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HSSC-I NATIONAL BOOK FOUNDATION FBISE

COMPUTER TEST - CHAPTER 5: APPLICATION OF COMPUTER SCIENCE

Name:		Roll No.		Section:

Total Time: 2:30 Hour
Time Allowed: 150 Minutes

Total Marks: 150

PAPER OBJECTIVE
SECTION-A (MARKS 150)

NOTE: Section-A is compulsory. All parts of this section are to be answered on these pages and handed over to the center superintendent. Deleting / overwriting is not allowed. Do not use lead pencil.

Q.1 Fill the relevant bubble for each part. All parts carry one mark.

Questions	A	B	C	D	A B C D
1. IoT stands for:	Input of Things	Internet of Tools	Internet of Things	Interface of Technology	○○●○
2. In IoT, 'Things' refers to:	Physical devices	Only phones	Only cables	Only computers	●○○○
3. In IoT, the Internet is used to:	Store paper files	Connect devices for communication	Generate electricity	Print documents	○●○○
4. Which of the following is an IoT device?	Smart watch	Plain mirror	Paper notebook	Wooden chair	●○○○
5. Which is a wireless technology used for creating IoT networks?	Zigbee	Coaxial cable	Parallel port	Ethernet cable	●○○○
6. NFC stands for:	Node Fiber Cable	New Frequency Channel	Near Field Communication	Network File Control	○○●○
7. Which wireless technology is used in IoT networks?	VGA	Bluetooth	USB cable	HDMI	○●○○
8. Which of the following is NOT an IoT enabling technology listed in the book?	Cloud computing	Embedded systems	Spreadsheet software	Wireless sensor networks	○○●○
9. The technologies that enabled IoT include big data analytics and:	Typewriters	Film cameras	Radio only	Communication protocols	○○○●
10. A Wireless Sensor Network (WSN) is a network of devices that communicate through:	Wired cables only	Wireless channels	Telegraph	Paper	○●○○
11. The devices of a WSN are embedded with:	Sensors and software	Only paper	Only screens	Only batteries	●○○○
12. How many types of sensors are used in WSN in the book?	Two	Four	Five	Three	○○○●

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Questions	A	B	C	D	A B C D
13. Which is a type of sensor used in WSN?	Keyboard sensor	Sound mixer	Motion detection sensor	Printer sensor	○○●○
14. Environmental sensors are used for measuring and monitoring:	Network speed	Environmental conditions	Manufacturing speed	Bank balances	○●○○
15. Which is an environmental sensor?	Gas sensor	PIR sensor	Viscosity sensor	Humidity sensor	○○○●
16. Which is also an environmental sensor?	Fluid flow sensor	Proximity sensor	Magnetic field sensor	Wind speed sensor	○○○●
17. Industrial sensors are used for measuring physical quantities in:	Libraries only	Schools only	The manufacturing process	Homes only	○○●○
18. A fluid flow sensor is a type of:	Climate control sensor	Industrial sensor	Motion detection sensor	Environmental sensor	○●○○
19. Which is an industrial sensor?	Wind sensor	PIR sensor	Light sensor	Magnetic field sensor	○○○●
20. Which is also an industrial sensor?	Air quality sensor	Humidity sensor	Ultrasonic sensor	Viscosity sensor	○○○●
21. Motion detection sensors are commonly used to prevent:	Unauthorized movement in restricted areas	Rainfall	Network delay	Power cuts	●○○○
22. PIR stands for:	Primary Infrared Reader	Programmable Input Relay	Passive Infrared	Personal Internet Router	○○●○
23. Which is a motion detection sensor?	Humidity sensor	Air quality sensor	Ultrasonic sensor	Viscosity sensor	○○●○
24. An ultrasonic sensor is used for measuring:	Heat	Distance	Light	Humidity	○●○○
25. A PIR sensor is used for detecting:	Rain	Motion	Wind	Gas	○●○○
26. Which is an example of WSN used in IoT systems?	Typewriters	Printing presses	Surveillance systems	Telegrams	○○●○
27. Structural health monitoring in civil engineering is an example of:	A compiler	A spreadsheet	A word processor	WSN in IoT	○○○●
28. A smart grid monitors and manages the transport of:	Water only	Electricity	Paper	Gas only	○●○○
29. Cloud computing is an IT infrastructure that provides services over the:	Radio only	USB	Printer	Internet	○○○●

