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**B.Sc. (E.C.S.) (Semester – I) (NEP CBCS) Examination:  
March/April – 2026  
Office Automation (G06-GE-OE-101)**

Day & Date: Thursday, 23-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative. 06**

- 1) Which of the following is an example of page orientation?
  - a) Landscape
  - b) Subscript
  - c) Superscript
  - d) A4
- 2) Which power point view works best for adding slide transition?
  - a) Slide sorter view
  - b) Slide show view
  - c) Slide view
  - d) Notes
- 3) Borders can be applied to \_\_\_\_\_.
  - a) Cells
  - b) Paragraph
  - c) Text
  - d) All of above
- 4) Which key can be used to view Slide show?
  - a) F5
  - b) F2
  - c) F7
  - d) F8
- 5) In order to tell Excel that we are entering a formula in cell, we must begin with an Operator such as \_\_\_\_\_.
  - a) \$
  - b) #
  - c) =
  - d) +
- 6) The default extension of MS Word file is \_\_\_\_\_.
  - a) .txt
  - b) .docx
  - c) .xlsx
  - d) none of these

**Q.2 Answer the following. (Any Three) 06**

- a) What is the CONCATENATE function used for?
- b) What is power point?
- c) What is templates?
- d) Explain the importance of the MAX and MIN functions in Excel.
- e) What is a cell in Excel?

- Q.3 Answer the following. (Any Two) 06**
- a) What are the main components of MS Word?
  - b) How can you create a new presentation?
  - c) How do you enter data into Excel
- Q.4 Answer the following. (Any Two) 06**
- a) What are the advantages of using Power Point?
  - b) Write the features of MS-Word.
  - c) How do you insert an image into a document on Microsoft Word?
- Q.5 Answer the following. (Any One) 06**
- a) What is Mail-merge? Explain its steps in details.
  - b) Explain 6 functions in excel.

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**B.Sc. (E.C.S.) (Semester - I) (New) (NEP CBCS) Examination:  
March/April – 2026  
English/English for communication (ENG-101)**

Day & Date: Friday, 24-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternatives from the options.****06**

- 1) What is the primary purpose of communication?
  - a) To avoid interactions
  - b) To share ideas, information, and emotions
  - c) To maintain silence
  - d) To create confusion
  
- 2) What is a key characteristics of clear communication?
 

a) Using Jargon	b) Being vague
c) Using simple language	d) Being lengthy
  
- 3) Which barrier is caused by different culture backgrounds?
 

a) Technological	b) Organizational
c) Cultural	d) Physical
  
- 4) What is a key benefit of arriving early for an interview?
  - a) Impressing the receptionist
  - b) Reviewing last-minute notes
  - c) Giving yourself time to relax
  - d) Finding a better parking point
  
- 5) What is the main purpose of group discussion?
  - a) To access individual communication skills
  - b) To evaluate one's appearance
  - c) To access team work and leadership skills
  - d) To identify the smart participant
  
- 6) What should be avoided in a group discussion?
  - a) Making eye contact
  - b) Interrupting others
  - c) Summarizing key point
  - d) Giving structured arguments

- Q.2 Answer the following. (Any Two) 06**
- a) State the significant role to use simple and clear language in communication.
  - b) Write in brief the role of Feedback in the communication process.
  - c) Explain the difference between Verbal and Non-verbal communication?
  - d) Use of technology in communication and teamwork.
- Q.3 Write Short Notes. (Any One) 06**
- a) Describe the 7 CS of communication and explain their importance.
- OR**
- b) Describe the communication process and its components.
- Q.4 Broad Question. (Any One) 12**
- a) Write a sample interview for the post of Sales Manager, including an introduction, question about the candidates experience and specific skills required for the role.
- OR**
- b) What are the key Do's and Don'ts in Group Discussion?

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**B.Sc. (E.C.S.) (सत्र - I) (नवीन) (NEP CBCS) परीक्षा:**

मार्च/एप्रिल – २०२६

**Constitution of India/Indian Constitution and Democracy (ICD-101)**

वार, दिनांक: शुक्रवार, २४-०४-२०२६

कमाल गुण: ३०

वेळ: दुपारी १२:०० ते ०१:३०

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.

२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.१ अ) खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा. ०४

१) भारतीय घटना परिषदेचे अध्यक्ष ——— हे होते.

- अ) पंडित जवाहरलाल नेहरू      ब) सरदार वल्लभभाई पटेल  
क) डॉ. बाबू राजेन्द्रप्रसाद      ड) डॉ. जॉन मथाई

२) भारताने ——— शासनपद्धती स्वीकारलेली आहे.

- अ) संसदीय      ब) अध्यक्षीय  
क) संमिश्र      ड) सर्वकष

३) भारत हे ——— राज्य आहे.

- अ) धार्मिक      ब) धर्मनिरपेक्ष  
क) धर्मबाह्य      ड) धर्माधिष्ठीत

४) भारतीय घटना मसुदा समितीचे अध्यक्ष ——— हे होते.

- अ) पंडित जवाहरलाल नेहरू      ब) सरदार वल्लभभाई पटेल  
क) डॉ. बाबू राजेन्द्रप्रसाद      ड) डॉ. बाबासाहेब आंबेडकर

ब) चूक कि बरोबर ते लिहा. ०२

१) भारतीय राज्यघटनेनुसार २५ वर्षे पूर्ण झालेल्या सर्व नागरिकांना मतदानाचा अधिकार दिला आहे.

२) भारताने प्रत्यक्ष लोकशाहीची पद्धत स्वीकारलेली आहे.

प्र.२ खालील प्रश्नाचे उत्तर लिहा. ०६

अ) धर्मनिरपेक्ष राज्य

ब) राज्यघटनेतील समता

- प्र.३ खालील प्रश्नाचे उत्तर लिहा. 0६  
भारतीय निवडणूक आयोगाची रचना व अधिकार सांगा.
- प्र.४ खालील प्रश्नाचे उत्तर द्या. (कोणताही एक) 0६  
अ) भारतीय राज्यघटनेच्या सरनाम्याचे स्वरूप व महत्त्व सांगा.  
किंवा  
ब) लोकशाहीची व्याख्या सांगून लोकशाहीचे प्रकार स्पष्ट करा.
- प्र.५ खालील प्रश्नाचे उत्तर द्या. (कोणताही एक) 0६  
अ) भारतीय राज्यघटनेची प्रमुख वैशिष्ट्ये स्पष्ट करा.  
किंवा  
ब) भारतीय निवडणुका व मतदार जागृती कार्यक्रमावर भाष्य करा.

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**B.Sc. (E.C.S.) (Semester - I) (New) (NEP CBCS) Examination:  
March/April – 2026**

**Constitution of India/Indian Constitution and Democracy (ICD-101)**

Day & Date: Friday, 24-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 A) Choose the correct alternative from the options. 04**

- 1) The Chairman of the Indian Constituent Assembly was \_\_\_\_\_.
  - a) Pandit Jawaharlal Nehru
  - b) Sardar Vallabhbhai Patel
  - c) Dr. Babu Rajendra Prasad
  - d) Dr. John Mathai
  
- 2) India has adopted the \_\_\_\_\_ system of government.
 

a) Parliamentary	b) Presidential
c) Mixed	d) Comprehensive
  
- 3) India is a \_\_\_\_\_ state.
 

a) Religious	b) Secular
c) Irreligious	d) Theocratic
  
- 4) The Chairman of the Drafting Committee of the Indian Constitution was \_\_\_\_\_.
  - a) Pandit Jawaharlal Nehru
  - b) Sardar Vallabhbhai Patel
  - c) Dr. Babu Rajendra Prasad
  - d) Dr. Babasaheb Ambedkar

**B) True or False. 02**

- 1) According to the Indian Constitution, all citizens who have completed 25 years of age have been given the right to vote.
- 2) India has adopted the system of direct democracy.

**Q.2 Answer the following questions. 06**

- a) Secular State
- b) Equality in the Constitution

**Q.3 Answer the following questions. 06**

Explain the structure and powers of the Election Commission of India.

**Q.4 Attempt the following questions. (Any One) 06**

a) Explain the nature and importance of the Preamble of the Indian Constitution.

**OR**

b) Define democracy and explain the types of democracy.

**Q.5 Attempt the following questions. (Any One) 06**

a) Explain the major features of the Indian Constitution.

**OR**

b) Write a note on Indian elections and voter awareness programmes.



- ६) खालीलपैकी — हे प्राचीन भारतीय रसायनशास्त्राचे योगदान नाही.  
 अ) नैसर्गिक रंग व रंगरेषा                      ब) आधुनिक प्लास्टिक  
 क) मातीची भांडी व कांचनिर्मिती            ड) धातुकर्म

- प्र.२ खालील प्रश्नांची उत्तरे लिहा. (कोणतेही तीन) 0६
- अ) नालंदा विद्यापीठाच्या कोणत्याही दोन वैशिष्ट्यांची नोंद करा.  
 ब) मातीची भांडी यासंबंधित भारतीय संकल्पनांबाबत लिहा.  
 क) ज्ञान प्रसारात योगदान देणाऱ्या उल्लेखनीय माजी विद्यार्थ्यांची नावे लिहा.  
 ड) पर्यावरणशास्त्र (Ecology) याची व्याख्या लिहा.  
 इ) अवैदिक तत्त्वज्ञान प्रणाली म्हणजे काय?
- प्र.३ खालील प्रश्नांची उत्तरे लिहा. (कोणतेही दोन) 0६
- अ) भारतीय वैज्ञानिक परंपरांचे मूलभूत संकल्पना थोडक्यात समजावून सांगा.  
 ब) शरीररचना व कार्यशास्त्र (Anatomy and Physiology) यावरील पारंपरिक दृष्टिकोन समजावून सांगा.  
 क) प्रकाशाच्या रहस्यांशी संबंधित भारतीय संकल्पना स्पष्ट करा.
- प्र.४ खालील प्रश्नांची उत्तरे लिहा. (कोणतेही दोन) 0६
- अ) पर्यावरणीय शाश्वततेवर भारतातील पारंपरिक भर स्पष्ट करा.  
 ब) वैदिक गणितावर थोडक्यात माहिती द्या.  
 क) गणितीय व सांख्यिकी संकल्पनांमधील भारतीय मूळ स्पष्ट करा.
- प्र.५ खालील प्रश्नाचे उत्तर लिहा. (कोणताही एक) 0६
- अ) दैनंदिन जीवनातील रसायनशास्त्रातील भारतीय नवोपक्रम समजावून सांगा.  
 ब) पर्यावरण संवर्धनासाठी प्राचीन भारतीय पद्धतींबाबत नोंद लिहा.

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**B.Sc. (E.C.S.) (Semester - I) (NEP CBCS) Examination:  
March/April – 2026  
Indian Knowledge System/ General IKS (G06-IKS-101)**

Day & Date: Saturday, 25-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Draw neat diagrams and give necessary equations whenever necessary.

