KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

QUALITY INDICATOR FRAMEWORK (QIF)

CRITERION - 2

2.5.1 – TEST QUESTION PAPERS

File contains Sample Test Question Papers for Internal Assessment

Sl. No	SUBJECT	PAGE NO.
1	PHYSICS	2 - 3
2	CHEMISTRY	4 - 7
3	ELECTRONICS	8 – 9
4	MATHEMATICS	10 – 11
5	ZOOLOGY	12 – 13
6	ENGLISH	14 – 15
7	B.CA	16 – 17
8	BOTANY	18 - 19

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

TIME: $1\frac{1}{2}$ HOURS FIRST TEST. SEPTEMBER -2018 MAX.MARKS: 45

SUBJECT: PHYSICS CLASS : II B.SC., III SEMESTER. [CBCS]

PAPER-II: THERMAL PHYSICS , RADIATION AND OPTICS

PART-A

ANSWER ANY THREE OF THE FOLLOWING QUESTIONS.EACH QUESTION CARRIES EIGHT MARKS. 3x8=24

1. a)What is transport phenomena? 1+7
   b) Derive an expression for co-efficient of viscosity of a gas by kinetic theory of gases.
2. Describe working mechanism of diesel engine. Derive the expression for efficiency of diesel engine and compare it with otto engine. 8
3. Derive an expression for the fringe shift in the biprism experiment by the introduction of a transparent sheet in the path of one of the interfering beams. 8
4. What are coherent sources? Explain two methods of production of coherent sources with examples. 8
5. What is a diffusion pump? With neat- labeled diagram, explain the principle, construction and working of diffusion pump. 8

PART –B

ANSWER ANY THREE OF THE FOLLOWING QUESTIONS . EACH QUESTION CARRIES FIVE MARKS. 3x5=15

1. Calculate the rms and mpv of a gas molecule whose density is 1.4 Kg/m^3 at a pressure of 10^6 N/m^2 .
2. Determine the mean free path of nitrogen given that the density of nitrogen at NTP is 1.2 Kg/m^3 and its co-efficient of viscosity is 1.7×10^{-3} NS/m2
3. Calculate the efficiency of diesel engine in which combustion expansion ratio is 2 and adiabatic compression ratio is 10. The ratio of specific heats for the fuel is 1.4.
4. The Vander Walls constants for hydrogen are a=0.0247 $Nm^4\,(mol)^{-2}$ and b= 2.65×10^{-5} $m^3(mol)^{-1}$. Calculate (i) Inversion temperature and (ii) Joule – Thomson cooling for 2 atmosphere fall of pressure. The initial temperature is 100K. Given C_p =28.7 J $(mol)^{-1}K^{-1}$, R= 8.314 J $(mol)^{-1}K^{-1}$and 1atm= 1.01×10^5 N/m^2.

PART –C

ANSWER ANY THREE OF THE FOLLOWING QUESTIONS.EACH QUESTION CARRIES TWO MARKS. 3x2=6

1. How many numbers of degrees of freedom for triatomic molecule? Explain.
2. Write first law of thermodynamics for an adiabatic process. What is the meaning of the resultant equation?
3. What happens if we perform Young's double slit experiment using two bulbs of the same power?
4. Explain why hydrogen and helium shows heating effect when passed through porous plug at lab temperature?
5. Now a day's silicon oil is used in diffusion pump instead of mercury. Explain.

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

TIME: $1\frac{1}{2}$ HOURS FIRST TEST. SEPTEMBER -2018 MAX.MARKS: 45

SUBJECT: PHYSICS CLASS : III B.SC., V SEMESTER. [CBCS]

PAPER-5: DIGITAL, ANALOG CIRCUITS AND SEMICONDUCTOR DEVICES.

