



RAN-2511000904044001

Bachelor of Computer Applications (NCF - NEP) (Sem. - IV) Examination September - 2025 Internet of Things - Minor (Paper - 402-01)

Time: 2 Hours]

[Total Marks: 50

<p>सूचना : / Instructions</p> <p>(1) उपरोक्त दशविव विगतो उत्तरवही पर अवश्य लખवी. Fill up strictly the above details on your answer book.</p>	<p>Seat No.:</p> <table border="1"> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table> <div style="border: 1px solid black; height: 80px; width: 100%; margin-top: 10px;"></div> <p style="text-align: center;">Student's Signature</p>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		

SET - I

- Q. 1. Answer in brief (Any Five) (10)**
1. What is embedded system? Give an example.
 2. Is HTTP protocol suitable for network communication in IoT application? Justify your answer.
 3. What is AAA framework?
 4. What is constrained node in terms of IoT device?
 5. Brief on Ultrasonic sensor and IR sensor.
 6. What is GPIO pins on Raspberry Pi.?
 7. What is PaaS and IaaS.
- Q. 2. A. Explain the Applications of wireless sensor network. (03)**
- OR**
- Explain Exclusive Pair Communication Module in Detail.
- B. Answer Following (Any Three) (12)**
1. Explain the benefits and advantage of big Data analytics.
 2. Explain M2M Architecture in Detail.
 3. Discuss on IoT security issues, challenges, threats and the measures against them.
 4. What is an IoT Device? Explain basic building blocks of an IoT Device
- Q. 3. A. How is Raspberry Pi different from a Desktop computer? (04)**
- OR**
- Explain Application Layer and Link Layer Protocols.
- B. Answer following. (Any Three) (21)**
1. What is Arduino? Discuss on Components of Arduino in detail with its pinout diagram.
 2. Explain the various types of sensors with it usage.
 3. Write Case Study of Health Monitoring System.
 4. Write Case study of smart Home Application.



RAN-2511000904022001

Second Year Bachelor of Computer Applications (Sem. - IV) Examination September - 2025
Major-2-404 : .Net Programming (Th)

Time: 1 Hour]

[Total Marks: 25

<p>सूचना : / Instructions</p> <p>(1) उपरोक्त दशविव विगतो उत्तरवही पर अवश्य लખवी. Fill up strictly the above details on your answer book.</p>	<p>Seat No.:</p> <table border="1"> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table> <div style="border: 1px solid black; height: 80px; width: 100%; margin-top: 10px;"></div> <p style="text-align: center;">Student's Signature</p>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		

Q. 1. Select best option from given choice. (Any five). (05)

1. What is the full form of MSIL ? (05)
 - (A) Microsoft International Language
 - (B) Microsoft Inter Language
 - (C) Microsoft Interpreter Language
 - (D) Microsoft Intermediate Language
2. _____ data type is a universal data type, which can hold any type of data.
 - (A) Date
 - (B) Integer
 - (C) Boolean
 - (D) Object
3. Which control is used to select one and only one option from the available options in one group?
 - (A) Textbox Control
 - (B) Label Control
 - (C) Check Box Control
 - (D) Radio Button Control
4. Which of the following statement is used to define a class in visual basic?
 - (A) Event class statement
 - (B) Class statement
 - (C) Form class statement
 - (D) Event statement
5. The _____ object is required to connect to a database.
 - (A) Data Reader
 - (B) Data Set
 - (C) Connection
 - (D) None of above
6. Group Box control act as.....
 - (A) Method
 - (B) Event
 - (C) Container
 - (D) None of mention
7. _____ do not return a value.
 - (A) Procedure
 - (B) Function
 - (C) Both A and B
 - (D) None of above

Q. 2. A. Explain BCL and CTS (04)

OR

A. What is .NET? Explain working of CLR. (04)

B. Explain data types of VB .Net. (04)

OR

B. What is the different between Array and Collection? Explain Collection in detail. (04)

- Q. 3. A. Explain the Rich Text Box control with its property, methods & events. (04)**
OR
A. Explain the error trapping mechanisms (exception handling) of VB .NET? (04)
B. Explain inheritance & polymorphism of VB .NET. (04)
OR
B. Explain constructor & destructor of VB .NET. (04)
- Q. 4. Explain Data Set and Data Reader object of ADO .NET (04)**
OR
Q. 4. Explain Connection and Data Adapter object of ADO .NET (04)
-

RAN-2511000904033001

Second Year Bachelor of Computer Applications (Sem. - IV) Examination October - 2025
 MJ-3 - Web Designing - II (Paper - 405-01)

Time: 1 Hours]