**Q.1 Choose the correct alternative from the options.**

06

- 1) \_\_\_\_\_ was considered sacred and protected in ancient Indian environmental practices.
  - a) Rivers and forests
  - b) Only animals
  - c) Only mountains
  - d) Only birds
- 2) IKS is described as \_\_\_\_\_.
  - a) a single, unified system of knowledge
  - b) a collection of diverse, traditional, knowledge systems
  - c) a-modern, scientific approach to knowledge
  - d) a spiritual practice unrelated to knowledge
- 3) The Indian Knowledge System is primarily derived from two types of traditions they are \_\_\_\_\_.
  - a) Western and Eastern
  - b) Vedic and Non-Vedic
  - c) Modern and Post-modern
  - d) Scientific and Literary
- 4) \_\_\_\_\_ ancient Indian university was famous for attracting international scholars, including those from China.
  - a) Vikramashila
  - b) Nālandā
  - c) Jagaddala
  - d) Ujjain
- 5) \_\_\_\_\_ among the following ancient Indian thinkers is associated with atomic theory.
  - a) Aryabhata
  - b) Kanada
  - c) Bhaskaracharya
  - d) Patanjali
- 6) \_\_\_\_\_ is not a contribution of ancient Indian chemistry.
  - a) Natural dyes and paints
  - b) Modern plastics
  - c) Pottery and glass-making
  - d) Metallurgy

- Q.2 Answer the Following. (Any Three) 06**
- a) Write any two characteristics of Nalanda.
  - b) Write about Indian concepts related to pottery.
  - c) Write names of notable alumni who contributed to the spread of knowledge.
  - d) Define Ecology.
  - e) What is non-Vedic philosophical systems?
- Q.3 Answer the following. (Any Two) 06**
- a) Describe in brief the Foundational concepts of Indian Scientific traditions.
  - b) Explain the traditional perspectives on Anatomy and physiology.
  - c) Explain the Indian concepts related to mystery of light.
- Q.4 Answer the following. (Any Two) 06**
- a) Explain India's traditional emphasis on environmental sustainability.
  - b) Brief note on Vedic Mathematics.
  - c) Explain the Indian origin in foundational mathematical and statistical concepts.
- Q.5 Answer the following. (Any One) 06**
- a) Explain Indian innovations in daily-life chemistry.
  - b) Write a note on Ancient practices that promote environmental stewardship.

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**B.Sc. (E.C.S.) (Semester - I) (NEP CBCS) Examination:  
March/April – 2026  
OOP'S with C++ - I (G06-0101)**

Day & Date: Monday, 27-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the Correct Alternative. (MCQ) 06**

- 1) Constructors cannot be \_\_\_\_\_.
  - a) Public
  - b) Static
  - c) Virtual
  - d) Both b and c
- 2) By default data members and member functions of class are \_\_\_\_\_.
  - a) Static
  - b) Public
  - c) Private
  - d) Friend
- 3) \_\_\_\_\_ are the basic runtime in an object oriented system.
  - a) Class
  - b) Object
  - c) Both a and b
  - d) None of these
- 4) We cannot overload \_\_\_\_\_ operator.
  - a) ::
  - b) >>
  - c) <<
  - d) +
- 5) Which of the following approach is adapted by C++?
  - a) Left-right
  - b) Right left
  - c) Top-down
  - d) Bottom-up
- 6) The operator << is called \_\_\_\_\_.
  - a) A get from operator
  - b) Extraction
  - c) Insertion operator
  - d) None of these

**Q.2 Answer the following questions. (Any Three) 06**

- a) Define Algorithm.
- b) Define Data abstraction.
- c) Define class and object.
- d) What is Inline function?
- e) What is the use of Scope resolution operator?

**Q.3 Answer the following questions. (Any Two) 06**

- a) Explain type casting in C++.
- b) Explain function overloading with example.
- c) Write note on nesting of classes.

**Q.4 Answer the following questions. (Any Two) 06**

- a) Explain array of objects with example.
- b) Write difference between Procedure Oriented Programming and Object Oriented Programming.
- c) Write a program to check the given number is Armstrong or not.

**Q.5 Answer the following question. (Any One) 06**

- a) Write a program to swap two numbers using call by reference.
- b) What is constructor? Explain different types of constructor.

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**B.Sc. (E.C.S.) (Semester - I) (NEP CBCS) Examination:  
March/April – 2026  
Python Programming – I (G06-0102)**

Day & Date: Tuesday, 28-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the Correct Alternative. (MCQ)**

**06**

- 1) What is the output of print (3+2 \* 2) in Python?
  - a) 8
  - b) 10
  - c) 5
  - d) 7
  
- 2) What arithmetic operators cannot be used with strings in Python?
  - a) \*
  - b) -
  - c) +
  - d) All of the above
  
- 3) Which of the following is the use of id() function in python?
  - a) Every object in Python doesn't have a unique id
  - b) In Python Id function returns the identity of the object
  - c) None of the mentioned
  - d) All of the mentioned
  
- 4) What is an array in Python?
  - a) A collection of elements of different data types
  - b) A collection of functions
  - c) A key-value pair collection
  - d) A collection of elements of the same data type
  
- 5) What is the purpose of the return statement in a function?
  - a) To stop the execution of the function
  - b) To print a value to the console
  - c) To return a value to the caller
  - d) To define a recursive function
  
- 6) Which of these is not a core data type?
  - a) Dictionary
  - b) List
  - c) Tuple
  - d) Class

**Q.2 Answer the following questions. (Any three)**

**06**

- a) List out the python applications.
- b) What is set?
- c) Write the difference between list and tuple.
- d) What is the use of decision making statements?

- Q.3 Answer the following questions. (Any two) 06**
- a) What is lambda function? Explain with example.
  - b) What is looping? Explain for loop with example.
  - c) What is tuple? Explain tuple methods with example.
- Q.4 Answer the following questions. (Any two) 06**
- a) What is function? Explain user defined function.
  - b) Write a python program to find out given number perfect or not.
  - c) What is conversion? Explain types of conversion.
- Q.5 Answer the following question. (Any one) 06**
- a) What is literals? Explain different types of literals.
  - b) What is array? Explain method of array.

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**B.Sc. (E.C.S.) (Semester - I) (NEP CBCS) Examination:  
March/April – 2026  
Digital Electronics and Microprocessors (G06-0103)**

Day & Date: Wednesday, 29-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative.**

**06**

- 1) AND gate is \_\_\_\_\_.
 

a) A/B	b) A-B
c) A+B	d) A.B
  
- 2) A J-K flip-flop made to toggle \_\_\_\_\_.
 

a) J = 0, K = 0	b) J = 1, K = 0
c) J = 0, K = 1	d) J = 1, K = 1
  
- 3) \_\_\_\_\_ are universal gates.
 

a) NOT	b) NAND & NOR
c) AND	d) NOT, AND, & OR
  
- 4) 8085 is \_\_\_\_\_ bit microprocessor.
 

a) 8 bit	b) 16 bit
c) 32 bit	d) 4 bit
  
- 5) \_\_\_\_\_ is branch control group of instruction.
 

a) MOV	b) ADD
c) CALL	d) RAR
  
- 6) Address bus of 8085 is \_\_\_\_\_ bit.
 

a) 8 bit	b) 16 bit
c) 32 bit	d) 4 bit

**Q.2 Answer the following. (Any Three)**

**06**

- a) Define logic gates.
- b) Explain D flip-flop.
- c) Draw symbol of AND, OR, NOT and EX-OR.
- d) List data transfer group of instructions.
- e) Define Machine cycle and instruction cycle.

- Q.3 Answer the following. (Any Two) 06**
- a) Write features of 8085.
  - b) Explain Half Adder.
  - c) Explain 4:1 multiplexer.
- Q.4 Answer the following. (Any Two) 06**
- a) Explain system bus architecture of 8085.
  - b) Write a program for 8 bit Addition.
  - c) Explain RS flip-flop.
- Q.5 Answer the following. (Any One) 06**
- a) Explain Pin diagram of 8085.
  - b) Explain Full adder with suitable diagram.

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**B.Sc. (E.C.S.) (Semester - I) (NEP CBCS) Examination:  
March/April – 2026  
Numerical Methods (G06-0104)**

Day & Date: Wednesday, 29-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

- Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Use of scientific calculator is allowed.

**Q.1 Choose the Correct Alternative. (MCQ)**

**06**

- 1) If  $X_0 = 3, f(X_0) = 24, X_1 = 5, f(X_1) = 50$  then value of first order divided difference  $f(X_0, X_1) = [X_0, X_1]$  is \_\_\_\_\_.
  - a) 13
  - b) 26
  - c) -13
  - d) -26
- 2) The square matrix in which all  $a_{ij} = 0$ ; for all  $i < j$  is called as \_\_\_\_\_ matrix.
  - a) lower triangular
  - b) upper triangular
  - c) symmetric
  - d) diagonal
- 3) Interpolation means estimating numerical value at a point which lies \_\_\_\_\_.
  - a) outside the given range of arguments
  - b) inside the given range of arguments
  - c) outside the range of the dependent variable
  - d) None of these
- 4)  $EV = VE =$  \_\_\_\_\_.
  - a)  $V$
  - b)  $E^{-1}$
  - c)  $E$
  - d)  $\Delta$
- 5) While doing multiplication of two numbers in normalized floating point notation mantissas should be \_\_\_\_\_ and exponents should be \_\_\_\_\_ respectively.
  - a) added and multiplied
  - b) multiplied and added
  - c) added and made equal
  - d) made equal and added
- 6) One of root of the equation lies in between  $X_0$  and  $X_1$  if and only if  $f(X_0)$  and  $f(X_1)$  have \_\_\_\_\_.
  - a) same signs
  - b) positive signs
  - c) negative signs
  - d) opposite signs

**Q.2 Answer the following questions. (Any Three)**

06

- a) Define forward difference operator  $\Delta$  and backward difference operator  $\nabla$ .
- b) State Regula Falsi method formula to find first approximation for the value of root of equation  $f(X) = 0$  in the interval  $[X_0, X_1]$ .

- c) Prepare forward difference table for the following data.

$X$	5	10	15	20
$Y = F(x)$	22.6589	38.2456	49.2589	65.2134

- d) Define diagonal matrix and scalar matrix with suitable example.

- e) Solve

i)  $32.4589 E 25 \times 8.2541 E 20$

ii)  $125.52 E 320 \div 28.5485 E 120$

Express your final answer in normal form.

**Q.3 Answer the following questions. (Any Two)**

06

- a) Evaluate  $\left(\frac{\Delta^2}{E}\right)x^2$  by taking  $h = 1$ .

- b) Let  $A = \begin{bmatrix} 2 & 3 \\ 0 & -5 \\ 5 & 1 \end{bmatrix}_{3 \times 2}$  and  $B = \begin{bmatrix} -5 & 5 \\ 4 & 0 \\ 9 & -5 \end{bmatrix}_{3 \times 2}$

Find the matrix  $2A + B$  and  $A - 3B$

- c) By using bisection method find the approximate value of root of equation  $f(x) = e^x - 4x$  in the interval  $[1, 0]$ . Perform only three iterations.

**Q.4 Answer the following questions. (Any Two)**

06

- a) Define absolute error, relative error and percentage error.

- b) Solve the following system of linear equations by using Jacobi's method. Perform only two iterations.

$$6X_1 + X_2 + X_3 = 20 ; X_1 + 4X_2 - X_3 = 6 ; X_1 - X_2 + 5X_3 = 7$$

- c) By using Lagrange's Interpolation Formula, find numerical value of  $f(9.5)$  from the data given below.

$X$	5	8	10
$Y = f(x)$	20.2345	35.9876	58.4567

**Q.5 Answer the following question. (Any One)**

06

- a) By using Newton's Forward difference interpolation formula find numerical value of  $y$  at  $x = 3.5$  from the following data.

$X$	2	4	6	8
$Y = F(x)$	112.26	128.96	149.45	190.52

- b) Solve the following system of linear equations by using Gauss Seidel iterative method. Perform only three iterations.

$$x + 3y + 10z = 24 ; 28x + 4y - z = 32 ; 2x + 17y + 4z = 35$$

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Set **P**

**B.Sc. (E.C.S.) (Semester - II) (NEP CBCS) Examination:  
March/April – 2026  
Software Engineering (G06-GE-OE201)**

Day & Date: Saturday, 04-04-2026  
Time: 03:00 PM To 04:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the Correct Alternative. (MCQ)****06**

- 1) \_\_\_\_\_ is not a phase of SDLC.
 

a) Planning	b) Analysis
c) Testing	d) Maintenance
  
- 2) \_\_\_\_\_ software development model is also known as linear software development model.
 

a) RAD	b) Agile
c) Waterfall	d) Spiral
  
- 3) \_\_\_\_\_ is non-functional requirement.
 

a) Performance	b) Functionality
c) User output	d) Output
  
- 4) What is purpose of software validation?
  - a) To ensure software meet requirements
  - b) To find errors
  - c) To document software
  - d) To create user manual's
  
- 5) \_\_\_\_\_ purpose of SDLC models.
  - a) To define system requirements
  - b) Transfer requirement into design
  - c) To perform unit testing
  - d) To deploy software
  
- 6) \_\_\_\_\_ is a key characteristic of spiral model.
 

a) High risk analysis	b) Low risk analysis
c) Sequential analysis	d) No customer involvement

**Q.2 Answer the following questions. (Any Three)****06**

- a) Define System.
- b) What is Software engineering?
- c) Define DFD.
- d) What is data dictionary?
- e) What is testing?