PART-A

ANSWER ANY FOUR OF THE FOLLOWING QUESTIONS.EACH QUESTION CARRIES EIGHT MARKS. 4x8=32

1. Explain XOR gate and draw logic circuit for XOR gate using basic gates. 8
2. What is universal gate? How basic gates can be realized using NAND gates. 8
3. a) What is a transistor? 1
   b) Mention three configurations of transistor operation with neat circuit diagrams. 3
   c) Deduce the relation between α and β of a transistor. 4
4. a) Explain the working of C-E amplifier in voltage divider biasing with a neat circuit diagram. 5
   b) derive an expression for collector current of a C-E amplifier in potential divider biasing. 3
5. a) What is an embedded system? Give examples. 2
   b) Distinguish between general purpose computer and an embedded system. 6
6. Explain the classification of embedded system (i) based on generation and (ii) based on complexity and performance. 8

PART- B

ANSWER ANY **ONE** OF THE FOLLOWING QUESTIONS. EACH QUESTION CARRIES **FIVE** MARKS. 1×5=05

7. Simplify the following expression using Boolean laws and draw logic circuit.
   A ($\overline{ABC}$ + ABC).
8. Simplify using Karnaugh map
   $\overline{A}\,\overline{B}$ C D + $\overline{A}$ B $\overline{C}\,\overline{D}$ + $\overline{A}$ B C D + $\overline{A}$ B C $\overline{D}$ + A B C D + A B C $\overline{D}$

PART- C

ANSWER ANY **FOUR** OF THE FOLLOWING QUESTIONS. EACH QUESTION CARRIES **TWO** MARKS. 4×2 =08

9. a) Why is binary system preferred to the decimal system in digital circuits?
   b) What is an ideal diode? Draw the characteristic curves of an ideal diode.
   c) Can the collector and emitter terminals are interchanged in a transistor? Justify.
   d) What are the components of embedded system?
   e) Can microcontroller work independently? Justify.

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR.

II B.Sc III Semester **I-TEST –SEP 2019**

Time: 1½ Hours **Subject**: Chemistry (PAPER-III) **Max marks: 46**

PART-A

Answer any **Three** of the following questions. Each question carries two marks. **2x3=6**

1. State Kohlrausch's law of independent migration of ions.
2. Define Specific conductance and how it is related to equivalent conductance?
3. What is an electrochemical series?
4. Give an example for Rosenmund's reduction.
5. How do you distinguish between aldehydes and ketones by oxidation reaction? Give equation.
6. What is carbylamine reaction? Give an example.

PART-B

Answer **all** the following questions. Each question carries ten marks. **4x10=40**

7. a) Define transport number of an ion and how it can be determined by moving boundary method?
   b) Explain the variation of Specific, Equivalent and Molar conductances with dilution.
   c) The resistance of 0.01M solution of an electrolytes was found to be 200Ω at a given Temperature. The cell constant of the conductivity cell was found to be 87.8m^{-1}. Calculate the Specific and molar conductance of the electrolyte. (4+3+3)

Head
Dept. of Chemistry
KFGSC., Tiptur - 572202

8. a) What is EMF? How it is measured using poggendorff's compensation method?
   b) Write Nernst equation. Mention the terms and their importance.
   c) Explain the following types of electrodes.
      a)Metal – Metal ion electrodes b) Gas electrodes. (4+3+3)

9. a) What is Benzoin condensation? Write the mechanism.
   b) Give any two methods of preparation of ketones.
   c) What is clemmenson's reduction? Give an example. (4+3+3)

10. a) Convert the following i) Benzene diazonium chloride to p-hydroxy azobenzene.
      ii) Aniline to chlorobenzene.
   b) How primary amines can be prepared by Gabriel's phthalimide synthesis?
   c) What is Hinsberg's reagent? How 1^0,2^0,3^0, amines are distinguished by using this reagent?
   (4+3+3)

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR.

III BSc, V Semester **Subject:** Organic Chemistry (PAPER-V) March - 2021

Time: 1½ hours **Max marks: 46**

PART-A

Answer any **three** of the following. Each question carries **two** marks. 2x3=6

1. What are enantiomers? Ilustrate with an example.
2. State Ingold's isoprene rule. Give an example.
3. Define the terms bathochromic shift and hypsochromic shift with a suitable example.
4. Define racemic mixture.
5. How do you prove the presence of the pyridine ring in nicotine.
6. Write the structure of congored and identify the chromophore and auxochrome in it.

