

V.V.SANGHA'S  
**VEERASHAIVA COLLEGE**

Cantonment, Ballari- 583104, Karnataka.

[www.veerashaivacollege.org](http://www.veerashaivacollege.org)



## **Criteria-II: TEACHING LEARNING PROCESS**

2.5.1: Mechanism of internal/ external assessment is transparent and grievance redressal system is time- bound and efficient (Q.M)

### **Copy Enclosed**

- IA Question papers

**v.v sangha's  
Veerashaiva college .Ballari  
Department of Studies in Physics**



**Semester: III  
Max. Marks: 20**

**IA Test No :1  
Advanced Condensed Matter Physics (21PHY3E1AL)**

**Date :22-02-2023  
Duration : 60 Min**

- Q1). a) Expression for length of reciprocal lattice vector  $\vec{H}$  in terms of interplanar spacing of the lattice plane.  
b) Obtained reciprocal lattice of BCC. (6+4M)  
(OR)
- Q2) a) Derive an expression for Internal field according to Lorentz.  
b) explain the concept of static dielectric constants of gases. (6+4M)
- Q3] Give an account of Brillouin Zone function. (5M)  
(OR)
- Q4] explain silent feature of APW method of band structure calculation. (5M)
- Q5] Give an expression for static dielectric constants of solids. (5M)  
(OR)
- Q6] explain about macroscopic description of static dielectric constant. (5M)



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Department of Studies in Physics**

**Semester: III  
Max. Marks: 20**

**IA Test No :1  
Renewable Energy physics (21PHY3E2CL)**

**Date :23-02-2023  
Duration : 60 Min**

- 
- Q1) Explain the classification of energy resources with their advantages. (10M)  
(OR)
- Q2) Explain the construction and working principle of Hydro Electric Power unit. (10M)
- Q3] Differentiate between Power and Energy. (5M)  
(OR)
- Q4] What are the advantages and limitation of non renewable energy sources? (5M)
- Q5] With a schematic diagram explain the working principle of Nuclear reactor. (5M)  
(OR)
- Q6] Write a note on commercial energy sources. (5M)



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**Veerashaiva college .Ballari**  
**Department of Studies in Physics**

**Semester: III**  
**Max. Marks: 20**

**IA Test No :1**  
**Thermal and Statistical Physics (21PHY3C9L)**

**Date :20-02-2023**  
**Duration : 60 Min**

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Q1]. a) Derive an expression for the probability distribution of the grand canonical ensemble.

b) State and explain laws of thermodynamics. (6+4M)

**(OR)**

Q2]. a) Define partition function. Obtain the partition function for a system of rotating particle.

b) Give any one application of Maxwell Boltzmann statistics. (7+3M)

Q3] Obtain thermodynamic potentials. (5M)

**(OR)**

Q4] Give the classification of ensembles. (5M)

Q5] State and Prove the Boltzmann Equipartition theorem. (5M)

**(OR)**

Q6] Write a note on phase space. (5M)



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Department of Studies in Physics**



**Semester: III  
Max. Marks: 20**

**IA Test No :1  
Analytical Techniques & Instrumentation (21PHY3C9L)**

**Date :21-02-2023  
Duration : 60 Min**

Q1] a) Explain in detail about types and classification of analytical instruments.

b) Explain any two instrument calibration techniques in details. (6+4M)

**(OR)**

Q2]. a) Describe in detail, the principle and instrumentation of Raman Spectroscopy.

b) List any five applications of Raman Spectroscopy. (7+3M)

Q3] Write a note on smart sensors. (5M)

**(OR)**

Q4] Explain the performance characteristics of Transducers. (5M)

Q5] Explain the sample handling techniques. (5M)

**(OR)**

Q6] Differentiate between Raman and Infrared Spectroscopy. (5M)



**V.V Sangha's**  
**Veerashaiva College, Ballari**  
**Department of Political science**  
**B.Com and BCA I st SEM II Internal 2022-23**  
**Subject: HUMAN RIGHTS (Marks-20)**

**I. Answer the following questions**

(5\*1=5)

1. Who is the chairman KSHR ?
2. Who is the prime minister of India?
3. What is equality ?
4. When was declaration of human rights
5. What is human rights?

**II. Answer the following questions**

(1\*5=5)

6. write the function of NHRC?

**III. Answer the following questions**

(1\*10=10)

7. explain the function of KSHR?



**V.V Sangha's**  
**Veerashaiva College, Ballari**  
**Department of Political science**  
**B.Com and BCA I st SEM I Internal 2022-23**  
**Subject: HUMAN RIGHTS** (Marks-20)

**I. Answer the following questions**

(5\*1=5)

1. Who is the chairman NHRC ?
2. Who is the first Citizen of India?
3. What is equality ?
4. who is divider of human generation ?
5. What is human rights?

**II. Answer the following questions**

(1\*5=5)

6. write the classification oh human rights ?

**III. Answer the following questions**

(1\*10=10)

- 7.explain the nature and scope of human rights?



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Veerashaiva College, Ballary 2022-23

Department of political science

**Subject:- International relations**

1st internal

Class:- BA. 6th semester

Time :- 1 Hour

Marks :- 20

**I. Answer any two of the following questions.**

1. Explain the causes war ?
2. Write the importance international relations ?
3. Explain the evaluation of INR?



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Veerashaiva College, Bellari 2022-23

Department of political science

Subject:- **International relations**

2nd internal

Class:- BA. 6th semester

Time :- 1 Hour

Marks :- 20

**I. Answer any two of the following questions.**

1. Explain the foreign policy of India ?
2. Write the structure of league of nation
3. Explain the achievement of UNO ?



**v.v sangha's  
Veerashaiva college .Ballari  
Department of Physics**

**Semester: III  
Max. Marks: 20**

**IA Test No: 1  
GEC 1: Hormones and Disease (21Z003G1CL)**

**Date: 25-02-2023  
Duration: 60 Min**

**I. Answer all the following questions, each carries ONE mark.**

**1x4=4Marks**

1. Define Harmones.
2. Why pituitary gland is called master gland?
3. What are Endocrine glands?
4. Name the harmones secreted by Adrenal gland.

**II. Answer all the following questions, each carries TWO marks.**

**2x3=6Marks**

5. List out the Endocrine glands in human body.
6. What is the function of Thyroid gland?
7. Write the symptoms of Addison's disease.

**III. Answer all the following questions, each carries FIVE marks.**

**5x2=10Marks**

8. Explain the structure and function of Pituitary gland with neat labeled diagram.
9. Discuss the diseases of Adrenal gland in detail.





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**Semester: III**

**IA Test No :2**

**Date :24-03-2023**

**Max. Marks: 20    Analytical Techniques & Instrumentation (21PHY3C9L)**

**Duration : 60 Min**

Q1] a) Discuss the principle and working of Differential Scanning Calorimeter.

b) List out the application of X-Ray Diffraction.

(6+4M)

**(OR)**

Q2] a) With schematic diagram explain the principle and working of UV-visible absorption Spectroscopy.

b) Write a note on Atomic absorption Spectroscopy.

(6+4M)

Q3] Distinguish between TEM and STEM.

(5M)

**(OR)**

Q4] Write a note on Ion Scattering Spectroscopy.

(5M)

Q5] Explain about Plasma Excitation sources of Atomic Emission Spectroscopy.

(5M)

**(OR)**

Q6] Explain about Instrumentation of Spectrofluorimeter.

(5M)



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**Department of Studies in Physics**

**Semester: III**  
**Max. Marks: 20**

**IA Test No :2**  
**Thermal and Statistical Physics (21PHY3C9L)**

**Date :23-03-2023**  
**Duration : 60 Min**

Q1] a) Derive an expression for Bose-Einstein and Fermi Dirac distribution. (10M)

**(OR)**

Q2] a) Derive an expression for Fluctuation in grand canonical Ensemble.

b) Derive an Einstein relation for mobility of a particle. (6+4M)

Q3] Show that the Anti-symmetric nature of fermionic wave function leads to Pauli's Exclusion principle. (5M)

**(OR)**

Q4] List out the difference between bosons and Fermions. (5M)

Q5] Explain Thermoelectric phenomena. (5M)

**(OR)**

Q6] Write a note on Brownian motion. (5M)



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**Semester: III**

**IA Test No :2**

**Date :25-03-2023**

**Max. Marks: 20    Advanced Condensed Matter Physics (21PHY3E1AL)**

**Duration : 60 Min**

Q1)a) Derive an expression for Langevin classical theory of Paramagnetism.

b) Write a note on classification of magnetic materials.

(7+3M)

**(OR)**

Q2) Discuss the electrodynamics for superconductor – London equation.

(10M)

Q3] Write a note on BSC theory.

(5M)

**(OR)**

Q4] write a note on Nuclear magnetic Resonance.

(5M)

Q5] Distinguish type I and type II superconductors.

(5M)

**(OR)**

Q6] explain about Meissner effect and coherence length of superconductivity.

(5M)



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Department of Physics**

**Semester: III  
Max. Marks: 20**

**IA Test No: 2  
GEC 1: Hormones and Disease (21Z003G1CL)**

**Date: 27-03-2023  
Duration: 60 Min**

**I. Answer all the following questions, each carries ONE mark.**

**1x4=4Marks**

1. Define Cancer.
2. Name the male Hormone?
3. What is Hirsutism?
4. Define Stress.

**II. Answer all the following questions, each carries TWO marks.**

**2x3=6Marks**

5. What are the symptoms of polycystic ovaries disease?.
6. Mention the functions of melatonin.
7. Write any two characters of Hyperandrogenism.

**III. Answer all the following questions, each carries FIVE marks.**

**5x2=10Marks**

8. Discuss the general organization of Ovary and its Hormones.
9. Explain the following:-
  - a) Obesity
  - b) Sleep Disorder
  - c) Jet lag

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**Semester: III  
Max. Marks: 20**

**IA Test No :2  
Renewable Energy physics (21PHY3E2CL)**

**Date :27-03-2023  
Duration : 60 Min**

Q1) a) Explain the construction and working of Solar cell.

b) List out the applications of solar cell.

(7+3M)

**(OR)**

Q2 a) Explain the process of photosynthesis.

b) List out the factors influencing photosynthesis.

(7+3M)

Q3] Write a note on stand alone and grid connected solar PV systems.

(5M)

**(OR)**

Q4] Mention the applications of street lighting and domestic lighting.

(5M)

Q5] Explain the production of biomass to Ethanol.

(5M)

**(OR)**

Q6] Write a note on Biomass conversion technologies.

(5M)



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**Department of Studies in Physics**

**Semester: IV**  
**Max. Marks: 20**

**IA Test No :1**  
**Advanced and Quantum mechanics (21PHY4C11L)**

**Date :24-08-2023**  
**Duration : 1 hr**

Q1]. a) Briefly discuss the Einstein's A and B Coefficients with relevant examples.

b) State Fermi golden rule and its applications for time dependent Perturbation theory.

(7+3)

**(OR)**

Q2]. a) What are symmetric and anti-symmetric wave functions? construct anti-symmetric and symmetric wave functions from unsymmetrized wave function.

b) Write a note on Exchange integral spin angular momentum.

(5+5)

Q3] What is perturbation theory? Explain time dependent perturbation theory.

(5)

**(OR)**

Q4] Mention the applications of first order perturbation theory.

(5)

Q5] Explain the physical significance of Wave function.

(5)

**(OR)**

Q6] Derive an expression for constant perturbation theory.

