VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO ALL BRANCHES
FIRST SEMESTER
CALCULUS FOR ENGINEERS
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Prove that at the point $x = \dfrac{\pi}{2}$ of the curve $y = 4\sin x - \sin 2x, \rho = \dfrac{5\sqrt{5}}{4}$

2   Write the formula for the centre of curvature.

3   Write the sufficient conditions for a maximum (or) minimum.

4   Find $\dfrac{du}{dt}$ if $u = x^2 + y^2$, $x = at^2$, $y = 2at$.

5   Evaluate $\int x \sin x\, dx$

6   Evaluate $\int \dfrac{dx}{(x+2)^2 - 4}$

7   Evaluate $\int\limits_{0}^{a} \int\limits_{0}^{\sqrt{a^2-x^2}} dx\, dy$

8   Evaluate $\int\limits_{0}^{1} \int\limits_{1}^{2} x(x+y)\, dy\, dx$.

9   Find the unit vector normal to the surface $x^2 - y^2 + z = 2$ at the point $(1,-1,2)$

10   State Green's theorem in plane

PART-B (5 x 16 = 80)

11 a.   Find the equation to the circle of curvature of the curve $xy = c^2$ at (c,c)

OR

(P.T.O)

b.

Find the radius of curvature at the point θ on $x = 3a\cos\theta - a\cos 3\theta$ and $y = 3a\sin\theta - a\sin 3\theta$

12 a.

(i) If $u = \sin^{-1}\dfrac{x}{y} + \tan^{-1}\dfrac{x}{y}$, then find the value of $x\dfrac{\partial u}{\partial x} + y\dfrac{\partial u}{\partial y}$

(ii) Find $\dfrac{du}{dt}$ as a total derivative and verify the result by the direct substitution of $u = x^2 + y^2 + z^2$ when $x = e^{2t}, y = e^{2t}\cos 3t$, and $z = e^{2t}\sin 3t$

OR

b.

Find the maximum or minimum value of f $f(x,y) = 2 + 2x + 2y - x^2 - y^2$

13 a.

(i) Evaluate $\int \sqrt{x^2 - 2x - 3}\, dx$

(ii) Show that $\displaystyle\int_{2}^{3} \sqrt{(x-2)(3-x)}\ dx = \dfrac{\pi}{8}$

OR

b.

(i) Evaluate $\int x\tan^{-1} x\, dx$

(ii) Evaluate $\displaystyle\int \dfrac{e^x(1+\sin x)}{1+\cos x}\, dx$

14 a.

Evaluate $\displaystyle\int_{0}^{a}\int_{0}^{\sqrt{a^2-x^2}}\int_{0}^{\sqrt{a^2-x^2-y^2}} \dfrac{dzdydx}{\sqrt{a^2 - x^2 - y^2 - z^2}}$

OR

b.

Evaluate $\displaystyle\iint_{R} r^2 \sin\theta\, dr\, d\theta$, Where R is the region above the initial line of the curve $r = 2a\cos\theta$.

15 a.

Verify Stoke's theorem for $\vec{F} = (x^2 + y^2)\vec{i} - 2xy\vec{j}$ taken around the rectangle bounded by the lines $x = \pm a,\ y = 0,\ y = b$

OR

b.

Evaluate $\displaystyle\iint_{s} \vec{F}.\hat{n}\, ds$ where $\vec{F} = z\vec{i} + x\vec{j} - y^2 z\vec{k}$ and S is the part of the surface of the cylinder $x^2 + y^2 = 1$ included in the first octant between the planes $z = 0$ and $z = 2$

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Sl.No. 1981

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO ALL BRANCHES
FIRST SEMESTER
PHYSICS FOR ENGINEERS
(Candidates admitted under 2015 &2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Give the examples for elastic bodies.

2   Define: bulk modulus of elasticity

3   Give the no. of atoms per unit cell and coordination number for FCC

4   What are Miller indices?

5   Define: Spontaneous emission

6   Write any two applications of CO_2 laser.

7   What is meant by critical angle?

8   What is multimode fiber?

9   What is destructive testing?

10   Give the demerits of Liquid Penetrant method.

PART-B (5 x 16 = 80)

11 a.   Describe an experiment to determine Young's modulus of a beam by uniform bending.

OR

   b.   Explain about I-shaped girders with neat diagram.

12 a.   Determine the number of atoms per unit cell, coordination number, atomic radius and packing factor for BCC structure.

OR

   b.   What are Miller indices? Write down the procedure finding the Miller indices with examples.

13 a.   Explain the applications of lasers in scientific, engineering and industrial fields.

OR

   b.   Describe the applications of laser in communication, military and chemical fields.

14 a.   Describe the characteristics, advantages, disadvantages and applications step-index multimode fibre with necessary diagrams.

OR

   b.   Write a note on the following
        i)critical angle, ii) total internal reflection, iii) acceptance angle, iv) numerical aperture.

15 a.   Write down the principle, advantages, disadvantages and applications of ultrasonic flaw detector.

OR

   b.   Describe the X-ray fluoroscopy technique of nondestructive testing.

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Sl.No.E 1993   Sub.Code: 34116102/34115102

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E DEGREE EXAMINATIONS – NOV/DEC -2018
COMMON TO ALL BRANCHES
First Semester

ENGLISH FOR ENGINEERS
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. **Identify the parts of speech for the underlined words.**
    i)   We <u>must</u> help ourselves
    ii) <u>Oh!</u> we are late for the movie

2. **Correct the following sentences by identifying the errors.**
    i)   Do the roses in your garden smell more sweetly than the roses in ours?
    ii) If you lend him a book, he will lend it to some one else and never you will get it back.

3. **Define the following definitions.**
    i)   Acid   ii) Calculator.

4. **Fill in the blanks with suitable articles.**
    i)   I live in -------- apartment
    ii) I saw ---- movie last night.

5. **Identify the silent letters for the given words.**
    i) Psychology ii) Doubt

6. **Choose the correct homonyms for the following.**
    i) The burning candle created a pleasant _____ in the room. Sent, cent, scent.
    ii) Would you like a piece of fruit? Perhaps a _____? Pear, pair, pare

7. **Choose the correct homophones for the following.**
    i)   She held the _____ in her hand. Reigns, rains, reins
    ii) He was a medieval _____. Night, knight

8. **Fill in the blanks with appropriate tense form of the verbs.**
    SIMPLE PRESENT TENSE
    i)   Every twelve months, the Earth _____(circle) the Sun.
    ii) This delicious chocolate_____ (be) made by a small chocolaty in Zurich, Switzerland.

9. Change the following sentences into impersonal passive voice.
      i) The N. S. S. students will clean our campus.
      ii) We can alter the characteristics of steel in various ways.

10. Complete the following sentence:
      i) If there had been no rains last month, _____.
      ii) If he studied hard,_____

PART – B (5 x 16 = 80 marks)

11. a) What are the characteristics of a good listener?
OR
  b) State the importance of pronunciation with its guidelines

12. a) What are the points to remember while making a call and receiving a call?
OR
  b) As a manager in a company you are asked to write a report of three of your sub ordinates for promotion. Prepare a report along with your recommendations.

13. a) Describe a memorable incident in your life.

OR
  b) Write a note on skimming

14. a) What are the differences between Spoken and Written English?
OR
  b) Write the symbols of Vowels. Explain with examples.

15. a) **Read the passage and draw a flow chart.**

      The earth contains a large number of metals which are useful to man. One of the most important of these is iron. The iron wore which we find in the earth is not pure. It contains some impurities which we must find in the earth is not pure. It contains some impurities which we must remove by smelting. The process of smelting consists of heating the ore in a blast furnace with coke limestone and reducing it to metal. Blasts of hot air enter the furnace from the bottom and provide the oxygen which is necessary for the reduction of the ore. The ore becomes molten, and its oxides combine with the limestone to form a liquid slag. This floats on top of the molten iron, and passes out of the furnace through a tap. The metal which remains is pig iron.

      We can melt this down again in another furnace-a cupola-with more coke and limestone, and tap it out into a ladle or directly into moulds

OR
  b) Write a letter to your friend Ramesh, expressing your sense of relief at his recovery from a serious and long illness

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Sl.No.E

VINAYAKA MISSIONS UNIVERSITY, SALEM

B.E. DEGREE EXAMINATION - NOV /DEC – 2018

COMMON TO BME, CSE, EEE, ECE, IT AND MECT

First Semester

ESSENTIAL OF CIVIL AND MECHANICAL ENGINEERING

(Candidates admitted under 2015&2016 Regulations - CBCS)

Time: Three hours　　　　　　　　　　　　　　　　　　Maximum: 100 marks

Answer **ALL** questions

Use separate Answer books for Part I and Part II

PART – I: CIVIL ENGINEERING　　　　(50 marks)

PART – A (10 x 2 = 20 Marks)

1. What is meant by offset?

2. How brick earth is classified?

3. What are the uses of cement?

4. State the types of concrete

5. List out different types of shallow foundations.

6. What is meant by Shallow foundation?

7. Differentiate between stretcher bond and header bond.

8. List out the mortars used in masonry work.

9. Write short notes on gravity dam.

10. Define a lintel and mention the materials which are commonly used to construct it.

PART – B (3 x 10 =30 Marks)

1 . a) Draw 10 conventional symbols.

OR

b) What is chaining and explain the types of chain.

2. a) Explain different types of cement.

OR

b) Explain with neat sketches the different types of shallow foundations.

3. a) Briefly explain the types of Floors

OR

b) Write short notes on types of dames.

(P.T.O)

PART – II: MECHANICAL ENGINEERING   (50 marks)

PART – A (10 x 2 = 20 Marks)

1. List out the different kinds of fossil fuels.

2. State the advantages and disadvantages of solar energy.

3. What is meant by super heater?

4. Differentiate the Nuclear fission and fusion.

5. What is meant by moderator?

6. List out the applications of four stroke and two stroke engines.

7. What is known as refrigerant?

8. Give some forging operations.

9. Why is a neutral flame extensively used in oxy-acetylene welding?

10. State the advantages and disadvantages of gas welding.

PART – B (3 x 10 =30 Marks)

11. a) Draw the layout and explain the working principle of steam power plant.

OR

b) Compare the steam power plant with hydro power plant.

12. a) Explain the vapour compression refrigeration system with neat sketch.

OR

b) Discuss the working principle of a window room air conditioning system with neat sketch

13. a) Briefly explain the preparation of the Green sand moulding with neat sketch.

OR

b) Explain with neat sketch about the Arc welding.

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Sl.No. 1596

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E-DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO ALL BRANCHES
FIRST SEMESTER
ESSENTIALS OF COMPUTER SCIENCE AND ENGINEERING
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What is mean by hardware?

2   Define Booting.

3   Write notes on Bullets and numbering in MS Word.

4   Mention the uses of MS Excel.

5   List out the way how algorithms may be represented.

6   Write an algorithm to find the area of a circle.

7   In what way to analyze an algorithm.

8   Give an example for top-down analysis.

9   List out any four formatting tags in HTML.

10   How you define href, target and name Attributes?

PART-B (5 x 16 = 80)

11 a.   Explain the block diagram of a Computer with neat sketch.

OR

   b.   Describe the services provided by Internet.

12 a.   Briefly explain table menu in MS Word.

OR

   b.   What is a chart and explain different steps for inserting a chart in Excel.

13 a.   What is flowchart? Explain the symbols used in drawing the flowchart. Also write the rules and advantages of using flowcharts.

OR

   b.   Write an algorithm and flowchart for generating Fibonacci series.

14 a.   Discuss the features of an algorithm.