- Q.3 Answer the following questions. (Any Two) 06**
- a) Explain fact finding techniques with their types.
  - b) Design ERD of banking system.
  - c) Explain waterfall model in detail.
- Q.4 Answer the following questions. (Any Two) 06**
- a) Explain the difference of functional and non-functional requirement.
  - b) Explain characteristics of software.
  - c) Explain data Dictionary with example.
- Q.5 Answer the following question. (Any One) 06**
- a) Design DFD of admission process.
  - b) What is maintenance? Explain types of maintenance.

<b>Seat No.</b>	
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**B.Sc. (E.C.S.) (Semester - II) (New) (NEP CBCS) Examination:  
March/April – 2026  
English (ENG-201)**

Day & Date: Monday, 06-04-2026  
Time: 03:00 PM To 04:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative. 06**

- 1) Why is tone important in speech?
  - a) It changes grammar
  - b) It conveys emotions
  - c) It makes speech longer
  - d) It removes meaning
  
- 2) Listening is one of the \_\_\_\_\_ in communication.
  - a) Fundamental skills
  - b) Critical skills
  - c) Analytical Skills
  - d) Collaborative Skills
  
- 3) \_\_\_\_\_ means understanding someone's feelings and emotions without judging them.
  - a) Focused listening
  - b) Evaluative listening
  - c) Attentive listening
  - d) Empathetic listening
  
- 4) Which of the following is NOT essential for effective writing?
  - a) Clarity
  - b) Proper structure
  - c) Unnecessary repetition
  - d) Concise language
  
- 5) What should be avoided in a formal letter?
  - a) Professional tone
  - b) Clear purpose
  - c) Slang and informal language
  - d) Proper salutations
  
- 6) Which part of a newspaper report provides the most important information?
  - a) Introduction
  - b) Conclusion
  - c) Background details
  - d) Quotes

**Q.2 Answer the following. (Any Two) 06**

- a) Difference between Hearing and Listening.
- b) Write in brief about attentive listening.
- c) Explain types of Blogs.
- d) What are the Parts of an Email?

**Q.3 Answer the following. (Any One)** **06**

- a) What is Listening and explain the Process of listening.
- b) Explain the concept of falling and rising tone.

**Q.4 Answer the following. (Any One)** **12**

- a) Explain the Newspaper report and their types with examples.
- b) What are the parts of Formal Letter and write an application letter for the post of Computer Engineer with the help of following details.

You are Rohit Sharma, a resident of 52 Green Park, Kharadi, Pune.  
You came across an advertisement in The Times of India dated 10th April 2025, for the post of Computer Engineer at Tech Mahindra.,  
Hinjewadi Phase 3, Pune 400225.

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**B.Sc. (E.C.S.) (सत्र - II) (NEP CBCS) परीक्षा:**  
**मार्च/एप्रिल – २०२६**  
**Environmental Studies (ENS-24)**

वार, दिनांक : मंगळवार, ०७-०४-२०२६  
वेळ: दुपारी ०३:०० ते ०४:३०

कमाल गुण: ३०

- सूचना :** १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.  
३) जिथे आवश्यक असेल तिथे सुबक आकृत्या आणि समीकरणे काढा.

**प्र.१ खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.**

०६

- १) ध्वनी कोणत्या एककात मोजतात?  
अ) किलोमीटर                      ब) पास्कल  
क) किलोग्राम                      ड) डेसिबल
- २) 'सायलेंट व्हॅली' हे राष्ट्रीय उद्यान भारतातील ——— येथे आहे.  
अ) केरळ                              ब) महाराष्ट्र  
क) ओडिशा                            ड) गुजरात
- ३) पृथ्वीवरील सर्वात मोठी परिसंस्था कोणती आहे?  
अ) वाळवंट                            ब) जंगल  
क) गवताळ प्रदेश                    ड) महासागर
- ४) ——— म्हणजे पाण्याचा तात्पुरता अतिप्रवाह जो जमिनीला पाण्याखाली बुडवतो, ज्यामुळे सजीव आणि निर्जीव वस्तूंचा लहान किंवा मोठा विनाशकारी परिणाम होऊ शकतो.  
अ) भूकंप                              ब) ज्वालामुखी  
क) पूर                                  ड) मृदा धूप
- ५) CNG चा पूर्ण अर्थ काय आहे?  
अ) कॉम्प्रेसड नॅचरल गॅस (दाबलेला नैसर्गिक वायू)  
ब) कोरोसिव्ह नॅचरल गॅस (संक्षारक नैसर्गिक वायू)  
क) केमिकल न्यूट्रल गॅस (रासायनिक उदासीन वायू)  
ड) चीप नॅचरल गॅस (स्वस्त नैसर्गिक वायू)



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**B.Sc. (E.C.S.) (Semester-II) (NEP CBCS) Examination:  
March/April – 2026  
Environmental Studies (ENS-24)**

Day & Date: Tuesday, 07-04-2026  
Time: 03:00 PM To 04:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Draw neat diagrams and equations wherever necessary.

**Q.1 Choose the correct alternatives from the options. 06**

- 1) In which unit sound is measured?
  - a) Kilometer
  - b) Pascal
  - c) Kilogram
  - d) Decibel
- 2) Silent Valley is a national park located \_\_\_\_\_ in India.
  - a) Kerala
  - b) Maharashtra
  - c) Odisha
  - d) Gujarat
- 3) Which is the largest ecosystem on Earth?
  - a) Desert
  - b) Forest
  - c) Grassland
  - d) Oceans
- 4) \_\_\_\_\_ temporary overflow of water that submerges land, which may have small or large destructive impact on living and non living things.
  - a) Earthquake
  - b) Volcano
  - c) Flood
  - d) Soil erosion
- 5) CNG stands for?
  - a) Compressed Natural Gas
  - b) Corrosive Natural Gas
  - c) Chemical Neutral Gas
  - d) Cheap Natural Gas
- 6) The Bishnois, living in western \_\_\_\_\_ for centuries, have been conserving the flora and fauna to the extent of sacrificing their lives to protect the environment.
  - a) Rajasthan
  - b) Karnataka
  - c) Himalaya
  - d) Maharashtra

**Q.2 Answer the following questions. (Any Two) 06**

- a) Write about ecosystem.
- b) Write any two causes of soil erosion.
- c) Define the term biodiversity.
- d) What are renewable energy sources?

- Q.3 Write short note.** **06**  
What is mean of global warming? Write its effects.
- Q.4 Answer the following questions. (Any One)** **12**
- a) Describe in detail about In-situ and Ex-situ conservation of biodiversity.
  - b) Explain causes and control of water pollution.

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Set P

**B.Sc. (E.C.S.) (सत्र - II) (NEP CBCS) परीक्षा: मार्च / एप्रिल - २०२६**  
**Co-Curricular Course**  
**National Service Scheme (CC-201)**

वार, दिनांक: बुधवार, ०८-०४-२०२६  
वेळ: दुपारी ०३:०० ते ०४:३०

कमाल गुण: ३०

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

- प्र.१ खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा. ०६
- १) "मी माझ्यासाठी नसून इतरांसाठी" हे घोषवाक्य ——— चे आहे.  
अ) राष्ट्रीय सेवा योजना                      ब) रोजगार हमी योजना  
क) एनजीओ    ड) स्वयं बचत गट
- २) राष्ट्रीय सेवा योजनेच्या एका वर्षात ——— तास काम करणे अपेक्षित असते.  
अ) १००    ब) २४०  
क) ८०    ड) १५०
- ३) विशेष शिबिराचे गाव महाविद्यालयापासून ——— असावे.  
अ) जवळ    ब) अतिदूर  
क) दूर    ड) वरील सर्व
- ४) ——— हा दिवस जागतिक लोकसंख्या दिन म्हणून साजरा केला जातो.  
अ) २४ सप्टेंबर    ब) ११ जुलै  
क) १५ ऑगस्ट    ड) ०५ जून
- ५) रा.से.यो. चिन्ह चक्र हे ——— रंगाचे आहे.  
अ) हिरवा    ब) लाल  
क) पिवळा    ड) निळा
- ६) राष्ट्रीय सेवा योजनेची सुरुवात ——— या वर्षी झाली.  
अ) १९७५    ब) १९५०  
क) १९६९    ड) १९४७

- प्र.२ खालील प्रश्नांची उत्तरे लिहा. (कोणतेही तीन) **0६**
- अ) राष्ट्रीय सेवा योजनेच्या डायरी (नोंदवही) ची देखभाल लिहा.  
ब) जनजागृती रॅलीची गरज का आहे?  
क) प्रथमोपचार कौशल्याची माहिती सांगा.  
ड) रा.से.या.कार्यक्रमाचे वर्गीकरण सांगा.  
इ) रक्तदानाची आवश्यकता का आहे?
- प्र.३ खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही दोन) **0६**
- अ) रा.से.यो.चा इतिहास लिहा.  
ब) दत्तक खेड्यामध्ये नियमित उपक्रमावर चर्चा करा.  
क) मतदान जनजागृती आणि नावनोंदणी शिबीर यावर चर्चा करा.
- प्र.४ दीर्घोत्तरी प्रश्नांची उत्तरे लिहा. (कोणताही एक) **0६**
- अ) वृक्षारोपण आणि स्वच्छता मोहीम स्पष्ट करा.  
ब) रा.से.यो. चे महत्व स्पष्ट करा.
- प्र.५ दीर्घोत्तरी प्रश्नाचे उत्तर लिहा. **0६**
- विशेष शिबिर कार्यक्रमातील नियोजन, पूर्वतयारी, संघटना आणि प्रशासन स्पष्ट करा.

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Set **P**

**B.Sc. (E.C.S.) (Semester-II) (NEP CBCS) Examination:  
March/April – 2026  
Co-Curricular Course  
National Service Scheme (CC-201)**

Day & Date: Wednesday, 08-04-2026  
Time: 03:00 PM To 04:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative.****06**

- 1) "Not me but you" is a motto of \_\_\_\_\_.
  - a) N.S.S.
  - b) Employment Guarantee Scheme
  - c) N.G.O.
  - d) Self-Saving Group
- 2) \_\_\_\_\_ is the number of hours the N.S.S. volunteers expected to work during the year.
 

a) 100	b) 240
c) 80	d) 150
- 3) The special camping village should be \_\_\_\_\_ from college.
 

a) Near	b) Far away
c) Away	d) All of these
- 4) \_\_\_\_\_ is celebrated as the World Population Day.
 

a) 24 <sup>th</sup> September	b) 11 <sup>th</sup> July
c) 15 <sup>th</sup> August	d) 05 <sup>th</sup> June
- 5) The N.S.S. emblem, the chakra bears \_\_\_\_\_ colour.
 

a) Green	b) Red
c) Yellow	d) Blue
- 6) The National Service Scheme is started in the year of \_\_\_\_\_.
 

a) 1975	b) 1950
c) 1969	d) 1947

**Q.2 Write answer of the following questions. (Any Three)****06**

- a) Write the maintenance of NSS dairy.
- b) Why need is Awareness of Rallies?
- c) State of First Aid Skill Activity.
- d) State the Classification of NSS Programme.
- e) Why is important of Blood Donation?