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Questions	A	B	C	D	A B C D
30. How many cloud computing models does the book describe?	Two	Four	Five	Three	○●○○
31. Which is a cloud computing model?	Private fog	Local cloud	Open sky	Community cloud	○○○●
32. In a public cloud, resources are owned and operated by:	The government only	A cloud service provider	Nobody	The user's organization only	○●○○
33. Public cloud services can be free or:	Only barter	Only free	Only one-time purchase	Pay-per-usage or subscription	○○○●
34. Which is an example of a public cloud provider?	USB drive	Local server	Microsoft Azure	School LAN	○○●○
35. A private cloud runs on infrastructure used inside:	No organization	A single organization	The whole world	Many countries	○●○○
36. A private cloud model requires:	Free hardware	Huge investment	No maintenance	No investment	○●○○
37. In a private cloud, who is responsible for operation and maintenance?	The Internet provider only	The public	Nobody	The user organization	○○○●
38. The cloud model that provides the best security of data is:	Hybrid cloud	Community cloud	Public cloud	Private cloud	○○○●
39. The cloud model that provides services to multiple organizations is the:	Public cloud	Community cloud	Hybrid cloud	Private cloud	○●○○
40. A community cloud is suitable for organizations with common concerns like:	Security, policy and compliance	Sports only	Cooking	Entertainment only	●○○○
41. A community cloud is more secure than a public cloud but:	Less secure than a private cloud	Equal to a private cloud	More secure than a private cloud	Not secure at all	●○○○
42. A community cloud is cost effective because it is:	Shared by many organizations	Owned by one person	Free of hardware	Run without staff	●○○○
43. A hybrid cloud is a combination of:	Two private clouds	Community and none	Two public clouds	Public and private cloud	○○○●
44. In a hybrid cloud, sensitive data is usually stored on the:	Private cloud	Printer	Public cloud	Paper	●○○○
45. Big data analytics is concerned with collecting:	Only paper records	Extremely big data from various resources	Only images	Very small data	○●○○

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Questions	A	B	C	D	A B C D
46. Big data analytics uses analytics software to find market trends, patterns and:	Insights	Cables	Errors only	Viruses	●○○○
47. Big data cannot be handled by:	Modern tools	Analytics software	Traditional databases	Cloud systems	○○●○
48. Which of the following creates huge volumes of data?	Banking transactions	A pencil	A table	A chair	●○○○
49. Big data analytics transforms IoT data into:	Noise	Paper	Viruses	Actionable information	○○○●
50. An area of big data analytics is the:	Candle industry only	Toy industry only	Pencil industry only	Healthcare industry	○○○●
51. An IoT communication protocol is a set of _____ that govern how data is transferred.	Batteries	Cables	Rules	Sensors	○○●○
52. Exchange of information between IoT devices and end users is provided by:	Communication protocols	Cloud computing	Embedded systems	Big data analytics	●○○○
53. Embedded systems are a combination of hardware and:	Screens only	Cables only	Paper	Firmware	○○○●
54. Software that is permanently installed in an electronic machine is called:	System software	Machine software	Application software	Firmware	○○○●
55. An embedded system has a microcontroller or a:	Monitor	Mouse	Printer	Microprocessor	○○○●
56. An embedded system is designed to perform:	No task	A specific task	Many random tasks	Any task	○●○○
57. An embedded system that monitors room temperature and adjusts the thermostat is an application in:	Printing	IoT	Typing	Drawing	○●○○
58. Which of the following uses embedded systems?	Paper maps	Wooden desks	Vending machines	Plain mirrors	○○●○
59. Which of these also uses embedded systems?	Paper books	Chalk	Stone tools	Medical equipment	○○○●
60. A blockchain is a digital _____ of transactions.	Cable	Ledger	Screen	Printer	○●○○
61. The records in a blockchain are known as:	Blocks	Files	Pages	Folders	●○○○

Questions	A	B	C	D	A B C D
62. Blocks in a blockchain are chained together using:	Paper	Glue	Cryptography	Cables	○○●○
63. Cryptography ensures that blockchain data is secure and:	Immutable	Temporary	Public to hackers	Editable	●○○○
64. How many technologies enabled blockchain, as listed in the book?	Three	Two	Four	Five	●○○○
65. Which is a technology that enabled blockchain?	Binding	Printing	Typing	Cryptography	○○○●
66. Cryptography provides confidentiality, integrity and:	Printing	Authentication	Formatting	Typing	○●○○
67. The types of blockchain networks are public, private, permissioned and:	Local	Consortium	Community cloud	Hybrid cloud	○●○○
68. The purpose of blockchain networks is to share the ledger among:	Only one person	All the participants	Only banks	No one	○●○○
69. A public blockchain network is one that:	Anyone can join	Only one organization manages	Only banks use	Only government uses	●○○○
70. A public blockchain network requires substantial:	Computing power	Chalk	Silence	Paper	●○○○
71. Security in a public blockchain network is:	Same as private	Weak	Very strong	Absent	○●○○
72. A public blockchain network is used for exchanging:	Books	Cryptocurrency	Gold only	Paper money only	○●○○
73. A well-known cryptocurrency mentioned in the book is:	Bitcoin	Euro coin	Dollar bill	Rupee	●○○○
74. Cryptocurrency is a type of:	Paper currency	Metal coin	Digital currency	Bank cheque	○○●○
75. A private blockchain network is managed by:	The public	All governments	Anyone	A single organization or business	○○○●
76. Public access to a private blockchain network is:	Open	Free for all	Restricted	Mandatory	○○●○
77. Compared with a public blockchain, a private blockchain is:	Less secure	Equal	Always open	More secure	○○○●
78. In a permissioned blockchain network, only _____ individuals can access and view transactions.	Anonymous	Unknown	Any	Authorized	○○○●