(5)





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**Semester: IV  
Max. Marks: 20**

**IA Test No :1  
Electromagnetics(21PHY4C12L)**

**Date :25-08-2023  
Duration : 1 hr**

Q1]. Obtain Laplace and Poisson's equations in Electrostatics. (10)

**(OR)**

Q2]. Derive an expression for multipole expansion of magnetic vector potential of a localized current distribution. (10)

Q3] State and prove Uniqueness theorem. (5)

**(OR)**

Q4] Obtain gauss law in integral form. (5)

Q5] Derive an expression for Ampere's circuit law in magnetostatic field. (5)

**(OR)**

Q6] Explain the effect of magnetic field in matter. (5)

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**Semester: IV  
Max. Marks: 20**

**IA Test No :1  
Semiconductor Physics(21PHY4E3AL)**

**Date :26-08-2023  
Duration : 1 hr**

Q1].Derive an expression for the electrical conductivity of an Intrinsic Semiconductor. (10)

**(OR)**

Q2]. a) What are Interband and Intraband transitions? Explain

b) Discuss the absorption process involving impurities in semiconductors. (4+6)

Q3] Differentiate between Intrinsic and Extrinsic Semiconductors. (5)

**(OR)**

Q4] Explain the band structure of Silicon. (5)

Q5] What is Hall effect ? Derive an expression for Hall coefficient. (5)

**(OR)**

Q6] Write a note free carrier absorption process. (5)

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**Semester: IV  
Max. Marks: 20**

**IA Test No :1  
Lasers and optical fibers(21PHY4E4AL)**

**Date :28-08-2023  
Duration : 1 hr**

Q1]. With a schematic energy level diagram, Explain the construction and working of Argon Ion Laser. (10)

**(OR)**

Q2]. a) Derive an expression for the fundamental or first Harmonic polarization

b) Estimate the peak power or total energy emitted by the pulse of a Q-switched Laser. (6+4)

Q3] List out the various medical applications of Lasers. (5)

**(OR)**

Q4] With a neat diagram explain the working of Semiconductor diode laser. (5)

Q5] Explain the general characteristics of Q-switching Laser. (5)

**(OR)**

Q6] Write a note on Laser amplifier. (5)

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**Semester: IV  
Max. Marks: 20**

**IA Test No :1  
Lasers and optical fibers(21PHY4E4AL)**

**Date :07-08-2023  
Duration : 1 hr**

Q1]. With a schematic energy level diagram, Explain the construction and working of Argon Ion Laser. (10)

**(OR)**

Q2]. a) Derive an expression for the fundamental or first Harmonic polarization

b) Estimate the peak power or total energy emitted by the pulse of a Q-switched Laser. (6+4)

Q3] List out the various medical applications of Lasers. (5)

**(OR)**

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Q5] Explain the general characteristics of Q-switching Laser. (5)

**(OR)**

Q6] Write a note on Laser amplifier. (5)

V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS  
B.Sc. IV Semester  
Thermal Physics and Electronics

**Second Internal Test**

**Date: 11-08-2023**

**Max Marks: 20**

**Answer the Following Questions: 5 marks Each**

1. Define Entropy and explain the physical significance of entropy.
2. Show that at absolute zero degree Kelvin, the temperature is same on Thermodynamic scale and perfect scale.
3. State third Law of Thermodynamics and explain its significance.
4. What are electronic Adder circuits. Explain Full Adder circuit.

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VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS  
B.Sc. IV Semester  
Thermal Physics and Electronics



**Second Internal Test**

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DEPARTMENT OF PHYSICS  
B.Sc IV Semester  
Thermal Physics and Electronics  
First Internal Test  
Max Marks 20

Answer any four of the Following:

Each of 5 marks

1. State and explain first law of thermodynamics and Obtain an expression for work done during isothermal process.
2. Obtain an expression for the efficiency of Carnot's engine.
3. Explain the working of half wave and full wave rectifier.
4. Discuss the characteristics of NPN Transistor and obtain expression for current gain.
5. Explain the functioning of FET and its characteristics.

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VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS  
B.Sc IV Semester  
Thermal Physics and Electronics  
First Internal Test  
Max Marks 20



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V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS

B.Sc. VI Semester

6.1 Nuclear physics, Solid State Physics,  
Astrophysics and Biophysics

**Second Internal Test**

**Date: 09-08-2023**

**Max Marks: 20**

**Answer the Following Questions: 5 marks Each**

1. With a neat diagram, Explain the principle and working of Bio-gas plant.
2. Discuss the principle and working of Nuclear reactor.
3. Explain Langevin Classical theory of magnetic materials.
4. Explain BCS theory of Superconductivity.

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VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS

B.Sc. VI Semester

6.1 Nuclear physics, Solid State Physics,  
Astrophysics and Biophysics

**Second Internal Test**

**Date: 09-08-2023**

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VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS  
B.Sc VI Semester– 6.2  
Material Science and Electronics-II  
First Internal Test Max Marks 20

Answer any four of the Following: 5 mark Each

1. Explain chemical evaporation method of preparation of thin films.
2. Write a brief note on application of thin films.
3. With a neat diagram explain the working of Phase shift Oscillator.
4. What is the concept of feedback and Write a note barkhausen criteria.
5. Obtain an expression for frequency of Hartly oscillator.

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VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS  
B.Sc VI Semester– 6.2  
Material Science and Electronics-II  
First Internal Test Max Marks 20



Answer any four of the Following: 5 mark Each

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2. Write a brief note on application of thin films.
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VEERASHAIVA COLLEGE, BALLARI  
DEPARTMENT OF PHYSICS

B.Sc VI Semester– 6.1

Nuclear Physics, Solid state Physics, Astrophysics and  
Biophysics

First Internal Test

Max Marks 20

Answer any four of the Following:

Each of 5 marks

1. Write a note on Nuclear forces.
2. Explain Liquid drop model of the nucleus.
3. Derive an expression for mean life of radioactive nucleus.
4. Discuss Gamow's theory and explain Geiger Nuttle law.
5. Explain Fermi theory of beta energy spectrum.



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DEPARTMENT OF PHYSICS

B.Sc VI Semester– 6.1

Nuclear Physics, Solid state Physics, Astrophysics and  
Biophysics

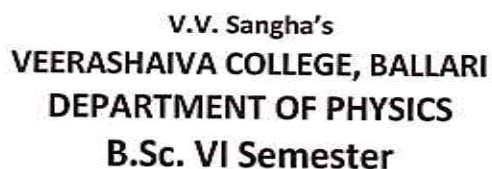
First Internal Test

Max Marks 20

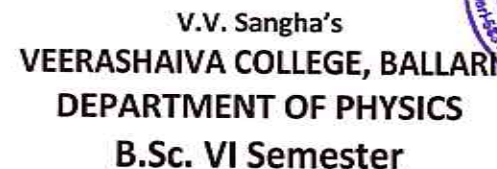
Answer any four of the Following:

Each of 5 marks

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4. Discuss Gamow's theory and explain Geiger Nuttle law.
5. Explain Fermi theory of beta energy spectrum.



1. With neat Truth table and circuit diagrams. Write a note on OR, AND & NOT gate.
2. Explain the functions of RS and JK flip-flops.
3. What are electronic Adder circuits. Explain Full Adder circuit.
4. Write a note on Astable multi-vibrator.



1. With neat Truth table and circuit diagrams. Write a note on OR, AND & NOT gate.
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**VEERASHAIVA COLLEGE, BALLARI**  
**DEPARTMENT OF PHYSICS**  
**B.Sc. V Semester**  
**Paper 5.1: Atomic and Molecular Physics Theory**  
**First Internal Assessment (I A-I)**

**Date: 02:01:2023**

**Time: 12:00 to 1:00 noon**

**I. Answer the following:**

**5 Mark each**

1. Obtain the expression for charge of an electron by Millikan's oil drop method.
2. Deduce the specific charge of electron by J. J. Thomson's method.
3. Explain the theory of pure rotational spectra of diatomic molecule with energy level diagram.
4. Explain the fluorescence and phosphorescence using quantum theory of radiation.

**VEERASHAIVA COLLEGE, BALLARI**  
**DEPARTMENT OF PHYSICS**  
**B.Sc. V Semester**  
**Paper 5.1: Atomic and Molecular Physics Theory**  
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4. Explain the fluorescence and phosphorescence using quantum theory of radiation.



**VEERASHAIVA COLLEGE, BALLARI**  
**DEPARTMENT OF PHYSICS**  
**B.Sc. V Semester**

**Paper 5.2: Statistical mechanics, Quantum mechanics and Electronics-I**  
**First Internal Assessment (I A-I)**

**Date: 03:01:2023**

**Time: 12:00 to 1:00 noon**

**I. Answer the following:**

**5 Mark each**

1. Explain the construction and working of full wave rectifiers.
2. Explain the transistor as an amplifier in CE-Mode.
3. Derive an expression for De-Broglie's wavelength.
4. Explain with a neat diagram the Davisson and Germer experiment.

**VEERASHAIVA COLLEGE, BALLARI**  
**DEPARTMENT OF PHYSICS**  
**B.Sc. V Semester**

**Paper 5.2: Statistical mechanics, Quantum mechanics and Electronics-I**  
**First Internal Assessment (I A-I)**

**Date: 03:01:2023**

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**I. Answer the following:**

**5 Mark each**

1. Explain the construction and working of full wave rectifiers.
2. Explain the transistor as an amplifier in CE-Mode.
3. Derive an expression for De-Broglie's wavelength.
4. Explain with a neat diagram the Davisson and Germer experiment.
- 5.

VEERASHAIVA COLLEGE

20

Department of Mathematics

Sub: ODE & Real analysis - I

Max mark: 20

Time: 1 hour

First Internal

I] Answer any four of the following questions.  
4x5=20m

1. verify the condition of integrability and solve

$$y z \log z dx - z x \log z dy + x y dz = 0$$

2. (a) Define upper and lower Darboux Sum 2m

(b) If  $f(x) = 2x - 1$  on  $[0, 1]$  &  $P = \{0, \frac{1}{3}, \frac{2}{3}, 1\}$ .

Find the upper Darboux Sum & lower Darboux Sum 3m

3. If  $f \in R[a, b]$  &  $m, M$  are infimum and supremum of  $f(x)$  on  $[a, b]$  then p.p.

$$m(b-a) \leq \int_a^b f(x) dx \leq M(b-a)$$

  
H.O.D.

Department of Mathematics  
Veerasaiva College, Ballari.



# VEERASHAIVA COLLEGE

First Internal (paper - 1.1) - 2022-23

Subject :- Mathematics

Max marks = 20

Answer any Four of the following  $[4 \times 5 = 20]$

1) Find the Rank of the matrix A by elementary row-operation (or) Row-reduced Echelon form.

a)  $A = \begin{bmatrix} 1 & 2 & -1 & 4 \\ 2 & 4 & 3 & 5 \\ 3 & 2 & 6 & 7 \end{bmatrix}$

b)  $A = \begin{bmatrix} 0 & 1 & 2 & 3 & 4 \\ 1 & 1 & 2 & 3 & 3 \\ 1 & 1 & 0 & 1 & 1 \\ 3 & 3 & 2 & 1 & 1 \end{bmatrix}$

2) State Cayley - Hamilton Theorem

ii) using Cayley - Hamilton Theorem find  $A^{-1}$

if  $A = \begin{bmatrix} 1 & 0 & -1 \\ 1 & 2 & 1 \\ 2 & 2 & 3 \end{bmatrix}$

3) Find the real value of  $\lambda$ , for which system  
 $x + 2y + 3z = \lambda x$   
 $3x + y + 2z = \lambda y$  have non-zero solution.  
 $2x + 3y + z = \lambda z$

4) Reduce the matrix A to its normal form.

where  $A = \begin{bmatrix} 1 & 1 & 1 & 2 \\ 2 & 1 & -3 & -6 \\ 3 & -3 & 1 & 2 \end{bmatrix}$



H.O.D.

Department of Mathematics  
Veerasaiva College, Ballari.



Second Internal Assessment

Subject : Mathematics (Graph theory - 5.3)

Time: 1 hr

Max marks: 30mx

Class: B.Sc-5<sup>th</sup> Sem

I] Answer any Five of the followings

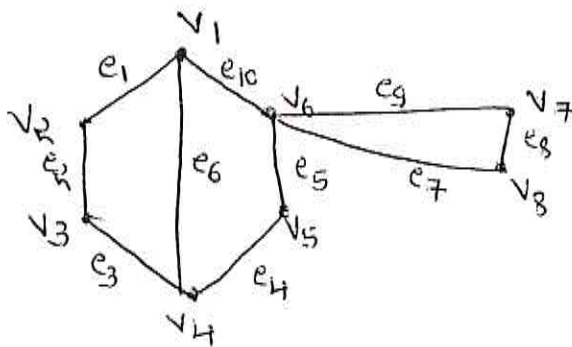
5x6=30M

1] Find the graph whose incidence matrix is

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 & 0 & 1 \\ 0 & 1 & 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 & 1 & 0 \end{bmatrix}$$

and find its adjacency matrix.