PART-B

Answer **all** the following questions. Each question carries **ten** marks. 10x4=40

7. a) Explain elements of symmetry with an example.
   b) What is resolution? Explain biological method of resolution.
   c) Explain optical activity of allene derivatives. (4+3+3)

Head
Dept. of Chemistry
KFGSC., Tiptur - 572202

8. a) Give the synthesis of citral from methyl heptenone.

b) Give one reaction each to prove the presence of carbonyl group and aldehyde group in citral molecule.

c) Define the following and give one example for each

i)Antipyretics ii)Food preservatives iii)Antioxidants

(4+3+3)

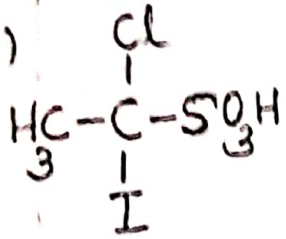
9. a) Explain the four types of electronic transitions in UV spectroscopy.

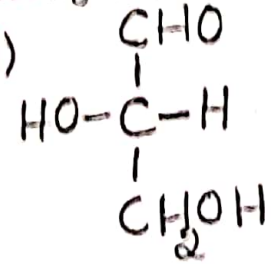
b) Give the synthesis of saccharin and mention its uses.

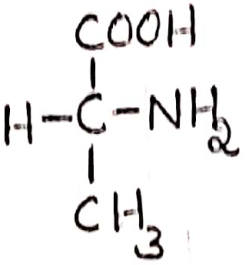
c) Explain the synthesis of malachite green.

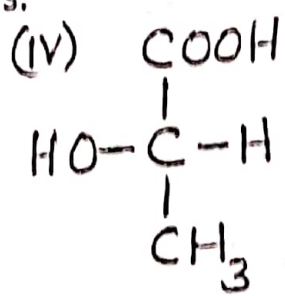
(4+3+3)

10. a) Assign the (R) or (S) configuration for the following compounds.

(i) 

(ii) 

(iii) 

(iv) 

b)Give the synthesis of paracetamol.

c) How do you convert benzene sulphonic acid to I) aniline and II) phenol (4+3+3)

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

UNIT TEST II, SEPTEMBER - 2017

CLASS : II B.Sc. (3rd SEM) Max. Marks: 30

Subject : ELECTRONICS (paper-III) Time : 1 Hr

PART A Answer any **FOUR** questions. **1 x 4 =4**

1. What does GSM stand for?
2. Mention popular frequency bands used in mobile communication?
3. Mention any two additional features of 3rd generation of mobile phones.
4. State Kepler's first law as applied to satellite communication?
5. Define apogee and perigee in a satellite orbit.

PART B Answer any **TWO** questions. **8 x 2 = 16**

6. a) Compare the advantages and disadvantages of elliptical and geostationary orbits of a satellite.
   b) Draw the block diagram of uplink system in a satellite communication. (4+4)
7. a) Write a note on Global Positioning System (GPS).
   b) Draw the block diagram of mobile communication system and explain briefly. (4+4)
8. a) Explain two types of interference caused in mobile communication.
   b) Compare FDMA and TDMA in mobile communication. (4+4)

PART C Answer any **ONE** question. **6 x 1 =6**

9. Calculate C/N_0 at the earth receiving station from a satellite transmitting an EIRP of 49.5dBW on a frequency of 12 GHz. The earth station antenna angle of elevation is 7^0 and receiving figure of merit is 40.7dB. Given a= 6400km and h = 36,000km.
10. Calculate the difference in round trip propagation delays for vertical transmission and ground station transmission at 5^0 elevations to a satellite in geostationary orbit.