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Questions	A	B	C	D	A B C D
79. A permissioned blockchain network is generally set up by organizations that have built a:	Cloud printer	Private blockchain network	Paper ledger	Public blockchain network	○●○○
80. Permissioned blockchain networks are used in:	Painting	Cooking	Gardening	Supply chain management	○○○●
81. In a consortium blockchain network, who manages the network?	Nobody	Multiple organizations	The public	A single person	○●○○
82. The blockchain network that is most difficult to set up is the:	Consortium blockchain network	Private blockchain network	Public blockchain network	Permissioned blockchain network	●○○○
83. A consortium blockchain network is more complex to set up because it requires:	Collaboration between several organizations	A single user	No rules	No servers	●○○○
84. Consortium blockchain networks are suitable for:	Cooking	Painting	Farming only	Finance and banking	○○○●
85. The blockchain network that is open for everyone to join is the:	Consortium blockchain network	Permissioned blockchain network	Public blockchain network	Private blockchain network	○○●○
86. Blockchain allows individuals to make deals without:	Participants	The Internet	Computers	Intermediaries such as banks	○○○●
87. Each blockchain transaction is verified by participants in a:	Client-only network	Single server	Peer-to-peer network	Paper network	○○●○
88. Once a blockchain transaction is added to the ledger, it is:	Hidden	Permanent and irreversible	Editable	Temporary	○●○○
89. Compared with traditional databases, blockchain transactions are:	Slower always	Faster as there are no intermediaries	Paper based	Impossible	○●○○
90. Blockchain uses _____ of data.	Deletion	Compression only	Centralization only	Decentralization	○○○●
91. In blockchain, data is stored on:	One disk	One paper	One server	Millions of computers all over the world	○○○●
92. IoT devices collect vast amounts of data which is vulnerable to:	Sunlight	Rain	Noise only	Cyber-attacks	○○○●
93. Blockchain's decentralized ledger provides transparency and:	Immutable recording of transactions	Editable recording	Weak security	No records	●○○○
94. Integrating IoT and blockchain provides faster communication because it needs no:	Devices	Data	Intermediaries	Sensors	○○●○
95. IoT and blockchain integration is used in supply chain, energy grid, healthcare, agriculture and:	Water management	Painting only	Stationery only	Pencil making only	●○○○

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Questions	A	B	C	D	A B C D
96. AI is a branch of computer science to make machines perform:	Only typing	Human-like tasks	Only printing	Only storage	○●○○
97. AI machines have capabilities of:	Painting only	Cooking only	Decision-making	Singing only	○○●○
98. A stakeholder in an AI system is a person or group who is:	Unaffected by it	Affected by it or interested in its social impact	Only a user	Only a developer	○●○○
99. Which is a stakeholder of an AI system?	Cables	Regulators	Pencils	Chairs	○●○○
100. Which is also a stakeholder of an AI system?	Tables	Cables	Developers	Printers	○○●○
101. Which is a positive impact of AI systems?	High cost	Unbiased decisions	Lack of employment	Less creativity	○●○○
102. AI decisions are based on reason and logic rather than:	Algorithms	Machines	Emotions	Data	○○●○
103. An AI-based recruitment system hires applicants based on:	Demographics	Colour	Ethnicity	Skills and qualification	○○○●
104. An online customer support chatbot demonstrates:	Around the clock availability	High cost	Less creativity	Unemployment	●○○○
105. AI robots defusing a bomb illustrate:	Zero risk in hazardous environments	Less creativity	High cost	Employment loss	●○○○
106. Robotic surgery systems illustrate:	Less accuracy	Reduction in human error	Increase in error	More cost only	○●○○
107. Which is a negative impact of AI systems?	Reduction in human error	Unbiased decisions	Lack of employment	24x7 availability	○○●○
108. A negative impact of AI is less creativity and:	Emotions	Speed	Accuracy	Memory	●○○○
109. AI relies on algorithms and:	Personal connections	Emotions	Data inputs	Imagination	○○●○
110. Robots replacing humans in manufacturing may increase:	Creativity	Emotions	Unemployment	Salaries	○○●○
111. It is difficult to incorporate _____ and morality into AI systems.	Data	Memory	Ethics	Speed	○○●○
112. Creating machines that simulate human intelligence is very:	Cheap	Free	Costly	Easy	○○●○