- Q.3 Write Short answers to questions. (Any Two) 06**
- a) Write the History of NSS.
  - b) Discuss the Regular activities in Adopted Village.
  - c) Discuss the Voter Awareness and Registration Camp.
- Q.4 Write answers to broad questions. (Any One) 06**
- a) Explain the Tree Plantation and Cleanup drive.
- OR**
- b) Explain the Importance of NSS.
- Q.5 Write answers to broad question. 06**
- Explain the Planning, Preparation, Organization and Administration of Special Camping Programme.



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**B.Sc. (E.C.S.) (Semester - II) (NEP CBCS) Examination:  
March/April – 2026  
Co-Curricular Course  
National Cadet Corps (CC-202)**

Day & Date: Wednesday, 08-04-2026  
Time: 03:00 PM To 04:00 PM

Max. Marks: 15

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative from the options. 04**

- 1) One can express thought \_\_\_\_\_.
 

a) oral	b) gestures
c) written	d) all of the above
  
- 2) Few \_\_\_\_\_ traits can not changed.
 

a) New	b) adopted
c) inborn	d) natural
  
- 3) Thinking oneself very different is \_\_\_\_\_.
 

a) superego	b) self motivation
c) pleasure	d) reality
  
- 4) The personality vary as per \_\_\_\_\_.
 

a) individuals	b) time
c) work	d) none of these

**Q.2 Attempt the following questions. (Any Two) 04**

- a) State any two factors for personality development.
- b) Give examples of honesty.
- c) Mention any two types of personality development.
- d) Give examples of support and respect.

**Q.3 Write a note on “How to improve character”? 03**

**Q.4 Explain importance values for a good leader. 04**

**OR**

Explain role of NCC cadet in personality development.

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Set **P**

**B.Sc. (E.C.S.) (सत्र - II) (NEP CBCS) परीक्षा: मार्च / एप्रिल - २०२६**  
**Co-Curricular Course**  
**Sports (CC-203)**

वार, दिनांक : बुधवार, ०८-०४-२०२६  
वेळ: दुपारी ०३:०० ते ०४:००

कमाल गुण: १५

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

- प्र.१ खालील दिलेल्या योग्य पर्याय निवडून गाळलेल्या जागा भरा. ०४
- १) खो खो खेळात एकूण ——— खेळाडू असतात.  
अ) १० ब) ९  
क) १२ ड) ११
- २) खेळ हा ——— प्रकाराचा उपक्रम आहे.  
अ) मानसिक ब) शारीरिक  
क) सामाजिक ड) वरील सर्व
- ३) नीरज चोप्रा ——— हा खेळातील प्रसिद्ध खेळाडू आहे.  
अ) गोळाफेक ब) भालाफेक  
क) क्रिकेट ड) लांब उडी
- ४) क्रिकेट, बेसबॉल आणि हॅन्डबॉल हे ——— प्रकारचे खेळ आहे.  
अ) वैयक्तिक ब) सांघिक  
क) मनोरंजक ड) अन्य
- प्र.२ टिपा लिहा. ०६
- अ) खेळाचे शारीरिक फायदे  
ब) खेळाची संकल्पना  
क) खेळाची मानसिक फायदे
- प्र.३ दीर्घोत्तरी प्रश्न. (कोणताही एक) ०५
- अ) खेळाचा इतिहास सांगा.  
ब) खेळाचे विविध प्रकार स्पष्ट करा.



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**B.Sc. (E.C.S.) (सत्र - II) (NEP CBCS) परीक्षा: मार्च / एप्रिल – २०२६**  
**Co-Curricular Course**  
**Culture (CC-204)**

वार, दिनांक: बुधवार, ०८-०४-२०२६  
वेळ: दुपारी ०३:०० ते ०४:३०

कमाल गुण: ३०

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.१ खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा. ०६

- १) कायिक अभिनय, ज्याला ——— अभिनय असेही म्हणतात.  
अ) आहार्य ब) सात्विक  
क) वाचिक ड) आंगिक
- २) ——— अभिनय म्हणजे आवाज आणि शब्दांच्या माध्यमातून पात्राची भूमिका साकारणे.  
अ) आहार्य ब) सात्विक  
क) वाचिक ड) आंगिक
- ३) मुकनाट्य म्हणजे असा नाट्यप्रयोग ज्यामध्ये कोणताही ——— नसतो.  
अ) ध्वनि ब) संवाद  
क) अभिनय ड) विषय
- ४) रस्त्यावर सादर केल्या जाणाऱ्या कला प्रकाराला ——— म्हणतात.  
अ) पथनाट्य ब) वगनाट्य  
क) एकांकिका ड) लघुनाटिका
- ५) एकांकिका नाट्यप्रकारात ——— अंक असतात.  
अ) एक ब) अनेक  
क) दोन ड) तीन
- ६) ——— म्हणजे लिखित मजकूर अर्थपूर्ण आणि प्रभावीपणे वाचणे.  
अ) एकांकिका ब) अभिवाचन  
क) लघुनाटिका ड) पथनाट्य

- प्र.२ खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही दोन) 0६
- अ) मुकनाट्याचा थोडक्यात परिचय द्या.  
ब) साहित्यकलेच्या सादरीकरणाचे प्रकार लिहा.  
क) कथाकथन कसे करावे? स्पष्ट करा.  
ड) वकृत्व करतांना कोणती तयारी करावी?
- प्र.३ टिप्पणी लिहा. 0६  
काव्यवाचन
- प्र.४ खालील प्रश्नाचे तपशीलवार उत्तर लिहा. (कोणताही एक) १२
- अ) अभिनयाची संकल्पना स्पष्ट करा.  
किंवा  
ब) साहित्यकलेचे स्वरूप स्पष्ट करा.

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**B.Sc. (E.C.S.) (Semester-II) (NEP CBCS) Examination:  
March/April – 2026  
Co-Curricular Course  
Culture (CC-204)**

Day & Date: Wednesday, 08-04-2026  
Time: 03:00 PM To 04:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative.**

**06**

- 1) Physical acting, also known as \_\_\_\_\_ acting.
  - a) Aaharya
  - b) Sattvic
  - c) Vachik
  - d) Angik
- 2) \_\_\_\_\_ Acting is the portrayal of a character through voice and words.
  - a) Aaharya
  - b) Sattvic
  - c) Vachik
  - d) Angik
- 3) Mime is a theatrical performance in which there is no \_\_\_\_\_.
  - a) Sound
  - b) Dialogue
  - c) Acting
  - d) Subject
- 4) The art form performed on the street is called \_\_\_\_\_.
  - a) Street play
  - b) Vagnatya
  - c) One-act play
  - d) Short play
- 5) One-act drama has \_\_\_\_\_ numbers.
  - a) One
  - b) Many
  - c) Two
  - d) Three
- 6) \_\_\_\_\_ means reading a written text meaningfully and effectively.
  - a) One-act play
  - b) Recitation
  - c) Short play
  - d) Street play

**Q.2 Write a short answer. (Any Two)**

**06**

- a) Give a brief introduction to Mime.
- b) Write the types of presentation of literary art.
- c) How to do storytelling? Explain.
- d) What preparation should be done while giving a speech?

**Q.3 Write short note.**

**06**

Poetry Reading

**Q.4 Write a detail answer. (Any One)**

**12**

**a)** Explain the concept of acting.

**OR**

**b)** Explain the nature of literary art.

Seat No.	
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Set P

**B.Sc. (E.C.S.) (सत्र - II) (NEP CBCS) परीक्षा: मार्च/एप्रिल - २०२६**  
**Co-Curricular Course**  
**Health, Wellness and Fitness (CC-205)**

वार, दिनांक: बुधवार, ०८-०४-२०२६  
वेळ: दुपारी ०३:०० ते ०४:००

कमाल गुण: १५

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.१ योग्य पर्याय लिहा. ०४

- १) एन. आय. एच. ही संस्था ——— संबंधित कार्य करते.  
अ) आरोग्य ब) खेळ  
क) व्यवसाय ड) यापैकी नाही
- २) ——— हा जीवनसत्त्वाचा प्रकार नाही.  
अ) अ ब) ब  
क) क ड) टी
- ३) जागतिक आरोग्य संघटनेचे मुख्यालय ——— या ठिकाणी आहे.  
अ) दिल्ली ब) रोम  
क) जिनेव्हा ड) कतार
- ४) ——— याला वैयक्तिक स्वच्छता म्हणता येईल.  
अ) आंघोळ करणे ब) नखे काढणे  
क) स्वच्छ कपडे घालणे ड) वरील सर्व

प्र.२ खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही तीन) ०६

- अ) तंदुरुस्ती म्हणजे काय?
- ब) व्यायामाचा स्नायूवर होणारा परिणाम सांगा.
- क) आरोग्याची व्याख्या लिहा.
- ड) समतोल आहार म्हणजे काय?

प्र.३ सविस्तर उत्तरे लिहा. (कोणताही एक) ०५

- अ) वैयक्तिक स्वच्छता मधील घटक लिहा आणि सविस्तर स्पष्ट करा.
- ब) जागतिक आरोग्य संघटनेचे कार्य सविस्तर लिहा.

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**B.Sc. (E.C.S.) (Semester - II) (NEP CBCS) Examination:  
March/April –2026  
Co-Curricular Course  
Health, Wellness and Fitness (CC-205)**

Day & Date: Wednesday, 08-04-2026  
Time: 03:00 PM To 04:00 PM

Max. Marks: 15

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative from the options. 04**

- 1) NIH is an organization that works in the field of \_\_\_\_\_.
  - a) Health
  - b) Sports
  - c) Business
  - d) None of these
- 2) \_\_\_\_\_ is not type of vitamin.
  - a) A
  - b) B
  - c) C
  - d) T
- 3) The headquarter of the World Health Organization is located in \_\_\_\_\_.
  - a) Delhi
  - b) Rome
  - c) Geneva
  - d) Qatar
- 4) \_\_\_\_\_ can be called as personal hygiene.
  - a) Washing hands
  - b) Cutting nails
  - c) Wearing clean clothes
  - d) All of the above

**Q.2 Write short answers. (Any Three) 06**

- a) What is mean by fitness?
- b) Write the effect of exercises on Muscles.
- c) Write the definition of Health.
- d) What is mean by Balance diet?

**Q.3 Answer the following question in detail. (Any One) 05**

- a) Write the components of personal hygiene and explain them in detail.
- b) Write the detailed work of the World Health Organization.

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**B.Sc. (E.C.S.) (सत्र - II) (NEP CBCS) परीक्षा: मार्च / एप्रिल - २०२६**  
**Co-Curricular Course**  
**Yoga Edu. / Performing Arts (CC-206)**

वार, दिनांक: बुधवार, ०८-०४-२०२६  
वेळ: दुपारी ०३:०० ते ०४:००

कमाल गुण: १५

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

**प्र.१ योग्य पर्याय निवडा.**

०४

- १) — योग करण्याची योग्य वेळ कोणती?
  - अ) दुपारचे सत्र
  - ब) सकाळी लवकर
  - क) संध्याकाळचे सत्र
  - ड) रात्रीचे सत्र
- २) — योग शब्दाचा अर्थ काय आहे?
  - अ) अभ्यास
  - ब) जोडणे व एकत्र आणणे
  - क) ध्यान
  - ड) विश्रांती
- ३) अनुलोम विलोम प्राणायाम करताना श्वास कसा घ्यावा?
  - अ) एका नाकपुडीने श्वास घेणे आणि दुसऱ्या नाकपुडीतून श्वास सोडणे
  - ब) दोन्ही नाकपुड्यांमधून श्वास आत घेणे आणि बाहेर सोडणे
  - क) तोंडाने श्वास घेणे
  - ड) श्वास रोखून धरणे
- ४) योग दिवस — साजरा केला जातो?
  - अ) २१ जून
  - ब) २२ जून
  - क) २५ जून
  - ड) २८ जून

**प्र.२ खालील प्रश्नांची उत्तरे लिहा. (कोणतेही तीन)**

०६

- अ) योगाची कोणतीही तीन उद्दिष्टे लिहा.
- ब) आसने कोणत्या प्रकारे केली जाऊ शकतात?
- क) मानवी जीवनात योगाची काय गरज आहे?
- ड) प्राणायामात श्वास स्वीकारणे, श्वास रोखून ठेवणे आणि श्वास सोडणे या प्रक्रियांची नावे काय आहेत?