PART D Answer any **TWO** subdivisions **2 x 2 = 4**

11. For a given frequency band CDMA has higher channel capacity when compared to GSM. Give reason.
12. What is the inclination angle of (i) geo stationary and (ii) polar circular orbits.
13. Mention two factors that determine the life span of a satellite.

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

INTERNAL TEST, JANUARY - 2022

CLASS : III B.Sc. (5^{TH} SEM) Max. Marks: 45

Subject : ELECTRONICS (Paper-VI) Time : 1 Hr 30 Minutes

PART A Answer any **FIVE** questions. **1 x 5 = 5**

1. What is dark resistance of a photo conductive material.
2. What is radiative transition?
3. Define absorption coefficient of a photonic device.
4. Mention any one advantage of PIN diode over Photo diode.
5. Define quantum efficiency of a photo detector.
6. What do you mean by population inversion in LASER?

PART B Answer any **THREE** questions. **8 x 3 = 24**

7. a) Mention any four applications of photonic devices.
   b) Write a note on Photo conductive cell (4+4)
8. a) What are the types of interactions possible between radiation and matter?
   b) Explain infrared and microwave interaction with matter (4+4)
9. a) Explain types of optical fibers based on the index fiber
   b) Write a note on losses in optical fibers. (4+4).
10. a) Write a note on Avalanche Photo Diode.
    b) Explain working of a three-layer Laser. (4+4)

PART C Answer any **TWO** questions **6 x 2 =12**

7. The HVL of a material is 1.5μm. If an optical light of intensity of 25lumen and power of 30mW is incident on the material, calculate the intensity of light and optical power at a distance of 2μm.

8. An optical fiber is designed for a launching angle of 9.5^0. If the core index is 1.65 calculate the clad index. If the core index changes by 10% what is the new value of clad index for launching angle of 10.5^0?

9. When $3x10^{11}$ photons each with a certain wavelength are incident on photo diode they produce an average electron of $1.8x10^{11}$. Determine the wavelength of the optical light incident if the responsivity is 0.63A/W

PART D Answer any **TWO** subdivisions **2 x 2 = 4**

10. Mention any two differences between light produced by LED and Laser.
11. Why Si or Ge are not used in LED?
12. The hand appears red when brought in front of a torch. Give reason.

KALPATARU FIRST GRADE SCIENCE COLLEGE,TIPTUR
I BSc ,I SEMESTER, I TEST SEPTEMBER-2017
MATHEMATICS: (PAPER-1.1)

TIME:1:30 HOURS

Max.Marks:45

I.Answer any four of the following questions. $4 \times 2 = 8$

1) Define pedal equation ? Prove that $P = r \sin \emptyset$
2) If $y = a \log \sec\left(\frac{x}{a}\right)$ then show that $\frac{ds}{dx} = \sec\frac{x}{a}$
3) Find the radius of curvature $y = e^x$ at point where It crosses the y - axis
4) If $= x^2y + y^2z + z^2x$, find $\frac{\partial u}{\partial x}, \frac{\partial u}{\partial y}, \frac{\partial u}{\partial z}$
5) If $x^3 + y^3 - 3axy = 0$, then find $\frac{dy}{dx}$ using partial differentiation.
6) Find the value of 'a', if the matrix A is of rank 2 . Where $A = \begin{bmatrix} 6 & a & -1 \\ 2 & 3 & 1 \\ 3 & 4 & 2 \end{bmatrix}$

II. Answer any four of the following questions. $4 \times 3 = 12$

1) Find the slope of the tangent to the curve $r = a(1 - \cos\theta)$ at $\theta = \frac{\pi}{6}$
2) Find the ratio of polar subnormal to the polar subtangent for the curve $r = ae^{b\theta^2}$
3) For the cycloid x=a $(t + sint)$, y= a$(1 - cost)$ Show that i)ψ=t/2 ii) $\frac{ds}{dt}$=2acost/2.
4)If u=log$\frac{x^2+y^2}{x+y}$ prove that $xu_x + yu_y = 1$
5) Find $\frac{du}{dt}$, if u=xy^2+x^2y, where x=at^2 and y=2at.
6)Find the Rank of the matrix by using Elementary row operations $B = \begin{bmatrix} 1 & 2 & -1 & 4 \\ 2 & 4 & 3 & 4 \\ 1 & 2 & 3 & 4 \\ -1 & -2 & 6 & -7 \end{bmatrix}$

