS – Credit 2

Time: **2** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. When a program is compiled, the _____ file will be created.

   a) .exe   b) .al   c) .obj   d) .dll

2. _____ is not a one of the System Software.

   a) Port   b) Debugger   c) Compiler   d) Device Driver

3. An Assembly language is a _____.

   a) Machine dependent   b) Low Level

   c) System   d) All the above

4. NTAB Stands for _____.

   a) data table   b) node table   c) name table d) null table

5. Loader that allow for program relocation are called _____.

   a) relocating loader   b) Specifying relocation

   c) relative loader   d) none of these

6. Define Linking?

7. What is the purpose of Translators?

8. Explain about the Register?

9. What is System Software?

10. Define Compiler.

SECTION – B

Answer ALL Questions :   **(4 × 10 = 40)**

11. a) Describe about compilation of Control Structure?

    (OR)

    b) Explain about the Two-Pass Assembler?

12. a) Explain about the Lexical Analysis?

    (OR)

    b) Write down the algorithm of Macro Processing?

13. a) Briefly discuss about Static and Dynamic Memory Allocation?

    (OR)

    b) Write Short Notes on Grammars?

14. a) Briefly discuss about the Fundamental steps in Program Development?

    (OR)

    b) Describe about the Storage Allocation Processor?

SECTION – C

Answer any TWO Questions :   **(2 × 12½ = 25)**

15. Explain the different types of parsing in details?

16. List and the types of text editors?

17. Explain about the Basic Macro Processor Function?

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – IV : Skill Based Subject : Sixth Semester : Paper – I

PC HARDWARE AND TROUBLE SHOOTING
Under CBCS – Credit 2

Time: **2** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. From what location are the 1st computer instructions available on boot up?

   a) ROMBIOS   b) CPU   c) boot. In   d) None of the above

2. Which Motherboard form factor uses one 20 pin connector?

   a) ATX   b) AT   c) BABY AT   d) All of the above

3. Scanner is a _____ device.

4. _____ voltage does a Pentium system use?

5. Define SMPS?

6. Define USB?

7. Define DMA?

8. Write about tape drives?

9. Define circuit Emulators?

10. Define Modem?

SECTION – B

Answer ALL Questions :   **(4 × 10 = 40)**

11. a) Explain the basic parts of the computer?   **(OR)**

    b) Explain DMA in detail?

12. a) Write short notes on storage devices?   **(OR)**

    b) List out input devices and its functions?

13. a) List out the output devices and its functions?**(OR)**

    b) Explain floppy disk and drive?

14. a) Explain CD and DVD technology?   **(OR)**

    b) Explain Signature Analysers?

SECTION – C

Answer any TWO Questions :   **(2 × 12½ = 25)**

15. Discuss about Storages devices of the PC in detail?

16. Write about Peripheral devices in detail?

17. Write about Troubleshooting in detail?

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – IV : Skill Based Subject : Sixth Semester : Paper – II

UNIX AND SHELL PROGRAMMING
Under CBCS – Credit 2

Time: **2** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. For dial-in terminal facility which of the following is must

   a) multimedia kit   b) modem   c) printer   d) emulator

2. *cal* command is capable of printing calendar for any year in the

   range _____.

   a) 1 to 999   b) 1 to 9999 c) 1 to 99999 d) 1 to 999999

3. Which of the following is not a redirection symbol?

   a) >   b) <   c) | d) >>

4. Which symbol is used to run a process in the background?

   a) &   b) &&   c) | d) ||

5. The *test* command carry out _____ types of tests.

   a) numeric   b) string   c) file   d) all the above

6. What are the three levels of security possessed by Unix

   operating system?

7. *pwd* stands for _____.

8. What is password aging?

9. What is a shell program?

10. State the I/O statement used in Unix Shell Programming.

SECTION – B

Answer ALL Questions :   **(4 × 10 = 40)**

11. a) What are the different types of shells available in Unix?

    Write note on it.

(OR)

   b) Briefly discuss about any 5 file related commands with example.

12. a) How will you protect your file? Briefly discuss.

(OR)

   b) Briefly discuss about Blocks of Unix file system.