OR

   b.   Explain the classification of Algorithms.

15 a.   To create a web page to showing an ordered & unordered list of name of your five friends.

OR

   b.   Explain in detail about HTML image tags.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E. DEGREE EXAMINATION- NOV /DEC – 2018
COMMONTO AERO, AUTO, CIVIL, ECE, EEE,
EIE, CSE, IT, BME, MECH& & MECT
Second Semester

BUSINESS ENGLISH

(Candidates admitted under 2015&2016 Regulations - CBCS)

Time: Three hours   Maximum: 100 marks

Answer **ALL** questions
PART – A (10 x 2 = 20 Marks)

1. Correct the following sentences using subject and verb agreement.

    a). He can able to operate the computer.

    b) One of my books are missing.

2. Fill in the blank with suitable prepositions.

    a) They ceased work _____ sunset.

    b) He wrote the answer _____ ink.

3. **Combine the sentences showing cause and effect relations.**

.   a) The machine was tested. It was installed.

    b) He was sick. He went to consult a doctor.

4. **Write the meaning for the following phrasal verbs and make sentences of your own.**

    a). Break up   b). Agree with

5. **Make your own sentences using the following idiomatic phrases**

    a) Catch one's eye   b) Jack of all trades

6. **Write British English words for the following American English words.**

    a) Fulfill   b) Favor

7. **Write American English words for the following British English Words.**

    a) Litre   b) Mould

8. **Make your own sentences for the following compound words.**

    a) Boat house   b) . Animal behavior.

9. **Read the answers and frame the questions**.

    a) My father is sixty years old.   b) I come from Bangkok

10. **Find out the stress for the following words.**

    a). Before   b). Television

PART-B (5 x 16 = 80 Marks)

11.a) Write some interpersonal etiquette for negotiation skill.

OR

b) What are the important points to be followed by the e-mail users?

12.a) Write a note on Stress.

OR

Rewrite the following jumbled sentences in the correct order.

b) i. If that strikes oil, then production wells can be drilled.

  ii. They carry out surveys from the ground and from the air using a variety of instruments. And they bore into the rocks to take samples.

  iii. When Petroleum engineers search for oil, they look for certain types of rock layers, or strata, which they know from past experience, can trap oil.

  iv. If it indicates that oil may be present, a test well is drilled.

  v. Oil is found underground trapped in the layers of rock.

  vi. When all the information is collected and analyzed, of the underground strata is obtained.

  vii.They also set off explosions in the ground and record the waves reflected from the underground rock layers.

  viii. This is called seismic surveying.

13.a) Recommendations that should be followed for safety in a factory.

OR

b) Write a set of eight recommendations following which you could avoid the attack of swine flu.

OR

14.a) Write instructions that should be followed in computer Laboratory.

OR

b) Write a letter to the Manager of Sharptronics, Chennai. Calling for quotation for the following items. Assume that you are the purchase officer.

Items	Nos
Blue Star AC	3
Usha fans	7
L G Television 32"	1
L G Refrigerator	1

15.a) Prepare a checklist to find a suitable accommodation for your family.

OR

b) Explain the following Proverbs 'No pain, no gain' and Cleanliness is next to Godliness.

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Sl.No. E1553

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO ALL BRANCHES
SECOND SEMESTER
CHEMISTRY FOR ENGINEERS
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Define oxidation and reduction.

2   State the reaction when a lead storage battery is recharged?

3   Name any two Coagulants.

4   What is cathodic protection?

5   Why are plastics indispensible in everyday life?

6   What is degree of polymerization?

7   Define component with example.

8   Calculate the degree of freedom for $2 H_2(g) + O_2(g) \rightarrow 2 H2O(v)$

9   Give the frequency region of Infrared spectrum?

10   State Retention time.

PART-B (5 x 16 = 80)

11 a. Explain the determination of EMF by Poggendorff's method.

OR
  b. Discuss the electrochemical series and its applications.

12 a. (i)How is internal treatment of boiler water carried out?
       (ii) Describe the principle and method involved in the determination of different types and amount of alkalinity of water.

OR
  b. (i) Differentiate between chemical corrosion and electrochemical corrosion.
      (ii) Illustrate the reactions involved in differential aeration corrosion with reference to the iron material.

13 a. (a). What are ceramics and how they are classified? Write the uses of ceramics.
       (b). Write a note on Special cements.

OR
  b. Write the preparation, properties and uses of the following
      (i) PVC (ii) Teflon (iii) Bakelite

14 a. With suitable examples explain the terms phase, component and degree of freedom.

OR

b. Write a detail note on harmful effects of radioactive isotopes.

15 a. Describe Gas chromatography with neat diagram.

OR

b. How will you estimate metals by flame photometer?

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Sl.No. 1292

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO ALL BRANCHES
SECOND SEMESTER
C PROGRAMMING
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What are the memory requirements of primary data type?

2   Mention the various types of operator

3   Write the syntax of switch statement.

4   Write the Syntax of for statement?

5   Find the length of following strings using strlen( ) function,
       char s1[ ]="program";
       char s2[ ]="importance";

6   How to declare a union variable?

7   Define library function

8   What are the advantages of using a pointer?

9   Write the rules for preprocessor directives.

10   What is the use of fseek( ) function?

PART-B (5 x 16 = 80)

11 a.   Explain the Arithmetic and relational operators in C with suitable program.

OR

   b.   Write a C program
        i) To find sum of 5 numbers.
        ii) To find simple interest.

12 a.   Explain the types of looping statements?

OR

   b.   Write a C program:
         a. i. To find the   factorial of a given number using while statement
         b. ii. To find the factorial of a given number using for statement

13 a.   Write a C program to explain the concept of structure.

OR

   b.   Write a C program to explain the concept of structure within structure.

14 a.   Discuss the pointer expressions used in the C program.

OR

b. Write a C program to implement function returning pointers.

15 a. Write a C program to altering the allocated memory.

OR

b. Write about the following function,
i. fputs( ) ii. fgets( ) iii. fread( ) iv. fwrite( )

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E. DEGREE EXAMINATION- NOV /DEC - 2018
COMMON TO CSE AND IT
Third Semester
NUMERICAL METHODS, PDE AND APPLICATIONS
(Candidates admitted under 2015&2016 Regulations - CBCS)

Time: Three hours   Maximum: 100 marks

Answer **ALL** questions

PART – A (10 x 2 = 20 Marks)

1. Which has faster convergence either Gauss-Seidel or Gauss–Jacobi method?

2. Find an iterative formula to find $\sqrt{N}$, where N is a positive number.

3. If $f(3) = 5$ and $f(5) = 3$, what is the form of $f(x)$ by Lagrange's Formula?

4. When will you use Newton's backward interpolation formula?

5. Find the complete solution of the PDE $p + q = x + y$.

6. Find the Particular Integral of $\left(D^2 + 3DD' + 2D'^2\right)z = \sin(x + 5y)$.

7. Find the half-range sine series for $f(x) = x^2$ in $(0, \pi)$

8. In the Fourier series expansion of $f(x) = |\sin x|$ in $(-\pi, \pi)$. What is value of b_n

9. How do we classify the second order partial differential equation?

10. In the wave equation $\dfrac{\partial^2 y}{\partial t^2} = a^2 \dfrac{\partial^2 y}{\partial x^2}$ what does a^2 stand for?

PART-B (5 x 16 = 80 Marks)

11.a) Find the root of $xe^x = 3$ by Regula falsi method correct to 3 decimal places.

OR

  b) Solve the system of equations by Gauss elimination
     method. $10x - 2y + 3z = 23$; $2x + 10y - 5z = -33$; $3x - 4y + 10z = 41$.

12.a) Using Newton's Forward Interpolation Formula, find the value of Sin 47° given that Sin
      45° = 0.7071; Sin 50° = 0.7660; Sin 55° = 0.8192; and Sin 60° = 0.8660.

OR

  b) Obtain the value of $y(5)$, using Bessel's formula given

x	0	4	8	12
$f(x)$	143	158	177	199

13.a) (i) Form the partial differential equation by eliminating f from $f(xy + z^2, x + y + z) = 0$

   (ii) Find the complete solution and singular solution of $z = px + qy + p^2 - q^2$

OR

  b) Solve $r + s - 6t = y\cos x$.

14.a) Obtain the Fourier series for the function $f(x) = x \cos x$ in $(-\pi, \pi)$

OR

b) Find the Fourier series expansion of period 2π for the function $y = f(x)$ which is defined

in $(0, 2\pi)$ by means of the table of value given below. Find the series up to the third harmonic

x	0	$\dfrac{\pi}{3}$	$\dfrac{2\pi}{3}$	π	$\dfrac{4\pi}{3}$	$\dfrac{5\pi}{3}$	2π
y	1.0	1.4	1.9	1.7	1.5	1.2	1.0

15.a) A uniform string is stretched and fastened to two points $x = 0$ and $x = l$ apart. Motion is

started by displacing the string into the form of the curve $y = k \sin^3\left(\dfrac{\pi x}{l}\right)$ and then releasing

it from this position at time $t = 0$. Find the displacement of the point of the string at a distance
x from one end at time t.

OR

b) square plate is bounded by the lines $x = 0$, $y = 0$, $x = 20$ and $y = 20$. Its faces are insulated.

The temperature along the upper horizontal edge is given by $u(x, 20) = x(20 - x)$,

while the other three edges are kept at $0°C$. Find the steady state temperature distribution in

the plate.

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Sl.No. E1530

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO BME,CSE,EEE AND ECE
THIRD SEMESTER
DIGITAL ELECTRONICS
(Candidates admitted under 2015 &2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What is meant by natural BCD code?
2   Why is a hexadecimal number system called as an alphanumeric number system?
3   State the associative property of Boolean algebra.
4   Define integrated circuit.
5   Give the truth table of a full adder.
6   Specify the application of combinational circuit.
7   Define synchronous counter.
8   What is BCD counter?
9   Define control logic.
10 Mention the type of operations most often encountered in digital system.

PART-B (5 x 16 = 80)

11 a.   Convert the following numbers with the indicated bases:
i) $(10110001101.1111001)2 = (?)8$, $(173.124)8 = (?)2$ and $(CAD)16 = (?)8$
ii) $(10110001101011.1111001)2 = (?)16$ and $(306.D)16 = (?)2$

OR

b.   a) With a suitable example explain the signed binary numbers in detail.
b) i)Multiply the binary numbers 1001 by 1101 ii) Subtract the binary number 1011 and 0110.

12 a.   i) Implement the following Boolean function using NOR gates.
 F = (AB'+A'B)(C+D)
ii) Simplify the following Boolean function in SOP and POS and implement the output expression by using logic gates:
 $F(A,B,C,D)= \sum (0,1,2,5,8,9,10)$

OR

b.   a) Simplify the Boolean function $F(W,X,Y,Z)= \sum (5,6,9,10)$ Which has the don't-care conditions $D(W,X,Y,Z)= \sum (0,2,11)$
b) Implement the exclusive-OR function by using digital logic gates.

13 a. Design a half and full subtractor circuit with inputs x and y and outputs D and B. Implement the output expression by using digital logic gates.

OR

2

b. Design a 2-to-4-line and 3-to-8 line Decoder circuits.

14 a. Using JK flip flops, design a synchronous counter which counts in the sequence,000,001,010,011,100,101,110,111,000

OR

b. Design and explain the working of a 4-bit ripple counter with a neat diagram.

15 a. Illustrate ASM with suitable example.

OR

b. Explain the HDL description of binary multiplier.