प्र.३ सविस्तर उत्तर लिहा. (कोणताही एक)

०५

अ) योगाचे महत्त्व स्पष्ट करा.

किंवा

ब) प्राणायामाचे महत्त्व स्पष्ट करा.

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**B.Sc. (E.C.S.) (Semester - II) (NEP CBCS) Examination:  
March/April - 2026  
Co-Curricular Course  
Yoga Edu. / Performing Arts (CC-206)**

Day & Date: Wednesday, 08-04-2026  
Time: 03:00 PM To 04:00 PM

Max. Marks: 15

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative. 04**

- 1) \_\_\_\_\_ is the right time to do Yoga?
  - a) Afternoon session
  - b) Early morning
  - c) Evening session
  - d) Night session
  
- 2) \_\_\_\_\_ is the meaning of Yoga word?
  - a) Exercise
  - b) Join & bring together
  - c) Meditation
  - d) Rest
  
- 3) How should one breathe while performing Anulom Vilom Pranayama?
  - a) Inhale through one nostril and exhale through the other
  - b) Inhale and exhale through both nostrils
  - c) Breathe through the mouth
  - d) Hold your breath
  
- 4) \_\_\_\_\_ is Yoga day celebrated?
  - a) 21 June
  - b) 22 June
  - c) 25 June
  - d) 28 June

**Q.2 Write short answer. (Any Three) 06**

- a) Write any three objectives of yoga.
- b) In what ways can asanas be performed?
- c) What is the need of yoga in human life?
- d) What are the names of the processes of inhalation, holding the breath and exhalation in pranayama?

**Q.3 Write the detail answer. (Broad answer type question) (Any One) 05**

- a) Explain the importance of yoga.
- OR**
- b) Explain the importance of pranayama.

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**B.Sc. (E.C.S.) (Semester - II) (NEP CBCS) Examination:  
March/April – 2026  
OOP'S with C++ - II (G06-0201)**

Day & Date: Thursday, 09-04-2026  
Time: 03:00 PM To 04:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the Correct Alternative. (MCQ) 06**

- 1) What is the process of defining a new class based on an existing class in C++ called?
  - a) Inheritance
  - b) Composition
  - c) Encapsulation
  - d) Polymorphism
- 2) Which keyword is used to achieve runtime polymorphism in C++?
  - a) override
  - b) virtual
  - c) final
  - d) polymorphic
- 3) What is a pure virtual function in C++?
  - a) A virtual function defined in a base class
  - b) A virtual function declared in a base class
  - c) Any function in a class
  - d) A function without definition in a base class
- 4) Which of the following is used to create an output stream?
  - a) ofstream
  - b) ifstream
  - c) iostream
  - d) fsstream
- 5) How Exception handling is implemented in the C++ program?
  - a) Using Exception keyword
  - b) Using try-catch block
  - c) Using Exception block
  - d) Using Error handling schedules
- 6) Which keyword can be used in template?
  - a) class
  - b) typename
  - c) both class & typename
  - d) function

**Q.2 Answer the following questions. (Any Three) 06**

- a) Differentiate between Abstraction and Encapsulation.
- b) What is single inheritance?
- c) What is use of virtual function?
- d) What is constructor?
- e) Define class and object.

- Q.3 Answer the following questions. (Any Two) 06**
- a) What is inheritance? Explain multiple inheritance.
  - b) What is Polymorphism? Explain its types.
  - c) Explain File Stream classes.
- Q.4 Answer the following questions. (Any Two) 06**
- a) What is Exception? Explain try-catch Block.
  - b) Explain Command line Argument.
  - c) Write a C++ program to create a new file and write some text into it.
- Q.5 Answer the following questions. (Any One) 06**
- a) Explain hybrid and multilevel inheritance.
  - b) Write down the program for pure virtual function and its characteristics.

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**B.Sc. (E.C.S.) (Semester - II) (NEP CBCS) Examination:  
March/April – 2026  
Python Programming - II (G06-0202)**

Day & Date: Friday, 10-04-2026  
Time: 03:00 PM To 04:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the Correct Alternative.**

**06**

- 1) Which of the following statements correctly imports only the sqrt function from the math module?
  - a) import math.sqrt
  - b) import sqrt from math
  - c) math import sqrt
  - d) from math import sqrt
  
- 2) Which of the following modules in Python is used for working with threads?
  - a) multiprocessing
  - b) os
  - c) threading
  - d) concurrent
  
- 3) What is the purpose of thread synchronization in Python?
  - a) To avoid conflicts when multiple threads access shared resources
  - b) To speed up the execution of threads
  - c) To randomly schedule thread execution
  - d) To terminate threads forcefully
  
- 4) What will happen if an exception is not handled in Python?
  - a) The program will ignore it and continue
  - b) The program will pause until the exception is handled
  - c) The program will crash and display a traceback
  - d) Python will automatically fix the error
  
- 5) Which block is always executed, regardless of whether an exception occurred or not?
  - a) try
  - b) except
  - c) else
  - d) finally
  
- 6) Which of the following is used to raise a custom exception in Python?
  - a) throw
  - b) raise
  - c) except
  - d) assert

- Q.2 Answer the following questions. (Any Three) 06**
- a) Differentiate between built-in and user-defined exceptions.
  - b) What is thread synchronization and why is it needed?
  - c) What is a constructor in Python, and how is it defined?
  - d) Differentiate between text files and binary files in Python.
- Q.3 Answer the following questions. (Any Two) 06**
- a) Differentiate between procedure-oriented programming and object-oriented programming.
  - b) How can we pass a member of one class to another class? Give an example.
  - c) Explain different file opening modes in Python with their meaning.
- Q.4 Answer the following questions. (Any Two) 06**
- a) Explain the steps involved in exception handling using try, except, else, and finally.
  - b) Write a Python program that creates multiple threads and demonstrates concurrent execution.
  - c) Write a Python program to read from and write to a text file. Also explain the use of with statement.
- Q.5 Answer the following question. (Any One) 06**
- a) Explain the Object-Oriented Programming concepts with suitable examples.
  - b) Explain the use of seek() and tell() methods in file handling. How do you perform random access on binary files in Python?



- Q.3 Answer the following. (Any Two) 06**
- a) Explain difference between Microprocessor and Microcontroller.
  - b) Write down features of 8051 Microcontroller.
  - c) Write down any two characteristics of embedded system.
- Q.4 Answer the following. (Any Two) 06**
- a) Draw and explain Architecture of Embedded System.
  - b) Explain different types of Embedded System.
  - c) Write Embedded C program for LED blinking.
- Q.5 Answer the following. (Any One) 06**
- a) Draw and explain Block diagram of 8051 Microcontroller.
  - b) Explain with block diagram concept of Microcontroller based Embedded System.



**Q.3 Attempt the following. (Any Two) 06**

- a) Let  $f: R \rightarrow R$  is defined by  $f(x) = \frac{5x-4}{3}$  show that  $f(x)$  is bijective function.
- b) Define reflexive relation & symmetric relation.
- c) Let  $R$  is a relation defined on set  $A = \{1,2,3\}$  &  $R = \{(1,1), (1,2), (2,3), (3,1), (3,2)\}$  find transitive closure of  $R$  by Wharshall's algorithm.

**Q.4 Attempt the following. (Any Two) 06**

- a) Define homogeneous recurrence relation with constant coefficient & find characteristic equation of recurrence relation  
$$a_r - 8a_{r-1} + 16a_{r-2} = 0$$
- b) What is injective & surjective function?
- c) If  $f(x) = x^2 + x - 1$  then find  
i)  $f(2)$ , ii)  $f(-4)$ , iii)  $f(2x)$

**Q.5 Attempt the following. (Any One) 06**

- a) State & prove mutual inclusion-exclusion principle for 3 sets.
- b) Solve the recurrence relation  $a_r - 5a_{r-1} + 6a_{r-2} = 0$  with initial conditions  $a_0 = a_1 = 1$ .

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**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
Operating Systems (G06-GE-OE-0301)**

Day & Date: Thursday, 02-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose correct alternative. (MCQ)**

**06**

- 1) Which of the following is NOT a type of Operating System?
  - a) Batch
  - b) Multiprogramming
  - c) Real-Time
  - d) BIOS
  
- 2) Which scheduling algorithm is preemptive by nature?
  - a) First Come First Serve (FCFS)
  - b) Shortest Job First (SJF)
  - c) Round Robin (RR)
  - d) Priority Scheduling (non-preemptive)
  
- 3) The main function of a Process Control Block (PCB) is: \_\_\_\_\_.
  - a) To store program source code
  - b) To store process-related information
  - c) To store hardware details
  - d) To schedule jobs
  
- 4) Dining Philosophers problem can NOT be solved using Two Process solutions.
  - a) TRUE
  - b) FALSE
  
- 5) Which synchronization tool is used to solve the critical section problem?
  - a) System calls
  - b) Semaphores
  - c) Context switch
  - d) PCB
  
- 6) \_\_\_\_\_ provides the interface between a running program and O.S.
  - a) System Process
  - b) Overlays
  - c) Kernel
  - d) system calls

**Q.2 Answer the following. (Any Three)**

**06**

- a) Define an Operating System. List out different types of OS.
- b) Define system calls with two examples.
- c) Define process states with a neat diagram.
- d) Define context switching with its Drawback.
- e) List out OS Services.

**Q.3 Answer the following. (Any Two) 06**

- a) Explain Multiprogramming OS.
- b) Explain the Dining Philosopher Problem.
- c) Write a note on Multilevel Queue Scheduling with a neat diagram.

**Q.4 Answer the following. (Any Two) 06**

- a) Explain the Producer Consumer Problem with a diagram.
- b) Explain the Critical Section Problem and the role of semaphores.
- c) State Scheduling Criteria's for Scheduling algorithms.

**Q.5 Answer the following. (Any One) 06**

- a) Define Process Scheduling and Consider Following System Snapshot,

<b>Process</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>
<b>Arrival Time</b>	0	1	2	3	4
<b>CPU Burst</b>	5	9	7	2	4

Prepare Gantt chart and calculate Average Waiting and Average Turnaround Time using, RR Scheduling Algorithm with Time Slice= 2 m/s

- b) Explain PCB with neat diagram.

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Set **P**

**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
English (G06-ENG-301)**

Day & Date: Saturday, 04-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative from the options:****06**

- 1) Where is Miss Pushpa departing to?
  - a) Another city in India
  - b) Foreign country
  - c) Her hometown
  - d) Back to her office
  
- 2) What does the narrator mean by "the sweat of the soul"?
  - a) Physical tiredness
  - b) Emotional and spiritual effort during the journey
  - c) Fear of the sun
  - d) Dirt on the body
  
- 3) What is the main message of the poem "The Ghaghra in Spate"?
  - a) Nature is gentle and kind
  - b) Humans should respect nature's power and endure its challenges
  - c) Floods can be stopped by prayers
  - d) Villagers live without any fear
  
- 4) What is the first step mentioned in the poem to kill a tree?
  - a) Uproot it entirely
  - b) Cut the bark and cut the roots
  - c) Burn the leaves
  - d) Water it less
  
- 5) Mulk Raj Anand was born in \_\_\_\_\_ year.
  - a) 1905
  - b) 1910
  - c) 1915
  - d) 1920
  
- 6) The narrator spent his time in the banyan tree by \_\_\_\_\_.
  - a) Flying kites
  - b) Reading books
  - c) Writing stories
  - d) Watching birds

**Q.2 Answer the following. (Any Two)****06**

- a) Describe the fight between the mongoose and the cobra.
- b) Describe the friendship between Dr. Raman and Gopal?
- c) Write in brief about the poem "On Killing A Tree"
- d) What difficulties did the pilgrims face during the journey?