13. a) Briefly discuss about the modes of operations used in *vi* editor.

(OR)

   b) Write note on *write* and *wall* commands.

14. a) Write note on decision making statements.

(OR)

   b) Briefly discuss about looping statements.

SECTION – C

Answer any TWO Questions :   **(2 × 12½ = 25)**

15. Discuss about the salient features of Unix operating system.

16. Explain about piping and redirection symbols with suitable examples.

17. Explain *ps* command with suitable example.

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – IV : Skill Based Subject : Sixth Semester : Paper – III

EMBEDDED SYSTEM
Under CBCS – Credit 2

Time: **2** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   (10 × 1 = 10)

1. An embedded system must have
   a) hard disk b) processor and memory c) operating system d) processor and I/O unit(s)

2. An embedded system hardware can
   a) have microprocessor or microcontroller or single purpose processor
   b) have digital signal processor
   c) one or several digital signal processor or microcontroller or single purpose processor
   d) not have single purpose processor (s)

3. A device driver is software for
   a) opening or connecting or writing or closing or other actions of the device
   b) receiving input or sending outputs from device
   c) access to parallel or serial port by the device
   d) controlling and configuring the device for read and write functions

4. RTOS is used in most embedded systems when the system does _____.

5. Device Manager is software _____.

6. Define Emulation.

7. Define Peripherals.

8. Define Integrated Processors.

9. Define Timer / Counter.

10. Define Linking and Loading for Writing Software.

SECTION – B

Answer ALL Questions :   (4 × 10 = 40)

11. a) What is Embedded System?
    (OR)
    b) Write short notes for inside the embedded system.

12. a) Explain the Micro Controller?
    (OR)
    b) Describe about the Intel Pentium?

13. a) Difference between the Parallel Ports and Serial Ports?
    (OR)
    b) Explain the DMA Controller?

14. a) Write short notes on Run-time Libraries for Writing Software?
    (OR)
    b) Write the Emulation Techniques?

SECTION – C

Answer any TWO Questions :   (2 × 12½ = 25)

15. Explain about the 8-bit Accumulator Processors?

16. Explain the Ports and the types of Ports?

17. Brief discuss about the debugging techniques in details.

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SECTION – C

Answer any THREE Questions :   **(3 × 10 = 30)**

16. Obtain the median for the following frequency distribution:

x:	1	2	3	4	5	6	7	8	9
f:	8	10	11	16	20	25	15	9	6

17. Calculate the mean and standard deviation for the following table giving the age distribution of 542 members.

Age	:	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No. of members	:	3	61	132	153	140	51	2

18. Three groups of children contain respectively 3 girls and 1 boy, 2 girls and 2 boys and 1 girl and 3 boys. One child is selected at random from each group. Show that the chence that the three selected consist of 1 girl and 2 boys is $\dfrac{13}{32}$.

19. A random variable X has the following probability function.

x	:	0	1	2	3	4	5	6	7
$p(x)$	:	0	k	$2k$	$2k$	$3k$	k^2	$2k^2$	$7k^2+k$

i) Find k ii) Evaluate $P(X<6)$, $P(X\geq6)$ and $P(0<X<5)$.

20. A random sample of 10 boys had the following I.Q.S. 70, 120, 110, 101, 88, 83, 95, 98, 107, 100. Do these data support the assumption of a population mean I.Q. of 100?
($t_{0.05}$ of 9 d.f. is 2.262)

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – III : Allied Subject : Second Semester : Paper – I

STATISTICS & PROBABILITY
Under CBCS – Credit 5

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. Arithmetic mean = _____.
   a) $\dfrac{1}{n}\sum_{i=1}^{n} x_i$ b) $n\sum_{i=1}^{n} x_i$ c) $\sum x_i$ d) None of these

2. Geometric mean = _____.
   a) $\left(x_1, x_2........x_n\right)^n$ b) $\left(x_1, x_2........x_n\right)^{1/n}$
   c) $\sqrt{\left(x_1, x_2........x_n\right)}$ d) None of these

3. The difference between two extreme observations of the distribution is _____.
   a) Mean   b) Median   c) Mode   d) Range

