Roll. No. .....

O.M.R. Serial No. | | | | | | | | |

Question Booklet Number

BCA (SEM.-VI) (NEP) (SUPPLE.)EXAMINATION, 2024-25

COMPUTER APPLICATION

(Internet of Things)

[BCA-6002]

Paper Code							
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Question Booklet Series

A

Time : 1 : 30 Hours **Max. Marks : 75**

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.
4. Four alternative answers are mentioned for each question as - A, B, C & D in the booklet. The candidate has to choose the correct / answer and mark the same in the OMR Answer-Sheet as per the direction :

(Remaining instructions on last page)

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, उसे तुरन्त बदल लें।
4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर- A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छाँटना है। उत्तर को OMR उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

(शेष निर्देश अन्तिम पृष्ठ पर)

1. The term IoT was coined in

(A) 2000

(B) 1999

(C) 1998

(D) 2001

2. The standard port number of secure MQTT is

(A) 8000

(B) 8888

(C) 1883

(D) 8883

3. The standard length of the MAC address is

(A) 16 bit

(B) 48 bit

(C) 32 bit

(D) 8 bit

4. MQTT stands for _____

(A) Message Query Telemetry Transport

(B) MetaQuery Telemetry Transport

(C) Multiple Query Telemetry Transport

(D) Multi-queue Query Telemetry Transport

5. Total types in which IoT platform is divided.

(A) 2

(B) 3

(C) 4

(D) 5

6. Arduino UNO is?

(A) Protocol

(B) Network

(C) Software

(D) Hardware device

7. Arduino IDE is written in which programming language

(A) Java

(B) Python

(C) C/C++

(D) JavaScript

8. IaaS stands for

(A) Internet as a Service

(B) Infrastructure as a Service

(C) Infrastructure as a Software

(D) Internet as a Software

9. Identify among the following which is not a fundamental component of IoT system.

(A) User interface

(B) Sensors

(C) Transformers

(D) Connectivity and data processing

10. Identify among the following which is not an IoT platform.

(A) Salesforce

(B) Amazon Web Services

(C) Microsoft Azure

(D) Flipkart

11. Among the following layers, identify the one which is used for wireless connection in IoT devices.

(A) Datalink Layer

(B) Transport Layer

(C) Network Layer

(D) Application Layer

12. Identify the language preferred for IoT analytics.

(A) Python

(B) HTML

(C) PHP

(D) C++

13. Identify the lightweight protocol.

(A) HTTP

(B) MQTT

(C) CoAP

(D) IP

14. Identify the one which is not a networking device.

(A) Switch

(B) Traffic analyser

(C) Bridge

(D) Router

15. IIoT stands for _____ .

(A) Intense Internet of Things

(B) Indexed Internet of Things

(C) Industrial Internet of Things

(D) Incorporate Internet of Things

16. What is the standard form of RFID?

(A) Radio Frequency Identification

(B) Radio Waves Frequency Identification

(C) Radio Frequency InterDependent

(D) Radio Wave Frequency Independent

17. What is mandatory for an IP Packet to contain?

(A) Destination IP Address

(B) Source IP Address

(C) Both of these

(D) None of these

18. What is an IoT network?

(A) A collection of networked devices

(B) A collection of Interconnected devices

(C) A collection of signalled devices

(D) None of the above

19. What is the standard form of LLN?

(A) Lower Lossy Network

(B) Low Power and Lossy Network

(C) Lossy Low Power Network

(D) Low Lossy Powered Network

20. In which of the following way, data is associated with an IoT device:

(A) Internet

(B) Network connection

(C) Cables

(D) Cloud

21. LTE stands for:

(A) Long Terminal evolution

(B) Lower Terminal evolution

(C) Long Term evolution

(D) None

22. ____ is a security mechanism used in WiFi.

