

S.S Jain Subodh Girls P.G College, Sanganer



Semester-I Internal Assignment

Student Name:

Father Name:

Student I'd:

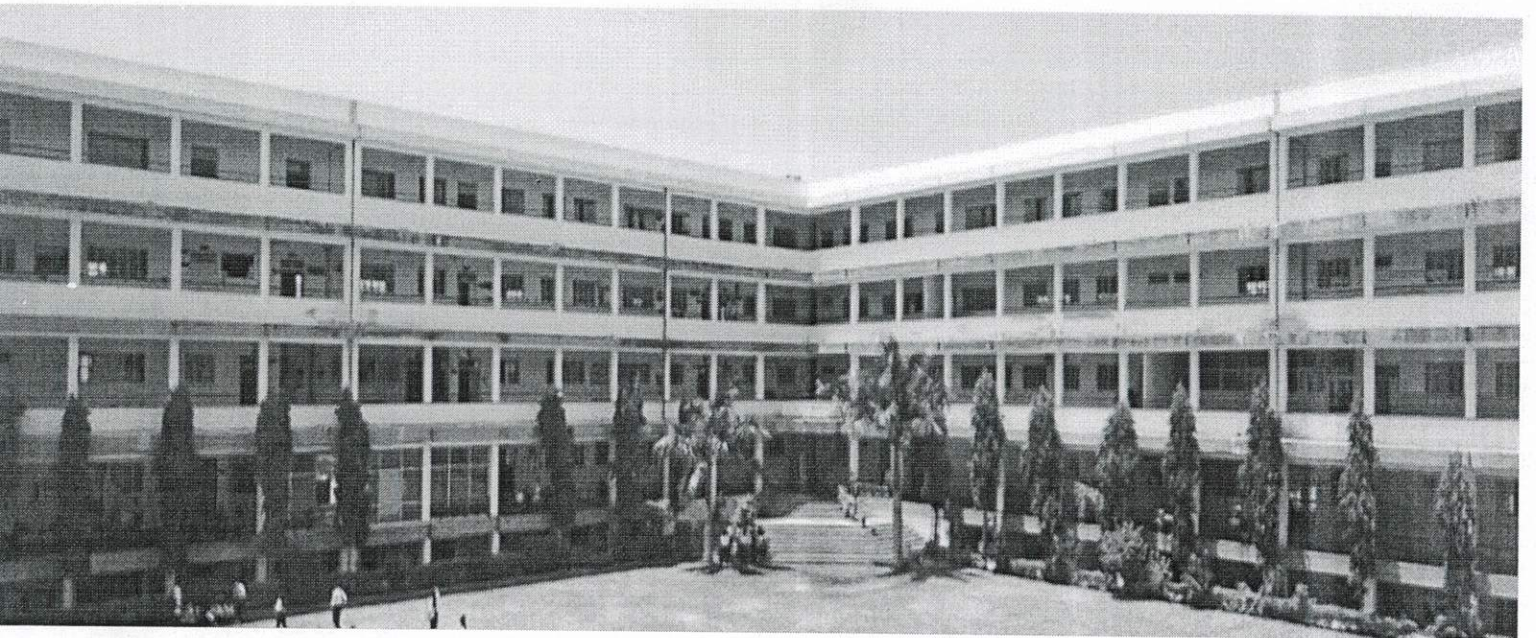
Session:

Class:

Subject:

Paper:

Name of faculty



S. S. Jain Subodh Girls PG College, Sanganer, Jaipur

Semester I

B. Sc. Part - I Maths

Discrete Mathematics & Optimization Techniques

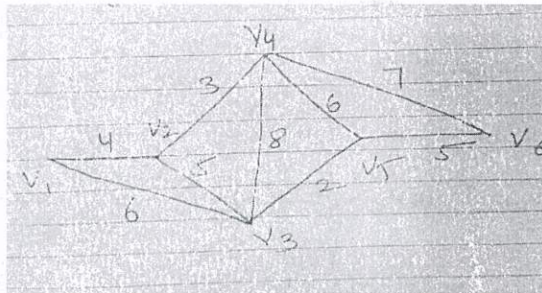
Dr Preeti Gupta & Dr Pramila Vijaywargiya