4. Quartile Deviation = _____.
   a) $\dfrac{1}{2}\left(Q_3 - Q_1\right)$ b) $\dfrac{1}{2}\left(Q_1 - Q_3\right)$ c) $\dfrac{Q}{2}$ d) None of these

5. $A\cup\phi =$ _____.
   a) A b) ϕ c) X d) S

6. Idempotency law states that _____.
   a) $A\cup A = A$ b) $A\cup S = S$ c) $S\cup A = A$ d) $A\cap A' = \phi$

7. If a random variable takes atmost a countable number of values, it is called a _____ random variable.
   a) Discrete   b) Continuous   c) real   d) None of these

8. If a random variable takes all possible values between certain limits, it is called a _____ random variable.
   a) Discrete   b) Continuous   c) real   d) None of these

9. Formula for students t distribution is _____.

   a) $t = \dfrac{\bar{x} - \mu}{S \big/ \sqrt{n}}$
   b) $t = \dfrac{\mu - \bar{x}}{S\sqrt{n}}$
   c) $t = \dfrac{\mu - \bar{x}}{S}$
   d) $t = \dfrac{x}{\mu}$

10. Formula for Fisher's 't' distribution is _____.

   a) $t = \dfrac{\Sigma}{\sqrt{\dfrac{\chi^2}{n}}}$
   b) $t = \Sigma \sqrt{\dfrac{\chi^2}{n}}$
   c) $t = \Sigma \chi^2 \sqrt{n}$

SECTION – B

Answer ALL Questions :   (5 × 7 = 35)

11. a) Find the arithmetic mean of the following frequency distribution.

x:	1	2	3	4	5	6	7
f:	5	9	12	17	14	10	6

(OR)

   b) Calculate the arithmetic mean of the marks from the following table :

Marks	:	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	:	12	18	27	20	17	6

12. a) A student obtained the mean and standard deviation of 100 observations as 40 and 5.1 respectively. It was later discovered that he had wrongly copied down an observation as 50 instead of 40. Calculate the correct mean and standard deviation.

(OR)

   b) The first of the two samples has 100 items with mean 15 and standard deviation 3. If the whole group has 250 items with mean 156 and standard deviation $\sqrt{13.44}$, find the standard deviation of the second group.

13. a) A card is drawn from a well – shuffled pack of playing cards. What is the probability that it is either a spade of an ace?

(OR)

   b) State and prove the addition theorem of probabilities.

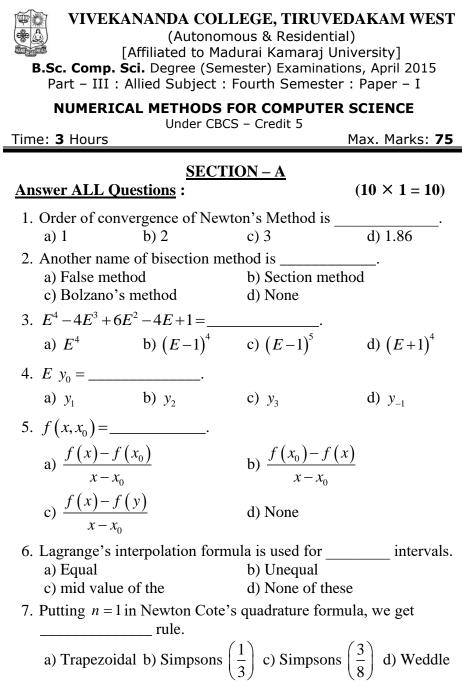14. a) The probability density function of a random variable.

$$f(x) = \begin{cases} 0 & \text{for } x \le -a \\ \dfrac{1}{a^2}(a+x) & \text{for } -a < x \le 0 \\ \dfrac{1}{a^2}(a-x) & \text{for } 0 < x \le a \\ 0 & \text{for } x \ge a \end{cases}$$
Verify that $\int_{-\infty}^{\infty} f(x)\,dx = 1$

(OR)

   b) The following table gives the number of aircraft accidents that occurred during the various days of the week. Test whether the accidents are uniformly distributed over the week.