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Sl.No. 1467

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
THIRD SEMESTER
DIGITAL PRINCIPLES AND SYSTEM DESIGN
(Candidates admitted under 2015 &2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Specify the radix and the symbols used in ternary, quinary and hexadecimal number systems.

2   List out the basic rules for binary addition.

3   Give the logical expression for sum and carry of a half adder.

4   What do you meant by comparator?

5   Define synchronous counter.

6   Mention the 2 kinds of behavioral statements in VHDL for sequential circuit.

7   When does race condition occur?

8   Define critical and non-critical races.

9   Give examples of Random –access memory.

10   Mention the full custom ASIC design.

PART-B (5 x 16 = 80)

11 a.   Explain the logic gates with neat diagram.

OR

b.   Simplify the given function by using K- map technique and draw the equivalent diagram for the output function by using logic gates.
i) F(A,B,C,D) = $\sum$ m(0,1,2,4,5,6,8,9,12,13,14)
ii) F (A,B,C,D) = BC' D+ A'BCD + B'CD' + A'B'C'D' + AC'D

12 a.   Design a half and full subtractor circuit with inputs x and y and outputs D and B .Implement the output expression by using digital logic gates.

OR

b.   a)Implement the following functions with an 4:1 multiplexer
F (A, B, C) =$\sum$m (1, 3, 5, 6)
b) Implement the following functions with an 8:1 multiplexer
F(A,B,C,D)= $\sum$m (0,1,3,4,8,9,15)

13 a.   Using   JK   flip   flops,   design   a   synchronous   counter   which   counts   in   the sequence,000,001,010,011,100,101,110,111,000

OR

b.   Discuss in detail about the clocked sequential circuit design and analyze with suitable example.

14 a.   Explain the fundamental mode asynchronous sequential circuit.

b. Explicate the different methods of state assignment.

15 a. Explain the sequential programmable devices.

OR

b. Explain the error detecting and correcting codes.

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Sl.No. 1510

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E -DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO CSE AND IT
THIRD SEMESTER
OBJECT ORIENTED PROGRAMMING USING C++
(Candidates admitted under2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1

Write down the syntax of a class.

2

What is an inline function?

3

Write down the syntax for constructor and destructor.

4

What are the characteristics of destructor?

5

How can member function be declared as template function?

6

How are multiple catch blocks defined?

7

Define inheritance.

8

What is cross casting?

9

What is the stream?

10

List out various types of string handling functions.

PART-B (5 x 16 = 80)

11 a. Write short notes for the following: Access specifier   ii. Static variable   iii. Message passing   iv. Reusability

OR

b.

Write a program to calculate simple interest to implement the concept of data encapsulation.

12 a.

What is copy constructor? When a copy constructor is called? Explain with example.

OR

b.

Write a program to overload binary operator by using friend function.

13 a.

Write a program to implement the concept of overloading template function.

OR

(P.T.O)

b.

Write a C++ program for uncaught exception.

14 a.

Write a C++ program to implement the concept of hierarchical inheritance.

OR

b.

Write a short notes on, i. Down casting   ii. Virtual base class

15 a.

Write a C++ program for random access of files.

OR

b.

Explain the following with examples: I) String insert II) String concatenation.

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Sl.No. 1914

SUBJECT CODE: 35015304/35016305

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS-NOV/DEC- 2018
COMPUTER SCIENCE AND ENGINEERING
THIRD SEMESTER
DATABASE MANAGEMENT SYSTEMS
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What are the components of storage manager?
2   List the various types of keys in a database.
3   What is relation model?
4   Differentiate Embedded SQL and Dynamic SQL.
5   What are the uses of functional dependencies?
6   What is trivial dependency?
7   Give the reasons for allowing concurrency?
8   What is upgrade and downgrade?
9   Distinguish primary index and secondary index?
10   What are the steps involved in query execution?

PART-B (5 x 16 = 80)

11 a.   Describe the following: a). Data abstraction b). Mapping cardinalities
                                OR
   b.   In what way data-manipulation languages are different from conventional procedural
        languages? Explain.

12 a.   Explain the following with suitable example
        a). Select statement & its various forms b). Sub queries
        c). Order by   d). Group by
        e) Aggregate Functions (min, max, count, sum, avg) f) String operation
                                OR
   b.   Briefly explain about join query and its types with example.

13 a.   Explain about insert, delete and update anomalies.
                                OR
   b.   What is mean by Relational database design and explain briefly?

14 a.   What is concurrency control and explain need for concurrency control?
                                OR
   b.   Explain about two-phase commit protocol.

                                                                    (P.T.O)

15 a. Explain the following a). fixed length records b). variable length records

OR

  b. Write algorithms to compute the following joins a). Nested-loop join   b). Block nested-loop join c). Indexed nested-loop join d). Merge join

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S.No.1020

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON CSE AND IT
THIRD SEMESTER
DATA STRUCTURES
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Define Stack ADT (LIFO/FILO).

2   Define Data structure.

3   Construct an expression tree for the following a b + c d e + * *

4   What are the operations possible in a binary search tree?

5   What is the main use of heap?

6   Define array implementation of Binary Heap.

7   Define Open Addressing.

8   When the Disjoint set Union / Find algorithm is dynamic?

9   Define Graph.

10   Define total degree of a graph.

PART-B (5 x 16 = 80)

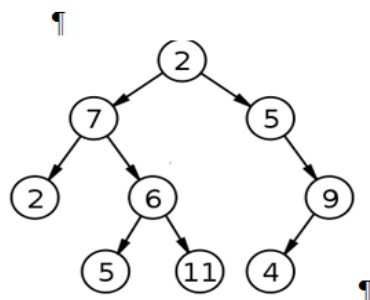11 a. Describe in detail about linked list implementation of stack.
OR
   b. Explain Tower of Hanoi problem in detail.

12 a. Explain the concept of binary tree.
OR
   b. Perform inorder, preorder and postorder traversals for the tree given below

13 a. Construct a min heap tree for the following 5,2,6,7,1,3,8,9,4.
OR

(P.T.O)

b. Construct a splay tree for the following 8,17,1,14,16,15.

14 a. Explain the separate chaining collision resolution techniques in detail.

OR

b. Show the result of the following sequence of instructions: Union(2,3) Union(3,5) when the unions are
a)Performed arbitrarily
b) Performed by height
c) Performed by size.

15 a. Explain Dijkstra's algorithm with an example.

OR

b. Explain Prim's algorithm with an example.

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Sl.No. 1309

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
FIFTH SEMESTER
ELECTIVE - MOBILE APPLICATION DEVELOPMENT
(Candidates admitted under 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   List the uses of mobile application.

2   Define Third party framework?

3   List out the various design issues that needs to be considered during the development of mobile application.

4   Define cohorts.

5   Define mobile cloud architecture.

6   what are different applications for multimedia.

7   What is Persisting data in SQLite?

8   What are the three ways to Integrate Social Media?

9   What is the use of core location?

10   How to integrate address book in Social media?

PART-B (5 x 16 = 80)

11 a.   What is Requirement Gathering? Explain in detail.

OR

b.   Define Myths? Explain in detail with suitable example.

12 a.   Discuss various user interfaces in mobile application.

OR

b.   Discuss different types of mobile OS in detail.

13 a.   Explain with diagram the mobile cloud architecture.

OR

b.   Explain in detail about interactive multimedia application.

14 a.   Explain how to interact with UI with suitable example?

OR

b.   Explain in detail about packaging and its applications?

15 a.   Explain Data Persistence using core data?

OR

b.   Discuss briefly the integration of calendar and address book with social media application.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)

B.E DEGREE EXAMINATIONS – NOV/DEC-2018

COMPUTE SCIENCE AND ENGINEERING

Fourth Semester

PROBABILITY AND QUEUEING THEORY
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Find the m.g.f. of a random variable X having the p.d.f.

$$f(x) = \begin{cases} \dfrac{1}{3}, & -1 < x < 2 \\ 0, & otherwise \end{cases}$$

2. If a random variable 'X' has the m.g.f $M_X(t) = \dfrac{2}{2-t}$, Find the Mean.

3. 10 coins are thrown simultaneously. Find the probability of getting atleast 7 heads.

4. Prove that $M_X(t) = \dfrac{e^{bt} - e^{at}}{(b-a)t}$ for uniform distribution in the interval (a,b).

5. Find k if the joint probability density function of a bivariate random variable (X, Y) is given by

$$f(x, y) = \begin{cases} k(1-x)(1-y) \ if \ o < x < 4, 1 < y < 5 \\ 0 \qquad\qquad otherwise \end{cases}$$

6. Define joint pdf for continuous random variable X and Y.

7. Let $A = \begin{pmatrix} 0 & 1 \\ \dfrac{1}{2} & \dfrac{1}{2} \end{pmatrix}$ be a Stochastic matrix. Check whether it is regular.

8. Define wide sense stationary?

9. Write four different queue models.

10. Consider (M/M/1): $(\infty / FIFO)$ .What is the formula for the average waiting time of a customer in the queue.

(P.T.O)

PART – B (5 x 16 = 80 marks)

11. a) A random variable X has the following probability distribution.

Values of $X = x$	0	1	2	3	4	5	6	7
$p(x)$	0	k	$2k$	$2k$	$3k$	k^2	$2k^2$	$7k^2 + k$

    a) Find the value of 'k'

    b) Find $P(X < 6), P(X \geq 6)$ and $P(0 < X < 5)$

    c) Find the cumulative distribution function of X

    d) *If* $P(X \leq c) > \dfrac{1}{2}$, Find the minimum value of c.

OR

b) A random variable X has the probability density function

$$f(x) = \begin{cases} 2x, & 0 < x < 1 \\ 0, & \text{Otherwise} \end{cases}$$

Find   (i) $P\left(X > \dfrac{3}{4}\right)$ (ii) $P\left(X > \dfrac{1}{2}\right)$ (iii) $P\left(\dfrac{1}{2} < X < \dfrac{3}{4}\right)$

    (iv) $P\left(\dfrac{X > \dfrac{3}{4}}{X > \dfrac{1}{2}}\right)$

12. a) *i*) If X is a Poisson variate such that $P(X = 1) = \dfrac{3}{10}$ and $P(X = 2) = \dfrac{1}{5}$,

    find $P(X = 0)$ and $P(X = 3)$.

  ii)If X is a Poisson variate such that $P(X = 2) = 9P(X = 4) + 90P(X = 6)$,

    Find (a) Mean of X (b) Variance of X.

OR

(P.T.O)

b) *i*) Find the moment generating function of Poisson distribution.

   ii) The number of monthly breakdown of a computer is a random variable having a Poisson distribution with mean equal to 1.8 . Find the probability that this computer will function for a month with only one breakdown.

13. a) *i*) Given the following joint density function

$$f(x, y) = \begin{cases} \dfrac{8}{9}xy, & 1 < x < y < 2 \\ 0, & otherwise \end{cases}$$

      a) Find the Marginal Density functions of X and Y.

      b) Find the conditional density function of Y given $X = x$.

  ii) Find the Correlation coefficient for the following data.

X	10	14	18	22	26	30
Y	18	12	24	06	30	36

OR

b) The two lines of regression are

    $8x - 10y + 66 = 0$

    $40x - 18y - 214 = 0$

    The Variance of $X = 9$.

    Find   i) The mean values of x and y

          ii) The correlation coefficient between x and y

14. a) Show that the random process $X(t) = A\cos(wt + \theta)$ is wide sense stationary if A and ω are constants and θ is uniformly distributed over the interval $(0, 2\pi)$.