2] Find the cycle matrix of



3] State and prove Whitney's theorem.

4] Explain Konigberg's seven bridge problem.

5] If  $G$  is a graph with  $p \geq 3$  vertices such that for all pairs of distinct non-adjacent vertices  $u$  &  $v$   $\deg u + \deg v \geq p$  then  $G$  is Hamiltonian graph.

**Vv Sangha's**  
**VEERASHAIVA COLLEGE**  
**Department of Mathematics**

**SUB:-DSC2: Algebra and Calculus (2.1) Theory**

**Maximum marks=20**

**Time: 1 hour**


**B.sc 2<sup>nd</sup> semester: First internal**

**Date: 12/07/2023**

**I) Answer any Four of the following**

**[4\*5=20]**

- 1) Evaluate  $\int_C (3x + y)dx + (2y - x)dy$  along the curve  $y = x^2 + 1$  from (0, 1) to (3, 10).
- 2) Solve  $\int_0^2 \int_1^2 xy(1 + x + y)dx dy$
- 3) Solve  $\int_0^1 \int_0^3 \int_{x^2}^{\sqrt{x}} (x + y + z)dy dz dx$
- 4) Evaluate  $\int_C (3x - 2y)dx + (y + 2z)dy - x^2 dz$  Where C is the curve defined by  $x=t, y=2t^2, z=3t^3$  and  $t \in [0, 1]$ .
- 5) Evaluate line integral  $\int x^2 y^2 ds$  around the circle  $x^2 + y^2 = 1$
- 6) Solve  $\int_0^b \int_{\frac{x^2}{b}}^{2b-x} xy dy dx$

  
**H.O.D.**  
**Department of Mathematics**  
**Veerasaiva College, Ballari.**

Vv SANGHA'S  
VEERASHAIVA COLLEGE  
DEPARTMENT OF MATHEMATICS  
SUB:-TRIGNOMETRY AND TOPOLOGICAL SPACES  
B. Sc 6<sup>th</sup> SEMESTER: FIRST INTERNAL

TIME: 1 HOUR

TOTAL MARKS=30

DATE: 14/07/2023

1) Answer any FIVE of the following

[5\*6=30]

1) Expand  $\cos 8\theta$  in terms of powers of  $\sin \theta$  and  $\cos \theta$

2) Separate into real and imaginary parts of following

a)  $\sin(x+iy)$       b)  $\sin(x+iy)$       c)  $\cosh(x+iy)$

3) If  $\sin(A+iB) = x+iy$ , Prove that

i)  $\frac{x^2}{\cosh^2 B} + \frac{y^2}{\sinh^2 B} = 1$

ii)  $x^2 \operatorname{Cosec}^2 A - y^2 \operatorname{Sec}^2 A = 1$

4) Show that :  $i \log \frac{(x-i)}{(x+i)} = \pi - 2\tan^{-1} x$

5) Find the Principle and General value of

a)  $\log_e i^i$

b)  $\log(-i)$

6) Prove that the following

i)  $\sinh(x-y) = \sinh x \cosh y - \cosh x \sinh y$

ii)  $\sinh(2x) = \frac{2 \tanh x}{1 - \tanh^2 x}$

7) Show that

$$\frac{\cos 7\theta}{\cos \theta} = 64 \cos^6 \theta - 112 \cos^4 \theta + 56 \cos^2 \theta - 7$$

  
H.O.D.

Department of Mathematics  
Veerasaiva College, Ballari.

  
H.O.D.

VEERASHAIVA COLLEGE

Second Internal Assessment - 2022-23

Subject: Mathematics (paper - 1.1)

Time: - 1 hour

Max marks = 20

Class: B.Sc - 1<sup>st</sup> semester

I) Answer any four of the following [4X5=20]

1) Solve  $\lim_{x \rightarrow 0} \frac{x e^x - \log(1+x)}{x^2}$  by L-Hospital rule.

2) If  $K = \lim_{x \rightarrow 0} \frac{\sinh x - x}{\sin x - x \cos x}$  show that  $K = \frac{1}{2}$

3) Find the Pedal Equation (P-r) of the curve  $r = a(1 - \cos \theta)$

4) Find  $\frac{ds}{dt}$  for the curve  $x = a(\cos t + t \sin t)$   
 $y = a(\sin t - t \cos t)$

5) show that Radius of curvature

$$p = \frac{(1 + y_1^2)^{3/2}}{y_2}$$

6) Derive the derivative of an Arc in cartesian form with respect to 'x'.

  
H.O.D.

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Veerasaiva College, Ballari.



**V. V. Sangha's**  
**Veerashaiva college, Department of BIOTECHNOLOGY, Ballari**  
**B.Sc I sem (NEP) 2022-23**  
**DSC1:21BSC1C1BTL: Cell Biology & Genetics**  
**1<sup>st</sup> Internal Assessment Question paper**

**Time:1 Hour**

**Time:**

**Answer the following**

1. what is genetics
2. Define gene
3. Define allele
4. Backcross
5. Define Epistasis

**Write abrief note on any one of the following**

6. Explain the law of segregation
7. Explain the complementary gene

**Write explanatory notes on any one of the following**

8. Explain the sex linked inheritance in haemophilia
9. Explain the cytoplasmic inheritance

**Max Marks:20**

**Date: 3-4 2022**

**(5×1=5)**

**(1×5=5)**

**(1×10=10)**

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**Veerashaiva college, Department of BIOTECHNOLOGY, Ballari**  
**B.Sc I sem (NEP) 2022-23**  
**DSC1:21BSC1C1BTL: Cell Biology & Genetics**  
**2<sup>nd</sup> Internal Assessment Question paper**

**Time:1 Hour**

**Time:**

**Answer the following**

1. Cytology
2. Vacuoles
3. Cisternae
4. Sand witch model
5. Lysosomes
6. Linkage

**Write abrief note on any one of the following**

7. Differentiate between prokaryotes and eukaryotes.
8. Brief note on Fluid mosaic model with neat labelled diagram.

**Write explanatory notes on any one of the following**

9. Draw and explain mitochondrial and their function.
10. Explain the coupling and repulsion hypothesis.

**Max Marks:20**

**Date: 3. 1. 2023**

**(5×1=5)**

**(1×5=5)**

**(1×10=10)**

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**Veerashaiva college, Department of BIOTECHNOLOGY, Ballari**  
**B.Sc III sem (NEP) 2022-23**  
**DSC:21BSC3C3BTL: Biomolecules 1<sup>st</sup> IA**

**Time:1 Hour**

**Time: 9.00-10.00AM**

**Answer the following**

**Max Marks:20**

**Date: 25. 1. 2023**

**(5×1=5)**

1. Haworth structure of  $\beta$ -D Fructose.
2. Elaborate D & L configuration.
3. Define Mutarotation.
4. Homopolysaccides.
5. Activation energy.
6. Expand FMN & FAD.

**Write a brief note on any one of the following**

**(1×5=5)**

10. Explain the properties of Carbohydrates.
11. Write a note on enzyme inhibition and types.

**Write explanatory notes on any one of the following**

**(1×10=10)**

7. Explain the metabolism of Krebs's Cycle with neat labeled.
8. Derive the MM equation

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**B.Sc III sem (NEP) 2022-23**  
**DSC: 21BSC3C3BTL: Biomolecules -2<sup>nd</sup> IA**

**Date:25.1.2023**

**Max Marks:20**

**Answer the following**

**Time: 9.40-10.40AM**

**(5×1=5)**

1. Define Transamination
2. Pk value
3. Conjugated proteins
4. Name the deficiency of vitamin B and D
5. Scientific name of vitamin B5
6. Symptoms of vitamin B3

**Write a brief note on any one of the following**

**(1×5=5)**

7. Draw the structures of 20 amino acids with three letter symbols
8. Explain the structural organization of secondary protein

**Write explanatory notes on any one of the following**

**(1×10=10)**

9. Explain the steps of urea cycle with neat labelled daiagram
10. Write a brief note on Fat soluble vitamins.



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**B.Sc V sem (CBCS) 2022-23**  
**P:Bt -5.1: Immunology 1<sup>st</sup> IA**

**Time:1 Hour**

**Time: 9.00-10.00AM**

**Max Marks:20**

**Date: 2. 1. 2023**

**Answer the following**

**(5×1=5)**

1. Define Inflammation.
2. What is Tetanus Toxid.
3. What are Antigen presenting cells(APC)?
4. Define Epitope.
5. Edward Jenner.
6. Which glands are absent in Soles of the feet.

**Write abrief note on any one of the following**

**(1×5=5)**

12. Write a note on antigens with their types?
13. Explain the cells involved in immune system..

**Write explanatory notes on any one of the following**

**(1×10=10)**

9. Define vaccine. Write a detailed note on Vaccination with Table
10. Explain the Innate Immunity

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**Veerashaiva college, Department of BIOTECHNOLOGY, Ballari**  
**B.Sc V sem (CBCS) 2022-23**  
**P:Bt -5.2: Recombinant DNA Technology 1<sup>st</sup> IA**

**Time:1 Hour**

**Time:**

**Max Marks:20**

**Date: 3. 1. 2023**

**Answer the following**

**(5×1=5)**

1. Define palindromic sequence
2. Shuttle vector
3. Expand YRPs
4. Cloning vector
5. Sticky ends
6. Enzymes involved in gene cloning

**Write abrief note on any one of the following**

**(1×5=5)**

7. Describe the method of DNA isolation by Shot gun method
8. Write the principles of Recombinant DNA technology.

**Write explanatory notes on any one of the following**

**(1×10=10)**

9. Explain briefly about the classification and the types of Restriction endonucleases.
10. Write in detail about vectors

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**B.Sc V sem (CBCS) 2022-23**  
**P:Bt -5.1: Immunology 2<sup>nd</sup> IA**

**Time:1 Hour**

**Time: 9.00-10.00AM**

**Answer the following**

1. MALT.
2. Hybridoma.
3. Fisher's view
4. Interferon's.
5. Inflammation

**Max Marks:20**

**Date: 3. 1. 2023**

**(5×1=5)**

**Write abrief note on any one of the following**

**(1×5=5)**

1. Describe the general structure of immunoglobulin with function.
2. Write a note on lymph nodes with neat labelled diagram

**Write explanatory notes on any one of the following**

**(1×10=10)**

- 1 Explain briefly about spleen with neat labelled diagram.
- 2 Explain the types of immunoglobins.

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**B.Sc V sem (CBCS) 2022-23**  
**P:Bt -5.2: Recombinant DNA Technology 2<sup>nd</sup> IA**

**Time:1 Hour**

**Time: 9.00-10.00AM**

**Answer the following**

1. Define hybridization
2. Define DNA foot printing.
3. Define Chromosome walking.
4. What radioactive phosphate is used in maxima-gilbert sequencing.
5. Which enzyme is used in the sequencing process.
6. What are clone cells.

