Sr. No:8001 Roll No:_____

B.TECH. (CE/CSE/ME/ECE)-1st SEMESTER EXAMINATION, NOV./DEC.-2016

(SUBJECT-ENGINEERING MATHEMATICS-I; PAPER CODE–13010101/13020101/13030101/13040101)

Time: 3 Hours **Maximum Marks-75**

Instruction:

1. Write your Roll No. on the question paper.
2. Candidate should ensure that they have been provided with correct question paper. Complaint(s) in this regard, if any, should be made within 15 minutes of the commencements of the Exam. No complaints will be entertained thereafter.
3. Attempt five (5) questions in all and Question No. 1 is compulsory. Students are required to attempt one question from each unit. Marks are indicated against each.
4. Draw diagram wherever required.

Q1. (a) Determine the rank of matrix $A = \begin{bmatrix} 2 & 4 & 6 \\ 1 & 2 & 3 \\ 3 & 6 & 9 \end{bmatrix}$ **(2)**

(b) Find the eigen value of a matrix $A = \begin{bmatrix} 8 & -6 & 2 \\ -6 & 7 & -4 \\ 2 & -4 & 3 \end{bmatrix}$ **(2)**

(c) If $y = e^x \log x$, find y_n **(2)**

(d) If $u = \tan^{-1} \frac{x^3+y^3}{x-y}$, show that $\frac{x\partial u}{\partial x} + \frac{y\partial u}{\partial y} = sin2u$ **(2)**

(e) Find asymptotes of $x^3 + y^3 - 3axy = 0$ **(2)**

(f) Find curvature $\sqrt{x} + \sqrt{y} = \sqrt{a}$ **(2)**

(g) Evaluate $\int_0^1 \int_0^{x^2} e^{\frac{y}{x}}\, dydx$ **(3)**

UNIT-I

Q2. (a) If $y = e^{a\, sin^{-1}x}$, show that $(1-x^2)\, y_{n+2} - (2n+1)\, xy_{n+1} - (n^2+a^2)\, y_n = 0$ **($7\frac{1}{2}$)**

(b) If $\int_1$ *and* $\int_2$ be the radie of the curvature at ends point of a focal chord of the parabola $y^2 = 4ax$ then show that $\int_1^{-2/3} + \int_2^{-2/3} = (2a)^{-2/3}$ **($7\frac{1}{2}$)**

Q3. (a) if $u = \text{cosec}^{-1}\left[\frac{x^{\frac{1}{2}}+y^{\frac{1}{2}}}{x^{\frac{1}{3}}+y^{\frac{1}{3}}}\right]^{\frac{1}{2}}$, show that $x^2\frac{\partial^2 u}{\partial x^2} + 2xy\frac{\partial^2 u}{\partial x \partial y} + y^2\frac{\partial^2 u}{\partial y^2} = \frac{tanu}{144}(13 + tan^2 u)$ **($7\frac{1}{2}$)**

(b) Discuss maxima or minima of the function $\int = sin\, x + \sin y + \sin\,(x+y)$ **($7\frac{1}{2}$)**

P.T.O.

UNIT-II

Q4. (a) Evaluate $\iint \frac{rdrd\theta}{\sqrt{a^2+r^2}}$, over one loop of laminiscate $r^2 = a^2 \cos 2\theta$ $(7\frac{1}{2})$

(b) Evaluate double Integral by change of order of integration $\int_0^{\infty} \int_y^{\infty} \frac{e^{-y}}{y}\, dydx$ $(7\frac{1}{2})$

Q5. (a)Find the volume of ellipsoid $x^2/a^2 + y^2/b^2 + z^2/c^2 = 1$ $(7\frac{1}{2})$

(b) Express $\int_0^1 x^m(1-x^n)^p dx$ in the teams of Gamma function and hence evaluate

$\int_0^1 x^5(1-x^3)^{10} dx$ $(7\frac{1}{2})$

UNIT-III

Q6. (a) Find the Eigen values and Eigen Vector of a matrix $A = \begin{bmatrix} 8 & -6 & 2 \\ -6 & 7 & -4 \\ 2 & 4 & 3 \end{bmatrix}$ $(7\frac{1}{2})$

(b) For what value of k the equations $x + y + z = 1$, $2x + y + 4z = k$, $4x + y + 10z = k^2$ have a solution and solve them completely. $(7\frac{1}{2})$

Q7. (a) verify Cayley – Hamilton theorem and A^{-1} for the matrix $A = \begin{bmatrix} 7 & 2 & -2 \\ -6 & -1 & 2 \\ 6 & 2 & -1 \end{bmatrix}$ $(7\frac{1}{2})$