Days	Mon	Tues	Wed	Thurs	Fri	Sat
No. of accidents	14	18	12	11	15	14

(Given : The values of chi-square significant at 5, 6, 7, d.f are respectively 11.07, 12.59, 14.07 at the 5% level of significance)

15. a) The theory predicts the proportion of beans in the four groups A, B, C and D should be 9 : 3 : 3 : 1. In an experiment among 1600 beans, the numbers in the four groups were 882, 313, 287 & 118. Does the experimental result support the theory? ($x^2\,0.05$ at 3d.f $= 7.815$)

(OR)

   b) A machinist is making engine parts with axle diameters of 0.700 inch. A random sample of 10 parts shows a mean diameter of 0.742 inch with a standard deviation of 0.040 inch. Compute the statistic you would use to test whether the work is meeting the specification.

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – III : Allied Subject : Fourth Semester : Paper – I

NUMERICAL METHODS FOR COMPUTER SCIENCE
Under CBCS – Credit 5

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. Order of convergence of Newton's Method is _____.
   a) 1   b) 2   c) 3   d) 1.86

2. Another name of bisection method is _____.
   a) False method   b) Section method
   c) Bolzano's method   d) None

3. $E^4 - 4E^3 + 6E^2 - 4E + 1 = $ _____.
   a) E^4 b) $(E-1)^4$ c) $(E-1)^5$ d) $(E+1)^4$

4. $E\ y_0 = $ _____.
   a) y_1 b) y_2 c) y_3 d) y_{-1}

5. $f(x, x_0) = $ _____.
   a) $\dfrac{f(x) - f(x_0)}{x - x_0}$ b) $\dfrac{f(x_0) - f(x)}{x - x_0}$

   c) $\dfrac{f(x) - f(y)}{x - x_0}$ d) None

6. Lagrange's interpolation formula is used for _____ intervals.
   a) Equal   b) Unequal
   c) mid value of the   d) None of these

7. Putting $n = 1$ in Newton Cote's quadrature formula, we get
   _____ rule.

   a) Trapezoidal b) Simpsons $\left(\dfrac{1}{3}\right)$ c) Simpsons $\left(\dfrac{3}{8}\right)$ d) Weddle

8. Putting $n = 2$ in Newton Cote's quadrature formula, we get _____ rule.

   a) Trapezoidal b) Simpsons $\left(\dfrac{1}{3}\right)$ c) Simposons $\left(\dfrac{3}{8}\right)$ d) Romberg's

9. Euler's formula is _____.

   a) $y_{n+1} = y_n + h\, f\left(x_n, y_n\right)$ b) $y_{n+1} = y_n - h\, f\left(x_n, y_n\right)$

   c) $y_{n+1} = h + \left(x_n, y_n\right)$ d) None of these

10. The Runge Kutta method of second order is nothing but the _____ method.

    a) Euler   b) Modified Euler   c) Taylor's   d) pi card's

SECTION – B

Answer ALL Questions :   **(5 × 7 = 35)**

11. a) Find a positive root of $xe^x = 2$ by the method of False position.

    (OR)

    b) Find the positive root of $F(x) = 2x^3 - 3x - 6 = 0$ by Newton Raphson method correct to 5 decimal places.

12. a) Solve the system of equations by Gauss Elimination method.
    $2x + 3y - z = 5,\quad 4x + 4y - 3z = 3\ \ and\ \ 2x - 3y + 2z = 2.$

    (OR)

    b) Solve the system of equations by Gauss Jordan method.
    $x + 2y + z = 3,\quad 2x + 3y + 3z = 10,\quad 3x - y + 2z = 13.$

13. a) Apply Gauss forward formula and estimate $f(32)$ from the following table :

x :	25	30	35	40
$y = f(x)$:	0.2707	0.3027	0.3386	0.3794

    (OR)

    b) Using Gauss backward interpolation formula find the population for the year 1936 given that

Year (x):	1901	1911	1921	1931	1941	1951
Population (y):	12	15	20	27	39	52

14. a) Find the first and second derivative of the function tabulated below at $x = 0.6$.

x	0.4	0.5	0.6	0.7	0.8
y	1.5836	1.7974	2.0442	2.3275	2.6511

    (OR)

    b) Given the following data, find $y'(6)$.