[Total Marks: 25

<p>સૂચના : / Instructions</p> <p>(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book.</p> <p>(2) Answer all the questions.</p> <p>(3) Figures in the right indicate full marks.</p> <p>(4) Illustrate your answer with necessary example, if required.</p>	<p>Seat No.:</p> <table border="1"> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table> <div style="border: 1px solid black; padding: 10px; width: 100%;"> <p style="text-align: center;">Student's Signature</p> </div>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		

Q. 1. Answer the following MCQs (Any 5):

(05)

1. JSON stands for
 - a) JavaScript Object Notation
 - b) Java Object Notation
 - c) JavaScript Object Normalization
 - d) JavaScript Object-Oriented Notation
2. Which is the correct symbol to insert a comment in JSON?
 - a) //
 - b) /*...*/
 - c) <!...-->
 - d) JSON doesn't support the comments
3. \$(this) in jquery is used when
 - a) an HTML element references the entire document
 - b) an HTML element references its own action
 - c) an HTML element references the action of it's parent element
 - d) All of the above
4. Which of the following is the correct way to include jQuery in an HTML document?
 - a) <script src="jquery.js"></script>
 - b) <script href="jquery.js"></script>
 - c) <linksrc="jquery.js">
 - d) <script name="jquery.js"></script>
5. What is Node.js commonly used for?
 - a) Managing databases
 - b) Developing mobile apps
 - c) Creating user interfaces
 - d) Building server-side applications
6. AJAX is used for creating _____
 - a) Web applications
 - b) Desktop applications
 - c) System applications
 - d) None of the above
7. Which of these is a correct jQuery selector?
 - a) \$('p')
 - b) \$('#p')
 - c) \$.p
 - d) \$p()

Q. 2. A. Write features of XML

(04)

OR

Q. 2. A. What are the rules of XML declaration?

(04)

Q. 2. B. Write advantages of jquery.

(04)

OR

Q. 2. B. Write a note on ID Selector used in jquery with an example **(04)**

Q. 3. A. Write differences between JSON and XML? **(04)**

OR

Q. 3. A. What is JSON object? Give its proper example. **(04)**

Q. 3. B. How AJAX works? **(04)**

OR

Q. 3. B. Explain Synchronous request and Asynchronous request in AJAX. **(04)**

Q. 4. A. Explain require() function of Node.js **(04)**

OR

Q. 4. A. Describe fs.readFile() method of Node.js **(04)**



RAN-2511000904011001

Bachelor of Computer Applications (NCF-NEP) (Sem. - IV) Examination September - 2025
Major - 1 - 403 : Java Programming Language (TH) New

Time: 1 Hour]

[Total Marks: 25

<p>सूचना : / Instructions</p> <p>(1) उपरोक्त दशविव विगतो उत्तरवही पर अवश्य लખवी. Fill up strictly the above details on your answer book.</p> <p>(2) All questions are compulsory.</p> <p>(3) Figures to the right indicate full marks.</p>	<p>Seat No.:</p> <table style="width: 100%; text-align: center;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> </table> <div style="border: 1px solid black; height: 80px; margin-top: 10px;"></div> <p style="text-align: center; margin-top: 5px;">Student's Signature</p>						

Q. 1. Answer the following (Any 5)

(05)

1. Java compiler generates _____ instructions which are machine independent.

A. Source code	B. Byte code
C. Machine code	D. Class code
2. Which of the following is the correct statement if you want to create an object of a Robot class?

A. Robot r;	B. Robot r = new Robot;
C. Robot r = new Robot();	D. None of these
3. Which of the members cannot be inherited from a super class to subclass?

A. private	B. protected
C. public	D. default
4. The statements that a programmer wants to monitor for exceptions should be written in which block?

A. try	B. finally
C. throw	D. catch
5. indexOf() method returns ____ if character is not found in the invoking string object.

A. 0	B. -1
C. NULL	D. False
6. How is a node inserted at the end of a singly circular linked list?

A. By updating the reference of the last node
B. By creating a new node with a reference to the last node
C. By creating a new node with a circular reference
D. By deleting the last node and inserting a new one
7. Java is platform Independent Language.

A. True	B. False
---------	----------

Q. 2. A. Compare feature of Java with any other object oriented programming language.

(04)

OR

A. Explain iteration control in detail.

B. What is interface? How interfaces are created and implemented? Also discuss difference between interfaces and abstract class.

(04)

OR

B. Explain method overloading and overriding with example

Q. 3. A. List method of String class. Explain any three methods from string class. (04)

OR

A. Explain Exception handling in java with example.

B. What is Thread? Explain thread life cycle. (04)

OR

B. What is package? How can we create sub package and import into another class?

Q. 4. What is Link List? Explain operations of create and insert node in single link list. (04)

OR

What is Circular Link List? Explain operations of create and insert node in circular link list.