**Max Marks:20**

**Date: 3. 1. 2023**

**(5×1=5)**

**Write abrief note on any one of the following**

**(1×5=5)**

7. Explain the mechanism of DNA ligase.
8. Explain the method of genomic library construction.

**Write explanatory notes on any one of the following**

**(1×10=10)**

9. What is Maxima-gilbert method explain in detail.
10. Write Brief note on screening techniques.

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**B.Sc II sem (NEP) 2022-23**

**DSC 2: MICROBIOLOGICAL METHODS -1st IA**

**Time:1 Hour**

**Date:**

**Max Marks:20**  
**(5×1=5)**

**Answer the following**

1. Define Centrifugation
2. What is Microscopy
3. Define Spectroscopy
4. What is Numerical aperture
5. Who is the father of Microbiology

**Write abrief note on any one of the following**

**(1×5=5)**

1. Write down the principle & application of the centrifugation
2. Differentiate between SEM and TEM

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. Write a note on Dark field Microscope with Schematic representation
2. Elaborate the principle & applications of phase contrast microscope

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**B.Sc II sem (NEP) 2022-23**

**DSC 2: MICROBIOLOGICAL METHODS -2<sup>nd</sup> IA**

**Time:1 Hour**

**Date: 12-08-2023**

**Max Marks:20**  
**(5×1=5)**

**Answer the following**

1. Define Stain
2. What is Enriched media
3. Define Culture Media
4. What is Antiseptic
5. Name the Mordant in Gram staining

**Write abrief note on any one of the following**

**(1×5=5)**

1. Write the principle and applications of Moist heat sterilization
2. Differentiate between Gram positive and Gram negative Bacteria

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. Describe about the Serial dilution method and write its applications
2. Write a note on special media based on chemical composition



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**B.Sc IV sem (NEP) 2022-23**

**DSC: 21BSC3C3BTL:Molecular Biology 1<sup>st</sup> I.A**

**Date:14.7.2023**

**Time: 9.40-10.40AM**

**Max Marks:20**

**Answer the following**

**(5×1=5)**

1. Define Primase
2. Define Poly A tail
3. What is splicing
4. Define core enzyme
5. What is enhancer

**Write a brief note on any one of the following**

**(1×5=5)**

1. Explain the types of RNA polymerase in RNA synthesis
2. Write a note on central Dogma of molecular Biology

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. Explain detail note on transcription in Eukaryotes
2. Give a note on Experimental proof of DNA as genetic material

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**B.Sc IV sem (NEP) 2022-23**

**DSC: 21BSC3C3BTL:Molecular Biology 2<sup>nd</sup> I.A**

**Date:07.8.2023**

**Time: 9.40-10.40AM**

**Max Marks:20**

**Answer the following**

**(5×1=5)**

1. Define Translocation
2. Define Genetic code
3. What is Primosome
4. Define Replisome
5. What is Replication complex

**Write a brief note on any three of the following**

**(1×5=5)**

1. Write a neat diagram explain the DNA replication in Eukaryotes
2. Define Genetic code & Explain its properties of Genetic code

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. Explain detail note on translation in Eukaryotes
2. Explain the theta models of DNA replication & rolling circle model

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**B.Sc VI sem (CBCS) 2022-23**

**P:Bt -6.1: Environmental & Agricultural Biotechnology 1st IA**

**Time:1 Hour**

**Date: 17-07-2023**

**Max Marks:20**

**Answer the following**

**(5×1=5)**

1. Define Plant breeding
2. What are microbial pesticides
3. Give an example for herbal pesticides
4. Define Hybridization
5. Define Emasculation
6. Write the application of agriculture biotechnology

**Write abrief note on any one of the following**

**(1×5=5)**

1. Explaiin briefly about bacillus thuringensis of biopesticides
2. Write a note on Micropropagation

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. explain the techniques of plant breeding
2. Write about the techniques of cryopreservation

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**B.Sc VI sem (CBCS) 2022-23**

**P:Bt -6.2: Plant and Animal cell culture 1st IA**

**Time:1 Hour**

**Date:17 -07-2023**

**Max Marks:20**

**Answer the following**

**(5×1=5)**

1. Define invitro culture
2. What is micropropagation
3. Define organogenesis
4. What is PTC
5. Who is the father of PTC
6. Write the use of growth regulators

**Write a brief note on any one of the following**

**(1×5=5)**

1. Write a note on History of Plant tissue culture
2. Write the applications of Micropropagation

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. Explain the plant growth regulators
2. Explain the composition of M.S media



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**B.Sc VI sem (CBCS) 2022-23**  
**P:Bt -6.1: Environmental & Agricultural Biotechnology 2<sup>nd</sup> IA**

**Time:1 Hour**

**Date: 09-08-2023**

**Max Marks:20**

**Answer the following**

**(5×1=5)**

1. Define Biofertilizers
2. Give an examples for Symbiotic Nitrogen Fixation
3. What is Plant Growth Regulators
4. Write the Synthetic & Natural hormone for Auxins
5. Define Free living nitrogen Fixation

**Write a brief note on any one of the following**

**(1×5=5)**

1. Explain in detail the Mechanism of Biological Nitrogen fixation process
2. Write a note on Biofertilizers with Examples

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. Briefly explain Plant growth regulators in Agriculture
2. Write a note on NIF, NOD & HUP genes involved in Nitrogen Fixing Mechanism

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**B.Sc VI sem (CBCS) 2022-23**  
**P:Bt -6.2: Plant and Animal cell culture 2<sup>nd</sup> IA**

**Time:1 Hour**

**Date:10 -08-2023**

**Max Marks:20**

**Answer the following**

**(5×1=5)**

1. Define suspension culture
2. What is clonal propagation
3. Define Totipotency
4. What is surface sterilization
5. What is Callus

**Write a brief note on any one of the following**

**(1×5=5)**

1. Describe the methods of Callus development
2. Write about the process of embryo culture

**Write explanatory notes on any one of the following**

**(1×10=10)**

1. Give an account of Suspension culture
2. Explain the process of Micropropagation of plants by Auxillary bud



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**DEPARTMENT OF COMMERCE AND MANAGEMENT**  
**B COM 4<sup>TH</sup> SEM**

**1<sup>ST</sup> INTERNAL TEST - 2019-20**  
**SUB:-CORPORATE ACCOUNTING-II**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. What is bank? Name the schedules of profit and loss account of a bank?
2. Write the Pro-form of balance sheet of a bank.
3. Prepare profit and loss account and calculate statutory reserves from the following information of a bank on 31-03-2019:-

Particulars	Rs.
Interest earned	10,00,000/-
Other income	2,50,000/-
Interest Expended	4,50,000/-
Operating expenses	3,00,000/-
Profit and loss a/c	2,50,000/-
Rebate on bill discounted	25,000/-
Provision for doubtful discounted	75,000/-
Provision for taxation	1,50,000/-



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DEPARTMENT OF COMMERCE AND MANAGEMENT  
B COM 4<sup>TH</sup> SEM  
1<sup>ST</sup> INTERNAL TEST - 2019-20  
SUB:-INCOME TAX-III**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. What is book profit. How do you calculate book profit.
2. Who is working partner and non- working partner.
3. X,Y and Z are equal partner in a firm with X being non-working partner.

**The P&L a/c for the year ended 31-03-2019 is as follows:-**

Rent	60,000/-	Gross Profit	12,00,000/-
Office expenses	75,000/-	Discounte	30000/-
Salaries	3,00,000/-	Bad Debts Recovered	6000/-
Sales Tax	30,000/-	Bank Interest	9000/-
Advertisement	45,000/-		
Charity & Donations	15,000/-		
Bad Debts	45,000/-		
Bad Debts Reserve	30000/-		
Sundry expense	60,000/-		
Depreciation	75,000/-		
Interest on capital:-			
X			
Y	1,50,000/-		
Z	90,000/-		
	60,000/-		
Commission:-			
X	45,000/-		
Y	30,000/-		
Z	15,000/-		
Net Profit	1,35,000/-		
	<b>12,60,000/-</b>		<b>12,60,000/-</b>

**Other Information:-**

1. Salaries include partner salaries Y Rs. 45000/- and Z Rs. 30000/-.
2. Bad Debts admissible by income tax department Rs. 37,500/-.
3. Furniture purchase by X for personal use Rs. 30,000/- has been debited to sundry expenses.
4. Donation include donation to local school Rs. 10,500/- to a club Rs. 3,000/- and trade association Rs. 1,500/-.
5. Capital account of partner at the beginning of previous year were as follows :-  
X Rs. 6,00,000/-  
Y Rs. 3,60,000/-  
Z Rs. 2,40,000/-

**Compute the total income of firm for the AY 2019-20.**





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**Veerashaiva College, Ballari**  
**Dept of Commerce & Management**  
**B.B.A 1<sup>st</sup> Semester**  
**I Internal Test 2019-20**  
**Subject: Quantitative Techniques-I**

**Time: 1 hour**

**Max Marks: 15**

**I. Answer any 3 of the following:**

**3\*5=15**

- 1) Define statistics. Briefly the scope and importance of statistics.
- 2) Prepare a bivariate frequency distribution table from the following information  
Age of bridegroom: 25, 28, 26, 30, 32, 40, 22, 26, 29, 31, 35, 38, 37, 28, 22, 29, 18, 30, 38, 25.  
Age of bride: 23, 26, 22, 25, 28, 35, 19, 20, 18, 27, 30, 35, 32, 26, 18, 25, 18, 25, 36, 20.
- 3) In a sample study of coffee habitants in two towns, the following information was received.  
  
Town A: 40% are males out of total 45% and male non coffee drinkers are 20%  
Town B: males were 55% non-coffee drinkers were 15% prepare tabulation.
- 4) Prepare a suitable bar diagram for the following data.

Items.	Family A	Family B	Family C
food	500	1400	2000
House rent	300	700	1000
fuel	150	200	200
others	750	1350	2000
Total	1700	3650	5200



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**Veerashaiva College, Ballari**  
**Dept of Commerce & Management**  
**B.B.A1<sup>st</sup>Semester**  
**I Internal Test 2019-20**  
**Subject: Accounting for Managers**

**Time: 1 hour**

**Max Marks: 15**

**I. Answer any 3 of the following:**

**3\*5=15**

- 1) Define accounting. Explain various of accounts and its rules?
- 2) Who are the users of Accounting information? Explain.
- 3) Explain in brief accounting principles?
- 4) Distinguish between financial accounting and cost accounting?
- 5) Frame accounting equation for the following :  
Commenced business with capital Rs:100000  
Borrowed loan from bank Rs:50000  
Purchased fixed assets for cash Rs:10000





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**Dept of Commerce & Management**  
**B.B.A1<sup>st</sup>Semester**  
**I Internal Test 2019-20**

**Subject: Principles and practice of management**

**Time: 1 hour**

**Max Marks: 15**

**I. Answer any 3 of the following:**

**3\*5=15**

- 1) Define management. Briefly explain levels of management?
- 2) Write the contribution of Henry Fayol towards management?
- 3) What are the steps in planning?
- 4) Discuss the techniques of forecasting?



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**Dept of Commerce & Management**  
**B.B.A1<sup>st</sup>Semester**  
**II Internal Test 2019-20**

**Subject: Principles and practice of management**

**Time: 1 hour**

**Max Marks: 10**

**I. Answer any 2 of the following:**

**5\*2=10**

- 1) Write the steps in rational decision making?
- 2) What are the types of organizations?
- 3) Write the functions of staffing?