x :	0	2	3	4	7	9
y :	4	26	58	112	466	922

15. a) Using Euler's method, solve numerically the equation,
    $y' = x + y,\quad y(0) = 1$ for $x = 0.0(0.2)(1.0).$

    (OR)

    b) Using Taylor series method, find the value of $y(0.1)$, given
    $\dfrac{dy}{dx} = x^2 + y^2$ and $y(0) = 1.$

SECTION – C

Answer any THREE Questions :   **(3 × 10 = 30)**

16. Find the positive root of $x^3 - x = 1$ correct to four decimal places by bisection method.

17. By Gaussian elimination method.

    Find the inverse of $A = \begin{bmatrix} 0 & 1 & 1 \\ 1 & 2 & 0 \\ 3 & -1 & -4 \end{bmatrix}.$

18. Using Lagrange's interpolation formula, find $y(10)$ from the following table.

x	5	6	9	11
y	12	13	14	16

19. Evaluate $\displaystyle\int_0^1 \dfrac{dx}{1 + x^2}$ using Romberg's method.

20. Apply the fourth order Runge Kutta method to find $y(0.2)$ given that $y' = x + y,\ y(0) = 1.$

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Part – III : Core Subject : Second Semester : Paper – I

COMPUTER GRAPHICS
Under CBCS – Credit 4

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. _____ is a common graphics method employed in many commercials, where one object is transformed into another.

    a) Morphing   b) Transformation c) Graphics   d) Scaling

2. CAD stands for Computer _____.

    a) Auto Design   b) Auto Domain

    c) Aided Design   d) Aided Domain

3. This _____ of coordinate values to integers causes lines to be displayed with a stairstep appearance (jaggies).

    a) doubling   b) rounding   c) increasing   d) rotating

4. Any parameter that affects the way a primitive is to be displayed is referred to as _____ parameter.

    a) an actual   b) an attribute   c) a formal   d) a display

5. A transformation that alters the size of an object is called _____.

    a) scaling   b) rotation   c) shifting   d) reflection

6. A ___ is a transformation that produces a mirror image of an object.

    a) scaling   b) rotation   c) shifting   d) reflection

7. The region against which an object is to clipped is called a _____.

   a) crop window b) clip algorithm c) clip window d) view window

8. In _____ mode, the application program initiates data entry.

   a) request   b) event   c) input   d) read

9. In a _____ projection, parallel lines in a scene that are not parallel to the display plane are projected into converging lines.

   a) parallel   b) perspective   c) perpendicular   d) serial

10. A method which indicates depth by varying the intensity of the objects according to their distance from the viewing position is _____.

   a) wireframe displays   b) depth

   c) depth cueing   d) deep distance

SECTION – B

Answer ALL Questions :   **(5 × 7 = 35)**

11. a) Discuss how CAD is useful in design processes? **(OR)**

    b) Write about Graphics for home use.

12. a) Write about line-type attributes.   **(OR)**

    b) Write about the attributes of a character.

13. a) Discuss about the Rotation of an object through angle θ about the pivot point (x_r, y_r).

(OR)

   b) Write about the Reflection of an object about the x axis and y axis.

14. a) Write in detail about Window to Viewport Coordinate Transformation.

(OR)

   b) Explain the functions of Cohen-Sutherland line-clipping algorithm.

15. a) Discuss about Three Dimensional Graphics Packages.

(OR)

   b) Discuss how a three-dimensional rotation can be performed?

SECTION – C

Answer any THREE Questions :   **(3 × 10 = 30)**

16. Write in detail about any five input devices available for data input on graphics Work stations.

17. Explain in detail about Midpoint Circle Algorithm.

18. Explain the Raster Methods for transformations.

19. Discuss about Interactive Picture – construction Techniques.

20. Write in detail about Three dimensional Display Techniques.

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015

Part – III : Core Subject : Second Semester : Paper – II

MICROPROCESSOR & INTERFACING TECHNIQUES

Under CBCS – Credit 4

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. ALU stands for _____.
   a) Arithmetic & Logic unit   b) Arithmetic list unit
   c) both   d) none