OR

b) The transition probability matrix of a Markov chain $\{X_n\}$, having states 1,2, and

   3 is $P = \begin{bmatrix} 0.1 & 0.5 & 0.4 \\ 0.6 & 0.2 & 0.2 \\ 0.3 & 0.4 & 0.3 \end{bmatrix}$ and the initial distribution is $P^{(0)} = (0.7, 0.2, 0.1)$.

    Find   (i) $P\{X_2 = 3\}$ and

       (ii) $P\{X_3 = 2, X_2 = 3, X_1 = 3, X_0 = 2\}$.

15. a) In the railway marshaling yard, goods trains arrive at a rate of 30 trains per day.

Assume that the inter-arrival time follows exponential distribution and the

service time distribution is also exponential with an average of 36 minutes.

Calculate the following:

(i) The mean queue size

(ii) The probability that the queue size exceeds 10

(iii) If the input of trains increases to an average of 33 per day, what will be the
change in the above qualities?

OR

b) Customers arrive at a watch repair shop according to a poisson process at a rate
of one per every 10 min and the service time exponential random variable with
mean 8min. Find L_s, L_q, W_s. What is the probability that the server idle?

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO CSE AND IT
FOURTH SEMESTER
COMPUTER ORGANIZATION AND ARCHITECTURE
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Define computer performance factor.

2   Define I/O technique.

3   List out the names of different micro operation.

4   Define abnormal situation handling.

5   Define memory interleaving.

6   Define write back policy.

7   Write the function of device controller.

8   Write any two advantages of asynchronous transfers.

9   What are levels of parallelism?

10   Define MESI protocol.

PART-B (5 x 16 = 80)

11 a.   Define I/O techniques & Explain with neat diagram.

OR

   b.   Discuss in detail about computer architecture & organization.

12 a.   Explain with diagram about typical minicomputer data path and mainframe data path.

OR

   b.   Explain about instruction cycle and decision involved in processor design.

13 a.   Explain virtual memory and its mechanism with suitable diagram & list out merits?

OR

   b.   Explain the following
        a. ROM   b. Main memory allocation

14 a.   Explain the concept of I\O port and instruction of I\O port with neat diagram.

OR

   b.   What is I/O technique? & explain any 3 methods.

15 a.   What are the different approaches of high performance computer architecture and also explain the levels of parallelism?

OR

   b.   What is multiprocessor systems & explain Interconnection structure.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E-DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO CSE AND IT
FOURTH SEMESTER
JAVA PROGRAMMING
(Candidates admitted under 2015&2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   How is Java more secured than other languages?

2   Mention the role of Polymorphism in Java.

3   Elucidate on the concept of Inheritance.

4   How will you initialize an array?

5   List out the methods under reflection used to analyze the capabilities of classes?

6   Give short notes on Dynamic proxy.

7   Why Errors are not checked in Java?

8   Differentiate between the 'Font' and 'FontMetrics' class.

9   Mention the different states of a thread.

10   What does the Serializable interface do?

PART-B (5 x 16 = 80)

11 a.   With an example code, explain Constructors.

OR

   b.   With an example describe abstract classes and Differentiate between abstract and concrete classes.

12 a.   Explain Arrays in Java with an example.

OR

   b.   Write a program to a) Compare two strings b) How to search a word inside a string?

13 a.   What is object cloning? Explain deep copy and shallow copy with examples.

OR

   b.   What is proxy class? Develop a Java code for constructing a proxy object.

14 a.   How are mouse events generated? Elaborate with sample codes.

OR

   b.   Explain about layout management available in Java.

15 a.   Write a Java program to create and implement threading by implementing the Runnable interface.

OR

   b.   What is meant by Executors? Explain in detail.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E-DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO CSE AND IT
FOURTH SEMESTER
OPERATING SYSTEMS
(Candidates admitted under 2015& 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Define the term "co-operating processes".
2   Give the multithreading models.
3   Define Pre-emptive scheduling.
4   When does a race condition occur?
5   Write some memory management functions.
6   What is TLB?
7   Give examples for file types.
8   What is the use of tree structured directories?
9   Give examples for disk scheduling algorithms.
10   How is the total capacity of the disk calculated?

PART-B (5 x 16 = 80)

11 a.   Discuss in detail about the types of system calls with examples.

OR

b.   Explain in detail about the threading issues.

12 a.   Explain the critical section problem and propose a solution for it.

OR

b.   Describe about producer consumer problem.

13 a.   Explain about fragmentation in detail.

OR

b.   Explain the steps in handling a page fault with diagram.

14 a.   Describe about file protection in detail.

OR

b.   Explain about directory implementation.

15 a.   Describe about the levels of RAID in detail.

OR

b.   With diagram explain the Kernel I/O subsystem.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO BME,CSE,ECE AND IT
FIFTH SEMESTER
ENVIRONMENTAL SCIENCE AND ENGINEERING
(Candidates admitted under 2015 &2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What is called a Mineral? Give two examples.

2   State environmental effects of extracting and using mineral resources.

3   Define producers, consumers and decomposers in an ecosystem.

4   Differentiate between species and genera.

5   Name any four air pollutants and their sources and effects.

6   Define the term incineration.

7   Enlist the objectives of air pollution act.

8   Write an account on issues involved in enforcements of environmental legislation.

9   Explain the term population dynamics.

10   What is meant by telemedicine?

PART-B (5 x 16 = 80)

11 a.   Write about the problems and benefits that are faced in constructing a dam.

OR

  b.   Write about nuclear fission and nuclear fusion.

12 a.   Explain various types of Ecological pyramids.

OR

  b.   Discuss the value of Biodiversity.

13 a.   Write in detail about water pollution that is caused by the heavy metals present in it.

OR

  b.   Explain the case studies due to i) Air pollution ii) Water pollution iii) Marine   pollution.

14 a.   Discuss water shed management.

OR

  b.   Write in detail about ozone layer depletion.

15 a.   Write a detailed account on the AIDS disease, its transmission tests and prevention measures.

OR

  b.   Explain how the remote sensing satellites help in the study of environment.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E. DEGREE EXAMINATION- NOV /DEC - 2018
COMMON TO CSE AND IT
Fifth Semester
DISCRETE MATHEMATICS

(Candidates admitted under 2015&2016 Regulations - CBCS)

Time: Three hours   Maximum: 100 marks

Answer **ALL** questions

PART – A (10 x 2 = 20 Marks)

1. Obtain a disjunctive normal form of $P \wedge (P \rightarrow Q)$.

2. Let P : I will study Discrete mathematics.
3. Symbolize "Sam is poor and Ram is intelligent".
4. Find the truth value of $(x)(P(x) \vee Q(x))$ with $P(x): x = 1, Q(x): x = 2$ and the universe of discourse is $A = \{1, 2\}$.

5. How many students must be in a class to guarantee that at least two students receive the same score on the final exam, if the exam is graded on a scale from 0 to 100 points?

6. There are 6 books on Economics, 3 on Commerce and 2 on History. In how many ways can these be placed on a shelf if books on the same subject are to be together?

7. Check whether $(N, +)$ is a group or not.

8. Define normal subgroup.
9. Define Bounded Lattice.

10. Simplify: $(x + \bar{y} + \bar{z})(x + \bar{y} + z)$.

PART-B (5 x 16 = 80 Marks)

11.a) Without using truth table find the PCNF and PDNF of $(P \rightarrow (Q \wedge P)) \wedge (\neg P \rightarrow (\neg Q \wedge \neg R))$.

OR

   b) Without using the truth table show that

   (i) $P \rightarrow (Q \rightarrow P) \Leftrightarrow \neg P \rightarrow (P \rightarrow Q)$.

   (ii) $(P \rightarrow Q) \wedge (R \rightarrow Q) \Leftrightarrow (P \vee R) \rightarrow Q$.

12.a) Prove that $(x)(P(x) \rightarrow (Q(Y) \wedge R(x))), (\exists x) P(x) \Rightarrow Q(y) \wedge (\exists x)(P(x) \wedge R(x))$.

OR

   b) Establish the validity of the following argument

   "All integers are rational numbers. Some integers are powers of 2.Therefore some rational numbers are powers of 2".

13.a) Solve the recurrence relation $S(k)-4S(k-1)-11S(k-2)+30S(k-3)=0$, with $S(0)=0$,

$S(1)=-35$ and $S(2)=-85$.

OR

b) Find the number of integers between 1 and 250 both inclusive that are not divisible by any of
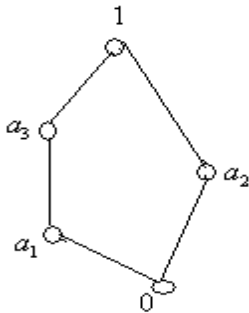
the integers 2, 3, 5 and 7.

14.a) Prove that a group $(G,*)$ is abelian iff $(a*b)^2 = a^2 * b^2, \forall a,b \in G$.
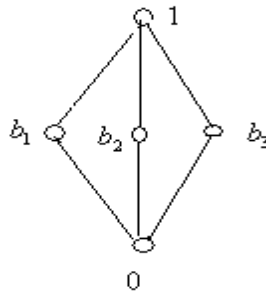
OR

b) (i) Prove that the identity element of a group is unique.

(ii) Prove that the inverse element of a group is unique.

15.a) Check the Lattice given by the diagrams are distributive or not

(a)   (b)

OR

b) Prove the following Boolean lattices

(i) $a \cdot a = a$

(ii) $a + (a' \cdot b) = a + b$

(iii) $a \cdot (a' + b) = a \cdot b$

(iv) $(a \cdot b) + (a \cdot b') = a$

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Sl.No. E1571

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
FIFTH SEMESTER
WEB TECHNOLOGY
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1
   Define firewall.

2
   What is a domain & mention different type of domains?

3
   State the difference between JavaScript and java.

4
   Define function in java script.

5
   Define DTD.

6
   What do you mean by JDBC?

7
   List the disadvantages of using cookies.

8
   What are the ASP objects?

9
   Give the difference between Servlet and Applet

10
   List down the types of JSP Engine.

PART-B (5 x 16 = 80)

11 a.
   Explain about CGI.

OR

   b.
   Explain about request type method in HTTP protocol

12 a.
   Write a JavaScript program to validate a form.

OR

   b.
   With an example explain about JavaScript statements.

13 a.
   Narrate Structuring of data in XML with example.

OR

(P.T.O)

b.

Give a brief overview of the JDBC process with simple application.

14 a.

Describe about the two ways of maintaining the sessions.

OR

b.

How to develop an application using ASP? Explain in detail.

15 a.

Explain the life cycle of JSP.

OR

b.

Explain the benefits of MVC pattern.

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Sl.No.1255

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E DEGREE EXAMINATIONS – NOV/DEC-2018
COMPUTER SCIENCE AND ENGINEERING
Fifth Semester

AUTOMATA THEORY AND COMPILER DESIGN
(Candidates admitted under 2015 & 2016 Regulations-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)
1. What are the needs of epsilon in NFA?
2. Write various applications of automata theory.
3. State Context free grammar.
4. Write the pumping lemma for context free language.
5. What is a 3-address code?
6. List out the compiler construction tools.
7. Write a short note on quadruple.
8. Draw the DAG for a:=b*-c+b*-c.
9. Define bootstrapping.
10. What is meant by inner loop?

PART – B (5 x 16 = 80 marks)
11. a) Construct NFA without ε moves from the NFA given in the diagram?
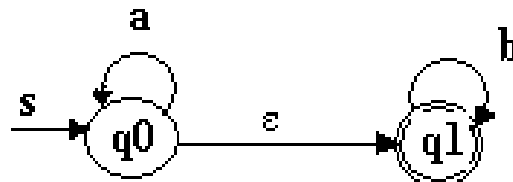
OR

b) Draw a NFA Diagram for following regular expression

(ab+(aab)*)(aa+a)

12. a) Construct a PDA accepting $\{ a^n b^n : n>=1\}$ by final state with neat example.