**Q.3 Write short notes. (Any One) 06**

- a) Write a summary of the poem "Goodbye Party for Miss Pushpa T.S"
- b) What is the main message of the poem "The Ghaghra in Spate"?

**Q.4 Answer the following. (Any One) 12**

- a) What quality of Dr. Raman is highlighted in the story "The Doctor's Word"?
- b) What is the central theme of the story "The Lost Child"?

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Set **P**

**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
Data Structures using C++ (G06-DSC1-0301)**

Day & Date: Monday, 06-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

- Instructions:** 1) All questions are compulsory.  
2) Draw neat diagrams and give equations wherever necessary.  
3) Figures to the right indicate full marks.

**Q.1 Choose correct alternatives. 06**

- 1) How many children does a node of binary tree have?
  - a) more than 2
  - b) any number of children
  - c) 0 or 1 or 2
  - d) 0 or 1
- 2) What is time complexity of linear search method to search 'n' element?
  - a)  $O(1)$
  - b)  $O(n)$
  - c)  $O(\log n)$
  - d)  $O(n^2)$
- 3) Quick sort method also called as \_\_\_\_\_.
  - a) Partition Exchange sort
  - b) Selection Sort
  - c) Exchanging Sort
  - d) Merging Sort
- 4) Which of the following searching algorithm is fastest?
  - a) Binary search
  - b) Linear search
  - c) Jump search
  - d) All are equally fast
- 5) A normal queue, if implemented using an array of size MAX\_SIZE, gets full when?
  - a)  $\text{Rear} = \text{MAX\_SIZE} - 1$
  - b)  $\text{Front} = (\text{rear} + 1) \bmod \text{MAX\_SIZE}$
  - c)  $\text{Front} = \text{rear} + 1$
  - d)  $\text{Rear} = \text{front}$
- 6) The data structure required to check whether an expression contains a balanced parenthesis or not?
  - a) Queue
  - b) Stack
  - c) Tree
  - d) Array

**Q.2 Answer the following. (Any Three) 06**

- a) Define Strictly binary tree.
- b) Evaluate the following POSTFIX expression using stack.  
 $PQ + RS - * TU + /$  where  $P = 2, Q = 1, R = 4, S = 5, T = 3, U = 7$
- c) Why queue is called FIFO data structure?
- d) List out applications of tree.
- e) What is Linear Circular linked list?

- Q.3 Answer the following. (Any Two) 06**
- a) Write CPP program to implement static queue.
  - b) Perform radix sort on given data.  
121, 23, 45, 232, 321, 36, 87, 63, 44, 101, 44
  - c) Explain ADT for Array.
- Q.4 Answer the following. (Any Two) 06**
- a) Write a program to implement static STACK with following operations:
    - i) CREATE
    - ii) PUSH
    - iii) POP
    - iv) Display
  - b) What is tree traversal? Explain Preorder and In-order traversing with example.
  - c) Write CPP program to perform addition of two-dimensional arrays.
- Q.5 Answer the following. (Any One) 06**
- a) Write CPP Program to perform following operations on singly linear linked list.
    - i) Insert new node at beginning
    - ii) Remove last node
    - iii) Search node
    - iv) Display linked list
  - b) What is Output Restricted Deque? Explain its following operations -
    - i) Insert Right
    - ii) Insert Left
    - iii) Remove
    - iv) Display

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**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
Database Management Systems (G06-DSC1-0302)**

Day & Date: Tuesday, 07-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figure to right indicate full marks.

**Q.1 Choose the correct alternative. 06**

- 1) In the three-level architecture, the logical structure of the database is described at \_\_\_\_\_.
  - a) Internal level
  - b) External level
  - c) Conceptual level
  - d) Physical level
- 2) Which normal form removes partial dependency?
  - a) 1NF
  - b) 2NF
  - c) 3NF
  - d) BCNF
- 3) Which operator is used with subqueries to compare a value with all values?
  - a) ANY
  - b) IN
  - c) ALL
  - d) BETWEEN
- 4) Which clause is used to filter grouped records?
  - a) HAVING
  - b) GROUP BY
  - c) WHERE
  - d) ORDER BY
- 5) Which command is used to remove a table completely?
  - a) Delete
  - b) Truncate
  - c) Drop
  - d) Remove
- 6) Which command is used to undo changes permanently saved?
  - a) Rollback
  - b) Commit
  - c) Savepoint
  - d) Revoke

**Q.2 Answer the following. (Any Three) 06**

- a) Define schema and instance.
- b) What is a primary key?
- c) Define subquery.
- d) What is an index?
- e) What is data independence?

- Q.3 Answer the following. (Any Two) 06**
- a) Explain GROUP BY and HAVING clause.
  - b) Explain DDL and DML commands with examples.
  - c) Explain aggregate functions with examples.
- Q.4 Answer the following. (Any Two) 06**
- a) What is the difference between DELETE and TRUNCATE?
  - b) Define DBMS & Explain advantages of DBMS.
  - c) What is a view? & State its types.
- Q.5 Answer the following. (Any One) 06**
- a) Explain ER model concepts: entity, attributes, relationship with diagram.
  - b) Explain different types of database users.



**Q.3 Answer the following questions. (Any Two) 06**

- a) Write a note on Stratified Random Sampling.  
 b) Find the value of mean of the following frequency distribution.

X	10	12	14	16	18
F	5	7	18	22	10

- c) Find correlation coefficient between X and Y.

X	10	14	21	22	30
Y	47	41	30	18	9

**Q.4 Answer the following questions. (Any Two) 06**

- a) Find the value of median.

Marks	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
No. of students	15	17	22	30	17

- a) Find the value of coefficient of variation of the  
 $X_i = 73, 22, 87, 19, 86, 95$   
 c) What is dispersion? Distinguish between absolute and relative measure of dispersion.

**Q.5 Answer the following question. (Any One) 06**

- a) Draw the histogram from the following data. Hence determine the mode.

Classes	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120	120 – 140
Frequency	19	25	32	38	48	11

- b) Write down the least square regression line procedure of Y on X.

Seat No.	
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Set **P**

**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April - 2026  
Advanced Python Programming (G06-DSC2-0304)**

Day & Date: Thursday, 09-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the Correct Alternative.****06**

- 1) A \_\_\_\_\_ function is a function that can take other functions as arguments and/or return functions as outputs.
  - a) lambda
  - b) span
  - c) higher-order
  - d) match
- 2) \_\_\_\_\_ method comes under infinite iterators category.
  - a) cycle()
  - b) batched()
  - c) dropwhile()
  - d) accumulate()
- 3) To convert dict. to json file, the \_\_\_\_\_ method is used.
  - a) json.loads()
  - b) json.load()
  - c) json.dumps()
  - d) json.dump()
- 4) \_\_\_\_\_ method of openpyxl module is used to create a new workbook.
  - a) workbook()
  - b) create\_workbook()
  - c) create\_wb()
  - d) None of these
- 5) The re.findall() method returns result in the form of \_\_\_\_\_ when match found.
  - a) tuple
  - b) list
  - c) set
  - d) dictionary
- 6) \_\_\_\_\_ special sequence of re module matches decimal digit.
  - a) /d
  - b) /D
  - c) \s
  - d) \S

**Q.2 Answer the following questions. (Any Three)****06**

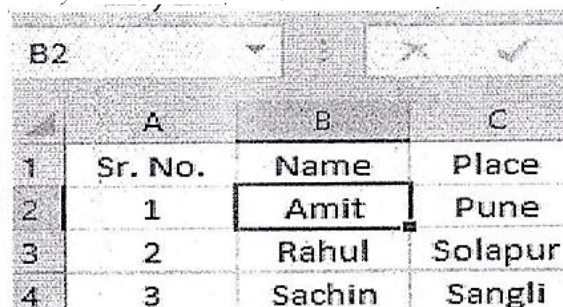
- a) What is metacharacter? List out metacharacters.
- b) What is serialization?
- c) What is lambda function?
- d) What is magic method?
- e) What is list comprehension?

**Q.3 Answer the following questions. (Any Two) 06**

- a) Consider a list `x = [17, 19, 15, 3, 45]`  
Write a python program by using `filter()` function, to extract and print numbers from above list which are greater than 18.
- b) What is type hinting? write a simple program of it.
- c) Explain about CSV file.

**Q.4 Answer the following questions. (Any Two) 06**

- a) What is arbitrary argument (`*args`)? Write a program of it.
- b) Consider a spreadsheet (Excel file) named `demo.xlsx`,



	A	B	C
1	Sr. No.	Name	Place
2	1	Amit	Pune
3	2	Rahul	Solapur
4	3	Sachin	Sangli

Write a python program to read single cell B2 (Amit) and print on screen.

- c) What is Recursive function? Write a simple program of it.

**Q.5 Answer the following question. (Any One) 06**

- a) What is spreadsheet/workbook? Explain following basic terminologies of a spreadsheet:
- Workbook
  - Sheet
  - Cell
  - Row
  - Column
- b) What is match object? Only explain following methods/properties of match object:
- `.span()`
  - `.group()`
  - `.start()`
  - `.end()`
  - `.string`

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Set P

**B.Sc. (E.C.S.) (सत्र - III) (नवीन) (NEP CBCS) परीक्षा: मार्च/एप्रिल - २०२६**  
**Co-Curricular Course**  
**National Service Scheme (G06-CC-301)**

वार, दिनांक: शनिवार, ११-०४-२०२६  
वेळ: सकाळी ०९:०० ते १०:३०

कमाल गुण: ३०

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

प्र.१ खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा.

०६

- १) स्वयंसेवा (Volunteerism) म्हणजे ——— .  
अ) पगारी सेवा  
ब) कोणत्याही मोबदल्याची अपेक्षा न करता सेवा  
क) शासकीय काम  
ड) व्यावसायिक क्रिया
- २) स्वयंसेवेचे एक महत्त्वाचे वैशिष्ट्य म्हणजे ——— .  
अ) स्वार्थ  
ब) सामाजिक बांधिलकी  
क) नफा मिळवणे  
ड) स्पर्धा
- ३) प्रभावी संवाद म्हणजे ——— .  
अ) फक्त बोलणे  
ब) फक्त लेखन  
क) विचार व माहितीची देवाणघेवाण  
ड) वाचन
- ४) धोरणात्मक नियोजन (Strategic Planning) ——— वर लक्ष केंद्रित करते.  
अ) अनियमित निर्णय  
ब) दीर्घकालीन उद्दिष्टे  
क) तात्काळ कृती  
ड) उद्दिष्टांकडे दुर्लक्ष
- ५) सामाजिक-आर्थिक सर्वेक्षण ——— संबंधित आहे.  
अ) हवामान  
ब) सामाजिक व आर्थिक स्थिती  
क) क्रीडा  
ड) वाहतूक
- ६) जनगणना किती कालावधीनंतर घेतली जाते?  
अ) दरवर्षी  
ब) ५ वर्षांनी  
क) १० वर्षांनी  
ड) दरमहा

- प्र.२ खालील प्रश्नांची उत्तरे लिहा. (कोणतेही दोन) 0६
- अ) सामाजिक-आर्थिक सर्वेक्षणावर टीप लिहा.  
ब) संवादाचे प्रकार लिहा.  
क) साक्षरता माहिती संकलनाकरिता प्रश्नावली तयार करा.  
ड) नियोजनाचे महत्त्व व मर्यादा लिहा.
- प्र.३ खालील प्रश्नाचे थोडक्यात उत्तर लिहा. (कोणताही एक) 0६
- अ) मुलाखात पद्धतीची प्रक्रिया थोडक्यात स्पष्ट करा.  
ब) अहवाल लेखन थोडक्यात स्पष्ट करा.
- प्र.४ खालील प्रश्नाचे सविस्तर उत्तर लिहा. (कोणताही एक) १२
- अ) कार्यक्रमाच्या यशस्वी अंमलबजावणीसाठी आवश्यक बाबी कोणत्या? स्पष्ट करा.  
ब) स्वयंसेवेची संकल्पना, भारतातील आदर्श व्यक्तिमत्त्वे आणि प्रभावी स्वयंसेवेसाठी आवश्यक नेतृत्व गुण स्पष्ट करा.