(A) WPA

(B) HTTP

(C) MLA

(D) None of these

23. The main purpose of the web of things (WoT) in IoT is:

(A) to increase the cost

(B) to improve security

(C) to improve the usability and interoperability

(D) All of these

24. The storage is _____ in IoT.

(A) Limited

(B) Unlimited

(C) not available

(D) All of these

25. The standard form of ICT is:

(A) Inter Connected Technology

(B) International Connection Technology

(C) Inter Communication Technology

(D) Information and Communication Technology

26. Domain Name System is used to:

(A) provide system security

(B) enhance network communication

(C) increase data and speed

(D) obtain IP Address

27. The standard form of CGI is:

(A) Common Gateway of Interest

(B) Common Gate Interfere

(C) Common Gateway Interdependent

(D) None

28. Which of the following is not a short-range wireless network?

(A) Bluetooth

(B) VPN

(C) Wifi

(D) Hotspot

29. A _____ is the component that executes a program in an IoT system.

(A) micro converter

(B) microcontroller

(C) microsensor

(D) None

30. Which one out of these is in a format which is not readable by the user?

(A) Encryption

(B) Passwords

(C) .text

(D) OTP

31. An equation of internet of things _____

(A) physical object + controller sensor and actuator + internet

(B) controller sensor and actuator + internet

(C) physical object + internet

(D) Physical object + controller + internet

32. A _____ tends to convert physical attribute to an electrical signal.

(A) Actuator

(B) Compiler

(C) Sensor

(D) Motors

33. SAAS stands for _____

(A) Software as a Service

(B) Service as a Software

(C) Service as a Service

(D) Software as a Software

34. _____ involves delivering different types of services over the Internet.

(A) Drought computing

(B) Rain computing

(C) Smoke computing

(D) Cloud computing

35. A _____ tends to convert electrical signal to physical action.

(A) Actuator

(B) Compiler

(C) Sensor

(D) Motors

36. Which from the following is not the Characteristics of IoT.

(A) Connectivity

(B) Scalability

(C) Identity

(D) Simplicity

36. Scalability provides

(A) Only expansions

(B) Only contractions

(C) Both expansions and contractions

(D) Horizontal scaling

37. Surveillance camera is best example of _____ characteristics of IoT because it should be flexible to work in different weather conditions and different light situations like morning, afternoon, or night.

(A) Connectivity

(B) Scalability

(C) Dynamic and self-adapting

(D) Identity

38. Which of the following example is extensively covers the definition of IoT

(A) ON and OFF Air Conditioner using internet

(B) Network of only Air Conditioners

(C) Connected Air Conditioner with other internet connected devices

(D) None of the above.

39. PAAS stands for _____.

(A) Principal as a Service

(B) Platform as a Service

(C) Physical computing as a Service

(D) Principal as a Software

40. Action execution, sensing and data collection happens here

(A) Processing and Control Action Layer

(B) Physical or Sensor Layer

(C) Session/Message Layer

(D) User Experience Layer

41. BLE stands for

(A) Blue Light Environment

(B) Blue Line Equation

(C) Bluetooth Low Energy

(D) Bluetooth Light Environment

42. NFC, RFID, Bluetooth, Zigbee can be used in following layer

(A) RF Layer

(B) Processing and Control Action Layer

(C) User Experience Layer

(D) Application Layer

43. IoT can be classified in _____ levels.

(A) 7

(B) 5

(C) 9

(D) 4

44. TCP stands for _____

(A) transmission control protocol

(B) telecommunication control protocol

(C) temperature control protocol

(D) transmission and communication protocol

45. GPU stands for _____

(A) Graphical Processing Unit

(B) Generally Processing Unit

(C) Graphically Program Unit

(D) General Programming Unit

46. API stands for _____.

(A) Application Programming Interface

(B) Android Programming Interface

(C) Arduino Protocol Information

(D) Application Protocol Interface

47. IoT related protocol is/are

(A) CoAp

(B) 6LOWPAN

(C) Zigbee

(D) All of the above

48. The huge numbers of devices connected to the Internet of Things have to communicate automatically, not via humans, what is this called?

(A) Bot to Bot(B2B)

(B) Machine to Machine(M2M) I

(C) InterCloud

(D) Skynet

49. IOT devices are various types, for instance_____.

(A) Wearable sensors.

(B) Smart watches.

(C) LED lights.

(D) All of the above

50. Properties of IoT devices.

(A) Sense

(B) Send and receive data

(C) Both (A) and (B)

(D) None of above

51. _____ layer protocols determine how the data is physically sent over the network's physical layer or medium.