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**Veerashaiva College, Ballari**  
**Dept of Commerce & Management**  
**B.B.A1<sup>st</sup> Semester**  
**II Internal Test 2019-20**  
**Subject: Quantitative techniques**

**Time: 1 hour**

**Max Marks: 10**

**I. Answer any 2 of the following:**

**5\*2=10**

1. Calculate mean and median for the following:

marks	No of students
10-20	10
20-30	20
30-40	5
40-50	10
50-60	5

2. Explain the techniques of central tendency?

3. Represent the following frequency distribution by histogram. Get the frequency polygon from histogram

IQ	60-80	80-90	90-95	95-100	100-105	105-110	110-120	120-140
No of children	10	15	10	15	12	05	05	02



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**Dept of Commerce & Management**  
**B.B.A1<sup>st</sup>Semester**  
**II Internal Test 2019-20**  
**Subject: Quantitative techniques**

**Time: 1 hour**

**Max Marks: 10**

**I. Answer any one of the following:**

**1\*10=10**

1. (A) What is compound journal entry? Explain the differences between JOURNAL & LEDGER

(B) Prepare the ledger account of Mr. Mohan from the following transactions:

2014 AUG	RS.
1. bought goods from Mohan	6000
7 paid him cash on account	3000
12 returned goods to him	200
18 sold goods to him	4000
22 received from him cash	2400
25 returned goods to him	400
28 purchased goods from him	2000

2. Journalise the following transactions post them to ledger accounts and cast the trail balance:

2019- April		Rs
1	Commenced business with the following	
	Cash	20000
	Goods	5000
	Building	15000
2	Deposited into State Bank of India	12000
3	Bought goods from Ravi Traders	3000
4	Sold Goods to Vinayaka	2000
6	Returned goods to Ravi Traders	200
7	Vinayaka returned us Goods	100
9	Purchased office furniture	500
12	Paid Ravi Traders by check	1800
13	Received check from Vinayaka and paid into Bank	1200
15	Paid for Repairs	



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**DEPARTMENT OF COMMERCE AND MANAGEMENT**  
**B COM 4<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-CUSTOMS DUTIES**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Define the term customs and explain the role of customs in international trade
2. Briefly explain the power of custom authorities ?
3. Give the meaning for the following :
  - A. Asses-sable value
  - B. Foreign Vessel
  - C. Import manifest
  - D. Letter of credit
  - E. Bill of lading.





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**B COM 4<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-COMPANY LAW AND SECRETARIAL PRACTICE**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Define the term secretary, Explain the qualification to become secretary?
2. Explain the procedure of appointment of company secretary.
3. What are the good qualities required to become a good secretary.



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**B COM 4<sup>TH</sup> SEM**  
**1<sup>ST</sup> INTERNAL TEST - 2019-20**  
**SUB:-BUSINESS COMPUTING**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Explain the basic structure of HTML.
2. Explain the different heading tags in HTML.
3. What is list? Explain the difference types of list.



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**B COM 4<sup>TH</sup> SEM**  
**1<sup>ST</sup> INTERNAL TEST - 2019-20**  
**SUB:-COMPUTER APPLICATIONS**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Explain the basic structure of C program.
2. Write a C program to find the sum of two numbers.
3. What is constant and explain its types.



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**B COM 4<sup>TH</sup> SEM**

**1<sup>ST</sup> INTERNAL TEST - 2019-20**  
**SUB:-QUANTATIVE TECHNIQUE-II**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Explain positive and negative correlation with examples.
2. Calculate Karl pearson's Co-efficient from the following:-

X	10	20	30	40	50
Y	20	40	60	80	100

3. Calculate the Spear-man's rank correlation from the following data:-

Marks in Accounts	Marks in Statistics
60	65
40	75
85	50
73	93
90	80



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**B COM 6<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-FINANCIAL SERVICES**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Explain the features of financial service.
2. State the development of financial services in India.
3. Briefly explain types of lease.





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**B COM 6<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-MULTIMEDIA**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Define Multimedia ? Explain the different elements of multimedia.
2. Explain the different categories of multimedia.
3. Write about scanner and digital camera.



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**DEPARTMENT OF COMMERCE AND MANAGEMENT**  
**B COM 6<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-HUMAN RESOUCE MANAGEMENT**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Define HRM. Write the features of HRM.
2. Briefly explain the scope of HRM.
3. Explain the functions of HRM.



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**B COM 6<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-INCOME TAX-II**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. What is capital gain? What is the difference between LTCG and STCG?
2. From the following information compute the taxable capital gains for the assessment year 2019-2020.

Particular	House
Date of purchase	01-06-1997
Cost of acquisition	5,70,000/-
Cost of improvement in 2000	25000/-
Fair Market Value as on 01-04-2001	5,25,000/-
Cost of improvement in 2004-05	1.55.940/-
Sale proceeds of property in 2018-19	21,14,400/-

**Cost of inflation index**

**For 2001-02:100    2004-05:113    2018-19:280**

3. Kabir Bedi provides the following details relating to the PY 2018-19

- A. Rs. 10000/- 6% Government Paper
- B. Rs. 20000/- 8% Securities of Port Trust Of Kandla.
- C. Rs. 20000/- 9% Tax Free Debentures of X Ltd (listed).
- D. Rs. 4500/- Int received on tax free securities (unlisted) of Z Ltd.
- E. Rs. 3600/- Int received on securities of UP Electricity Board
- F. Bank charged 100/-Rs as collection charges

**Compute the Income From Other Sources for A/Y 2019-20.**



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**B COM 6<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-INTERNET AND E-GOVERNANCE**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Write a short on LAN and WAN.
2. Explain world wide web(WWW).
3. Define E-Mail. Mention the advantages and disadvantages of E-Mail.



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**B COM 6<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-COST ACCOUNTING-II**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Draw the details from of cost sheet.
2. From the following calculate the quotation price .

A. Raw material consumed	Rs. 17000/-
B. Direct wages paid	Rs. 20000/-
C. Factory overhead	Rs. 10000/-
D. Office overhead	RS,9400/-

The quotation price should include a profit of 20% on selling price
3. A company wants o supply 100 units of an article . Ascertain the profit the company would make from the following data.

A. Meterial	Rs. 25000/-
B. Wages	Rs. 30000/-
C. Works overhead 40% on wages	
D. Administrative overhead 25% on work cost	
E. Expected sales price	Rs. 1,00,000/-





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**B COM 6<sup>TH</sup> SEM**  
**INTERNAL TEST - 2019-20**  
**SUB:-MANAGEMENT ACCOUNTING**

**TIME:-30 MIN**

**MARKS=10 MARKS**

**ANSWER ANY TWO FROM THE FOLLOWING QUESTIONS:-**

1. Define Management accounting? Explain its functions.
2. Difference between management accounting and cost accounting.
3. Briefly explain the various classification of financial analysis.
4. From the following data prepare common size income indicating items wise percentage to sales:-

Particular	2018	2019
Net sales	15,00,000/-	20,00,000/-
Cost of sales	10,00,000/-	12,00,000/-
Other expenses	1,00,000/-	2,00,000/-
Other incomes	20,000/-	5,000/-
Income Tax	80,000/-	1,20,000/-



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**Veerashaiva College, Ballari**  
**Dept of Commerce & Management**  
**B.B.A 3<sup>rd</sup> Semester**  
**Internal Test 2018-19**  
**Subject: Marketing Management**

Time:1 hour

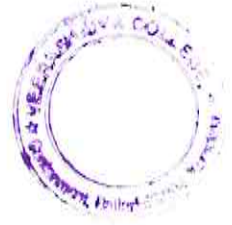
MAX MARKS:10

**SECTION - A : ANSWER ANY TWO OF THE FOLLOWING**

**2\*5=10**

1. What are the components of product portfolio
2. Briefly explain the various stages of PLC
3. Elucidate the various classification of products
4. What are the objectives of pricing
5. Explain the functions of channels of distribution

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**Dept of Commerce & Management**  
**B.B.A 3<sup>rd</sup> Semester**  
**Internal Test 2018-19**  
**Subject: Human Resource Management**



**Time:1 hour**

**MAX MARKS:15**

**ANSWER ANY THREE OF THE FOLLOWING**

**3\*5=15**

1. Define HRM. Explain the functions of HRM
2. Briefly explain HRM model
3. Define HRP. Write the process of HRP
4. Write a short note on job analysis

**Veerashaiva First Grade College, Bellari**  
**First internal Assessment 2018**

**Subject :- Political Theory**  
**Time :- 1 Hour**

**Class:- BA. 2nd semester**  
**Marks :- 20**

**I. Answer any two of the following questions.**

**2 x 10 = 20**

1. Discuss the characteristics of classical Political theory.  
ಸಾಂಪ್ರದಾಯಿಕ ರಾಜಕೀಯ ಸಿದ್ಧಾಂತದ ಲಕ್ಷಣಗಳನ್ನು ಚರ್ಚಿಸಿರಿ.
2. Explain the principles of socialism.  
ಸಮಾಜವಾದದ ತತ್ವಗಳನ್ನು ವಿವರಿಸಿರಿ.
3. Explain the nature and scope of Political theory.  
ರಾಜಕೀಯ ಸಿದ್ಧಾಂತದ ಸ್ವರೂಪ ಮತ್ತು ವ್ಯಾಪ್ತಿಯನ್ನು ವಿವರಿಸಿರಿ.

**Veerashaiva First Grade College, Bellari**  
**Second internal Assessment 2018**

**Subject :- Political Theory**  
**Time :- 1 Hour**

**Class:- BA. 2nd semester**  
**Marks :- 20**

**I. Answer any two of the following questions.**

**2 x 10 = 20**

1. Critically discuss the principles of liberalism.  
ಉದ್ಧಾರವಾದದ ತತ್ವಗಳನ್ನು ವಿಮರ್ಶಾತ್ಮಕವಾಗಿ ಚರ್ಚಿಸಿರಿ.
2. Discuss the theory of surplus - value.  
ಅಧಿಕ ಮೌಲ್ಯ ಸಿದ್ಧಾಂತ ಕುರಿತು ಚರ್ಚಿಸಿರಿ.
3. Discuss the merits and demerits of democracy.  
ಪ್ರಜಾಪ್ರಭುತ್ವದ ಗುಣದೋಷಗಳನ್ನು ಚರ್ಚಿಸಿರಿ.



**Veerashaiva First Grade College, Bellari**  
**First internal Assessment 2019**

**Subject :- Political Theory**

**Class:- BA. 2nd semester**

**Time :- 1 Hour**

**Marks :- 20**

**I. Answer any two of the following questions.**

**2 x 10 = 20**

1. Explain the nature and scope of Political theory.  
ರಾಜಕೀಯ ಸಿದ್ಧಾಂತದ ಸ್ವರೂಪ ಮತ್ತು ವ್ಯಾಪ್ತಿಯನ್ನು ವಿವರಿಸಿರಿ.
2. Explain the different types of authority.  
ಶಾಸನಬದ್ಧ ಅಧಿಕಾರದ ವಿಭಿನ್ನ ಪ್ರಕಾರಗಳನ್ನು ಚರ್ಚಿಸಿರಿ.
3. Explain the features of behaviouralism.  
ವರ್ತನಾವಾದದ ಲಕ್ಷಣಗಳನ್ನು ವಿವರಿಸಿರಿ.

**Veerashaiva First Grade College, Bellari**  
**Second internal Assessment 2019**

**Subject :- Political Theory**

**Class:- BA. 2nd semester**

**Time :- 1 Hour**

**Marks :- 20**

**I. Answer any two of the following questions.**

**2 x 10 = 20**

1. Discuss the kari marxian socialism.  
ಕಾರ್ಲ್ ಮಾರ್ಕ್ಸ್ ರವರ ಸಮಾಜವಾದವನ್ನು ಕುರಿತು ಚರ್ಚಿಸಿರಿ.
2. Discuss the challenges of Indian democracy.  
ಭಾರತದಲ್ಲಿ ಪ್ರಜಾಪ್ರಭುತ್ವವು ಎದುರಿಸುತ್ತಿರುವ ಸವಾಲುಗಳನ್ನು ಕುರಿತು ಚರ್ಚಿಸಿರಿ.
3. Critically discuss the principles of liberalism.  
ಉದ್ಧಾರವಾಗದ ತತ್ವಗಳನ್ನು ವಿಮರ್ಶಾತ್ಮಕವಾಗಿ ಚರ್ಚಿಸಿರಿ.





Veerashaiva degree college, BALLARI  
Department of PG studies in Zoology

Paper-3:DSC7:Ethology and Chronobiology  
II - SEM

1<sup>st</sup> Internal assessment examination

Date: 31.01.22 Date: 14.06.22

Time: 1.30 Hour

Sub. Code: 21ZOO2C7L

Maximum marks: 30

I. Answer the following in one or 2 sentences each: 5x1=5

1. Who is the father of animal behavior?
2. What is proximate behavior?
3. Define orientation.
4. What is Altruism?
5. Define mimicry.

II. Answer any three of the following in brief:

3x5=15

6. Discuss the method for studying animal behavior.
7. Explain animal signaling by taking one example.
8. Write a note on animal navigation.
9. Discuss the animal communication in birds.
10. Explain the sexual dimorphism in animals.