OR

b) Convert the grammar in to CNF

S➔aSaA / A

A➔abA/b

(p.t.o)

13. a) Discuss in detail about the role of lexical analyzer.

OR

   b) Discuss Operator Precedence Parsing in detail.

14. a) How would you generate the intermediate code for the Boolean expression.

OR

   b) Translate the expression –(a+b)*(c+d)+(a+b+c)into

   i.   quadruples

   ii. Triples

   iii. Indirect triples

15. a) What are the issues in designing of code generator? Explain.

OR

   b) Explain briefly about DAG representation of basic blocks.

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Sl.No.E 1411

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
FIFTH SEMESTER
COMPUTER GRAPHICS
(Candidates admitted under 2015 &2016 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Compare the merits and demerits of Plasma panel display.
2   Formulate governing equation of circle.
3   Analyze Translation and its uses.
4   Define Clipping.
5   Give the single point perspective projection transformation matrix when projectors are placed on the z axis.
6   Define Polygon mesh.
7   What is texture? Mention its application.
8   Describe surface patch.
9   Write down the equation of fractal similarity dimension.
10 Point out some properties of fractal.

PART-B (5 x 16 = 80)

11 a. i)Describe about graphics software.ii)List and discuss various output devices.
OR
   b. i) Explain the steps in mid point circle drawing algorithm with an example.
       ii)Generalize in brief Antialising techniques

12 a. Clip a quadrilateral ABCD with coordinates(10,18) (22,18) (34,27) and (10,37) against a window QRST with coordinates (5,15) (30,15),(30,25) and (5,25) using Cohen Sutherland algorithm algorithm.
OR
   b. i) Illustrate about Nicholl-Lee-Nicholl line clipping . ii) Examine about point clipping.

13 a. i) Create and explain the different 3D object representation in detail.ii)Show that the Bezier curve always touches the starting point(for u=0) and the ending point (for u=1).
OR
   b. i)Explain and Classify three dimensional display methods with example.ii)Illustrate Blobby objects and examples.

14 a. Demonstrate various method of color selection.
OR
   b. Compare and contrast the various color models in detail.

15 a. Demonstrate how images can be created using fractals.
OR
   b. Write notes on Peano Curves.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMMON TO CIVIL AND CSE
SIXTH SEMESTER
DISASTER MITIGATION AND MANAGEMENT
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Write the types of geological hazard.
2   Define flood.
3   Write short notes about Socio Economic Capacity.
4   What are the Factors to be considered during Recovery process?
5   What on earth do you know about water?
6   Write three general charcteristics of cyclone.
7   Expand NDMP.
8   Write Short Notes about Landslide Risk Evalution.
9   What is a Necular hazard?
10   How can we Predict Tsunami?

PART-B (5 x 16 = 80)

11 a.   Describe flood and explain causes of flood

OR

b.   Describe cyclone and explain causes of cyclone.

12 a.   Describe drought and explain causes of drought

OR

b.   Explain the activities during the recovery process.

13 a.   Describe the factors to considered during good construction

OR

b.   Explain Risk and suggest two ways of reducing risk with appropriate examples.

14 a.   Explain briefly State Disaster Response Fund.

OR

b.   Briefly explain Maintaining and updating the plan.

15 a.   Explain Volcanism and discuss the causes and effects .

OR

b.   Explain briefly Financial arrangements.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E. DEGREE EXAMINATION- NOV /DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
Sixth Semester

ARTIFICIAL INTELLIGENCE AND EXPERT SYSTEMS
(Candidates admitted under 2015 Regulations - CBCS)

Time: Three hours   Maximum: 100 marks

Answer **ALL** questions

PART – A (10 x 2 = 20 Marks)

1. Define rational agent.

2. List the fields that form the basis for AI

3. Give the drawback of DFS.

4. Explain depth limited search.

5. Define logical agents.

6. State the situation calculus?

7. Why does uncertainty arise?

8. Define cross validation.

9. Differentiate PCFG and CFG.

10. Define bigram model.

PART-B (5 x 16 = 80 Marks)

11.a) Describe in detail about the nature of environments?

OR

  b) What are all the steps involved in problem-solving. Explain with example?

12.a) Explain BFS, DFS, Depth –limited search.

OR

  b) Explain the memory bounded heuristic search algorithms.

13.a) Discuss in detail mental events and objects with example.

OR

  b) Explain reasoning with default information in detail.

14.a) Discuss in detail about passive reinforcement learning.

OR

  b) Explain generation in reinforcement learning in detail.

15.a) Discuss in brief about machine translation system and statistical machine translation.

OR

  b) What are the factors to be considered when building a speech recognizer?

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
SIXTH SEMESTER
OBJECT ORIENTED ANALYSIS AND DESIGN
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   List the key steps in OOAD.

2   List out the perspectives of UML.

3   How to name an association in UML?

4   Define Composition.

5   Classify the parts of the layers.

6   What are the three ways to show UML attribute?

7   Give short notes on Low Coupling.

8   Define singleton pattern.

9   Define pre and post conditions.

10   Define a component.

PART-B (5 x 16 = 80)

11 a.   How can we build a high quality software? Explain.

OR

b.   Write brief notes on the following:
       i) Association & Aggregation   ii) Inheritance & Polymorphism

12 a.   Describe about the various processes in Booch methodology.

OR

b.   With a neat sketch, explain about UML Sequence and Collaboration Diagrams.

13 a.   Discuss about the concept of an Association in an object oriented system.

OR

b.   Discuss in detail about object analysis- classification.

14 a.   What is CORBA? Explain in detail about its implementation.

OR

b.   Discuss in detail about the following.
       (i) Client Server Computing (ii) Distributed and Cooperative Processes

15 a.   Discuss in detail about the user satisfaction test.

OR

b.   Elucidate the purpose of a View layer interface with the help of a diagram.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)

B.E DEGREE EXAMINATIONS – NOV/DEC-2018

COMPUTER SCIENCE AND ENGINEERING
Sixth Semester

WEB BASED PROGRAMMING USING PHP
(Candidates admitted under 2015 Regulations-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)
1. What is a JavaScript statement? Illustrate an example?
2. What are style sheets?
3. Define PFP.
4. Write four advantages and disadvantages of PHP.
5. Write different loops in PHP.
6. Write example of do while statement.
7. Difference between chr() and ord() function.
8. How do you use array_ reverse functions?
9. What are the technical features of MySQL?
10. How can we find the number of rows in a result set using PHP?

PART – B (5 x 16 = 80 marks)
11. a) List and explain any six HTML elements in detail.
OR
    b) Illustrate the features of Client side and server side scripting.

12. a) Explain Types of arrays with example.
OR
    b) Construct a sample PHP program and give steps to execute it.

13. a) Correlate the different types of operations in PHP.
OR
    b) Explain FORM and INPUT elements with an example.

14. a) Explain briefly about Built in function PHP with example.
OR

    b) Explain parameter passing techniques in PHP.

15. a) Briefly explain about MYSQL.

OR
    b) Develop a simple real time application with database connectivity.
*****

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E-DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
SEVENTH SEMESTER
CYBER SECURITY
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What is Cyber Security?
2   What is resolution in DNS?
3   Show the layout of ICMP echo message.
4   What is IDS?
5   What are the techniques to gain a Foothold?
6   What are the DoS conditions?
7   What is Legacy Text Files?
8   What is Reflective DLL Injections?
9   Write about the job of Honeypots
10   What is Active analysis Automated Malicious Code?

PART-B (5 x 16 = 80)

11 a.   Explain about Domain Name System (DNS).
OR
  b.   Explain about Window Messaging in Microsoft windows Security.

12 a.   Explain the role of DNs and ICMP in Tunneling.
OR
  b.   Explain about Mobile malicious code.

13 a.   Explain about Format String Vulnerabilities.
OR
  b.   Explain about Misdirection, Reconnaissance, and Disruption Methods.

14 a.   Explain about Rootkits.
OR
  b.   Explain about Man-in-the-Middle Attacks.

15 a.   Explain about Honey pot infrastructure in defense analysis techniques.
OR
  b.   Explain about Active Analysis in Automated Malicious Code Analysis Systems.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E-DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
SEVENTH SEMETER
CLOUD COMPUTING
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   What is the relationship between datacenter growth and cost breakdown?
2   Define anything-as-a-service.
3   What information would you use to support the view of full and para-virtualization?
4   How would you show your understanding of virtual machine monitor?
5   How would you classify the cloud enabling technologies?
6   Which of the open source cloud computing platform databases are popular today?
7   How would you organize storage to show block replication?
8   Can you summarize the services that are provided by Window Azure Operating System?
9   Can you propose an alternative for Denial-of-service attack in cloud security?
10   Develop the measures in Guest-OS hardening technique.

PART-B (5 x 16 = 80)

11 a. How would you compose the cloud eco system?
OR
   b. How would you show your understanding of the Cluster Architecture?

12 a. a) What are the features of virtualization supported in multi core processor?
       b) Identify some of the pitfalls that come with virtualization.
OR
   b. How would you use virtual clusters in cloud?

13 a. How would use the inter-cloud resource management in cloud environment?
OR
   b. What can you say about the service tasks and trends in cloud?

14 a. Design the user view of Google App Engine with suitable block schematic.
OR
   b. How would you describe the architecture of OpenStack system?

15 a. What are the fundamental functions required for secure cloud computing? Explain?
OR
   b. Describe in detail. Describe the Security challenges in cloud computing?
              ＊＊＊＊＊＊＊＊＊＊＊＊＊＊＊

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- NOV/DEC - 2018
COMPUTER SCIENCE AND ENGINEERING
SEVENTH SEMESTER
SOFTWARE TESTING
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Illustrate the concept of failure.
2   Define Review.
3   Define Equivalence class partitioning.
4   Define Path.
5   What is Test harness?
6   What is Stress testing?
7   Define milestones.
8   Narrate the simple COCOMO equation.
9   What are the various Severity level hierarchy?
10   What are the various roles in review program?

PART-B (5 x 16 = 80)

11 a.   Describe Origins of defects with neat diagram.
OR
   b.   Give details about Developer / Tester support for developing a defect repository.

12 a.   Discuss about following techniques
        a)Cause – and - Effect graphing b) State transition testing .
OR
   b.   What are the Types of white box testing and explain any two white box testing technique?

13 a.   Explain about the class as testable unit.
OR
   b.   What are the key differences in integrating procedural-oriented systems as compared to object-oriented systems?

14 a.   Give Details about Test Plan Attachments.
OR
   b.   Why is it so important to integrate testing activities into the software life cycle?

15 a.   Narrate on the Types of reviews.

OR
   b.   What role do user/client play in the development of test plan for a project? Should they be present at any of the test plan reviews? Justify your answer.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
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B.E DEGREE EXAMINATIONS – NOV/DEC-2018

COMPUTER SCIENCE AND ENGINEERING

Seventh Semester

ELECTIVE: -BUILDING ENTERPRISE APPLICAITON
(Candidates admitted under 2015 Regulations-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (100 x 1 = 100 marks)

1. The software application , which imbibes _____ of the organizations, which are called enterprise applications.
   A   flowchart
   B   Program Logic
   C   Business logic
   D   Presentation Logic

2. Which one is ensure the applications are "fit for purpose"
   A   Rich user experience
   B   Internationalization
   C   QoS
   D   Transaction Management

3. Output comparators are used in
   A   Static testing of single module
   B   Dynamic testing of single module
   C   Static testing of single and multiple module
   D   Dynamic testing of single and multiple module.