Q-1 Solve the following recurrence relations

(a) $a_r - 5a_{r-1} + 6a_{r-2} = 4^r$

(b) $a_r - 8a_{r-1} = 10^{r-1}$, $r \geq 1, a_0 = 1$ (By method of generating function)

Q-2 Find the shortest path from the vertex v_1 to vertex v_6 in the following weighted graph



Q-3 If T is a binary tree with n vertices and of height h, then

$$h + 1 \leq n \leq 2^{h+1} - 1$$

Q-4 Solve the following transportation problem and find its optimal solution

From	D ₁	D ₂	D ₃	Availability
O ₁	2	7	4	5
O ₂	3	3	1	8
O ₃	5	4	7	7
O ₄	1	6	2	14
Demand	7	9	18	34

S.S. Jain Subodh Girls P.G. College Sanganer, Jaipur

Semester-I

B.Sc. Part-I (Maths)

Subject-Physics

Paper – UG0803 – Phy - 517 – 101 – Mechanics & Oscillations

Dr. Richa Pareek and Mrs. Shikha Sharma

Q. 1 What is Foucault Pendulum ? Write expression for its time period.

फोको लोलक क्या है? इसके आवर्तकाल का व्यंजन दीजिए ।

Q. 2 Describe the principle of rocket. Prove that the final velocity achieved by the rocket is –

$$V = V_0 + V_r \text{Log} (M_0/M) - gt$$

रोकेट का सिद्धांत समझाये । सिद्ध करो की रोकट के लिए -

$$V = V_0 + V_r \text{Log} (M_0/M) - gt$$

Q. 3 Define Rutherford Scattering. Deduce the relation between scattering angle and impact parameter of α - scattering.

रदरफोर्ड प्रकीर्णन को परिभाषित कीजिये । α - प्रकीर्णन के लिये प्रकीर्णन कोण तथा संघट्ट प्राचल में संबंध स्थापित कीजिये।

Q. 4 Write differential equation of a driven harmonic oscillator and solve it.

एक चालित आवर्ती दोलक के लिए अवकल समीकरण लिखिए
और हल करें।

Semester I

B.SC. Part –I Maths

Subject- Chemistry

Paper – CHM-51T-101: Structure-bonding, Mathematical concept and
States of Matter

Dr. Pratibha Sharma and Ms. Deepika sahil

Q.1 Why bond order of NO^+ is more than NO.

NO^+ का बांड ऑर्डर NO से अधिक क्यों होता है

Q.2 Draw the energy-level diagram for O_2 molecule and determine the bond order and the magnetic properties of the molecule.

O_2 अणु के लिए ऊर्जा-स्तर आरेख बनाएं और अणु के बंधन क्रम और चुंबकीय गुणों को निर्धारित करें।

Q.3 Write the short notes on the followings.

[I] Born-Haber Cycle.

[II] Stoichiometric defects

निम्नलिखित पर संक्षिप्त नोट्स लिखें।

[I] बॉर्न-हैबर साइकिल।

[II] स्टोइकोमेट्रिक दोष

Q.4 What is radius ratio? Calculate the r^+/r^- for coordination 4. CN. No-4

त्रिज्या अनुपात क्या है? समन्वय 4 के लिए r^+/r^- की गणना करें?

S.S. Jain Subodh Girls PG College Sanganer, Jaipur

Semester I

B.SC. Part -I (B10)

Subject-.Chemistry

Paper – CHM-51T-101: Structure-bonding, Mathematical concept and States of Matter

Dr Rachana Sharma and Dr Pratibha Sharma

Q.1 Explain the followings

(a) NO molecule is paramagnetic and NO^+ ion is diamagnetic.