(b) For what value of λ and μ do the system of equation have $x + y + z = 6$, $x + 2y + 3z = 10$, $x + 2y + \lambda z = \mu$ have

(i) No Solution (ii) Unique Solution (iii) Infinite Solution $(7\frac{1}{2})$

UNIT-IV

Q8. (a) Discuss the convergence of Series $x + 2^2\frac{x^2}{L^2} + 3^3\frac{x^3}{L^3} + 4^4\frac{x^4}{L^4} + \ldots\ldots$ $(7\frac{1}{2})$

(b) Discuss the convergence / Divergence of the Series $\frac{x^2}{2log_e 2} + \frac{x^3}{3log_e 3} + \frac{x^4}{4log_e 4} + \ldots\ldots$ $(7\frac{1}{2})$

Q9. (a) Discuss the convergence / Divergence of $\sum \sqrt{n^4+1} - \sqrt{n^4-1}$ $(7\frac{1}{2})$

(b) Discuss the convergence/Divergence of Series $\frac{1^2}{2^2} + \frac{1^2.3^2}{2^2.4^2} + \frac{1^2.3^2.5^2}{2^2.4^2.6^2} + \ldots\ldots$ $(7\frac{1}{2})$

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S No. 8002

Roll No._____

B.TECH (CE/CSE/ME/ECE)-1ST SEMESTER EXAMINATION; NOV./DEC.-2016
(SUBJECT :- ENGINEERING PHYSICS – I)
(PAPER CODE-13010102/13020102/13030102/13040102)

Time: 03 Hours **Max. Marks: 75**

Instruction:

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided with the correct question paper. Complaints in this regard, if any, should be made within 15 minutes of the commencement of the exam. no complaint(s) will be entertained thereafter;
3. Attempt five (05) questions in all and Q. No. 1 is compulsory. Students are required to attempt four questions selection one from each unit in addition to Q. No.-1. Marks are indicated against each question.
4. Draw Diagram wherever required.

Q.1 Explain the following: (6x2.5=15)

a) Describe coherent sources with examples.
b) Derive relation for dispersive power of grating.
c) Diffcrentiate between biquartz and Laurent's half shade polarimeter.
d) What is Mcissner effect? Explain.
e) Write five applications of Laser
f) Describe Molecular theory of Dielectric.

UNIT - I

Q.2 a) Explain the formation of Newton's ring in reflected light case and using these derive the relation for the wavelength of monochromatic light. (7.5)

b) Describe the construction and working of Michelson interferometer for circular fringes. How it can be used to find the refractive index or thickness of a transparent medium. (7.5)

Or

Q.3 a) Give the construction & theory a plan diffraction grating. How does intensity of principal maxima vary with the increase of order? (7.5)

b) Explain the Rayleigh criteria of resolution? Derive expression for resolving power of a grating. How resolving power is related with dispersive power? (7.5)

UNIT – II

Q.4 a) What is double refraction? Explain the construction & working of Nicol's Prism. (7.5)

b) Derive the relation for wavelength of light for half & quarter wave plates? A certain length of 5% solution causes the optical rotation of 20°. How much length of 10 % solution of the same substance will cause 35° rotation? (7.5)

Or

Q.5 a) Derive London equations of superconductivity? How it explain Meissner effect? (7.5)

b) Explain the experimental survey of superconductivity. Distinguish between Type 1 & Type 2 superconductor. (7.5)

P.T.O.

UNIT - III

Q.6 a) Describe principal, construction and working of Ruby Laser. What are merits & demerits of it? (7.5)

b) What do you understand by spontaneous and stimulated emission, pumping, population inversion and resonator? Explain different characteristics of laser beam. (7.5)

Or

Q.7 a) Explain the basic principal of optical fiber. Define and derive relations for Numerical aperture & acceptance angle. (7.5)

b) Describe different modes in optical fiber with examples. Explain the dispersion mechanism in optical fibers. (7.5)

UNIT - IV

Q.8 a) What do you understand by dielectric polarization? Define **D,P and E** and derive relation between them. (7.5)

b) Derive relation for energy stored within Dielectrics in the electrostatic field. (7.5)

Or

Q.9. a) Derive the expression for the mass energy equivalence relation. (7.5)

b) Derive the expression for the variation of mass with velocity. (7.5)