2. IC stands for _____.
   a) Integrated circuits   b) Inter Circuits
   c) Inline circuit   d) none

3. _____ is a halt instruction.
   a) HLT   b) HLC   c) HOLD   d) none

4. CLC stands for _____.
   a) Call clear clock   b) Clear carry Flag
   c) Clear direction Flag   d) none

5. ROM stands for _____.
   a) Read only memory   b) Read write memory
   c) Read over memory   d) both a & c

6. What is hardware?

7. What is flag?

8. What is RAM?

9. What is DMA?

10. What is AMD?

SECTION – B

Answer ALL Questions :   **(5 × 7 = 35)**

11. a) Explain RISC processor in detail.   **(OR)**

    b) Explain implied addressing modes in detail.

12. a) Discuss about Instruction format.   **(OR)**

    b) Discuss about Addressing modes of 8086.

13. a) Explain in detail 8086 instruction groups.   **(OR)**

    b) Explain in detail Eight bit I/O ports.

14. a) Write in detail about DMA.   **(OR)**

    b) Write in detail about Intel 8251 PCI.

15. a) Explain in detail about alpha Cyrix.   **(OR)**

    b) Explain in detail CRT controller.

SECTION – C

Answer any THREE Questions :   **(3 × 10 = 30)**

16. Explain in detail about architecture of 8086.

17. Discuss about 8086 Instruction set.

18. Explain Sixteen bit I/O ports.

19. Explain 8259A programmable Interrupt controller.

20. Discuss about Floppy disk controller.

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Part – III : Core Subject : Fourth Semester : Paper – I

OPERATING SYSTEM
Under CBCS – Credit 4

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   (10 × 1 = 10)

1. An operating system is _____ software that enables users to interact with a computer's hardware.

   a) a system   b) an application

   c) a middleware   d) a high level

2. The efficiency of OS is to achieve _____ throughput and _____ average turnaround time.

   a) high, high   b) high, low   c) low, high   d) low, low

3. _____ fit allocates the first memory hole that is big enough to fit it.

   a) Best   b) Worst   c) Good   d) First

4. One solution to the problem of external fragmentation is _____.

   a) deletion   b) insertion   c) compaction   d) compilation

5. Information associated with each process is available in _____.

   a) MU   b) CPU   c) PCB   d) Registers

6. Processes residing in main memory, which are ready and waiting to execute are in _____ queue.

   a) new   b) running   c) wait   d) ready

7. Peripheral devices are connected to the system via a general _____ bus.

   a) I/O   b) CPU   c) Memory   d) Control

8. Software within a hardware device is _____.

   a) system software   b) hardware

   c) firmware   d) middleware

9. A file operation which writes the new information at the end of the file is _____.

   a) Read   b) Write   c) Execute   d) Append

10. A file in which sequence of characters organized into lines is called _____.

    a) text   b) audio   c) image   d) video

SECTION – B

Answer ALL Questions :   **(5 × 7 = 35)**

11. a) Give the importance of Operating system.

    (OR)

    b) Discuss how OS acts as a resource manager to schedule resources of a system?

12. a) Discuss the paging concept with its hardware diagram?

    (OR)

    b) What is segmentation? How this is different from paging?

13. a) Write about the states of a process with a state transition diagram.

    (OR)

    b) What is semaphore? Explain the operations involved with semaphore.

14. a) Discuss how I/O scheduler works?

    (OR)

    b) Write about the I/O traffic controller.

15. a) Write about the various basic file operations.

    (OR)

    b) Give the general model of a file system.