III. Answer any five of the following questions. $5 \times 5 = 25$

1) With usual notation Prove that $cot\emptyset = \frac{1}{r}\frac{dr}{d\theta}$
2) Find the pedal equation of the curve $r = a(1 + \cos\theta)$
3) Find the center of curvature and circle of curvature for the curve $y = x^2 + x + 1$ at (1,1)
4) State and prove Euler's theorem.
5) If $u = \frac{yz}{x}$, $v = \frac{zx}{y}$, $w = \frac{xy}{z}$,then show that $\frac{\partial(u,v,w)}{\partial(x,y,z)} = 4$ at (1,1,1)
6) Find the inverse of the matrix $A = \begin{bmatrix} 1 & 2 & 0 \\ 2 & 4 & 5 \\ 3 & 5 & 6 \end{bmatrix}$
7) Find the rank of the matrix by reducing into its Normal form $\begin{bmatrix} 1 & 1 & 1 & 2 \\ 2 & 1 & -3 & -6 \\ 3 & -3 & 1 & 2 \end{bmatrix}$

/**********/

N. Jagadeesh, M.sc.,B.Ed.,
Prof. & HOD
Dept. of Mathematics
Kalpataru First Grade Science College,
TIPTUR - 572 202.

Principal
Kalpataru First Grade Science College
TIPTUR - 572201

KALPATARU FIRST GRADE SCIENCE COLLEGE,TIPTUR
II B.Sc, III SEMESTER, I TEST SEPTEMBER-2017
MATHEMATICS: PAPER-3.1

TIME:1:30 HOURS Max.Marks:45

I.Answer any FOUR of the following questions. 4 X 2 = 8

1) Prove that $\max\{a,b\}=\frac{1}{2}(a+b+|a-b|)$ where a and b are real numbers.
2) Define limit point of a set and state Balzano weiestrass theorem.
3) Verify whether the sequence $\{3+\frac{1}{n}\}$ is increasing or decreasing.
4) Define Absolute convergence of series.
5) State Rolle's theorem for the function f(x).

II. Answer any FOUR of the following questions. 4 X 3 = 12

1) Prove that intersection of two open set is an open set.
2) Test the convergence of the sequence.
$\{\frac{1^2+2^2+3^2+\ldots\ldots+n^2}{2n^3-5n^2+4n-7}\}$.
3) Test the convergence of the series $\sum(\frac{n}{n+1})^{n^2}$.
4) Discuss the convergence of the series $\sum(-1)^{n-1}\frac{n}{2n-1}$.
5) Expand $log_e x$ about x=1 by Taylor's series.

III. Answer any FIVE of the following questions. 5 X 5 = 25

1) Prove that the Union of countable set is countable.
2) Prove that monotonically decreasing sequence which is bounded below is convergent.
3) Prove that a series of positive terms either converges or diverges of $+\infty$.
4) Discuss the convergence of the series $\frac{x}{1\cdot3}+\frac{x^2}{3\cdot5}+\frac{x^3}{5\cdot7}+-----$
5) Prove that a function is continuous in a [a,b] takes every value between its bounds at least once.
6) State and prove Lagrange's mean value theorem.

****

Principal
Kalpataru First Grade Science College
TIPTUR - 572201

Kalpataru First Grade Science College, Tiptur. 22

First Internals

SUBJECT: Zoology

Duration: 1 ½ **Paper V Genetics and Evolutionary Biology** **Max Marks 45**

PART –A

I Answer any Five of the following: **2X5=10**

1) List the differences between Dominant and Recessive characters.
2) Mention the Bases of DNA.
3) Write the Genotypes of the blood groups 'A' and 'B'.
4) What is Linkage?
5) Write notes on Mutations.
6) Explain Gene pool and Gene frequency
7) What are Analogous organs? Give examples

PART-B

II Answer any Five of the following **5X5=25**

1) State the Law of Segregation with suitable example.
2) Write a note on Erythroblastosis foetalis.
3) What are Lethal genes? Give an example.
4) Explain principles of Lamarckism.
5) What are Vestigeal organs? Illustrate with any two suitable examples.
6) Explain Hardy-weinberg law with suitable practical applications.
7) Give an account of Serological evidences.