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Sr. No: 8003 Roll No:_____

B.TECH. (CE/CSE/ME/ECE)-1st SEMESTER EXAMINATION, NOV./DEC.-2016

(SUBJECT-ESSENTIAL COMMUNICATION-1: PAPER CODE – 13010103/13020103/13030103/13040103)

Time: 3 Hours **Maximum Marks-75**

Instruction:

1. Write your Roll No. on the question paper.
2. Candidate should ensure that they have been provided with correct question paper. Complaint(s) in this regard, if any, should be made within 15 minutes of the commencements of the Exam. No complaints will be entertained thereafter.
3. Attempt five (5) questions in all and Question No. 1 is compulsory. Students are required to attempt four questions selection one from each unit in addition to Q.No.1 Marks arc indicated against each.
4. Draw diagram wherever required.

Q1. Answer the following:

(a) Give the synonyms of: **(2)**
(i) Docile (ii) Enigma

(b) Give antonyms for: **(2)**
(i) Conceal (ii) Affirmative

(c) Give the verb form for : **(2)**
(i) Failure (ii) Nation

(d) Give the adjective form for: **(2)**
(i) Artist (ii) Enjoy

(e) Make a word using following prefixes: **(2)**
(i) Fore- (ii) Arch-

(f) Make a word using following suffixes: **(2)**
(i) -ise (ii) –ness

(g) Give the meaning of following homophones and use them in your own words: **(3)**
(i) Counsel-Council
(ii) Stationary-Stationery
(iii)Confident-Confidant

UNIT-I

Q2. Describe briefly different barriers to communication leading to the breakdown of Organizational communication. Discuss ways to overcome organizational barriers to communication. **(15)**

OR

Q3. Fill in the blanks with appropriate use of article (a/an/the) wherever required: **(15)**

(i) Yesterday, I read ..... *Othello*, ... great tragedy by William Shakespeare.
(ii) I take ..... dinner at about 8:00 p.m.
(iii) ..... 22nd June is ..... hottest day of ..... year.
(iv) ..... united family is thousand times better than ..... divided one.
(v) Sir, it is ..... honour to be called here as ..... chief guest.
(vi) ..... Kalidas is ..... Shakespeare of India.
(vii) Gold is a precious metal. But ..... gold mined here is of poor quality.
(viii) ..... visitors truly admire ..... Sunset.

PTO

UNIT-II

Q4. Rewrite the following sentences keeping in view the accuracy of subject-verb agreement: **(1.5x10=15)**

(i) The coach along with his team were praised.
(ii) All work and no play make Jack a dull boy.
(iii) One of the best students of our college have won the prize.
(iv) The quality of these apples are not good.
(v) My pair of trousers are spoiled.
(vi) Neither of the players have won a medal.
(vii) Either Shamli or her sisters has stitched my dress.
(viii) The spectacles is lying on the floor.
(ix) The second innings were played well by the Indian players.
(x) Two-fifth of the loan have been paid.

OR

Q5. What is an Adverb? Define different types of adverbs with the help o f examples. **(15)**

UNIT-III

Q6. Construct sentences using the following Phrasal verbs: **(1.5x10=15)**

(i) Break down (ii) call off (iii) fill up (iv) get over (v) give up
(vi) Work out (vii) turn on (viii) stick to (ix) run into (x) put out

OR

Q7. Give one word substitution for the following: **(15)**

(i) One who studies history relating to the development of man from primitive ages.
(ii) Life of a person written by somebody.
(iii) A place where wild birds/animals are kept in a protected area.
(iv) A person who believes in God.
(v) A story in which ideas are symbolized in character.
(vi) One who totally abstains from drinking.
(vii) An animal story with a moral.
(viii) Someone who loves collecting stamps.
(ix) A long poem about the action of great men/women or a nation.
(x) An artist's most outstanding and memorable artistic creation.

UNIT-IV

Q8. Write short notes on: **(15)**

(i) Process of communication
(ii) Interpersonal Barrier
(iii) Importance of Technical communication

OR

Q9. Fill in the gaps with the appropriate use of tense to the words provided in the parentheses: **(15)**

(i) Today(be) ..... the second day of my trek around Mount Annapurna. I am exhausted and my legs (shake) ..... ; I just hope I am able to complete the trek. My feet (kill, really) ..... me and my toes (bleed) ....., but I (want, still) ..... to continue.
(ii) Tony: I (buy) ..... them last week by phone. I (know) ..... tickets would be hard to get because I (see) ..... a news interview with a group of people standing in line to get tickets. They (wait) ..... in line for almost a month to buy tickets for the first showing.
(iii) Lars: I don't believe that!
(iv) Did you hear that Ben was fired last month? He(work)..... for that import company for more than ten years and he (work) ..... in almost every department. Nobody knew the company like he did.
(v) Sarah (climb) ..... the Matterhorn, (sail) ..... around the world and (go) ..... on safari in Kenya by the time she turned twenty-five. She (experience) ..... more by that age than most people do in their entire lives.