SECTION – C

Answer any THREE Questions :   **(3 × 10 = 30)**

16. What are the different types operating systems available. Explain any two of them in detail.

17. What is demand paging? Explain the paging algorithms which handles demand paging.

18. Explain in detail about process scheduling algorithms with examples.

19. Write in detail about device allocation considerations.

20. Write about the following.   1. Logical File System

                                   2. Physical File System.

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VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST
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[Affiliated to Madurai Kamaraj University]
B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – III : Core Subject : Fourth Semester : Paper – II

RELATIONAL DATABASE MANANGEMENT SYSTEM
Under CBCS – Credit 4

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. In an E – R diagram entities are represented by

   a) rectangle   b) square   c) ellipse   d) triangle

2. Generalisation is the process of _____ similar entities.

   a) grouping   b) joining   c) specilizing d) None of the above

3. Normalization involves checking that the tables conform to

   certain, and if not, reorganizing the _____.

   a) Record   b) data   c) file   d) table

4. Indexes are used to speed up the retrieval of data from _____.

   a) files   b) Records   c) databases   d) tables

5. Consistency is expressed interms of _____ characteristics.

   a) 5   b) 3   c) 2   d) 1

6. Locking is used by all commercial databases in implementing

   _____.

   a) serialisation   b) concurrency   c) Granularity d) deadlock

7. Give an Example software for RDBMS.

8. Write the Syntax for "SELECT FROM".

9. Define Cursor.

10. Define Subquery.

SECTION – B

Answer ALL Questions :   **(5 × 7 = 35)**

11. a) Explain "Data Modeling".   **(OR)**

    b) Explain "ER Model".

12. a) Explain "Database Management Systems".   **(OR)**

    b) What are the DBMS Languages? Briefly explain.

13. a) Explain "Forms and Report design".   **(OR)**

    b) Explain Data Validation.

14. a) Explain "Oracle data types".   **(OR)**

    b) Explain "Aggregate functions with examples".

15. a) Explain "CURSOR".   **(OR)**

    b) Explain "TRIGGER".

SECTION – C

Answer any THREE Questions :   **(3 × 10 = 30)**

16. Discuss basic operators of relational algebra with on example each.

17. Describe "Normalization".

18. Explain "Concurrency".

19. Discuss in detail about Table options and operations with suitable examples.

20. Give the block structure of PL/SQL. What are the advantages of PL/SQL?

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – III : Core Subject : Fourth Semester : Paper – III

VISUAL PROGRAMMING
Under CBCS – Credit 4

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   **(10 × 1 = 10)**

1. In VB form itself is an _____.

   a) object   b) Data   c) both   d) none

2. _____ are the memory locations which are used to store values temporarily.

   a) Table   b) picture   c) variables   d) none

3. A _____ is a series of Visual Basic statements enclosed by the Sub and End Sub statements.

   a) sub procedure   b) graph   c) controls   d) files

4. _____ are so-named because they "combine" the features found in both text boxes and list boxes.

   a) combo boxes b) list boxes   c) text boxes   d) rich text boxes

5. Line and Shape controls are ------- controls.

   a) Graphical   b) data base   c) both   d) none

6. What is text box?
7. Define input boxes.
8. Define functions.
9. Define Enums.
10. Write about pie charts.

SECTION – B

Answer ALL Questions :   **(5 × 7 = 35)**

11. a) Discuss about image controls.   **(OR)**

    b) Explain properties of window.

12. a) Explain any five numeric functions.   **(OR)**

    b) Explain any five date and time functions.

13. a) Explain function procedure.   **(OR)**

    b) Explain sub procedure.

14. a) Discuss about combo boxes.   **(OR)**

    b) Discuss about list boxes.

15. a) Discuss about fundamental of graphics. **(OR)**

    b) Discuss about lines and boxes.

SECTION – C

Answer any THREE Questions :   **(3 × 10 = 30)**

16. Discuss about ASCII representation of forms.

17. Write in detail about data types.

18. Explain one dimensional array with example.

19. Explain the flex grid control in detail.

20. Discuss about binary files.

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – III : Core Subject : Sixth Semester : Paper – I

WEB TECHNOLOGY
Under CBCS – Credit 4

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   (10 × 1 = 10)

1. The computer serving information from a central location is _____.
   a) Web Server   b) Client   c) Browser   d) Server

2. When <FRAMESET> is being coded within an HTML document _____ is not used.
   a) <Body>   b) <HEAD>   c) <TITLE>   d)

3. Values 1 and 0 are not considered _____ values in java script.
   a) Number   b) Boolean   c) Decimal   d) Binary

4. Java script event handlers _____ and _____.
   a) interactive & Non interactive   b) class & object
   c) polymorphism & inheritance   d) Non interactive and object