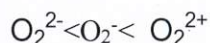
(b) The bond energy of F_2 is less than Cl_2

निम्नलिखित को स्पष्ट कीजिए

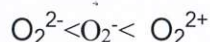
(ए) NO अणु अनुचुंबकीय है और NO^+ आयन प्रतिचुंबकीय है।

(बी) F_2 की बंधन ऊर्जा Cl_2 से कम है।

Q.2 On the basis of molecular orbital theory explain the increasing order of stability of the following series



आणविक कक्षीय सिद्धांत के आधार पर निम्नलिखित श्रृंखला की स्थिरता के बढ़ते क्रम की व्याख्या करें



Q.3 Explain the following with examples

(a) Schottky defect

(b) Bragg's equation for NaCl crystal

निम्नलिखित को उदाहरण सहित समझाइये

(ए) शोट्की दोष

(बी) NaCl क्रिस्टल के लिए ब्रैग का समीकरण

Q.4 What is radius ratio? Calculate the r^+/r^- for coordination 6?

त्रिज्या अनुपात क्या है? समन्वय 6 के लिए r^+/r^- की गणना करें?

$$CN = 6$$

S.S. JAIN SUBODH GIRLS P. G. COLLEGE SANGANER, JAIPUR

B.Sc Semester- I 2023-24

(Assignment)

Zoology (Paper-1)

Animal Diversity

Dr. Renu Sharma and Dr. Bhawana Vasishth

1. Classify Annelida (with characters) upto classes giving the important characters and examples of each class.
2. Classify Cyclostomata (with characters) upto orders giving the important characters and examples of each group.

S. S. Jain Subodh Girls P.G. College, Sanganer, Jaipur

Assignment

B.Sc. Bio. 1st Semester

Botany

Paper- Diversity of Plant Kingdom

Dr. Swapnal Sisodiya/Dr. Shikha Bhansali/ Ms. Shivangi Tamboli

Q. 1 Show the main differences between Monocot and Dicot plant with the help of diagrams.

S.S. Jain Subodh Girls PG College Sanganer, Jaipur

Semester I

B.SC. Part –I

Subject- Skill Enhancement (SEC-001)

Paper – Computer Fundamental

Mrs. Pooja Jain

Attempt all objectives with one correct option.

Q 1: Which among following first generation of computers had?

- A Vacuum Tubes and Magnetic Drum
- B Integrated Circuits
- C Magnetic Tape and Transistors
- D All of above

Q 2: What is the name of the first supercomputer of India?

- A Saga 220
- B PARAM 8000
- C ENIAC
- D PARAM 6000

Q 3: The second generation of computers consists of which of following?

- A Vacuum Tubes
- B Diodes
- C VLSI Microprocessor
- D Transistors

Q 4: From which year 5th generation of computers is considered?

- A 1970
- B 1980
- C 1990
- D 2000

Q 5: Which language was used as first generation language?

- A Machine language
- B Assembly language

- C Java
- D C

Q 6: What is unit of speed of Super Computer?

- A KFLOPS
- B LFLOPS
- C MFLOPS
- D GFLOPS

Q 7: In which generation of computers microprocessor was introduced?

- A First Generation
- B Second Generation
- C Third Generation
- D Fourth Generation

Q 8: Pascaline is also known by

- A abacus
- B adding machine
- C division machine
- D difference machine

Q 9: Which of the following is known as father of computer?

- A Dennis Ritchie
- B Napier
- C Charles Babbage
- D Alan Turing

Q 10: The Analytical Engine developed during first generation of computers used _____ as a memory unit.

- A RAM
- B floppies
- C cards
- D counter wheels

S. S. Jain Subodh Girls P.G. College, Sanganer, Jaipur

1 Semester 2023

B.A./B.Com./B.Sc./B.B.A./B.C.A.

Foundations of English Language: A Comprehensive
Introduction

Dr. Apoorva Sharma

Q. - Write an essay on “Enhancement of English
Language : Social Media”.

S. S. Jain Subodh Girls P.G. College, Sanganer, Jaipur

1 Semester 2023

B.A./B.Com./B.Sc./B.B.A./B.C.A.

General Hindi

Dr. Anita Sharma

Dr. Jyoti Joshi

Q. - राजस्थान के किसी ऐतिहासिक अथवा सांस्कृतिक स्थल की यात्रा पर विवरणात्मक लेख लिखिए।