III. Answer any one of the following in detail: 1x10=10

11. Discuss the History of animal behavior.
12. Explain the social behavior of bees and wild animals.

  
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Veerashaiva degree college, BALLARI  
Department of PG studies in Zoology  
Paper 4–DSC8:Cancer and Radiation Biology  
II - SEM  
1<sup>st</sup> Internal assessment examination

Date: 15.06.22

Time: 1.30 Hour

Sub. Code :21ZOO2C8L

Maximum marks: 30

I. Answer the following in one or 2 sentences each:

1x5=05

1. Define cancer.
2. What is chemical carcinogenesis?
3. Name any two properties of cancer.
4. Mention any two stages of cancer.
5. Write any two causes of cancer.

II. Answer any three of the following in brief:

3x5=15

6. Explain the physical carcinogenesis.
7. Discuss a) Immune surveillance b) Immune recognition of tumors.
8. Explain the clonal nature of cancer.
9. Discuss the role of T – regulatory cell in immune invasion.
10. Differentiate between tumor specific transplantation antigen and tumor associated transplantation antigens.

III. Answer any one of the following in detail:

1x10=10

11. Discuss in details Etiology of cancer.
12. What is the prevalence of cancer in India & World?

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Veerashaiva degree college, BALLARI  
Department of PG studies in Zoology

Paper 1 –DSC5: Biology of Chordates  
II - SEM

2<sup>nd</sup> Internal assessment examination

Date: 27.07.22

Time: 1.30 Hour

Maximum marks: 30

I. Answer the following in one or 2 sentences each: 5x1=5

1. Define Neoteny.
2. Name any 2 examples of snake venom?
3. What is courtship behavior?
4. Mention the different sub classes of mammals.
5. Define Branchial and Pulmonary Respiration.

II. Answer any three of the following in brief: 3x5=15

6. Explain the differences between Poisonous and Nonpoisonous Snakes of India.
7. Explain Avian migration.
8. Write a note on origin of birds with evidences.
9. Explain the origin & evolution of mammals.

III. Answer any one of the following in detail: 1x10=10

10. Explain the structural Peculiarities of Protheria, Metatheria, Eutheria. Write about Aquatic mammals.
11. Explain the Integuments of tetrapods with emphasis on epidermal derivatives of glands, scales, horns, nails, hoofs, feathers, hairs.

  
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Department of PG studies in Zoology

Paper 2-DSC6: Developmental Biology and Molecular Endocrinology  
II - SEM

2<sup>nd</sup> Internal assessment examination

Date: 28.07.22

Time: 1.30 Hour

Maximum marks: 75

I. Answer the following in one or 2 sentences each: 5x1=5

1. Define local hormones.
2. What are Pheromones?
3. Define Bioassay.
4. What are Secondary Messengers?
5. What is Pituitary Dwarfism?

II. Answer any one of the following in brief: 3x5=05

6. Explain milk ejection reflex and water balance.
7. Explain Addison's disease and Cushing's syndrome.
8. Discuss the hormone & homeostasis of sodium.
9. Discuss the physiological action of melatonin.

III. Answer any one of the following in detail: 1x10=10.

10. Explain Structure and Functions of Endocrine glands.
11. Discuss a) Surgical and Hormonal Replacement Therapy.  
b) Mechanism of hormone action

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Veerashaiva degree college, BALLARI  
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Paper 3-DSC7: Ethology and Chronobiology  
II - SEM

2<sup>nd</sup> Internal assessment examination

Date: 29.07.22

Time: 1.30 Hour

Maximum marks: 30

I. Answer the following in one or 2 sentences each: 5x1=5

1. Define circannual rhythms.
2. What is photoperiodism?
3. Define chronotherapy.
4. Expand a) PRC b) PTC.
5. What is Zeitgebers?

II. Answer any one of the following in brief:

5x1=05

6. Explain Biological timing system of a) Ultradian b) circadian.
7. Explain Rhythmic characteristics of photic and non-photic Entrainment.
8. Discuss about Free running rhythms.
9. Explain entrainment & masking in the natural artificial environment.

III. Answer any one of the following in detail:

1x10=10

10. Discuss the Biological clock and human health and diseases.
11. Explain a) parametric and non-parametric entrainment  
b) Phase shift and phase response curve.

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**Paper 1 - DSC1: Systematics and Biology of Non-Chordates**  
**I - SEM**

**1<sup>st</sup> Internal assessment examination**

Date: 28.01.22

Time: 1.30 Hour

Maximum marks: 30

**I. Answer the following in one or 2 sentences each: 5x1=5**

1. Define Alpha taxonomy.
2. What is cytotaxonomy?
3. What is nominalist species concept?
4. Name the two respiratory pigments.
5. What are labial palps?

**III. Answer any three of the following in brief: 3x5=15**

6. Discuss a) Molecular taxonomy b) Dendrogram c) Cladistics d) Chemotaxonomy e) Gamma taxonomy.
7. Explain a) Typological species concept b) Biological species concept c) Recognition Species concept e) Aberrant species concept
8. Write the general characteristics and classification of phylum Annelida.
9. Write a brief note on respiratory organs of Arthropoda.
10. Explain filter feeding in cheatopterus with a neat labelled diagram.

**IV. Answer any one of the following in detail: 1x10=10**

11. Write the general characteristics and out line classification of phylum chordates & Discuss the characteristics of super class Pisces.
12. Explain in detail about the mechanism of excretion in Pheretima.

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Veera Shaiva degree college, BALLARI  
Department of PG studies in Zoology

Paper 1 –DSC5: Biology of Chordates  
II - SEM

Practical Internal assessment examination

Date: 27.07.22

Time: 2 Hour

Maximum marks: 30

- I. Perform the Major experiment 'A':
- II. Perform the Minor experiment 'B':
- III. Comment on 'C':
- IV. Viva Voce:
- V. Record:

4

4

Veera Shaiva degree college, BALLARI  
Department of PG studies in Zoology

Paper 2–DSC6: Developmental Biology and Molecular Endocrinology  
II - SEM

Practical Internal assessment examination

Date: 28.07.22

Time: 1.30 Hour

Maximum marks: 20

- I. Perform the Major experiment 'A':
- II. Perform the Minor experiment 'B':
- III. Comment on 'C':
- IV. Viva Voce:
- V. Record:

4

4

Veerashaiva degree college, BALLARI

Department of PG studies in Zoology

Paper 3–DSC7: Ethology and Chronobiology

II - SEM

Practical Internal assessment examination

Date: 29.07.22

Time: 1.30 Hour

Maximum marks: 30

- I. Perform the Major experiment 'A':
- II. Perform the Minor experiment 'B':
- III. Comment on 'C':
- IV. Viva Voce:
- V. Record:

4

4

  
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17. Which of the following statements is correct for Levene's test
- a) It is used to assess the equality of variance between two samples
  - b) It is used to assess the equality of variance between the same sample of person
  - c) Both 1 and 2
  - d) None of these
18. Who discovered the Dunnett's test
- a) Charles Dunnett b) Charles Darwin c) Macleod d) John Snow
19. Which of the following tests are parametric tests
- a) ANOVA b) Wilcoxon c) Kruskal – Wallis d) All of these
20. Which of the following is the characteristic of a non-genotoxic carcinogen
- a) Has no influence on promotional stage of carcinogenesis
  - b) Would be expected to produce positive responses in in vitro assays for mutagenic potential
  - c) Typically exerts other forms of toxicity or disrupts cellular homeostasis
  - d) Generally, shows little structural diversity.

  
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9. Results from long term exposure to lower doses of the chemical is known as  
a) acute toxicity b) chronic toxicity c) moderate toxicity d) high toxicity
10. What is the main objective of toxicity assessment  
a) To determine source of pathway b) To determine chemical concentration  
c) To estimate how much of substance does what kind of harm  
d) To analyze chemical exposure
11. LD50 in a toxicity test stands for  
a) A dose that will kill 50% of an exposed population  
b) A dose that would not affect or harm 50% of an exposed population  
c) A dose that will kill 25% of an exposed population  
d) A dose that would not kill 25% of an exposed population
12. Which of the following assumptions is not correct regarding risk assessment for Male reproductive effects in the absence of mechanistic data  
a) An agent that produces an adverse reproductive effect in experimental animal is assumed to pose a potential reproductive hazard to humans  
b) In general, a non- threshold is assumed for the dose response curve for male reproductive toxicity  
c) Effects of xenobiotics on male reproduction are assumed to be similar across species unless demonstrated otherwise  
d) The most sensitive species should be used to estimate human risk
13. Which of the following toxicity can occur due to single exposure  
a) Acute toxicity b) sub-acute toxicity c) sub-chronic toxicity d) chronic toxicity.
14. The most common target organ of toxicity is  
a) Heart b) Lung c) CNS(brain and spinal cord) d) Skin
15. Toxicokinetics deals with  
a) Absorption, distribution b) Bio transformation and excretion of chemical  
c) Both 1 and 2 d) None of these
16. Saturation kinetics is also known as  
a) Linear pharmacokinetics b) Non – planar pharmacokinetics  
c) Straight line pharmacokinetics d) Nonlinear pharmacokinetics

*Spalte*  
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BALLARI



Veerashaiva degree college, BALLARI  
Department of PG studies in Zoology  
Paper 4-DSC8: Cancer and Radiation biology  
II - SEM  
2<sup>nd</sup> Internal assessment examination

Date: 29.07.22

Time: 1.30 Hour

Maximum marks: 25

I. Answer the following in one or 2 sentences each: 5x1=5

1. Define ontogenesis.
2. What is radiation lesions in DNA?
3. Expand a) RBE b) HRS
4. What are anti-cancer drugs?
5. Define gene amplification.

II. Answer any three of the following in brief:

3x5 = 05

6. Explain cancer therapy at gene level.
7. Discuss various clinical trial phases (Phase I, II, III) in cancer treatment.
8. Explain a) Induced repair (IRR) b) Major types of DNA repair.
9. Discuss the molecular target of a) Bi standard epigenetic effects  
b) Radiation sensitizers.

III. Answer any one of the following in detail:

1x10=10

10. Discuss a) Scope & significance of radiation biology.  
b) Cellular radiobiology
11. Explain ionizing radiation in detail.

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V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI.  
B.Sc II SEM Second Internal- 2022-23

Subject: Botany Paper: DSC-2.1 Diversity of Non-Flowering plants

Date: 10-08-2023

Marks: 20

Answer the following:

5 Marks

1. What is Diatomaceous Earth?
2. What are Algal Blooms?
3. What are Gemmae?
4. Define Paraphysis.
5. Alternate Name of *Selaginella*?
6. Give Indian any two Indian Examples of *Equisetum*?
7. What is Corolloid Root?

Answer the following (Any 3)

15 Marks

8. What are Diatoms and explain its Importance?
9. Explain the Morphology and Reproductive Parts of *Selaginella*?
10. Explain the T.S. of *Equisetum*. With neat labeled diagram?
11. Explain the T.S. of Leaf of *Cycas*. With neat labeled diagram?
12. Give a brief account on the general characters of Gymnosperms?

V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI.  
B.Sc II SEM Second Internal- 2022-23

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V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI.  
B.Sc., 4<sup>th</sup> SEM Second Internal- 2023  
Subject: Botany  
Paper: DSC-4.1 Ecology and Conservation Biology

Date: 09-08-2023

Answer any 5 of the following

Marks: 20

5Marks

- 1) What is Ecological Succession?
- 2) What is Hydrosere?
- 3) What is Sedimentary Cycle?
- 4) What is the % of Forest Area in Karnataka?
- 5) What is Water Quality Indicators?
- 6) Define is Solid Waste Management.
- 7) Give any two Plant Species names Western Ghats

15Marks

- II) Answer the following (Any 3)
- 8) Explain Ecological Pyramids and Pyramid energy
  - 9) Explain Biogeochemical Cycles of Nitrogen.
  - 10) Explain the Vegetation Types of Karnataka.
  - 11) Write the Waste Water Treatment Process.
  - 12) What is Acid Rain and its Formations and also its Effects.