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Set **P**

**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
Co-Curricular Course  
National Service Scheme (G06-CC-301)**

Day & Date: Saturday, 11-04-2026  
Time: 09:00 AM To 10:30 AM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternatives from the options. 06**

- 1) Volunteerism refers to \_\_\_\_\_.
  - a) Paid service
  - b) Service without expectation of reward
  - c) Government work
  - d) Business activity
- 2) Key characteristic of volunteerism is \_\_\_\_\_.
  - a) Self interest
  - b) Social commitment
  - c) Profit motive
  - d) Competition
- 3) Effective communication means \_\_\_\_\_.
  - a) speaking only
  - b) writing only
  - c) exchange of ideas and information
  - d) reading
- 4) Strategic planning focuses on \_\_\_\_\_.
  - a) Random decision
  - b) Long term goals
  - c) Immediate action only
  - d) Ignoring objectives
- 5) Socio economic survey related to \_\_\_\_\_.
  - a) weather
  - b) social and economic condition
  - c) sports
  - d) transport
- 6) Census conducted every \_\_\_\_\_.
  - a) year
  - b) 5 years
  - c) 10 years
  - d) month

**Q.2 Answer the following questions. (Any Two) 06**

- a) Write a note on socio economic survey.
- b) Give the types of communication
- c) Design of Questionnaire to collect Literacy data.
- d) Write the importance and limitation of planning.

- Q.3 Write Short answer to questions. (Any One)** **06**
- a) Explain in brief process of interview method.
  - b) Explain in brief report writing.
- Q.4 Broad Question. (Any One)** **12**
- a) What are the requirements of successful implementation of Programmes.
  - b) Explain the concept of volunteerism, role models in India, and leadership attributes required for effective volunteering.

Seat No.	
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Set P

**B.Sc. (E.C.S.) (सत्र - III) (नवीन) (NEP CBCS) परीक्षा: मार्च/एप्रिल - २०२६**  
**Co-Curricular Course**  
**National Cadet Corps (G06-CC-302)**

वार, दिनांक: शनिवार, ११-०४-२०२६  
वेळ: सकाळी ०९:०० ते १०:००

कमाल गुण: १५

सूचना : १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

- प्र.१ खालील दिलेले योग्य पर्याय निवडून गाळलेल्या जागा भरा. ०४
- १) — हा भारताचा सर्वोच्च नागरी सन्मान आहे.  
अ) भारतरत्न ब) पद्मविभूषण  
क) पद्मश्री ड) परमवीर चक्र
- २) वृक्षारोपण हा — चा एक भाग आहे.  
अ) झिल ब) समाजसेवा  
क) वेपन ट्रेनिंग ड) यापैकी एकही नाही
- ३) 'जय जवान, जय किसान' घोषणा — यांनी दिली.  
अ) जवाहरलाल नेहरू ब) महात्मा गांधी  
क) लाल बहादूर शास्त्री ड) यापैकी एकही नाही
- ४) भारतात एकूण — एन्. सी. सी. डायरेक्टरेट्स आहेत.  
अ) १४ ब) १५  
क) १६ ड) १७
- प्र.२ खालील प्रश्नांची उत्तरे लिहा. (कोणतेही दोन) ०४
- अ) समाजसेवेचे उद्देश लिहा.  
ब) एन्. सी. सी. मधील कॅम्पची नावे लिहा.  
क) स्वच्छ भारत अभियानाची स्थापना कोणत्या वर्षी झाली.
- प्र.३ टिप लिहा. ०३  
आदर्श नागरिकाचे गुण
- प्र.४ एन्. सी. सी. मध्ये केली जाणारी समाजसेवेची कामे सविस्तर लिहा. ०४  
**किंवा**  
नेतृत्वाचे मूलभूत गुण सविस्तर लिहा.

Seat No.	
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Set **P**

**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
Co-Curricular Course  
National Cadet Corps (G06-CC-302)**

Day & Date: Saturday, 11-04-2026  
Time: 09:00 AM To 10:00 AM

Max. Marks: 15

**Instructions:** 1) All questions are compulsory.  
2) Right side number indicates marks.

**Q.1 Choose the correct alternative from the options. 04**

- 1) \_\_\_\_\_ is the highest civilian honor of India.
 

a) Bharat Ratna	b) Padma Vibhushan
c) Padma Shri	d) ParamVir Chakra
  
- 2) Tree plantation is a part of \_\_\_\_\_.
 

a) drill	b) weapon training
c) social service	d) None of these
  
- 3) \_\_\_\_\_ gave the slogan, 'Jai Jawan, Jai Kisan'.
 

a) Jawaharlal Nehru	b) Mahatma Gandhi
c) Lal Bahadur Shastri	d) None of these
  
- 4) There are \_\_\_\_\_ NCC directorates in India.
 

a) 14	b) 15
c) 16	d) 17

**Q.2 Attempt any two of the following questions. 04**

- a) Write down the aims of social service.
- b) Write down the names of camps in NCC.
- c) In which year Swachh Bharat Abhiyan was established?

**Q.3 Write a short note. 03**

Qualities of an Ideal citizen

**Q.4 Describe the social services activity done in NCC. 04**

**OR**

Describe the basic leadership traits.





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**B.Sc. (E.C.S.) (सत्र - III) (नवीन) (NEP CBCS) परीक्षा: मार्च/एप्रिल – २०२६**  
**Co-Curricular Course**  
**Health, Wellness and Fitness (G06-CC-304)**

वार, दिनांक: शनिवार, ११-०४-२०२६  
वेळ: सकाळी ०९:०० ते १०:००

कमाल गुण: १५

**सूचना :** १) सर्व प्रश्न अनिवार्य आहेत.  
२) उजवीकडील अंक पूर्ण गुण दर्शवितात.

**प्र.१ योग्य पर्याय निवडून प्रश्नांची उत्तरे लिहा. ०४**

- १) खालीलपैकी कोणता घटक मानसिक आरोग्याचा भाग नाही?  
अ) भावनिक स्वास्थ्य                      ब) बौद्धिक कार्यक्षमता  
क) केसांचा रंग                                  ड) सामाजिक संबंध
- २) कोणता घटक मानसिक आरोग्यावर नकारात्मक परिणाम करू शकतो?  
अ) मजबूत सामाजिक आधार              ब) दीर्घकालीन तणाव  
क) नियमित व्यायाम                      ड) संतुलित आहार
- ३) खालीलपैकी कोणता मानसिक आरोग्य विकार आहे?  
अ) मधुमेह    ब) उच्च रक्तदाब  
क) नैराश्य                                        ड) दमा
- ४) फिटनेस ॲप्सचा मुख्य उद्देश काय असतो?  
अ) आरोग्याचे निरीक्षण करणे            ब) मोबाईलची बॅटरी वाढवणे  
क) इंटरनेट स्पीड वाढवणे                  ड) गेम खेळणे

**प्र.२ खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (कोणतेही तीन) ०६**

- अ) फिटनेस ॲप्स म्हणजे काय?
- ब) ध्यान म्हणजे काय?
- क) प्राथमिक उपचार म्हणजे काय?
- ड) खोल श्वसन करण्याची एक पद्धत सांगा.
- इ) मानसिक आरोग्य म्हणजे काय?

**प्र.३ खालील प्रश्नाचे सविस्तर उत्तर लिहा. (कोणताही एक) ०५**

- अ) तणाव म्हणजे काय? त्याची कारणे लिहा.
- ब) व्यायाम करताना दुखापती होण्याची कारणे कोणती?

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**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
Co-Curricular Course  
Health, Wellness and Fitness (G06-CC-304)**

Day & Date: Saturday, 11-04-2026  
Time: 09:00 AM To 10:00 AM

Max. Marks: 15

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative from the options. 04**

- 1) Which of the following is not a part of mental health?
 

a) Emotional well-being	b) Intellectual efficiency
c) Hair color	d) Social relationships
  
- 2) Which factor can negatively affect mental health?
 

a) Strong social support	b) Chronic stress
c) Regular exercise	d) Balanced diet
  
- 3) Which of the following is a mental health disorder?
 

a) Diabetes	b) High blood pressure
c) Depression	d) Asthma
  
- 4) What is the main purpose of fitness apps?
 

a) To monitor health	b) To increase mobile battery life
c) To boost internet speed	d) To play games

**Q.2 Write Short Answers. (Any Three) 06**

- a) What are fitness apps?
- b) What is meditation?
- c) What is first aid?
- d) Name one method of deep breathing.
- e) What is mental health?

**Q.3 Answer the following question in detail. (Any One) 05**

- a) What is stress? Write its causes.
- b) What are the causes of injuries during exercise?



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**B.Sc. (E.C.S.) (Semester - III) (New) (NEP CBCS) Examination:  
March/April – 2026  
Co-Curricular Course  
Yoga Education (G06-CC-305)**

Day & Date: Saturday, 11-04-2026  
Time: 09:00 AM To 10:00 AM

Max. Marks: 15

**Instructions:** 1) All questions are compulsory.  
2) Right side number indicates marks.

**Q.1 Choose the correct alternative from the options. 04**

- 1) International Yoga Day begins It's been \_\_\_\_\_ years.
  - a) 2015
  - b) 2016
  - c) 2017
  - d) 2018
- 2) \_\_\_\_\_ This person proposed Yoga Day at the United Nations.
  - a) Swami Vivekanand
  - b) Narendra Modi
  - c) A.P.J. Abdul Kalam
  - d) V.P. Chandrasekhar
- 3) \_\_\_\_\_ Countries supported the proposal for Yoga Day at the United Nations.
  - a) 177
  - b) 200
  - c) 202
  - d) 250
- 4) Explain the philosophical significance of the day 21st June.
  - a) Uttarayan → Dakshinayana
  - b) The biggest day of the year
  - c) Last day of the year
  - d) All of the above options They are right

**Q.2 Write short answers to the following questions. 06**

- a) Briefly explain the importance of yoga in today's stressful lifestyle?
- b) What is the meaning of stress?
- c) Write any two yoga possess that are useful for Stress Relief?

**Q.3 Write the answers to the following questions. (Any One) 05**

- a) Source of stress in modern life.
- b) Write the philosophical significance of June 21.

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**B.Sc. (E.C.S.) (Semester - IV) (New) (NEP CBCS) Examination:  
March/April – 2026  
Computer Networks (G06-GE-OE-0401)**

Day & Date: Wednesday, 15-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

- Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Draw neat labelled diagrams wherever necessary.

**Q.1 Choose the correct alternatives. (MCQ) 06**

- 1) The bit stream is broken into frames is job of \_\_\_\_\_.  
a) Data Link Layer                      b) Physical Layer  
c) Transport Layer                      d) Network Layer
- 2) In \_\_\_\_\_ the entire message stored at an intermediate node before forwarding.  
a) Circuit Switching                      b) Message Switching  
c) Packet Switching                      d) Hybrid Switching
- 3) The device operation at data link layer is \_\_\_\_\_.  
a) Repeater                      b) Router  
c) Bridges                      d) Protocol
- 4) In \_\_\_\_\_ topology does a single cable act as the backbone for the entire network.  
a) Star                      b) Ring  
c) Bus                      d) Mesh
- 5) The OSI Model has \_\_\_\_\_ layers.  
a) 4                      b) 3  
c) 7                      d) 5
- 6) What is the data unit at the Data Link Layer called?  
a) Segment                      b) Packet  
c) Frame                      d) Bit

**Q.2 Answer the following. (Any Three) 06**

- a) Define the term computer Network.
- b) What CSMA and CSMA/CD?
- c) Write full form of FTP and HTTP.
- d) Define Analog and Digital Signal.
- e) Write any four design issues of data link layer.