(A) Application layer

(B) Transport layer

(C) Network layer

(D) Link layer

52. ____ sensors is used for automatic door controls, automatic parking system, automated sinks, automated toilet flushers, hand dryers.

(A) Smoke Sensor

(B) Temperature Sensor

(C) IR Sensor

(D) Motion Sensor

53. ____ sensor measure heat emitted by objects.

(A) Smoke Sensor

(B) Temperature Sensor

(C) IR Sensor

(D) Proximity Sensor

54. ___ detects the presence or absence of a nearby object without any physical contact.

(A) Image sensor

(B) Accelerometer sensors

(C) IR sensor

(D) Proximity sensors

55. MAC stands for

(A) Media Area Control

(B) Memory Access Control

(C) Memory Area Control

(D) Media Access Control

56. Which one is not an element of IoT

(A) People

(B) Process

(C) Security

(D) Things

57. What risks and challenges should be considered in the Internet of Everything?

(A) Privacy and Security

(B) Energy Consumption

(C) Network Congestion

(D) All of the above

58. Which is not one of the features of Internet of Things devices?

(A) can turn themselves off if necessary

(B) remotely controllable

(C) programmable

(D) All listed above are features of IoT devices.

59. Identify the last step of reliable data transfer.

(A) Lost message detection

(B) Selective recovery

(C) Message relaying

(D) Initialization

60. What role of the cloud in smart grid architecture is?

(A) Store data

(B) Collect data

(C) Security

(D) Manage data

61. _____ are the devices that can emit, accept and process data over the network.

(A) Sensors

(B) Gateways

(C) Edge IT

(D) Data Acquisition

62. How many main components IoT mainly consists of?

(A) 2

(B) 3

(C) 4

(D) 5

63. _____ in the IoT Architecture is the hardware and software gateways that analyze and

pre-process the data before transferring it to the cloud.

(A) Data center

(B) Edge IT

(C) Gateways

(D) Data Acquisition

64. Global Sensor Network is built for _____.

(A) Increasing cost and increasing time for development

(B) Reducing cost and increasing time for development

(C) Reducing cost and time for development

(D) Increasing cost and decreasing time for development

65. Which of the following is true about IoT?

(A) The term Things in the Internet of Things refers to anything and everything in day-to-day life.

(B) IoT has greater transparency, control, and performance.

(C) Both (A) and (B)

(D) None of the above

66. IoT is an advanced automation and analytics system which deals with?

(A) Sensor, networking

(B) Electronic

(C) Cloud messaging

(D) All of the above

67. Which of the following is not an advantage of IoT?

(A) Improved Customer Engagement

(B) Security

(C) Reduced Waste

(D) Enhanced Data Collection

68. Active Engagement Features of IOT means?

(A) IoT makes the connected technology, product, or services to active engagement between each other.

(B) It makes the complete failure of the system.

(C) IoT makes things smart and enhances life through the use of data.

(D) None of the above

69. In SOA, Service is termed as _____

(A) Software service

(B) Network service

(C) Business service

(D) Developer service

70. Which one is an example for IOT?

(A) Remote monitoring

(B) Smart cities

(C) Fleet control

(D) All of the above

71. _____ specifies the function that will be called when there is a new message received from the channel.

(A) Reconnect

(B) Error

(C) Connect

(D) Callback

72. _____ specifies the function that will be called on an error event.

(A) Callback

(B) Error

(C) Connect

(D) Reconnect

73. A time series with ambient humidity observations expressed in _____.

(A) Degree Fahrenheit

(B) Degree Celsius

(C) Percentage

(D) Fahrenheit

74. IoT devices can easily lead to catastrophe without _____

(A) Software

(B) Devices

(C) Cloud

(D) Management system

75. Which of the following category is used for business to consumer process?

(A) Group IoT

(B) Community IoT

(C) Personal IoT

(D) Industrial IoT

76. Which is the future application of IoT?

(A) QoS in communication

(B) Role of green IoT system

(C) Secure communication

(D) Multimedia communication

77. _____ are the applications of IOT

(A) House

(B) Virtual environment

(C) Regional office

(D) All of the above

78. _____ are the main components in IOT.