4. Coupling and cohesion can be represented using a
   A   Cause-effect graph
   B   Dependence matrix
   C   Structure chart
   D   SRS

5. Which of these is not a characteristic of Personal Software Process?
   A   Emphasizes personal measurement of work product
   B   Practitioner requires careful supervision by the project manager
   C   Individual practitioner is responsible for estimating and scheduling
   D   Practitioner is empowered to control quality of software work products.

6. Recorded software attributes can be used in the following endeavors :
   (i) Cost and schedule estimates.
   (ii) Software product reliability predictions.
   (iii) Managing the development process.
   (iv) No where
   A   (i) (ii) (iv)   (p.t.o)

B (ii) (iii) (iv)
C (i) (ii) (iii)
D (i) (ii) (iii) (iv)

7. A feasibility study should focus on
   A Technical feasibility
   B Economic feasibility
   C Operational feasibility
   D All of these

8. Which is not a size metric?
   A LOC
   B Function count
   C Program length
   D Cyclomatic complexity

9. Pseudo code can replace
   A Flowcharts
   B Structure charts
   C Decision tables
   D Cause-effect graphs

10. Modules X and Y operate on the same input and output data, then the cohesion is
    A Sequential
    B Communicational
    C Procedural
    D Logical

11. Reasonable approach when requirements are well defined
    A Sequential
    B A good approach when a working core product is required quickly
    C The best approach to use for projects with large development teams
    D A revolutionary model that is not used for commercial products

12. Waterfall model is a
    A Linear model
    B Iterative model
    C Rapid model
    D Interactive model

13. If every requirement can be checked by a cost-effective process, then the SRS is
    A Verifiable
    B Traceable
    C Modifiable
    D Complete

14. The scrum approach originated with agile software development as practitioners
      looked for ways to

    A)   improve communication
    B)   increase throughput
    C)   increase risk
    D)   All of Above

15. .... are of scrum principles.

    A)   Time-boxes
    B)   Cross-functional teams
    C)   Open communications within team.
    D)   All of above
16. In the spiral model 'risk analysis' is performed
    A   In the first loop
    B   In the first and second loop
    C   In every loop
    D   Before using spiral model

17. An SRS
    A   establishes the basis for agreement between client and the supplier.
    B   provides a reference for validation of the final product
    C   is a prerequisite to high quality software
    D   all of the above.

18. The prototyping model of software development is
    A   A reasonable approach when requirements are well defined
    B   A useful approach when a customer cannot define requirements clearly
    C   The best approach to use for projects with large development teams
    D   A risky model that rarely produces a meaningful product

19. The component based development model is
    A   Only appropriate for computer hardware design
    B   Not able to support the development of reusable components
    C   Works best when object technologies are available for support
    D   Not cost effective by known quantifiable software metrics

20. The spiral model of software development
    A   Ends with the delivery of the software product
    B   Is more chaotic than the incremental model
    C   Includes project risks evaluation during each iteration
    D   All of the above

21. RUP and PSP stands for
a) Realtime unified process and Project software process
b) Realtime unified process and Personal software process
c) Rational Unified Process and Project software process
d) Rational Unified Process and Personal software process

22. Which of the following models follow a purity sequential approach
   a) Waterfall model
   b) Spiral model
   c) Iterfall development
   d) Iterative development

23. Which of the following is a non functional requirement of a web based application?
   a) When the user clicks a "read me" link, the color of the link should change from blue to pink
   b) When the user clicks a "read me" link, the next page should be opened within 5 seconds
   c) When the user clicks a "read me" links, the mouse over should show the target page title in a tool tip
   d) When the user clicks a "read me" links, the read me page should load successfully without errors

24. Which of the following is not a graphical language for software design:
   a) UML
   b) DML
   c) EEML
   d) SysML

25. Which of the following does data requirements allow for data ?
   i. Entering data
   ii. Leaving data
   iii. Storing data in product
   iv. All of the mentioned

26. Technical level abstraction includes ?
   i. User level requirement
   ii. physical level requirement
   iii. operational level requirement
   iv. All of the mentioned

27. Which of the following is not a level of the SEI CMM?
   a) Initial
   b) Optimizing
   c) Managed
   d) Defined

(p.t.o)

28. Which of the following concepts is not a part of CORBA?
    a) Polymorphism
    b) Lifecycle
    c) Inheritance
    d) Reuse

29. What is true about UML stereotypes?
    (a) A stereotype is used for extending the UML language.
    (b) A stereotyped class must be abstract.
    (c) The stereotype {frozen} indicates that the UML element cannot be changed.
    (d) UML Profiles can be stereotyped for backward compatibility.

30. The final form of testing COTS software is _____ testing.
    a) Unit
    b) Integration
    c) Beta
    d) Module

31. The relationship between a derived class (or subclass) and base class is referred to as
    (a) Association
    (b) Inheritance
    (c) Polymorphism

32. If a control switch is passed as an argument this is an example of _____ coupling.
    (a) Content
    (b) Common
    (c) Control
    (d) Stamp

33. Software Science bases its estimation of the size of a product on
    (a) Files (Fi), Flows (Fl) and Processes (Pr)
    (b) Lines of Code (kLOC)
    (c) Function Points (FP)
    (d) operands and operators

34. The best way to test the Software Project Management Plan (SPMP) is by
    (a) Prototyping
    (b) Inspection
    (c) Simulation
    (d) Compilation

35. What would be investigated during Requirements analysis?
    (a)System performance , Test Scheduling, Organizational Structure
    (b)Languages , Platforms, Competition
    (c)System Context , User Populations, User Tasks
    (d)Verification, Formal Methods, Accuracy

36. The entity relationship diagram
    (a)Depicts relationships between data objects
    (b)Depicts functions that transform the data flow
    (c)Indicates how data are transformed by the system
    (d)Indicates system reactions to external events

37. Which of the following is not an area of concern in the design model?
    (a)Architecture
    (b)Data design
    (c)Interfaces design
    (d)Project scope

38. Which of the following is not a logical layer of the application in client server system?
    (a)Presentation layer
    (b)Application layer
    (c)Data Management layer
    (d)Programming layer

39. Traditionally, the phase of software development where a formal approach used is
    (a)Programming
    (b)Design
    (c)Requirements
    (d)Planning

40. ROI stands for

    (a) Return on Investment
    (b) Return on Innovation
    (c) Revised of Investment
    (d) None of the above

41. TOGAF stands for

    (a) The Open Group Application Framework
    (b) The Open Group Architecture Framework
    (c) The Open Group Application Function
    (d) The Open Group Architecture Function

42. TOGAF define the -------- sub-architecture
   - (a) 1
   - (b) 2
   - (c) 3
   - (d) 4

43. ------------ Is the enterprise architecture framework for the telecommunications domain?
   - (a) TOGAF
   - (b) POJO
   - (c) NGOSS
   - (d) EJB

44. POJO stands for
   - (a) Plain add java object
   - (b) Plain old java object
   - (c) Plain old jug object
   - (d) None of the above

45. Match it:

   (i)   Logging   -   (a) Data Access Layer
   (ii) Database   -   (b) Business Layer
   (iii) EJB   -   (c) Presentation Layer
   (iv) Web Browser   -   (d) Infrastructure Layer

   Code:
   (a) i-a, ii-b, iii-c, iv-d
   (b) i-a, ii-c, iii-b, iv-d
   (a) i-d, ii-a, iii-b, iv-c
   (a) i-d, ii-b, iii-c, iv-a

46. ----------- is a relationship that exists among the object of the classes
   - (a) Factorization
   - (b) Associations
   - (c) Generalizations
   - (d) Globalizations

47. "Is a" or "a kind of" attributes belongs
   - (a) Factorization
   - (b) Associations
   - (c) Globalizations
   - (d) Generalizations

48. EJB have the process of:
   (a) Business
   (b) Presentation
   (c) Data
   (d) Integration

49. Middle tier is
   (a) Data
   (b) Integration
   (c) Business
   (d) Presentation

50. ----------- Is an open – source rules of engines
   (a) DRules
   (b) DRools
   (c) DRules 2.0
   (d) DRules 1.0

51. UML diagrams created using modeling tools like
   (i) Relational Rose
   (ii) VISIO
   (iii) Together Architect
   (iv) Relational Software Modeler
   (v) by hand

   a) i ,ii, iii, iv   (b) i, ii, iv   (c) iii, iv   (d) i ,ii, iii, iv, v

52. ERD Tools
   a) Together Architect
   b) Erwin
   c) Visio
   d) All of these

53. Which is Correct?
   a) ERD used to represent physical modeling
   b) ERD used to represent Conceptual modeling
   c) ERD used to represent Conceptual and logical modeling
   d) ERD used to represent logical and physical modeling

54. The tool supports XML modeling.
   a) XML Spy
   b) XML Sky
   c) XML Fly
   d) XML Try

(p.t.o)

55.Match the following.
(i) Networking   - (a) TIBCD,CORBA
(ii) IT hardware and software   - (b) ITIL
(iii)Middleware   - (c) DNS, Firewalls
(iv)Infrastructure Management   - (d) MySQL, JBoss,Apache
   Code:
(a) I – b   ii – c   iii – d   iv – a
(b) I – c   ii – d   iii – a   iv – b
(c) I – a   ii – b   iii – c   iv – d
(d) I – a   ii – c   iii – d   iv – b

56. Admin wizards, Commands, Shell Scripting are related to
      a) My SQL, DB2
      b)Linux, Unix, Mac OS
      c) Web logic, JBoss, and Glassfish
      d)Apache, Microsoft ITS

57.The server which accepts HTTP request from a browser.
      a)   Database Server
      b)   Web Server
      c)   Application Server
      d)   Operating System

58.Match the following:
(i) Directory Server   -   a) Apache
(ii) Virtualization   -   b) VMware
(iii)Application Server   -   c) open DS

  Codes:
(I) – A   (ii) – b   (iii) – c
(i) – c   (ii) – b   (iii) – a
(i) – c   (ii) – a   (iii) – b
(i) – a   (ii) – c   (iii) – b

59.Statement 1: MOM is based on Client/Server Architecture
    Statement 2: RPC is also based on Client/Server Architecture
(a) Both Statements are Correct
(b) Both Statements are Wrong
(c) Statement -1 is only Wrong
(d) Statement -2 is only Wrong

60. Architecture and design documentation is relates with
    (a) SaaS
    (b) BAD element
    (c) SAD element
    (d) CAD element

61. Expand MECE:

(a) Mutually exhaustive and collectively exclusive
(b) Mutual enterprise and collectively executive
(c) Mutually exclusive and collectively exhaustive
(d) None of these

62. AOP is related with

(a) Logging and error handling
(b) Exception handling
(c) Session Management
(d) Event handling

63. Which is the Server Side Caching frameworks

(a) JBoss Cache, ICS
(b) OSCache
(c) Both (a) and (b)
(d) None of the above

64. Presentation layer Construction done using

(a) Struts
(b) JSF
(c) Tapestry and Stripes
(d) All of the above

65. ------------------ is used to expose a web service as a pojo interface

a) Java API

b) Java Servlet API

c) JAX-WS API

d) JSP-API

66.Match the following :

I.	Class size	-	a.) Class to class
II.	Cyclomatic Complexity	-	b.) XSS
III.	Coupling	-	c.) 8-12 Metric points
IV.	Cross-side scripting	-	d.) 1000 lines of code

Code:

a) I-a   II-d III-c   IV-b

b) I-a   II-b III-c   IV-d

c) I-d   II-c III-a   IV-b

d) I-b   II-c III-d   IV-a

67._____ includes only code profiling and coverage

a) Static code analysis

b) Dynamic code analysis

c) Both of the above

d) None of the above

68._____Coverage of the underlying codebase usually considered as a good
   level of code coverage

a) At least 80%

b) At least 60%

c) At least 50%

d) At least 40%

69. JAR,EAR,WAR are _____ Files

a) Enterprise

b) Web

c) Archive

d) Java

70.Apache Ant coupled with _____ for scripting to be extended

a) Python

b) AJAX

c) Maven

d) Jython

71._____ tool for Unit Testing

a) JUnit

b) Java Unit Test

c) JU

d) JUT

72._____ is/are IDE for Java

a) JCreator

b) Netbeans

c) Eclipse

d) All of the above

73. Which of the following can not be used as the scope when using a JavaBean with JSP?

(a) session

(b) application

(c) request

(d) response

74.ejbCreate() method of CMP bean returns

(a) null

(b) Primary Key class

(c) Home Object

(d) Remote Object

75.Stateful Session beans contain

       (a) Home Interface

       (b) Remote Interface

       (c) Bean Class

       (d) All

76.How many Queues does a MDB listen to ?