- Q.3 Answer the following. (Any Two) 06**
- a) Explain the Hub device of network.
  - b) Explain the Frequency division multiplexing.
  - c) Explain stop and wait Protocol.
- Q.4 Answer the following. (Any Two) 06**
- a) Explain coaxial cable.
  - b) What is TCP/IP reference model?
  - c) What is error? Explain types of error with example.
- Q.5 Answer the following. (Any One) 06**
- a) What is OSI model? Explain in detail.
  - b) What is switching? Explain circuit switching.

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**B.Sc. (E.C.S.) (Semester - IV) (New) (NEP CBCS) Examination:  
March/April - 2026  
ENGLISH  
Reading Texts in Indian English - II (G06-ENG-401)**

Day & Date: Thursday, 16-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative from the option:****06**

- 1) What is the Primary motivation of the fisherman in the poem?
  - a) Greed
  - b) Revenge
  - c) Hunger
  - d) Fame
- 2) Who is the poet of the poem "Right Image"?
  - a) Agha Shahid Ali
  - b) Rabindranath Tagore
  - c) Dilip Chitre
  - d) Padma Sachdev
- 3) Which language was 'Sunrise' originally written?
  - a) Hindi
  - b) English
  - c) Punjabi
  - d) Dogri
- 4) What is the central theme of the poem "The house of my childhood"?
  - a) Celebration of modern life
  - b) Nostalgia and Loss
  - c) The beauty of urban setting
  - d) Conflict with nature
- 5) What was the primary occasion for Dr. Kalam's "Unity of Mind" address?
  - a) India's 55<sup>th</sup> Independence Day
  - b) A scientific summit
  - c) A UN Conference
  - d) A book Launch
- 6) Besides Engineering and Philanthropy, what other profession is Sudha Murty well known for?
  - a) Politics
  - b) Writing
  - c) Singing
  - d) Dancing

**Q.2 Answer the following question: (Any Two)****06**

- a) What is the significance of the title "Hunger"?
- b) What is the central theme of the poem "Right Image"?
- c) What is the difference between western and Indian nationalism?
- d) What personal qualities of Sudha Murty are most admirable?

**Q.3 Answer the following question: (Any One) 06**

- a) Picturise the fisherman and his daily life, as evident in the poem. Take the help of the phrases and words from the poem.
- b) What are the themes of the poem "The House of My Childhood"?

**Q.4 Answer the following question: (Any One) 12**

- a) What is the core idea of "Unity of Minds"?
- b) What is the central message of Reena Shah's article?

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**B.Sc. (E.C.S.) (Semester - IV) (New) (NEP CBCS) Examination:  
March/April – 2026  
Core Java (G06-DSC1-0401)**

Day & Date: Friday, 17-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose correct alternative for each of the following. 06**

- 1) What will be the output of following block of java code?  

```
String s= "solapur";
char c=s.charAt(5);
System.out.println(ch);
```

a) o	b) p
c) u	d) compile time error
- 2) Which of the following is a superclass of every class in Java?  

a) ArrayList	b) Abstract
c) String	d) Object
- 3) Which of the following is not an OOPS concept in Java?  

a) Polymorphism	b) Compilation
c) Encapsulation	d) Inheritance
- 4) Which of the following is not a primitive data type?  

a) array	b) byte
c) int	d) char
- 5) Which of the following method sends a running thread to runnable state?  

a) stop()	b) resume()
c) yield()	d) None of these
- 6) Which of the following modifier cannot be used with constructor?  

a) Public	b) Protected
c) Static	d) private

**Q.2 Answer the following questions. (Any Three) 06**

- a) What is data encapsulation?
- b) What is package?
- c) What is token? List out all tokens.
- d) What is object?
- e) Define Abstract class.

- Q.3 Answer the following questions. (Any Two) 06**
- a) Write a java program to print all odd numbers from 1 to 10 in reverse order.
  - b) Define Single Inheritance, write a program of it.
  - c) Define Parameterized Constructor, write program of it
- Q.4 Answer the following questions. (Any Two) 06**
- a) Explain Exception Handling in detail.
  - b) Explain one dimensional array with program.
  - c) Write a java program which inputs employee details(id,name,salary) from keyboard and prints it on screen.
- Q.5 Answer the following question. (Any One) 06**
- a) Explain any six features of java.
  - b) Explain Thread Life Cycle with a diagram.

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**B.Sc. (E.C.S.) (Semester - IV) (New) (NEP CBCS) Examination:  
March/April - 2026  
Relational Database Management Systems (G06-DSC1-0402)**

Day & Date: Saturday, 18-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

**Q.1 Choose the correct alternative.****06**

- 1) Atomicity means \_\_\_\_\_.
  - a) All operations are executed or none
  - b) Data duplication
  - c) Only read operations allowed
  - d) Fast execution
- 2) Lost update problem occurs due to \_\_\_\_\_.
  - a) Power failure
  - b) Concurrent transactions
  - c) Syntax error
  - d) Backup
- 3) A shared lock allows \_\_\_\_\_.
  - a) Write Only
  - b) delete
  - c) Read Only
  - d) Both Read and Write
- 4) Heuristic optimization is based on \_\_\_\_\_.
  - a) Cost
  - b) Log
  - c) Time Stamp
  - d) Rules
- 5) GOTO statement transfers control to \_\_\_\_\_.
  - a) Function
  - b) Procedure
  - c) Label
  - d) Cursor
- 6) Trigger is automatically executed when \_\_\_\_\_.
  - a) Procedure runs
  - b) Table created
  - c) Event occurs
  - d) User logs in

**Q.2 Answer the following. (Any Three)****06**

- a) Define Transaction.
- b) What is concurrency control?
- c) List any 4 advantages of PL/SQL.
- d) What is checkpoint?
- e) What is undo and redo?

- Q.3 Answer the following. (Any Two) 06**
- a) Write a note on ACID property.
  - b) Explain for loop with example.
  - c) Explain package with example.
- Q.4 Answer the following. (Any Two) 06**
- a) Why use lock based protocol? Explain two phase locking protocol.
  - b) What is stored procedure? Explain stored procedure with example.
  - c) Write a note on shadow paging.
- Q.5 Answer the following. (Any One) 06**
- a) What is cursor? Explain different types and attributes of cursor with example.
  - b) What is log? Explain log based recovery techniques in detail.

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**B.Sc. (E.C.S.) (Semester - IV) (New) (NEP CBCS) Examination:  
March/April – 2026  
Statistics for Data Science - II (G06-DSC2-0403)**

Day & Date: Monday, 20-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

- Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Use of Log table and Calculator is allowed.

**Q.1 Multiple choice questions. 06**

- 1) In \_\_\_\_\_ number of ways a committee of 5 be selected from 10 persons, such that 2 particular persons are always included and 1 particular person is always excluded from committee.
 

a) ${}^{10}C_5$	b) ${}^8C_3$
c) ${}^7C_3$	d) ${}^7C_2$
- 2) A random experiment is resulted in to \_\_\_\_\_ outcomes.
 

a) 1	b) 2
c) 6	d) more than one
- 3) Let 'A' be an event defined on sample space 'S', then  $P(\bar{A}/A) =$  \_\_\_\_\_.
 

a) 0	b) 1
c) $1 - P(A)$	d) None of these
- 4) If  $X \rightarrow B(10, 0.4)$  then  $Var(X) =$  \_\_\_\_\_.
 

a) 4	b) 6
c) 0.24	d) 2.4
- 5) If  $X \rightarrow N(5, 100)$  then \_\_\_\_\_.
 

a) Mean = Median = mode = 5	b) $P(X \leq 5) = P(X \geq 5)$
c) S.D. = 10	d) All of these
- 6) Reject  $H_0$  when  $H_1$  is true is \_\_\_\_\_.
 

a) Type-I error	b) Type-II error
c) Correct decision	d) None of these

**Q.2 Answer the following. (Any Three) 06**

- a) Define - parameter and statistic.
- b) State multiplication principle of counting.
- c) If  $P(A) = 0.6, P(B/A) = 0.8$  find  $P(A \cap B)$ .
- d) If  ${}^nC_x = {}^{(n+1)}C_{(x+1)}$  comment on values of n and x.
- e) If  $X \rightarrow U(10, 12)$  then find  $P(X \leq 11)$ .

**Q.3 Answer the following. (Any Two)****06**

- a) Define - permutations and combinations, state their formulae.
- b) Two identical boxes, Box-I contains 6 white and 5 black balls, Box-II contains 4 white and 3 black balls. A box is selected at random and a ball is drawn from it. Find probability of getting black ball.
- c) A discrete r.v.  $X$  has following p.m.f.

$X$	-1	0	1	2
$P(x)$	$2k$	$k$	$k$	$3k$

Find

- i)  $k$
- ii)  $P(X < 1)$

**Q.4 Answer the following. (Any Two)****06**

- a) State any three properties of normal distribution.
- b) Define - Null hypothesis, Alternative hypothesis and level of significance.
- c) A discrete r.v.  $X$  has Poisson distribution with  $P(X = 2) = P(X = 3)$ .  
Find  $P(X = 0)$

**Q.5 Answer the following. (Any One)****06**

- a) Explain chi-square test for testing independence of attributes.
- b) Marks obtained by students follows normal distribution with mean 55 and s.d. 24. How many students out of 500 have scored marks more than 79.  
(Given: area under s.n.v. curve from 0 to 1 is 0.3413)

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**B.Sc. (E.C.S.) (Semester - IV) (New) (NEP CBCS) Examination:  
March/April – 2026  
Software Testing and Quality Assurance (G06-DSC2-0404)**

Day & Date: Tuesday, 21-04-2026  
Time: 12:00 PM To 01:30 PM

Max. Marks: 30

**Instructions:** 1) All questions are compulsory.  
2) Figures to right indicate full marks.

**Q.1 Choose correct alternatives. 06**

- 1) Which should be the first test case for the login of Gmail account?
  - a) Check the URL of the login is working
  - b) Check the field validation of the username and password
  - c) Check that password must be visible in encrypted form
  - d) Label of the user name and password field must be visible
  
- 2) Software Testing with real data in real environment is Known as \_\_\_\_\_.
  - a) alpha testing
  - b) beta testing
  - c) regression testing
  - d) None of this
  
- 3) Cyclomatic complexity is \_\_\_\_\_.
  - a) White box testing
  - b) black box testing
  - c) Grey box testing
  - d) All of the above
  
- 4) Alpha testing is done at \_\_\_\_\_.
  - a) Developer's end
  - b) User's end
  - c) Developer's end & User's end
  - d) None of the mentioned
  
- 5) \_\_\_\_\_ is known as variance from software product specifications.
  - a) Defects
  - b) Review
  - c) Requirement
  - d) Report
  
- 6) Which Test Document is used to define the Exit Criteria of Testing?
  - a) Defect Report
  - b) Test summary Report
  - c) Test case
  - d) Test plan

**Q.2 Answer the following. (Any Three) 06**

- a) What is Boundary value Analysis?
- b) What is Smoke testing?
- c) Define Path Coverage Testing?
- d) What is Decision table?
- e) Define Load testing?

- Q.3 Answer the following. (Any Two) 06**
- a) What is Bugs? Explain types of Bugs.
  - b) Difference between Manual Testing and Automation Testing.
  - c) Define System Testing. Explain Function and Nonfunctional testing?
- Q.4 Answer the following. (Any Two) 06**
- a) Explain needs of Software Testing.
  - b) Explain regression testing and types.
  - c) What is black box testing? Explain advantages and disadvantages.
- Q.5 Answer the following. (Any One) 06**
- a) How to write a test case template with example?
  - b) What is STLC? Explain Software Testing Life Cycle.