(A) Low power embedded systems

(B) Cloud computing

(C) Availability of big data, networking connection

(D) All of the above

79. The number of addresses in IPV4 is _____

(A) 2^4

(B) 2^8

(C) 2^32

(D) 2^128

80. _____ are the types of actuators

(A) Hydraulic, pneumatic actuators

(B) Electrical, thermal actuators

(C) Mechanical actuators

(D) All of the above

81. The RFID tags consists of an _____

(A) Antenna

(B) Integrated circuit

(C) Both (A) and (B)

(D) None of the above

82. The Bluetooth technology operates in the ISM band at _____

(A) 2.4 to 2.485 GHz

(B) 1.4 to 2.485 GHz

(C) 2.4 to 2.485 MHz

(D) None of the above

83. In RFID tags, the tags are _____

(A) Active

(B) Passive

(C) Active or passive

(D) None of the above

84. The RFID tags used in _____

(A) Asset tracking

(B) ID badging

(C) Personnel tracking

(D) All of the above

85. The communication range in NFC is _____

(A) <20cms

(B) >20cms

(C) >40cms

(D) >60cms

86. he NFC used in _____

(A) Parcel tracking

(B) Low power home automation

(C) Smart phone-based payments

(D) All of the above

87. What is the standard form of WSNs?

(A) Wireless Sensor Networks

(B) Wired Sensor Networks

(C) Wireless Simple Networks

(D) None of the above

88. The sensor nodes are _____

(A) Typically small in size

(B) Consumes less power

(C) Cost is low

(D) All of the above

89. _____ are the few examples of sensor nodes

(A) Soil sensor nodes

(B) Temperature sensor nodes

(C) Weather sensor nodes

(D) All of the above

90. _____ are the machine to machine communication applications

(A) Environment monitoring

(B) Civil protection and public safety

(C) Supply chain management

(D) All of the above

91. The low-end sensor nodes are _____

(A) Cheap

(B) Static

(C) Simple and energy efficient

(D) All of the above

92. The mid-end sensor nodes are _____

(A) Cheap

(B) More expensive

(C) Nodes may have mobility

(D) Both (B) and (C)

93. What is the standard form of MANET?

(A) Mobile Ad Hoc Network

(B) Main Ad Hoc Network

(C) Man Ad Hoc Network

(D) None of the above

94. _____ are the challenges in human-centric sensing

(A) Privacy of users

(B) Participant selection

(C) Energy of devices

(D) All of the above

95. What is the full form of a UAV?

(A) Unmanned Aerial Vehicles

(B) Unmanned Automatic Vehicles

(C) Unmanned Non-automatic Vehicles

(D) None of the above

96. The computational capabilities are limited in _____

(A) IOT

(B) Cloud computing

(C) Both (A) and (B)

(D) None of the above

97. The storage is limited in _____

(A) IOT

(B) Cloud computing

(C) Both (A) and (B)

(D) None of the above

98. The IOT is a _____ based technology

(A) Software

(B) Hardware

(C) Both (A) and (B)

(D) None of the above

99. The M2M is a _____ based technology

(A) Software

(B) Hardware

(C) Both (A) and (B)

(D) None of the above

100. In M2M the communication type is _____.

(A) Point to point

(B) Multipoint

(C) Both (A) and (B)

(D) None of the above

Rough Work

Example :

Question :

Q.1 Ⓐ ● Ⓒ Ⓓ

Q.2 Ⓐ Ⓑ ● Ⓓ

Q.3 Ⓐ ● Ⓒ Ⓓ

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.

6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.

7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.

8. After the completion of the examination, candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.

9. There will be no negative marking.

10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.

11. To bring and use of log-book, calculator, pager & cellular phone in examination hall is prohibited.

12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

उदाहरण :

प्रश्न :

प्रश्न 1 Ⓐ ● Ⓒ Ⓓ

प्रश्न 2 Ⓐ Ⓑ ● Ⓓ

प्रश्न 3 Ⓐ ● Ⓒ Ⓓ

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।

6. सभी उत्तर केवल ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।

7. ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।

8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।

9. निगेटिव मार्किंग नहीं है।

10. कोई भी रफ कार्य, प्रश्न-पुस्तिका में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।

11. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।

12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्णः प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।