       (a) 1

       (b) 2

       (c) Any Number

       (d) 10

77. AJAX coding needs to be done on _____.

    a) only server

    b) only client

    c) client and server

    d) none of these

78.For AJAX to work on the client side, we can have _____ on the server-side.

    a) HTML

    b) CSS

    c) JavaScript

    d) PHP

79.If we use AJAX, _____.

    a) the whole page is refreshed

    b) only the part of interest is refreshed

    c) cannot comment on this

    d) None of the above

80.The "J" in AJAX stands for _____.

    a) JSON

    b) JRuby

    c) Java

    d) JavaScript

81. Verification is:
(a) Checking that we are building the right system
(b) Checking that we are building the system right
(c) Performed by an independent test team
(d) Making sure that it is what the user really wants

82. A regression test:
(a) Will always be automated
(b) Will help ensure unchanged areas of the software have not been affected
(c) Will help ensure changed areas of the software have not been affected
(d) Can only be run during user acceptance testing

83. If an expected result is not specified then:
(a) We cannot run the test
(b) It may be difficult to repeat the test
(c) It may be difficult to determine if the test has passed or failed
(d) We cannot automate the user inputs

84. Which of the following could be a reason for a failure
1) Testing fault
2) Software fault
3) Design fault
4) Environment Fault

85. The process starting with the terminal modules is called -
(a) Top-down integration
(b) Bottom-up integration
(c) None of the above
(d) Module integration

86. The inputs for developing a test plan are taken from
(a) Project plan
(b) Business plan
(c) Support plan
(d) None of the above

87. Function/Test matrix is a type of
(a) Interim Test report
(b) Final test report
(c) Project status report
(d) Management report

88. Defect Management process does not include
(a) Defect prevention
(b) Deliverable base-lining
(c) Management reporting
(d) None of the above

89. 21. Which of these can be successfully tested using Loop Testing methodology?
(a) Simple Loops
(b) Nested Loops
(c) Concatenated Loops
(d) All of the above

90. To test a function, the programmer has to write a _____, which calls the function and passes it test dat(a)
(a) Stub
(b) Driver
(c) Proxy
(d) None of the above

91. Equivalence partitioning is:
(a) A black box testing technique used only by developers
(b) A black box testing technique than can only be used during system testing
(c) A black box testing technique appropriate to all levels of testing
(d) A white box testing technique appropriate for component testing

92. When a new testing tool is purchased, it should be used first by:
(a) A small team to establish the best way to use the tool
(b) Everyone who may eventually have some use for the tool
(c) The independent testing team
(d) The vendor contractor to write the initial scripts

93. Standards and procedures for managing changes in an evolving software product is called?
   (a) Confirmation Management
   (b) Confederation Management
   (c) Configuration Management
   (d) Compatibility Management

94. This Testing Technique examines the basic program structure and it derives the test data from the program logic; Ensuring that all statements and conditions executed at least once. It is called as
   (a) Block box Testing
   (b) White box Testing
   (c) Grey Box Testing
   (d) Closed Box Testing

95. This type of test include, how well the user will be able to understand and interact with the system?
   (a) Usability Testing
   (b) User Acceptance Testing
   (c) Alpha Testing
   (d) Beta Testing.

96. Defects generally fall into the following categories?
   (a) WRONG
   (b) MISSING
   (c) EXTRA
   (d) All the above

97. The defects captured are analyzed for complexity type, security,, impact and other things is called as
   (a) Test Strategy
   (b) Test Planning
   (c) Test Analysis
   (d) Test Execution

98.------------ of user needs to be considered in testing the accessibility features of the system

  (a) Demographics

  (b) Crypto graphics

  (c) Both a & b

  (d) None of the these

99. Interface testing also known as

  (a)   Inter Testing

  (b) Intersystem Testing

  (c)   Interact Testing

  (d)   Interconnection Testing

100. Which are required internationalization requirements?

  (a)   Interface Testing

  (b) Usability Testing

  (c)   Globalization Testing

  (d)   Performance Testing.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- APR/MAY - 2019
COMPUTER SCIENCE AND ENGINEERING
EIGHTH SEMESTER
ELECTIVE -INTERNET OF THINGS
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1 Define supervisory control and data acquisition.

2 Differentiate web of things and IoT.

3 Why do we need a SCADA protocol?

4 List the sensor standards in unified data standards.

5 What are all the key elements of the M2M architecture?

6 What is Grid computing?

7 Evaluate the Network Effect in IoT?

8 What is the full form of CPS in IOT?

9 Analyze the main idea in M2M applications?

10 Define IaaS.

PART-B (5 x 16 = 80)

11 a. Explain four Pillars of IoT and how they are inter-connected with each other?.

OR

b. Briefly explain Secure Middleware for the Internet of Things.

12 a. Summarize the Issues of IoT Standardization and Security.

OR

b. Differentiate Network layer and APS layer.

13 a. Generalize WoT Portals and Business Intelligence.

OR

b. Give the importance of Cloud Standards and its Standardization Efforts.

14 a. What is meant by informational cascades and explain it in details.

OR

b. Discuss in detail about Cascading behaviour in Networks.

15 a. Describe in detail about synchronization in iot with example.

OR

b. Explain briefly about MAI and XaaS

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- APR/MAY - 2019
COMPUTER SCIENCE AND ENGINEERING
EIGTH SEMESTER
ELECTIVE IV- SOFTWARE QUALITY MANAGEMENT
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Give the schematic hierarchical view of software quality.
2   What are the attributes of Gilb's work?
3   What are the ways of killing the Quality Assurance?
4   What is SDD?
5   What is Fish Bone diagram?
6   List out the Reliability Growth models.
7   What are the activities of Reliability growth models?
8   Write short notes on Structure metrics.
9   What are the fundamental principles of ISO 9001 standard
10   Write short notes on Six Sigma concepts.

PART-B (5 x 16 = 80)

11 a.   Explain the Boehm model

OR

b.   List some guidelines of review. Briefly explain.

12 a.   Explain the management review process.

OR

b.   Explain the software inspection process.

13 a.   What are the objectives of inspections? Explain.

OR

b.   What is Dynamic model? Discus the advantages.

14 a.   Explain the complexity metrics and its models

OR

b.   Explain in detail the Cyclomatic Complexity

15 a.   Explain in detail the CMM Model

OR

b.   What are the metrics used in six sigma? Explain.

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VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University)
B.E - DEGREE EXAMINATION –APR/ May -2019
COMPUTER SCIENCE AND ENGINEERING
Eighth Semester
ELECTIVE; - BIG DATA AND ANALYTICS

Three Hours   Maximum: 100 marks

SECTION - A

I. Answer ALL Questions   **(100 x 1 = 100)**

1   Big data can broadly classified into ____
    a.Unstructured data   b.Semistructured data   c.Structured data   d.All the above

2   The popular data mining algorithm are_____
    a. Association rule mining   b .Regression analysis c. Collaborative filtering d. All the above

3   ____ is an open source from IBM
    a.Unstructed information management b. part-of-speech tagging c. Unstructed information management

4   _____ enabling computer to understand human or natural language input
    a.Natural language processing b.Noicy text analysis c.Text analysis. d. Natural processing.

5   Relational databases evolved in   a.1980 s and 1990s b.1990s and 1995s c.1985s and 1995s d.1980s and 1995s

6   Human and technical infrastructure needed to support_____
    a.Storage b.Processing and analysis c.both a&b d.none of these

7   External data resideing outside an organization firewall is
    a.public web b.private web c.protected web d.none of these

8   _____ refers to biases,noise,abnormality in data
    a.veracity &validity b.variability &volatility c.veracity&vol d.All of these

9   CRM stands for
    a.Customer Relationship Management b.Consumer Relationship Management c.None of these

10 Sensor data are
    a.Car sensors b.Smart electronic meters c.airconditioning units d.all of these

11 Data storage are   a.SQL b.MS SQL c.All of these d.None of these

12 _____is the process of Gleaning high quality and meaningfull information   a.Text mining b.data mining c.Data warehouse d.Information mining

13 Text analytics include task such as   a.Text categorization b.Text clustering c.Both of these d.None of these

14 Machine generated sources are   a. Web server logs b.presentation c.Audio and video files d.E-Mail

15 Mongodp is   a.Opensource b.Distributed c.Document oriented database d.all of these

16 XML is popularized by webservices utilizing the ____ principles   a.SOAP b.ASP c.ODBC d.HTML

17 Regression analysis helps to predict the relationship between _____ variables   a.two b.three c.four d.one

18 In regression analysis,the variables which are used to predict the values are reffered to as   **p.t.o**
    a.Dependent variable b.Independent variable c.Both a&b d.None of these

19   _____ is the characteristic of data dealing with its retention
      a.variability b.velocity c.Volatility d.Veracity
20   Near deals time processing or real time processing deals with_____characteristic of data
      a.variability   b.velocity   c.Volatility   d.Veracity
21   _____ is the extracting knowledge from data.
      a. Data science b. Meta data c. Communication d. All of these
22   The technology expertise is good knowledge in
      a.Database   b. Programming   c. Visualization   d. All of these
23   SMP stands_____
      a. Symmetric Multiprocessor System b. Symmetric Multiprocessor Server
      c. Server Multiprocessor System   d. Symmetric Management System
24   Distributed data base system are known as
      a. Loosely coupled   b. Tightly System   c. Shared system d. none
25   there are number of user-friendly _____available in market today.
      a. Business tools b. Analytics tools c. data tools d. All of these
26   CAP theorem is called the
      a.Varian Theorem   b. Brewer's theorem   c. Tolerence theorem d. Cloudera Theroem
27   Eventual consistency is a consistency model used in distributed computing to achieve
      high_____
      a. Schema   b. Security c.Availability d. Consistency
28   Leveraging analytics to improve _____
      a. Operational   b. Tactical   c. Strategic   d. All of these
29   The system will continue to function even when network partition occurs is called
      a. Partition tolerant   b. System tolerant   c. Memory tolerant   d. Tactical tolerant
30   NoSQL databases are
      a. Non relational   b. Relational   c. Fixed   d. Cluster
31   Hadoop developed in the year   a. 2006   b. 2007   c. 2005   c. 2008
32   _____is a robust data base that supports ACID properties of transactions and has the
      scalability of   QL.
      a. SQL   b. NewSQL   c. NoSQL   d. None
33   _____simply stores data files as close to the original form as possible.
      a. HDFS   b. Hbase   c. Hive   d.   Pig
34   _____is a workflow scheduler system to manage Apache Hadoop jobs.
      a. Ambari   b. Hive   c. Zookeeper   d. Oozie
35   _____supports structured data storage for large tables.
      a. HDFS   b. Hbase   c. Hive   d.   Pig
36   Hadoop 1.0 supports the features like
      a. Data storage framework b. Data processing framework c. Both a& b   c. None
37   Amazon web services hold out a comprehensive, end to end portfolio of cloud computing
      services to help   anaging_____
      a. Big data   b. Large data   C. Disk data   d. Cloud data