V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI.  
B.Sc., 4<sup>th</sup> SEM Second Internal- 2023  
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V.V. Sangha's  
Veerashaiva College, Ballari  
Department of Botany.  
Internal Assessment – 02

Paper – 6.1 Plant Breeding, Biotechnology and Plant Tissue Culture

Date 07-08-2023

I Answer the following in one sentence (any 5)

20 Marks

05 Marks

1. Define Genetic Engineering.
2. What is meant by r-DNA Technology?
3. Who is the Father of Indian DNA Fingerprinting?
4. Define the term Plant Tissue Culture.
5. Who is the Father of Plant Tissue Culture?
6. Define the term Callus.
7. Define Totipotency.

II Answer the following in brief (any 3)

15 Marks

8. Explain the Tools of Genetic Engineering?
9. Explain the Vector p<sup>BR322</sup>. With neat labeled diagram?
10. Who proposed PCR and Explain the Steps involved in PCR?
11. Explain the term Tissue Culture with its Aim and Scope?
12. Explain the concept of Totipotency?

V.V. Sangha's  
Veerashaiva College, Ballari  
Department of Botany.  
Internal Assessment – 02

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*S. Palli*  
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V.V. Sangha's  
Veerashaiva College, Ballari  
Department of Botany.  
Internal Assessment - 02

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Department of Botany.  
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*Sputa*  
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V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI.  
B.Sc., II SEM  
First internal- 2023  
Subject: Botany  
Paper: DSC-2.1 Diversity of non-flowering plants



Date: 14-07-2023

Marks: 20

Q.I) Answer any 5 of the following:

5 Marks

- 1) Who is the father of Indian Algology or Phycology?
- 2) What is mean by flagella?
- 3) What are pigments?
- 4) Which species is also called Bog mass?
- 5) What is Rhizoids?
- 6) Bryophytes are also called \_\_\_\_\_ of plant kingdom.
- 7) What are Cryptogames?

II) Answer the following (Any 3)

15 Marks

- 8) Explain the morphology and reproductive structure of Oedogonium.
- 9) Write a note on general characteristics of algae.
- 10) Write a note on Classification of Bryophytes?
- 11) Explain the morphology and reproductive structure of Riccia.
- 12) Write a note on general characteristics of Pteridophytes.

V.V. Sangha's  
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B.Sc., II SEM  
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*S. Pradeep*  
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*[Signature]*  
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VEERASHAIVA COLLEGE, BALLARI.  
B.Sc., 6<sup>th</sup> SEM  
First internal- 2023  
Subject: Botany  
Paper: DSC-6.2 Plant Physiology



Date: 15-07-2023

Marks: 20

Q.I) Answer any 5 of the following

- 1) What is plasmolysis?
- 2) What is endosmosis?
- 3) Which tissue is responsible for the ascent of sap.
- 4) What is lenticular transpiration?
- 5) What is diffusion?
- 6) What is osmosis?
- 7) What is plant physiology

5Marks

Q.II) Answer the following (Any 3)

- 8) Describe Respiratory quotient.
- 9) Write a note on water potential.
- 10) Describe the mechanism of active osmotic absorption.
- 11) Describe Dixons and jolly theory of cohesion.
- 12) Describe starch- sugar inter conversion theory

15Marks

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First internal- 2023  
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B.Sc., 6<sup>th</sup> SEM  
First internal- 2023

Subject: Botany

Paper: DSC-6.1 Plant breeding, biotechnology and plant tissue culture

Date: 12-07-2023



Marks: 20

5 Marks

Q.I) Answer any 5 of the following

- 1) What is plant breeding?
- 2) What is Quarantine?
- 3) What is mass selection?
- 4) What is grafting?
- 5) What is tagging?
- 6) What is pure line selection?
- 7) What is hybridization?

Q.II) Answer the following (Any 3)

- 8) Explain the mass selection.
- 9) Describe the objectives of plant Breeding.
- 10) Write a note on cutting type in propagation.
- 11) Explain wedge grafting
- 12) Explain the types of hybridization.

15 Marks

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B.Sc., 6<sup>th</sup> SEM

First internal- 2023

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Marks: 20

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*Spariti*  
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VEERASHAIVA COLLEGE, BALLARI.

B.Sc., 4<sup>th</sup> SEM

First internal- 2023

Subject: Botany

Paper: DSC-4.1 Ecology and Conservation Biology



Date: 13-07-2023

Marks: 20

Q.I) Answer any 5 of the following

- 1) What is Ecology?
- 2) What are xerophytes?
- 3) What is halophytes?
- 4) What are the biotic components.
- 5) What is Ecosystem?
- 6) Which person is divided the 9 phytogeographical regions of India.
- 7) What is average rain fall of Assam Region.

5 Marks

Q. II) Answer the following (Any 3)

- 8) What is soil and explain its types.
- 9) Explain the soil formation and physico-chemical properties
- 10) Detailed structure of pond ecosystem.
- 11) Explain the food chain grazing and food web.
- 12) Explain any 5 phytogeographical regions of India

15 Marks

V.V. Sangha's  
VEERASHAIVA COLLEGE, BALLARI.

B.Sc., 4<sup>th</sup> SEM

First internal- 2023

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*Dr. P. S. S.*  
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*Dr. P. S. S.*

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BALLARI



Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester FIRST Internal-Feb 2017

Paper: Numerical Methods (NM)

Mark: 20

Answer any four of the following questions:

- Define classification, types of classification with an example.
- $x^4 - x - 10 = 0$  (1.8 - 2) regula falsi method (3 decimal places).
- find cube roots of 24 by Newton's-Raphson's method (3 decimal places).
- Prepare a frequency distribution table with class intervals of 5 for the following data:  
60 54 75 77 70 68 51 59 57 63 60 50 69 74 58 74 61 65 65 77 62 64 65 67 53 53 63 62 72 57 55 52  
81 59 61 83 65 69 63 62.
- For the following data prepare f.d.t in inclusive method.  
12 36 40 16 10 10 19 20 28 30 19 27 15 21 23 44 7 19 20 26 26 37 6 5 20 30 37 17 11 20

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*Pratibha*  
COORDINATOR,

*Pratibha*

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Veerashaiva College, Ballari.  
Department of Computer Science  
BCA IV Semester FIRST Internal - February. 2018

Paper: Visual Basic

Dur : 1 Hour

4 x 7.5 = 30



1. Answer any FOUR of the following questions:

1. What is Visual Basic? Explain characteristics of VB and Advantages of VB.
2. What is IDE? Briefly explain all the components of IDE.
3. What is Tool Box? Explain differences between  
(i) Option button and checkbox (ii) Text box and Label (iii) List box and combo box.
4. What is a Form and properties window? Explain some properties.
5. Explain conditional & looping statements with Syntax? Explain data types and their types.

Veerashaiva College, Ballari.  
Department of Computer Science  
BCA IV Semester FIRST Internal - February. 2018

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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester FIRST Internal Feb-2018



Paper: E-Commerce

Dur : 1 Hour

I. Answer all the following questions:

4 x 7.5 = 30

1. Define E-commerce? Explain advantage and disadvantages of E-Commerce.
2. Define EDI? Explain EDI system layered Architecture.
3. Explain classification of E-Commerce
4. Write a short note on FTP and HTTP.

Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester FIRST Internal Feb-2018

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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester FIRST Internal Feb-2018

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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester FIRST Internal Feb-2018

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BELLARY



Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester FIRST Internal-Feb. 2018

Paper: Data Warehousing and Data Mining

I. Answer any five of the following questions:

Dur : 1 Hour

5x 4= 20

1. What is Data Mining? Explain the kinds of patterns can be mined.
2. What is Data Cleaning? Explain Missing values and Noisy Data.
3. What is Data Warehouse? Explain Stars, Snowflakes, and Fact Constellations Schema for multi-dimensional data model.
4. What is cluster analysis? Briefly explain BIRCH and CHAMELEON hierarchical methods.
5. Briefly explain mining sequence data using Timeseries, Symbolic Sequence, and Biological Sequence.
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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester FIRST Internal-Feb. 2018

Paper: Data Warehousing and Data Mining

I. Answer any five of the following questions:

Dur : 1 Hour

5x 4= 20

1. What is Data Mining? Explain the kinds of patterns can be mined.
2. What is Data Cleaning? Explain Missing values and Noisy Data.
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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA IV Semester First Internal - Feb, 2018

Paper: Basic English

1. Answer the following questions:

1. Write the character of Ratan Rathor.
2. Write a paragraph on "All that glitters is not gold".



Veerashaiva College, Bellary.  
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Paper: Basic English

1. Answer the following questions:

1. Write the character of Ratan Rathor.
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Dur : 1 Hour  
2 x 5 = 10

Veerashaiva College, Bellary.  
Department of Computer Science  
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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA II Semester FIRST Internal-Feb 2017

Paper: Discrete Mathematical Structures

Answer any four of the following questions:



- I. Prove by Mathematical Induction  $1+3+5+\dots+(2n-1) = n(n+1)/2$ .
- II. Verify Associative and commutative law  
 $A = \{1,3,4,6,8\}$   $B = \{3,4,8\}$  and  $C = \{1,2\}$   $U = \{1,2,3,4,5,6,7,8,9\}$ .
- III. A computer company wants to hire 25 programmers to handle system programming job and 40 programmers for application programming. out of these 10 will expected to perform job of both types how many programmers must the company hire.
- IV. A, B & C are sets such that  $A \cap B = A \cap C$  and  $A \cup B = A \cup C$ .  $P.T B = C$ .
- V. Define with an example: complement of a set, Cardinality of a set and empty set

Veerashaiva College, Bellary.  
Department of Computer Science  
BCA II Semester FIRST Internal-Feb 2017

Paper: Discrete Mathematical Structures

Marks:20

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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA II Sem FIRST Internal-FEB. 2018



Paper: C++

Dur : 1 Hour

I. Answer any four of the following questions:

4x 5 = 20

1. What is oop? How is it different from the procedure oriented programming.
2. Explain in detail about oop's concept.
3. Explain the structure of c++ program.
4. Show the difference of Insertion and Extraction operator with diagram.
5. What are the advantages of using new and delete operator in c++.

Veerashaiva College, Bellary.  
Department of Computer Science  
BCA II Sem FIRST Internal-FEB. 2018

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Veerashaiva College, Bellary.  
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BCA II Semester FIRST Internal-Feb. 2018

Paper: Database Management System

I. Answer FOUR of the following questions:

1. Define Data? Explain the advantages of using DBMS
2. Define Relational? and write a symbols used in ER-Diagram.
3. define database? Explain characteristics of database approach.
4. Define DBMS? Explain with neat diagram Three-schema Architecture.



Veerashaiva College, Bellary.  
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Dur : 1 Hour  
4 x 7.5 = 30

Veerashaiva College, Bellary.  
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Dur : 1 Hour  
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Veerashaiva College, Bellary.  
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BCA VI Semester SECOND Internal April-2018



Paper: System Software

I. Answer the following questions:

1. What is loader? explain any two loader design options.
2. Explain the structure of a text editor with a neat diagram.
3. What is Macro processor? Briefly explain Macro Processor Algorithm and Data Structures.
4. With an example explain generations of unique labels in macros.

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BCA VI Semester SECOND Internal April-2018

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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA VI Semester SECOND Internal April-2018



Paper: Multimedia

1. Answer all the following questions:

1. Explain in detail the different types of Image formats.
2. Explain structure of compact disc with neat diagram.
3. Explain parameters of High-Definition television.
4. Explain advantages of using compact disc.

Dur : 1 Hour

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Veerashaiva College, Bellary.  
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Veerashaiva College, Ballari.  
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BCA VI Semester SECOND Internal - April. 2018

Paper: Unix & Shell Programming

I. Answer any FOUR of the following questions:

1. What are signals and interrupts? List out the interrupts used in Unix.
2. Explain different steps in creating a file system in Unix.
3. What is difference b/w system calls and library functions? Explain awk (advanced filter).
4. What is process and process id? Explain different types of scheduling a process.
5. Write a note on (a) check disk (b) Basic filters (c)grep.