PART-C

III Answer any One of the following **1X10=10**

1) What is Epistasis? Describe Dominant and Recessive epistasis.
2) A man of colourblind marries a normal heterozygous woman. Find the possible offspring in F1 generation.
   (Note: Colourblindness is sex linked recessive character).
3) Give an account of Darwinism
4) Give an account of different types of Fossils.

Principal
Kalpataru First Grade
Science College, Tiptur.

Kalpataru First Grade Science College, Tiptur. 2021-22

First Internals

SUBJECT: Zoology

Duration: 1 ½ Paper VI Cell Biology and Immunology Max Marks 45

PART –A

I Answer any Five of the following 2X5=10

1) Define Resolving power.
2) What is Malignant tumour?
3) Write a note on Gap junction.
4) What is Immunity? Mention their types.
5) List the functions of Plasma membrane.
6) Write a note on Supernumerary chromosome.
7) Draw a neat labelled diagram of Mitochondria.

PART-B

II Answer any Five of the following 5X5=25

1 Explain Phase contrast Microscope
2) List the differences between Light and Electron Microscope
3) Describe Fluid Mosaic model of Plasma membrane.
4) What is Aging? Mention the causes of Aging.
5) Explain cell mediated immunity
6) Explain the structure of Golgi complex.
7) Write a note on spread of Cancer.

III Answer any One of the following PART-C 1X10=10

1) With a neat labelled diagram explain working principles of Electron microscope.
2) Describe the structure and functions of Nucleus with a neat labelled diagram.
3) With a neat labelled diagram explain Polytene-chromosome.

Principal
Kalpataru First Grade
Science College, Tiptur

KALPATARU FIRST GRADE SCIENCE COLLEGE

Time: 11/2 hours | III Semester B.Sc First Test ENGLISH | Max.Marks:45

I. Answer any five of the following in a word or phrase: 1x5=5

1. Where does the Irish Airman think he will die?
2. When does the river dry to a trickle?
3. What does the physician do with the crutches?
4. What is the speaker's attitude towards those he fights against?
5. What does the image of the sand ribs convey?

II. Answer any two of the following. 2x5=10

1. Explain the symbolism of the crutches.
2. What is the Irish Airman's attitude towards the war he is fighting for?
3. What is Ramanujan's attitude towards the poets of the city in the poem "A River."

III. Answer any two of the following. 2x5=10

1. Comment on the relationship between Bakha and his father.
2. How does Mulk Raj Anand describe the inhuman attitude of High Caste Hindus in 'Untouchable.'
3. Write a note on Sohini, Charat Singh and Chota.?

IV. Transform the sentences as directed in the brackets. 1x5=5

a). My grandfather is always on time (change into negative)

b). Your handwriting is not very legible (change into affirmative)

c). She entered the room (change into interrogative)

d). Close the window (change into interrogative)

e). Did Rama kill Ravana? (change into assertive)

V. Fill in the blanks with appropriate words given in the brackets 1x5=5

a). She is ..... than her sister. (intelligent, more intelligent, most intelligent)

b). Gold is the ..... metal. (heavy, heavier, heaviest)

c). It was the ..... experience in my life. (bad, worse, worst)

d). He is the ..... of the two. (tall, taller, tallest)

e). He is my ..... friend. (close, closer, closest)

VI. Change the following sentences into the passive voice. **1x5=5**

a). He makes tea.

b). She is writing a letter.

c). Floods have destroyed crops.

d). He ate an apple.

e). He was making a kite for the grandson.

