

## सत्रीय कार्य जमा करने की विधि

नालन्दा खुला विश्वविद्यालय के विद्यार्थियों के लिए, निर्धारित प्रोग्राम्स में, सत्रीय कार्य जमा करना आवश्यक है। अपने हस्तलिपि में विश्वविद्यालय द्वारा दी हुई परीक्षा-पुस्तिका में लिखना है। विद्यार्थियों से आग्रह है कि वे प्रत्येक पत्र के लिये दिये गये, निर्देश के अनुसार, स्व अध्ययन, स्वविवेक और अपनी प्रतिभा के अनुसार प्रश्नों का उत्तर अपने हस्तलिपि में लिखें। यह कार्य उन्हें अपने घर में रहकर करना है। किसी भी पुस्तक या नालन्दा खुला विश्वविद्यालय द्वारा दी गयी पाठ्य सामग्री से नकल करने पर उनकी उत्तर पुस्तिका का मूल्यांकन नहीं किया जायेगा। साथ ही, नियमानुसार, विश्वविद्यालय उनके विरुद्ध अलग से भी सख्त कार्यवाही कर सकेगा। विद्यार्थियों से अनुरोध है कि सत्रीय कार्य की उत्तर पुस्तिका तथा उसके लिफाफा पर वे अपना नाम, नामांकन संख्या तथा पत्र संख्या अवश्य लिखें। नामांकन संख्या गलत होने पर सत्रीय कार्य की उत्तर-पुस्तिका का मूल्यांकन नहीं किया जायेगा। प्रत्येक पत्र के सत्रीय कार्य को अलग-अलग लिफाफों में डालकर सील कर दें और सील बन्द लिफाफा को वे सम्बन्धित पत्र की लिखित परीक्षा के दिन अपने साथ परीक्षा केन्द्र पर लेते आयें, अर्थात्, जिस दिन प्रथम पत्र की लिखित परीक्षा हो, उस दिन वे प्रथम पत्र से सम्बन्धित सत्रीय कार्य की उत्तरपुस्तिका का सीलड लिफाफा अपने साथ परीक्षा हॉल में ले आयें और उसे अपने सीट पर रख लें। इसी प्रकार, जिस दिन द्वितीय पत्र की लिखित परीक्षा हो, उसी दिन द्वितीय पत्र से सम्बन्धित सत्रीय कार्य की उत्तर पुस्तिका का सीलड लिफाफा ले आयें। तदनुसार, अन्य पत्रों की लिखित परीक्षा के दिन, उन पत्रों से सम्बन्धित सीलड लिफाफा अपने साथ ले आयें और उसे अपने सीट पर रख लें। प्रत्येक दिन परीक्षा से सम्बन्धित वीक्षकगण आपके सीट से आपका सीलड लिफाफा संग्रह कर लेंगे और उपस्थित पंजी पर आपका हस्ताक्षर ले लेंगे, जो इस बात का प्रमाण होगा कि आपने पत्र के लिए अपना सत्रीय कार्य जमा कर दिया है। सत्रीय कार्य की उत्तर पुस्तिका को किसी भी हालात में डाक अथवा कुरियर से नहीं भेजें क्योंकि विश्वविद्यालय इसको स्वीकार नहीं करेगा। किसी भी पत्र में Theory Paper की परीक्षा समाप्त हो जाने के बाद, उस पत्र से सम्बन्धित सत्रीय-कार्य पुस्तिका स्वीकार नहीं की जायेगी।

**Course Code** : **FST-01**  
**Course Title** : **Foundation Course in Science and Technology**  
**Maximum Marks** : **10**

- Q.1: Answers the following in 100 words each.
- 1) How does import of technology relate to self relevance in the Indian context?
  - 2) Define fission and fusion energy.
- or
- Discuss the functions of Brain, Spinal cord and Peripheral nerves in human body.
- Q.2: What is I.Q. Also examine the method of measurement.
- Q.3: Discuss either the Political role or Social role of communication?