38   _____ used in predictive and prescriptive modelling
      a. Basic analytics b. Operationalized analytics   c. Advanced analytics d. Monetized
      analytics
39   _____used for enterprise business process.   **p.t.o**
      a. Basic analytics   b. Operationalized analytics   c. Advanced analytics d. Monetized
      analytics

40   Hadoop written in which language? a. JAVA   b. c   c. c++   d. .NET
41   Hadoop supports _____ data formats.
      a.Structured   b. Semi-Structured   c. Unstructured   d. all of these.
42   DMBS supports ---------data formats.
      a.Structured   b. Semi-Structured   c. Unstructured   d. None
43   NameNode uses_____ to store file system namespace.
      a.FsImage   b. Image   d. HsImage. HdImage
44   DataNode is responsible for_____ file operation.
      a. Read b.Write   c. Read/Write   d. None
45   Global Resource Manager distributes _____among Applications
      a. Resources   b. Containers   c. Consistency   d. All of these
46   Application is a _____submitted framework.
      a. Job   b. Wok   d. Memory   d. All of these
47
               _____ is an open source framework managed by Apache Software Foundations.
       a. YARN   b. HDFS   c. RDBMS   d. Hadoop
48   Receipt of a heartbeat implies that the _____is functioning properly.   a. DataNode b.
       Secondary NameNode   c. NameNode   d. LinearNode
49   The blocks of a file are replicated for _____tolerence.
       a.Error b. Fault   c. Recovery   d. None
50   Which file is used for updating MapReduce settings?
        a. Core-site   b)Mapred site   c. hdfs-site   d.Hadoop-env.sh
51   Which eco system project is ideal for use when we have multiple MapReduce and Pig
       program to run in   sequence?
       a. Oozie b. Hive   c. Pig   d. Sqoop
52   _____ open-Source software was developed from Google's MapReduce Concept.
       a.Hadoop   b. Hive   c. Hbase   d. Sqoop
53   How many data nodes can run on a single Hadoop cluster?
        a. Four   b. Three   c. Two   d. One
54   _____perform block creation, deletion and replication upon instruction from the Name
       node. a.Master node   b. Slave node   c. DataNode   d. Storage node
55   The key distinctions of Hadoop
        a. Accessible   b. Robust   c. Scalable   d. All of these
56   _____keeps track of how your files are broken down into file blocks, which node
       store those   locks and the overall health of the distributed file system.
       a.DataNode   b. NameNode   c. MasterNode   d.SlaveNode
57   _____to translate Pig Latin to MapReduce programming.
       a. Translator   b. Compiler   c. Interpreter   d. Assembler
58   HDFS Components_____
        a. Storage component   b. Distributes across several nodes
       c. Natively redundant   d. All of these
59   Version of Hadoop _____   a. Hadoop 2.0   b. Hadoop 3.0 c. Hadoop 4.0   d. Hadoop
       5.0
60   _____is a well based tool for provisiong, managing and monitoring Apache Hadoop
       clusters.
         a. Ambari   b. Hive c. Zookeeper   d. Sqoop
61   Collection in MongoDB contains   **p.t.o**
      a. Schema b. Documents c. Queries d. None of these

62 MongoDB provides gridfs to support the binary data. It can be store up to
    a. 4mb b.8mb c.2mb d.1mb
63 It is good with complex data structure and comfortable with linux , mac os , Solving and indows
    a. Oracle b. RDBMS c.mongoDB d.All the above
64 It has support for transactions and static data.It allow queries to be run
    a. MongoDB b.No SQL c.DBMS d. Traditional RDBMS
65 This mongo Import command used to imports
    a.CSV b.TSV c.JSON d. All of the above
66 A: mongo DB is a non-relational open source distributed database   B : It has no support for multi-statement transaction   a. a&b correct   b. a Only correct c.B only correct d.a & b wrong
67 Mongo Db uses these type of files
    a. documents b. record c. test mapped d. memory mapped
68 Mongo DB uses BSON a binary object format similar to but more expensive than
    a. JSON b. No SQL c.XML d.SQL Plus
69 Mongo DB is
    a. RBDBMS b. Object oriented DBMS c.Documented oriented DBMS d. Key value store

70 The maximum BSON document size is
    a. 8mb b. 4mb c. 32mb d.16mb
71 Which command in mongo DB is equivalent to SQL Select
    a. search() b. find() c.document() d.all the above
72 A: cassendra does not compromise on availability
    B: Cassendra have a master-slave architecture
    a). A&B true   b. A true , B false   c.A&B true   d. A&B false
73 Each map task is broken into   a. Shuffle b. Sort c. output format d. None of these
74 The generated output of the intermediate data is passed to the reducer it is from
    a. Combiner class b. Reducer class c. Input class d.output class
75 Combiner and partitioner are used techniques
    a. mapping b. optimization c. Sorting d. Reduce
76 In mapreduce programming reduce function is applied_____group at a time
    a. Only 2   b. more than 2   c.1   d.All the above
77 In Hive,view support is available in version from 0.6 views are purely _____ object
    a. Container   b. Logical c. Table c. Create
78 Meta Store consists of the   a. Meta store service b. Database c. Anoly d. Both a & b
79 The default meta store for Hive is____
    a. Main store b. Rc Store c.Derby d. database
80 Meta store contains____ of the Hive tables
    a. Record b. Collections c. System Catalog d.Key value store
81 Which of the following is data flow language
    a.Pig live b.pig Engine c.pig latin d.pig fly
82 To display result is Piglatin   a. Load b. display c. Store d. dump   **p.t.o**

83 Match the following
    (a) tuple   (i) (2,3)
    (b)bag   (ii){(2,3),(7,5)}
    (c)map   (iii)key/value
    (d)Boolean   (iv)true or false
            A   B   C   D
    a.   (i)   (ii)   (iv)   (iii)
    b.   (i)   (ii)   (iii)   (iv)
    c.   (iv)   (iii)   (i)   (ii)
    d.   (iv)   (iii)   (ii)   (i)
84   Odd man out
    a.FILTER b. FOREACH c.FOR d.DISTINCT
85   Action: A = Load '/pigdemo/student.tsv' as (roll no:int,gpa:float)
                B = Limit A.3; Dump B;
    From the above pig command, identify the process of dump
     a.Load b.Store c.Display d.Locate
86   Can pig provides facility to integrate Perl or phyto   script
     a. Yes b. Sometimes c. No d. a&b are correct
87   In pig_____is used to specify dataflow
      a.pig b.pig latin c.pig engine d.pig fly
88   _____,_____are execution modes of pig
     a. local modes ,map reduce mode b. local mode , batch mode
     c. map reduce , batch mode d. batch , internal time mode
89   _____,_____,_____ are Complex data Types of Pig
     a. Bag , Tuple , Map b. int , tuple , map c. int , float , double d. int , bag , map
90   A: DISTINCT keyword remove duplicate fields
      B: LIMIT keyword display limited number of tuples
     a) A & B is correct   b) B is correct c) A is correct ,B is wrong d) B is correct A is wrong
91   Statement: 1   Pig is used by programmers/Researches
     Statement: 2   Hive is used by Analyst
       a).1 alone true   b).2 alone true c).1 & 2 is true d).1 & 2 is false
92   Jasper soft studio suitable for
      a. Eclipse based b. Apache based c. Glossfish based d. None of above
93   Consider the following   Mongo URI : MongoDB : // local host : 27017/Student
     Here,"Student" is the name of the a.File b. Data base c. Program   d. Field
94   Which is the EVAL Function   a. sample b. SPLIT c. PUMP d. Avg
95   Consider the following   (John , 12)
      a. Record   b. Map c. Tuple d. Piggy bank
96   Load,Store,Group,Dump are   a. keywords b. Functions c. Sentence d. Names
97   Which is Boolean operator   a. AND b. OR c. NOT d. All of these
98   Identify the correct data type for Date & Time   a. Date time b. Date c. Time d. b & c
99   Which of the following command is used to show values to keys used in Pig ?
      a. set b. declare c. display d. All of the mentioned
100   . Use the _____ command to run a Pig script that can interact with the Grunt shell
     (interactive   ode).
     a fetch   b declare   c. run   d. All of the mentioned
                                    *****

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- APR/MAY - 2019
COMPUTER SCIENCE AND ENGINEERING
EIGTH SEMESTER
ELECTIVE-TOTAL QUALITY MANAGEMENT
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Quality planning – Explain its any four importance.
2   Total cost of quality – Explain.
3   Service quality – Explain its importance.
4   Define the term "partnering".
5   Draw any two differences between histogram and bar diagram.
6   List the merits of p charts and np charts.
7   Mention the important objectives of QFD.
8   Mention the types of loss measurements in TPM.
9   Give a note on environmental policy.
10   Explain the importance of QS 9000.

PART-B (5 x 16 = 80)

11 a.   Enlighten the habits of successful people according to Stephen covey.
OR
   b.   Describe the barriers for implementing TQM in industries.

12 a.   Describe the Juran Trilogy in detail with diagram.
OR
   b.   Enumerate the various stages in supplier selection and evaluation.

13 a.   Write notes on:
        (a) Differentiate matrix diagram and matrix data analysis diagram.
         (b) Differentiate tree diagram and decision tree diagram.

OR
   b.   Discuss the importance necessity of sampling plan.

14 a.   Discuss in detail the quality function development with suitable diagram.
OR
   b.   Write the step by step procedure to develop a TPM programme in an organization.

15 a.   Explain the various stages of quality auditing.
OR
   b.   Discuss the various elements of ISO-14000 standards with diagram.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- APR/MAY - 2019
COMMON TO CIVIL & CSE
EIGTH SEMESTER
ELECTIVE-Total Quality Management
(Candidates admitted under 2015 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1 Point out any four dimensions of quality.

2 Total cost of quality – Explain.

3 Safety needs – Explain with an example.

4   State the objectives of Malcolm Balridge National Quality Award.

5 Define the term "parameter" and "statistic".

6 Write a note on mean and range chart.

7 Why site visits are necessary in a benchmarking process?

8 Mention the types of loss measurements in TPM.

9 List out the important benefits of documentation.

10 Give a note on third party registrar.

PART-B (5 x 16 = 80)

11 a. Enlighten the habits of successful people according to Stephen covey.
OR
b. Explain the Deming Philosophy for improving quality, productivity and competitiveness.

12 a. Describe the Juran Trilogy in detail with diagram.
OR
b. Explain in detail the 5S concept with its factors and benefits.

13 a. Write notes on:
 (a) Differentiate matrix diagram and matrix data analysis diagram. (8 Marks)
 (b) Differentiate tree diagram and decision tree diagram.   (8 Marks)
OR
b. Discuss the characteristics of normal curve.

14 a. Discuss in detail the quality function development with suitable diagram.
OR
b. a) List out the benefits of the FMEA.(6) b) Discuss the different types of FMEA. (10)

15 a. Explain the various stages of quality auditing.
OR
b. Discuss in detail the benefits of ISO 14000.

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