Veerashaiva College, Ballari.  
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BCA VI Semester SECOND Internal - April. 2018

Paper: Image Processing

Dur : 1 Hour  
4 x 5 = 20

I. Answer the following questions:

1. Explain briefly about Gray-Level transformations?
2. Explain in detail about ID Fourier transformation and its inverse?
3. write in briefly about Region identification for Quad tree region identification.
4. what is Curvature, Signature, Chord distribution and Euler-Poincare characteristic.

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BCA VI Semester SECOND Internal - April. 2018

Paper: Web Technology

I. Answer any FOUR of the following questions:

1. Demonstrate the use of 'for each' statement in Perl.
2. Explain different level of Document Object Model.
3. Describe XML Namespaces.
4. What is an Event? Explain the handling events for Body and Button elements.
5. Write a note on: i)web services ii)XML processors

Dur : 1 Hour  
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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA VI Semester SECOND Internal-APR. 2018

Paper: C# with .NET

I. Answer all the following questions:

1. Explain about the understanding of strong (shared) names used in shared assembly.
2. Discuss the below given Advanced keywords of c#:  
a) checked b)unchecked c)unsafe d)sizeof
3. What is delegate? Briefly explain Asynchronous delegates.
4. Explain the probing basics of private assembly.

Dur: 1 Hour  
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Veerashaiva College, Ballari.  
Department of Computer Science

BCA VI Semester FIRST Internal - February, 2018

Paper: Unix & Shell Programming

I. Answer any FIVE of the following questions:

Dur : 1 Hour  
4 x 5 = 20

1. Explain Unix System Architecture & Unix command format with example.
2. List all the directory related commands with syntax with example.
3. Define Root block, Super block & Data block. Explain in detail Inode.
4. Explain different conditional and Looping statements in Shell programming with syntax.
5. What is Shell? Explain types of shell. Explain features of Shell script.

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BCA VI Semester FIRST Internal - February, 2018

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3. Define Root block, Super block & Data block. Explain in detail Inode.
4. Explain different conditional and Looping statements in Shell programming with syntax.
5. What is Shell? Explain types of shell. Explain features of Shell script.

Veerashaiva College, Ballari.

Department of Computer Science

BCA VI Semester FIRST Internal - February, 2018

Paper: Unix & Shell Programming

I. Answer any FOUR of the following questions:

Dur : 1 Hour  
4 x 5 = 20

1. Explain Unix System Architecture & Unix command format with example.
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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA VI Semester FIRST Internal-Feb. 2018



Paper: System Programming

Dur :1Hour

5x 4 = 20

I. Answer any five of the following questions:

1. What is System Software? Explain SIC/XE Machine Architecture.
2. Write a program of sample data movement operations for: (i) SIC (ii) SIC/XE
3. Explain briefly the assembler directives with example?
4. Write a short note on simple SIC Assembler?
5. Write an algorithm for pass two assembler.
6. Explain simple bootstrap loader with example.

Veerashaiva College, Bellary.  
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BCA VI Semester FIRST Internal-Feb. 2019

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BCA VI Semester FIRST Internal-Feb. 2019

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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA VI Semester FIRST Internal Feb-2018

Paper: Multimedia

Dur : 1 Hour  
4 x 5 = 20

I. Answer all the following questions:

1. Define Multimedia and explain different types of multimedia.
2. Define media? Explain different types of media.
3. Explain speech recognition with neat diagram.
4. Explain different types of file formats.



Veerashaiva College, Bellary.  
Department of Computer Science  
BCA VI Semester FIRST Internal Feb-2018

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1) Verify Euler's theorem on Euler's phi-function for  $a=9$  and  $n=4$ , using maxima software

2) Verify the Euler's theorem and its extension for the homogeneous Function  $u = \sin\left(\frac{y}{x}\right) + \tan^{-1}\left(\frac{y}{x}\right)$ , using maxima software.

1) Evaluate:  $\int_c (x + y)dx + (y - x)dy$  along the curve  $x=y^2$ , between the points (1, 1) and (4, 2), using maxima software.

2) Verify Euler's theorem on Euler's phi-function for  $a=9$  and  $n=4$ , using maxima software.

1) Evaluate:  $\int_0^a \int_{x^2}^{2a-x} xy \, dy \, dx$ , using maxima software.

2) Verify Fermat's Theorem for  $a=15$  and  $p=40$ , using maxima software.

1) Evaluate:  $\int_1^2 \int_1^2 \int_0^1 x^2 yz \, dx \, dy \, dz$ , using maxima software.

2) Verify Euler's theorem on Euler's phi-function for  $a=9$  and  $n=4$ , using maxima software.

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B.Sc 2<sup>nd</sup> Semester I.A-1 practical Question Paper

- 1) Verify Fermat's Theorem for  $a=14$  and  $p=19$ , using maxima software.
- 2) Verify the Euler's theorem and its extension for the homogeneous function  $u = x^3 + y^3 - 3hxy^2$ , using maxima software.

- 1) Verify Fermat's Theorem for  $a=15$  and  $p=40$ , using maxima software.
- 2) Verify the Euler's theorem and its extension for the homogeneous function  $u = \sin\left(\frac{y}{x}\right) + \tan^{-1}\left(\frac{y}{x}\right)$ , using maxima software.

- 1) Verify Fermat's Theorem for  $a=100$  and  $p=23$ , using maxima software.
- 2) Evaluate:  $\int_c (2y + x^2)dx + (3x - y)dy$  along the curve  $x=2t$ ,  $y=t^2+3$ , where  $0 \leq t \leq 1$ , using maxima software.

- 1) Verify Euler's theorem on Euler's phi-function for  $a=15$  and  $n=28$ , using maxima software.

- 2) Verify the Euler's theorem and its extension for the homogeneous function  $u = \sin\left(\frac{y}{x}\right) + \tan^{-1}\left(\frac{y}{x}\right)$ , using maxima software.

  
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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA VI Semester FIRST Internal-Feb. 2018

Paper: Web Technology

I. Answer any FOUR of the following questions:

1. Explain the structure of XHTML in detail.
2. What is javascript? Explain different ways of creating Array Objects.
3. Define MIME. List the various contents types used by MIME.
4. What is CSS? Explain different types of selector forms?
5. Explain the following  
(i)HTTP (ii)List Tags (iii)Web Servers (iv)Frame tags

Dur : 1 Hour  
4 x 5 = 20



Veerashaiva College, Bellary.  
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Veerashaiva College, Bellary.  
Department of Computer Science  
BCA VI Semester FIRST Internal-Feb. 2018

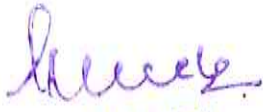
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Dur : 1 Hour  
4 x 5 = 20

  
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Veerashaiva College, Ballari.  
Department of Computer Science  
BCA VI Semester FIRST Internal - February, 2018



Paper: C#

I. Answer any FOUR of the following questions:

1. Explain the role of .NET Exception handling
2. Explain about building an Ad Hoc destruction method.
3. Explain the pillars of OOP in c# in detail.
4. What are generations in garbage collection? How to force garbage collection?
5. How to build cloneable objects?

Veerashaiva College, Ballari.  
Department of Computer Science  
BCA VI Semester FIRST Internal - February, 2018

Dur : 1 Hour  
4 x 5 = 20

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BCA VI Semester FIRST Internal - February, 2018

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Veerashaiva College, Ballari.  
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BCA VI Semester FIRST Internal - February, 2018

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Veerashaiva College, Ballari.  
Department of Computer Science  
BCA IV Semester SECOND Internal-April. 2018  
Paper: Additional English  
Answer the following:



1. How does Socrates succeed in convincing people?
2. What is the final twist in the play 'Lithuania'?

Veerashaiva College, Ballari.  
Department of Computer Science  
BCA IV Semester SECOND Internal-April. 2018  
Paper: Additional English  
Answer the following:

Dur: 1 Hr  
2x5=10

1. How does Socrates succeed in convincing people?
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Veerashaiva College, Ballari.  
Department of Computer Science  
BCA IV Semester SECOND Internal-April. 2018  
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Veerashaiva College, Ballari.  
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BCA IV Semester SECOND Internal-April. 2018  
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Veerashaiva College, Ballari.  
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BCA IV Semester SECOND Internal-April. 2018  
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VEERASHAIVA COLLEGE  
Department of Mathematics

SUB:-DSC2: Algebra and Calculus (2.1) Theory

Maximum marks=20

Time: 1 hour

B.se 2<sup>nd</sup> semester: First internal

Date: 12/07/2023

I) Answer any Four of the following

[4\*5=20]

1) Evaluate  $\int_C (3x + y)dx + (2y - x)dy$  along the curve  $y = x^2 + 1$  from (0, 1) to (3, 10).

2) Solve  $\int_0^2 \int_1^2 xy(1 + x + y)dx dy$

3) Solve  $\int_0^1 \int_0^3 \int_{x^2}^{\sqrt{x}} (x + y + z)dy dz dx$

4) Evaluate  $\int_C (3x - 2y)dx + (y + 2z)dy - x^2dz$  Where C is the curve defined by  $x=t, y=2t^2, z=3t^3$  and  $t \in [0, 1]$ .

5) Evaluate line integral  $\int x^2 y^2 ds$  around the circle  $x^2 + y^2 = 1$

6) Solve  $\int_0^b \int_{\frac{x^2}{b}}^{2b-x} xy dy dx$

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DEPARTMENT OF MATHEMATICS  
SUB:-TRIGNOMETRY AND TOPOLOGICAL SPACES  
B. Sc 6<sup>th</sup> SEMESTER: FIRST INTERNAL

TIME: 1 HOUR

TOTAL MARKS=30

DATE: 14/07/2023

1) Answer any FIVE of the following

[5\*6=30]

- 1) Expand  $\cos 8\theta$  in terms of powers of  $\sin \theta$  and  $\cos \theta$
- 2) Separate into real and imaginary parts of following
  - a)  $\sin(x+iy)$
  - b)  $\sin(x+iy)$
  - c)  $\cosh(x+iy)$
- 3) If  $\sin(A+iB) = x+iy$ , Prove that
  - i)  $\frac{x^2}{\cosh^2} + \frac{y^2}{\sinh^2} = 1$
  - ii)  $x^2 \operatorname{Cosec}^2 A - y^2 \operatorname{Sec}^2 A = 1$
- 4) Show that :  $i \log \frac{(x-i)}{(x+i)} = \pi - 2\tan^{-1} x$
- 5) Find the Principle and General value of
  - a)  $\log_e i^i$
  - b)  $\log(-i)$
- 6) Prove that the following
  - i)  $\sinh(x-y) = \sinh x \cosh y - \cosh x \sinh y$
  - ii)  $\sinh(2x) = \frac{2 \tanh x}{1 - \tanh^2 x}$
- 7) Show that

$$\frac{\cos 7\theta}{\cos \theta} = 64 \cos^6 \theta - 112 \cos^4 \theta + 56 \cos^2 \theta - 7$$

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Veerashaiva College, Ballari.  
Department of Computer Science  
BCA III Semester SECOND Internal-October, 2017

Paper: Data Structures

I. Answer any FOUR of the following questions:

1. Explain in-order, pre-order and post-order in trees with an example.
2. Explain Quick Sort and Bubble Sort.
3. Explain Insertion sort and Radix Sort with an Algorithm.
4. What is Double Linked List (DLL)? How do you represent DLL? Explain Merge Sort.
5. What is a tree? Explain types of Trees in details.

Dur : 1 Hour  
4 x 5 = 20



Veerashaiva College, Ballari.  
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BCA III Semester SECOND Internal-October, 2017

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Veerashaiva College, Ballari.  
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Veerashaiva College, Ballari.  
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BCA III Semester SECOND Internal-October, 2017

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