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Sr. No. 8004 Roll No._____

B.TECH.(CE/CSE/ME/ECE)-1ST SEMESTER EXAMINATION: NOV./DEC- 2016
(SUB-INTRODUCTION TO COMPUTER HARDWARE AND SOFTWARE)
(PAPER CODE- 13010104, 13020104, 13030104, 13040104)

TIME: 03:00 Hrs. **MAX. MARKS: 75**

Instructions:-

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided with the correct question paper. Complaints in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter;
3. Attempt five (05) questions in all and Q.No. 1 is compulsory. Students are required to attempt four questions selecting one from each unit in addition to Q.No. 1. Marks are indicated against each question.
4. Draw diagram wherever required.

Q1. Write a short note on: **(5*3=15)**

a) Computer Networks
b) I/O Devices
c) Types of printers
d) Decision Control Statements
e) Difference between Structure & union

UNIT-I

Q2. What is computer system? Explain various different components of Computer in detail. **(15)**

OR

Q3 a) Explain in detail Input / Output devices used in computer system. **(10)**

b) i) Convert the binary number 10011 to hexadecimal. **(05)**
ii) Convert the binary number 11001 to decimal.

UNIT-II

Q4. a) Write a program to print the right angle triangle. **(10)**

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b) Explain switch case statement with the help of suitable example. **(05)**

OR

Q5. What is computer networks? Explain various topologies used in computer networks. **(15)**

P.T.O

UNIT-III

Q6. (a) Write a program to check whether a number is prime or not? **(08)**

(b) Write a programme to find the factorial of a given number. **(07)**

OR

Q7. (a) Write a program to check whether the number is palindrome or not using while loop in 'C'. **(08)**

(b) Write a program to generate the Fibonacci series using recursion in 'C'. **(07)**

UNIT-IV

Q8. (a) What are array of strings? Explain the concept with the help of an example. **(10)**

(b) Explain the concept of dereferencing pointers. **(05)**

OR

Q9 . (a) Write a program to show the concept of returning pointer. **(10)**

(b) What are various storage classes? **(05)**

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S No. 8005 Roll No._____

B.TECH (CE/ME)-1ST SEMESTER EXAMINATION; NOV./DEC.-2016
(SUBJECT:-INDUSTRIAL CHEMISTRY PAPER CODE-13010105/13030105)

Time: 03 Hours **Max. Marks: 75**

Instruction:

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided with the correct question paper. Complaints in this regard, if any, should be made within 15 minutes of the commencement of the exam. no complaint(s) will be entertained thereafter;
3. Attempt five (05) questions in all and Q. No. 1 is compulsory. Students are required to attempt four questions selecting one from each unit in addition to Q. No.-1. Marks are indicated against each question.
4. Draw Diagram wherever required.

Q.1 Explain the following: (5x3=15)

a) What is supercritical CO_2& What are it's uses.
b) Define hardness & what are the different units of hardness.
c) What is Pilling-Bedworth rule?
d) Define tacticity & classify polymers on the basis of tacticity.
e) What are the electrochemical cells?

UNIT - I

Q.2 a) State & explain the first law of Thermodynamics. Derive a mathematical formulation of the law. Justify the law on the basis of some common observation and discuss it's limitations. (7)

b) Calculate the vapour pressure of water at 80°c if it's value is 100°c is 76.0 cm. The mean heat of vaporization of water in the above temperature range is 540 cals/gm. (5)

c) Differentiate Extensive & Intensive properties (3)

Or

Q.3 a) Explain Zn-Mg system in detail. (10)

b) Differentiate between H_2O & CO_2 system. (5)

UNIT – II

Q.4 a) What are scale and sludges and why they are formed in boilers? What are their disadvantages and how their formation be prevented. (10)

b) A sample of water was alkaline to both phenolphthalein & methyl orange. 100 ml of this water sample required 30 ml. of N/50 H_2SO_4 for neutralization to phenolphthalein end point. Another 20 ml. of same acid was needed for further titration to methyl orange end point.
Determine the type and amount of alkalinity. (5)

Or

Q.5 a) Describe the demineralization process for softening of water with a well labeled diagram. What are the advantages & limitations of this process. (10)

b) What is electrodialysis? Explain with a neat & clean diagram of electro dialyzer. (5)

UNIT - III

Q.4 a) What is sacrificial protection? Give some examples and principles involved. (7)

b) Write short notes on (8)

i) Water line corrosion
ii) Stress corrosion

P.T.O.