**Course Code** : **FST-01**  
**Course Title** : **Foundation Course in Science and Technology**  
**Maximum Marks** : **15**

- Q.1: What are the essential Nutrients? Discuss each of them.
- Q.2: Draw a map of India showing major Mineral bearing Zones and write short notes on each of them.

**Course Code** : **CS-63**  
**Course Title** : **Introduction to Software**  
**Maximum Marks** : **10**

This is a Tutor Marked Assignment. There are three questions in the assignment. Answer all questions. Each question carries equal weightage. You may use illustrations and diagrams to enhance explanations.

Question 1: What is the usefulness of context free grammar? Construct CFD for C-language.

- a) For loop
- b) Do ...While loop
- c) Switch statement

Question 2: Summarise the features of UNIX systems that have made them such phenomenally successful operating systems.

Question 3: Design an algorithm that accepts an input a decimal number and converts it into BCD (Binary Coded Decimal) representation.

**Course Code** : **CS-63**  
**Course Title** : **Introduction to Software**  
**Maximum Marks** : **15**

Question 1: Write a shell program to find the factorial of a given number.

Question 2: Write a shell program to find the Greatest Common Divisor among the two positive non-zero integers given.

Question 3: Write an algorithm to find the sum of the digits of given 5 digit numbers.

**Course Code** : **CS-05**  
**Course Title** : **Elements of System Analysis and Design**  
**Maximum Marks** : **10**

1. What is System? Who is System Analyst? What are the attributes of an effective system Analyst?
2. What do you mean by Benchmark Testing? Discuss in brief.
3. Discuss about Organization, Information and Decision.

**Course Code** : **CS-05**  
**Course Title** : **Elements of System Analysis and Design**  
**Maximum Marks** : **15**

1. What do you mean by System Analysis? Discuss the techniques of Systems Analysis.
2. Discuss Pre and Post implementation Review.
3. Discuss Database Design. What are the difference between File Design and Database Design?

**Course Code** : **CS-06**  
**Course Title** : **Introduction of DBMS**  
**Maximum Marks** : **10**

1. Discuss about the three level Architecture of Database Management System.
2. What do you mean by Relation Algebra? Discuss its basic operations.
3. Discuss about the Remote Procedure Calls and Object Linking and Embedding.

**Course Code** : **CS-06**  
**Course Title** : **Introduction of DBMS**  
**Maximum Marks** : **15**

1. What do you mean by Knowledge Database? Discuss different Knowledge Representation Schemes.
2. What is Structured Query Language? Discuss Data Definition Language and Data Manipulation Language.
3. Explain Evaluation and Administration of a Data Base Management System.

**Course Code** : **CS-64**  
**Course Title** : **Introduction to Computer Organisation**  
**Maximum Marks** : **10**

This is a Tutor Marked Assignment. There are three questions in this assignment. Answer all the questions. Each question carries equal weightage. You may use illustrations and diagrams to enhance explanations.

**Question 1:**

- (a) What is an Interrupt? When can it occur? How can interrupt be used for input/output in assembly language? What is an interrupt vector? Describe a method of input/output that require interrupt mechanism.
- (b) An Internet service provider requires a fail-safe system such that they are able to provide services even if one of their servers fails. Suggest the suitable configuration for the servers of ISP. You must include the following details in the configuration:
- CPU.
  - BUS
  - Cache memory.
  - Memory Capacity.
  - Disk Capacity and whether to use RAID.
  - Input/Output devices/interfaces.

Justify your selection by giving reasoning in support of your answer.

**Question 2:**

- (a) Describe the Instruction Formats and addressing modes of any latest Microprocessor. Relate various addressing mode implementations to the addressing mode as described in your Course material.
- (b) How is a Vertical microinstruction different to a Horizontal microinstruction? What is Wilkes control Unit? How does a micro-program result in execution of an instruction? Describe with the help of an example.