B.C.A EXAMINATION OCT.2025

VAC Sem_IV

S.Y.B.C.A

Bhartiya Mulaya Parampara-II

Gujarati Version

Total Marks:25

પ્રશ્ન:-1 7 MCQ (દરેકના ૨ માર્કસ) (7 માંથી 5) (10)

1) નચિકેતાની વાર્તા કયા ધર્મગ્રંથમાંથી લેવામાં આવી છે?

A. કેનોપનિષદ

B. કઠોપનિષદ

C. સાંખ્ય ઉનિષદ

D. વૈશેષિક ઉપનિષદ

2) કયું પરમ પદ ગણાય છે?

A. ઐ

B. ક્ષ

C. નમો હરિ:

D. નમો કૃષ્ણદેવાય:

3) પાંચ પાંડવો પૈકી સૌથી મોટો પુત્ર કોણ હતો.

A. ભીમ

B. અર્જુન

C. નકુલ

D. યુધિષ્ઠિર

4) ઊડતા કબૂતરનો શિકાર કરનાર કોણ હતા?

A. શિકારી

B. વાંદરો

C. બાજ પક્ષી

D. ગીધ પક્ષી

5) વ્રષ્ટિના કેટલા પ્રકારો છે?

A. ચાર

B. બે

C. ત્રણ

D. પાંચ

6) રાજા જનક કયા રાજ્યના રાજા હતા?

A. વિદેહ

B. અયોધ્યા

C. કાશી

D. અવંતી

7) 'લોભ' માણસને કયા માર્ગ તરફ દોરી જાય છે?

A. પાપકર્મ

B. મિલકતનાં દાન કરવા

C. સમૃદ્ધિની પ્રાપ્તિ

D. પુણ્યના ઉપાર્જન

પ્રશ્ન:-2 નીચેના જવાબ લખો.

અ) ટૂંકનોંધ લખો. (2 માંથી 1)

(15)

1) રાજા શિબિની વાર્તા ટૂંકમાં લખો.

(05)

2) રાજા ભગીરથનાં પુરુષાર્થનું સવિસ્તર વર્ણન કરો.

બ) ટૂંકનોંધ લખો. (2 માંથી 1)

(05)

3.C.A EXAMINATION OCT.2025

VAC Sem_IV

S.Y.B.C.A

Bhartiya Mulaya Parampara-II

English Version

Total Marks:25

Q:-1 MCQ (2 Mark Each) (5 out of 7)

(10)

1. Form witch religious scripture is the story of Nachiketa taken?
 - A. Ken Upanisad
 - B. Kath Upanisad
 - C. Sankhya Upanisad
 - D. Vaishvaki Upanisad
2. Which is Considered as the ultimate stat?
 - A. Om
 - B. Swastik
 - C. Namohari
 - D. Namoharishchayaya
3. Who was the eldest son among the five Pandavas?
 - A. Bhim
 - B. Arjun
 - C. Nukul
 - D. Yudhishtir
4. Who hunted the flying pigeon?
 - A. Hunter
 - B. Monkey
 - C. Hawk
 - D. Vulture
5. How Many types of vision are there?
 - A. Four

- B. Two
 C. Three
 D. Five
6. Which kingdom was king Janak the ruler of?
 A. Videha
 B. Ayodhya
 C. Kashi
 D. Avanti
7. Which path does greed lead to a person to words?
 A. Sinful deeds
 B. To donate property
 C. Attainment of prosperity
 D. Earning of merit

Q:-2 Answer the following Questions

(15)

A) Short Note (Any 1 out of 2)

(05)

- 1) Write the story of Raja shibi in short.
 2) Write a short note about the Purushartha of king Bhagiratha.

B) Short Note (Any 1 out of 2)

(05)

- 1) What secret did yaksha finally reveal?
 2) Write about the six Enemies of humans.

C) Translate the following Shlok and explain the meaning of it. (Any one)

(05)

- 1) विद्या विवादाय धनं मदाय शक्तिः परेषा परीपीडनाय।
 सत्तस्य साधोर विपरीतमेतद् ज्ञानाय दानाय च रक्षणाय ॥
- 2) साहित्यसंगीतकलाविहीनः साक्षात्पशुः पुच्छविषाणहीनः।
 तृणं न खादन्नपि जीवमानस्तद्भ्दागद्येयं परमं पशूनाम्॥

1) यक्षे छेल्ले क्युं रहस्य उजागर कर्युं?

2) मनुष्यना चङ्गिपुत्रो दिशे लपो.

3) श्लोकोनुं लाघांतर अने शोषण आपो. (2 मांघी 1) (05)

1) विद्या विवादाय धनं गदाय शक्तिः परेषा परीपीडनाय।
सलस्य साधोर विपरीतमेतद् ज्ञानाय दानाय च रक्षणाय ॥

2) साहित्यसंगीतकलाविहीनः साक्षात्पशुः पुच्छविषाणहीनः।

तृणं न खादन्नपि जीवमानस्तभ्दागद्येयं परमं पशूनाम्॥

-----X-----