Or

Q.5 a) What is meant by order of reaction? Derive an expression for the rate constant of a second order reaction. (8)

b) What is activation energy? How is the rate constant of reaction related to it's activation energy? (7)

UNIT - IV

Q.4 a) Explain the mechanism of Co-ordination polymerization. (7)

b) Write short notes on (8)

i) Vulcanization of rubber

ii) Polymeric composites

Or

Q.5 a) What do you mean by specific conductance, molar conductance and equivalent conductance? What will be the effect of dilution on them? (8)

b) What is concentration cell? Explain with example. Derive an expression for emf of concentration cell without transference. (7)

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S No. 8007 Roll No.

B.TECH (CSE/ECE)-1ST SEMESTER EXAMINATION; NOV./DEC.-2016
(SUBJECT :- ELECTRICAL TECHNOLOGY ; CODE-13020105/13040105)

Time: 03 Hours **Max. Marks: 75**

Instruction:

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided with the correct question paper. Complaints in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter;
3. Attempt five (05) questions in all and Q. No. 1 is compulsory. Students are required to attempt four questions selecting one from each unit in addition to Q. No.-1. Marks are indicated against each question.
4. Draw Diagram wherever required.

Q.1 Explain the following: (5x3=15)

a) State Kirchhoff's laws.

b) Why a 3-phase synchronous motor will always run at synchronous speed?

c) Define slip in 3-phase induction motor. What is its value at starting and at synchronous speed?

d) Write a short note on controlling torque in measuring instruments?

e) Explain the application of synchronous motor.

UNIT – I

Q.2 Calculate the current through the galvanometer in the following bridge. (15)

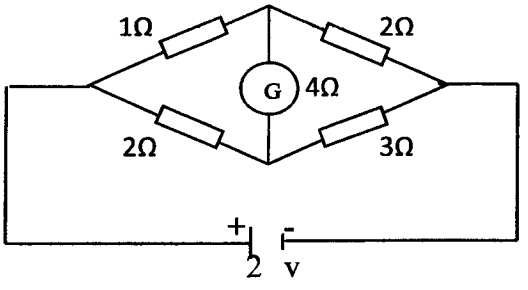

Figure : 1

Or

Q.3 State and explain Thevenin's theorem. Explain application to electric circuit. (15)

UNIT – II

Q.4 How 3 phase power can be measured by two wattmeter method, explain? (15)

Or

Q.5 Drive relation between I_L and I_{ph}, V_L and, V_{ph} in case of delta connected 3-phase circuit. (15)

P.T.O.

UNIT – III

Q.6 Why dc supply not given to primary of the transformer? Draw and explain the phasor diagram of transformer on full load (resistive, inductive and capacitive). (15)

Or

Q.7 A short circuit test when performed on HV side of a 10 kVA, 2000/400 V, 1-phase transformer, gave the following data-60 V, 4A, 100 W. if LV side is delivering full load current at 0.8 power factor lag and 400 V. Find the applied voltage to HV side. (15)

UNIT – IV

Q.8 Explain the working principle, construction and application of dc machines. (15)

Or

Q.9 Why an induction motor can not run at synchronous speed? How torque produced in a 3-phase induction motor? (15)

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Sr. No. 8006

Roll No._____

B.TECH. (CE/ME)-1ST SEMESTER EXAMINATION: NOVEMBER/DECEMBER 2016
(SUB-ENGINEERING DRAWING: PAPER CODE- 13010106/13030106)

TIME: 03:00 Hrs. **MAX. MARKS: 50**

Instructions: -

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided with the correct question paper. Complaints in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter;
3. Attempt five (05) questions in all and Q.No. 1 is compulsory. Students are required to attempt four questions selecting at least one from each unit in addition to Q.No. 1. Marks are indicated against each question.
4. Draw diagram wherever required.

Q1. Write in brief about **(5*2=10)**

a) Third angle projection of point.
b) Differentiate Absolute and relative co-ordinate system.
c) Explain Zoom, Pan and Re-draw commands in AutoCAD.
d) Explain Rotation of an object.
e) Explain surface modelling.