5. JSSS stands for _____.
   a) Java script assisted style sheet b) Java style sheet script
   c) Java sheet style script   d) Java script style sheet

6. HTML can be used to create a _____ in a webpage.
   a) CUI   b) GUI   c) Interface   d) Link

7. Web controls namespace is the _____.
   a) Menu Control b) Window   c) Rich Text   d) Label Control

8. Data Grid Control allows you to easily display _____ data.
   a) Abstract   b) Dynamic   c) 2D   d) 3D

9. The accept types collection returns on string _____.
   a) Handling   b) Array   c) Function   d) None of the above

10. IIS expanded _____.
    a) Intranet Information Service   b) Information Internet Service
    c) Information Interchange System d) Internet Information Service

SECTION – B

Answer ALL Questions :   (5 × 7 = 35)

11. a) Explain "Text Formatting in HTML".   **(OR)**

    b) Write notes on Lists in HTML.

12. a) Write about Functions in Java Script.   **(OR)**

    b) List the advantages of Java Script.

13. a) Explain about event handling in Java Script.   **(OR)**

    b) Explain cookies in Java Script.

14. a) Write about the following i) HTML Anchor Control
                                       ii) HTML Input File Control **(OR)**

    b) Explain the following Web Server Controls.

       i) Label Control   ii) Button Control   iii) Check Box Control

15. a) Explain in detail about Request Object.   **(OR)**

    b) Explain in detail about OLEDB Transaction Class

SECTION – C

Answer any THREE Questions :   (3 × 10 = 30)

16. Write about Linking documents with examples.

17. Explain about operators and Expressions.

18. Explain about Java Script Document Object Model.

19. Write notes on Data List Control with an example.

20. Discuss about "Application issues in ASP. Net.

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B.Sc. Comp. Sci. Degree (Semester) Examinations, April 2015
Part – III : Elective Subject : Sixth Semester : Paper – I

MOBILE COMPUTING
Under CBCS – Credit 5

Time: **3** Hours   Max. Marks: **75**

SECTION – A

Answer ALL Questions :   (10 × 1 = 10)

1. Mobile devices have _____.
   a) Limited processing power   b) Limited battery life
   c) Poor display   d) All of these

2. Radio waves are _____.
   a) Omni directional   b) bi-directional
   c) directional   d) easy to generate

3. The message center (MXE) is the node that provides intelligent
   network services.   (True / False)

4. _____ can be used to transmit analog data over analog signal.
   a) AM   b) FM   c) PM   d) All of these

5. Digital cellular technologies offer increased capacity and
   security.   (True / False)

6. What is the basic service unit of cellular telephony?
   a) location area   b) cell
   c) PLMN Service area   d) MSC/ULR Service area

7. A wireless LAN makes use of _____ transmission medium.
   a) mobile   b) adhoc   c) wireless   d) microwave

8. In the current IEEE 802.11 version _____ physical media
   are involved.
   a) 2   b) 3   c) 4   d) 5

9. Which of the following is not a layer in the WAP gateway stack?
   a) WDP   b) Context manager   c) TCP   d) WSP

10. The WAP forum is controlled by the founding companies.
                                                         (True / False)

SECTION – B

Answer ALL Questions :   (5 × 7 = 35)

11. a) Explain the characteristics of mobile computing models.

    (OR)

    b) Write a short notes on system-Transparent Application Aware
       Adaptation.

12. a) Explain Types of modulation.   **(OR)**

    b) Explain about spread spectrum.

13. a) Explain the cellular system components.   **(OR)**

    b) Explain the architecture of cellular system.

14. a) Explain the wireless LAN requirements and types. **(OR)**

    b) List out bluetooth usage modules.

15. a) Explain WAP Architecture.   **(OR)**

    b) Explain WML.

SECTION – C

Answer any THREE Questions :   (3 × 10 = 30)

16. Explain the Mobile computing architecture.

17. Explain the wireless communication.

18. Discuss digital systems.

19. Write about the following: a) Wireless LAN Problems

                              b) Protocols in Bluetooth Architecture

20. Describe Mobile Internet.

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