**Question 3:**

- (a) What is segmentation in the context of 8086 microprocessor? How is a 16 bit address is used to calculate the 20 bit memory address in this processor? Describe the instructions in 8086 microprocessor that can be used for BCD arithmetic, with the help of suitable example.
- (b) Describe the addressing modes of 8086 microprocessor with the help of an example each. What are the various addressing modes that can be used in 8086 to implement an array of numbers?

**Course Code** : **CS-64**  
**Course Title** : **Introduction to Computer Organization**  
**Maximum Marks** : **15**

There are two questions in this project assignment. Attempt all the questions. Each question carries equal weightage. You may use illustrations and diagrams to enhance explanations. Please attach computer output, wherever required.

**Question 1:**

Design the following digital circuits using AND, OR & NOT gates:

- (a) A binary addition-subtraction circuit that adds or subtracts two 4 bit binary numbers. The circuit has a selection bit that controls whether addition or subtraction is to be performed.
- (b) Draw a combinational circuit that converts a single digit hexadecimal number to an equivalent BCD number.
- (c) A 2 bit counter that counts till 2 that is the counting states are: 00, 01, 10, 00, 01, 10, 00 .....etc.

**Question 2:**

- (a) Write a program in 8086 assembly language that concatenates two given strings to create a third string (assume that the strings are available in the data division and the last character of the string is '\0' as the convention in C Programming) and prints the combined string. Make suitable assumptions, if any. Properly document the program.
- (b) Write a program in 8086 assembly language that multiplies two 2\*2 matrices to create a third matrix of size (2\*2). Make suitable assumptions, if any. Properly document the program.

**Course Code** : **CS-65**  
**Course Title** : **Windows Programming**  
**Maximum Marks** : **10**

1. What are the project and variable scopes in Visual Basic?
2. How we declare statements in visual basic. Explain with example.
3. How many prefixes are there in visual basic?

**Course Code** : **CS-65**  
**Course Title** : **Windows Programming**  
**Maximum Marks** : **15**

1. Write each steps to create a form in which user can select any one from a drop down list.
2. Create a form with a picture box having more than one picture, using timer control, for 5 seconds. The form should stop by clicking a command button.
3. Describe how to design a menu system using the application wizard.

**Course Code** : **CS-66**  
**Course Title** : **Multimedia**  
**Maximum Marks** : **10**

This is Tutor Marked Assignment. There are two questions in this assignment. Answer all the questions. Each question carries equal weightage. You may use illustrations and diagrams to enhance explanations.

**Question 1:**

What are the basic Hardware components needed for a Multimedia implementation. Describe the features of each hardware component-giving example of one market product each. Also find the approximate cost of the accessories that may be required for Multimedia Computer.

**Question 2:**

What are the various file formats used for Multimedia components. Describe the features of two Multimedia suites (One for Windows Operating System and One for linux Operating system). Compare and contrast the features of the two multimedia development Software.

**Course Code** : **CS-66**  
**Course Title** : **Multimedia**  
**Maximum Marks** : **15**

This is a project assignment. Answer the following question. You may use illustrations and diagrams to enhance explanation.

**Question 1: Design a multimedia package that helps in teaching “Instruction Execution and Micro Programming”. You must follow the standard methodology for development of multimedia. Present a prototype of your design using MS-Office tools. Your prototype should include at least 10 slides, graphics, simple animation and few audio clips. (Audio clips need not be recorded professionally but can be recorded using built in microphone of simple multimedia computer).**

**Note:** Assumptions can be made wherever necessary.

**Course Code** : **CS-67**  
**Course Title** : **RDBMS**  
**Maximum Marks** : **10**

1. What are the structural constraints of relationship?
2. What are the differences between file processing system and data base management system?
3. What is the difference between datasheet view and design view?

**Course Code** : **CS-67**  
**Course Title** : **RDBMS Lab**  
**Maximum Marks** : **15**

1. Write the steps to add new tools in your existing toolbars?
2. Discuss the usefulness of data dictionary for the database system as well as database administrator.
3. Discuss the role of normalization and desirable properties of each normal form.