UNIT-I

Q2. a) What do you mean by dimensioning. What are the different principles of dimensioning? **(5)**

b) Prepare, giving all details, a neat sketch of simple title block provided in a drawing sheet. What is its size, as recommended by B.I.S. **(5)**

OR

Q3. a) How projection of lines made. Explain with a suitable example. **(5)**

b) A Line CD 30mm long is parallel to both the planes. The line is 40mm above HP and 20 mm in front of V.P. Draw its projection. **(5)**

UNIT-II

Q4. a) A hexagonal prism with side of base 25mm and axis 60mm long is lying on one of its rectangular faces on H.P. Draw the projections of the prism when its axis is parallel to both H.P. and V.P. **(5)**

b) What is the difference between cone and cylinder, explain with neat sketches. **(5)**

UNIT-III

Q5. What are the procedures for drawing development of cut solid by cutting plane method. **(10)**

OR

Q6. What are the different types of sectional views? **(10)**

UNIT-IV

Q7. Explain all basic editing and display commands. **(10)**

OR

Q8. Explain Isometric projections in detail. **(10)**

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S No. 8008 Roll No._____

B.TECH (CSE/ECE)-1ST SEMESTER EXAMINATION; NOV./DEC.-2016
(SUBJECT:-WORKSHOP TECHNOLOGY; PAPER CODE-13020106/13040106)

Time: 03 Hours **Max. Marks: 50**

Instruction:

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided with the correct question paper. Complaints in this regard, if any, should be made within 15 minutes of the commencement of the exam. no complaint(s) will be entertained thereafter;
3. Attempt five (05) questions in all and Q. No. 1 is compulsory. Students are required to attempt four questions selecting one from each unit in addition to Q. No.-1. Marks are indicated against each question.
4. Draw Diagram wherever required.

Q.1 Explain the following: (5x2=10)

a) What are the methods of safety used in industry?
b) Write the function of flux coated on electrode?
c) Explain thc wirc drawing process?
d) Write the uses of coolant in machining?
e) Why testing of casting done?

UNIT - I

Q.2 What are the common sources of accidents? How they can be avoided. (10)

Or

Q.3 Explain the different types of shop layout with their advantages. (10)

UNIT - II

Q.4 With the help of neat sketches describe TIG and MIG welding processes. (10)

Or

Q.5 What is the need of heat treatment processes? Explain the different heat treatment processes. (10)

UNIT - III

Q.6 What is forging? What are the advantages and disadvantages of forging processes? (10)

Or

Q.7 Explain different types formed during machining operations. (10)

UNIT - IV

Q.8 What are the common allowances provided on pattern and why? (10)

Or

Q.9 Explain the different types of casting defects with their remedies. (10)

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Sr. No. 8009

Roll No_____

B.TECH (CSE) – 1st SEMESTER EXAMINATIONS; NOV./DEC.- 2016
(SUB.: ENVIRONMENTAL SCIENCE: PAPER CODE: 13020113)

TIME: 03:00 Hrs. **Max. Marks: 75**

Instructions:-

1. Write your Roll no. on the Question paper.
2. Candidate should ensure that they have been provided with the correct question paper. Complaints in this regards, If any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. Attempt FIVE questions in all, Q.1 is compulsory. Students are required to attempt FOUR questions selecting one question from each unit. Marks are indicated against each question.
4. Draw Diagram wherever required.

Q.1. Write notes on

a) Green House Effect (2)
b) Sustainable Development (2)
c) Rain Water Harvesting (2)
d) Ozone Layer Depletion (2)
e) Environmental Degradation (2)
f) Noise Pollution (2)
g) Ecological Balance (2)
h) Population Explosion (2)

UNIT-I

Q. 2. Define Environment and its components in detail. **(15)**

Or

Q. 3. Discuss different type of Environmental Pollution. How can you, as an individual prevent it? Why such an effort is important? **(15)**

UNIT-II

Q.4. Write short note on: **(5x3=15)**

(a) Atmospheric composition
(b) Climate and Weather
(c) Energy Balance

Or

Q.5. Discuss sources, adverse effect and control of water pollution. **(15)**

UNIT-III

Q.6. Classify Solid Waste. How we can manage different types of solid wastes? **(15)**

Or

Q.7. What are the natural and anthropogenic pollutants that cause Air Pollution? Write in brief about effects and controlling techniques of Air Pollutants. **(15)**

UNIT-IV

Q.8. What is Green Chemistry? Describe its principles. **(15)**

Or

Q.9. What are the major impacts and hazards associated with Fireworks. **(15)**