VII. Correct the following sentences. **1x5=5**

a). He ate a apple yesterday.

b). A Cat drink milk.

c). My friends doesn't smoke.

d). Amar have a car.

e). Either of these two boys are to blame.

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

II B.Sc, III Sem I TEST - 2020

Subject: OOP Concepts and Programming in Java

Time: 1 Hrs **Marks: 30**

I. Answer the following: **3 X 2=6**

1. What is JDK and API in java?
2. Define Class and Object.
3. Write difference between while and do-while loop.

II. Answer in detail: **2 X 5=10**

1. Explain features of java.
2. Explain operators in java.

III. Answer in detail: **2 X 7=14**

1. Explain general structure of java in detail.
2. Write a program to check whether a given number is prime or not.

VINAY M. S.
HoD of Computer Science
Kalpataru First Grade Science College
TIPTUR - 572 201.

KALPATARU FIRST GRADE SCIENCE COLLEGE, TIPTUR

III BCA, VI Sem, II TEST -2021.

Subject: Python Programming

Time: 1 Hour **Marks: 30**

I. Answer any FIVE of the following. **1 x 5 = 05**

1. What is a dictionary?
2. What is GUI?
3. What is sqlite3?
4. Mention 4 built-in functions in python.
5. What is matplotlib?
6. Mention types of SQL command.

II. Answer any FIVE of the following. **5 x 5 = 25**

1. Explain two types of input functions with example.
2. Explain user-defined functions with example.
3. Explain different types of list operations.
4. Explain File handling mechanism in python.
5. Write a program in python to connect with database and create table.
6. Write a program to create text and entry GUI constructs using Tkinter.

VINAY M. S.
HoD of Computer Science
Kalpataru First Grade Science College
TIPTUR - 572 201.

KALPATARU FIRST GRADE SCIENCE COLLEGE.TIPTUR.

VSEMESTER TEST SEPT 2017

SUB: BOTANY –PAPER-V

Time: 1hr 30 min

Marks: 30

I. Answer any three of the following: 3X2 =6

1. What is flora? Mention its uses.
2. Mention the Botanical name of Clove and Neem.
3. Mention the types of corolla found in sun flower.
4. Explain the gynoecium of Labiatae

II. Explain any four of the following: 4x4=16

5.Mention the botanical name, family , part used and uses of Tea and jute
6. Key characters of Musaceae.
7. Botanical survey of India.
8 Spikelet
9.Herbarium techniques.

III. Answer any one of the following :1x8= 8

10. Give a comparative account of verbenaceae and Rubiaceae
11. Describe Bentham and Hooker's system of classification with merits and demerits.

H. O. D. of Botany
Kalpataru First Grade Science College
TIPTUR - 572 201.

33

Principal
Kalpataru First Grade Science College
TIPTUR - 572201

KALPATARU FIRST GRADE SCIENCE COLLEGE.TIPTUR.

V SEMESTER TEST SEPT 2017

SUB: BOTANY –PAPER-VI

Time: 1hr 30 min

Marks: 30

I. Answer any three of the following: 3X2 =6

1. What is telomere? Mention its significance.
2. Differentiate between epistatic and hypostatic gene.
3. What is uniparental inheritance? Give an example
4. Differentiate between Euchromatin and heterochomatin.

II. Explain any four of the following: 4x4=16

5. Supplementary genes 6. Incomplete dominance
7. Nucleosome model 8.Monoploidy
9. In Maize the formation of purple pigment in seeds requires three genes ACR in dominant condition and their act is complementary to one another. Determine the genotype and phenotype of following crosses.

a). AACcRR XAACcRR b). AaCcRR X AaCcRR

III. Answer any one of the following :1x8= 8

10. Give a brief account on polyploidy and its significance.
11. Explain the Law of independent assortment with a suitable example.

H. O. D. of Botany
Kalpataru First Grade Science College
TIPTUR - 572 201.

Principal
Kalpataru First Grade Science College
TIPTUR - 572201