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Questions	A	B	C	D	A B C D
113. Conflicts among stakeholders of AI systems should be:	Resolved, not suppressed	Ignored	Suppressed	Hidden	●○○○
114. Conflicting requirements of stakeholders make the developers' task:	Automatic	More difficult	Easier	Unnecessary	○●○○
115. Conflicts between stakeholders can be due to different:	Brand of mouse	Size of keyboard	Colour of screen	Interpretation of the problem	○○○●
116. Which type of sensor is a barometer (air pressure)?	Motion detection sensor	Proximity sensor	Industrial sensor	Environmental sensor	○○○●
117. Cloud computing provides data storage, databases, servers, networking and:	Application software services	Paper services	Binding only	Printing only	●○○○
118. The IoT concept links _____ with the Internet.	Only cars	Only books	Only animals	Physical devices	○○○●
119. The devices in IoT are smaller in size with higher processing power and longer:	Battery power	Heights	Paper	Cables	●○○○
120. Private cloud solutions offer more _____ over servers and networks.	Cost	Noise	Control	Distance	○○●○
121. Public cloud provides _____ speed connectivity to ensure rapid access.	Variable only	Zero	High	Low	○○●○
122. Hybrid cloud allows data and applications to be:	Deleted	Shared between public and private clouds	Printed	Only stored on paper	○●○○
123. Embedded systems have applications in ticket scanners and:	Paper bags	Point-of-sale terminals	Wooden doors	Tents	○●○○
124. Banks use consortium blockchain to form a group that stores information on:	Debtors	Books	Songs	Pencils	●○○○
125. A permissioned blockchain network has the advantage of better:	Heat	Size	Noise	Transparency	○○○●
126. Cryptography protects information by coding it so that only _____ can read it.	Everyone	Intended parties	Nobody	Hackers	○●○○
127. Traditional databases are unable to handle big data because of its:	Low cost	Huge volume	Colour	Small size	○●○○
128. Which area uses big data analytics for weather patterns and trends?	Pencil making	Carpentry	Weather and climate	Tailoring	○○●○
129. Which is the Passive Infrared sensor used for?	Detecting motion	Measuring humidity	Measuring pressure	Measuring viscosity	●○○○

Questions	A	B	C	D	A B C D
130. Which unit of the book discusses stakeholders' interests in AI systems?	Programming Fundamentals	Digital Literacy	Application of Computer Science	Data and Analysis	○○●○
131. Wi-Fi is a wireless technology used for creating:	Paper networks	Wooden networks	IoT networks	Metal networks	○○●○
132. A smart door lock and a smart TV are examples of:	IoT devices	Analog devices only	Manual tools	Paper tools	●○○○
133. Big data analytics helps make better:	Noise	Cables	Business decisions	Paper	○○●○
134. The Passive Infrared (PIR), ultrasonic and proximity sensors are all:	Motion detection sensors	Light sensors	Industrial sensors	Environmental sensors	●○○○
135. Which type of cloud runs entirely on infrastructure dedicated to one organization?	Private cloud	Community cloud	Hybrid cloud	Public cloud	●○○○
136. Blockchain makes it nearly impossible to:	Alter transaction data	Read transactions	Share the ledger	Add transactions	●○○○
137. Smart door bells, smart light bulbs and medical sensors are examples of IoT:	Protocols	Ledgers	Things (physical devices)	Clouds	○○●○
138. Wireless sensor networks monitor environmental and:	Physical conditions	Hardware prices	Paper records	Software licences	●○○○
139. Digital marketing is an area of:	Big data analytics	Embedded systems only	Typewriting	Manual filing	●○○○
140. The word 'immutable' in blockchain means the data:	Is temporary	Cannot be altered	Is public to all hackers	Can be freely edited	○●○○
141. A community cloud is owned, managed and operated by one or more organizations or by a:	Single student	Keyboard	Printer	Third party	○○○●
142. A private blockchain network is often used for secure and transparent:	Singing	Cooking	Painting	Record-keeping	○○○●
143. AI predictions are based on data patterns and:	Colours	Luck	Emotions	Machine learning	○○○●
144. AI systems can work 24x7:	Only in schools	Only with breaks	Without breaks	Only at night	○○●○
145. Robots in hotels can carry out tasks such as cleaning and:	Teaching law	Singing	Luggage transportation	Writing books	○○●○
146. Stakeholders may have similar needs but differ on:	Nothing at all	Which day is today	How to implement them	What colour to use only	○○●○

Questions	A	B	C	D	A B C D
147. The unit 'Application of Computer Science' covers IoT, cloud computing and:	Blockchain	Sorting algorithms	Turtle graphics	Logic gates only	●○○○
148. Embedded systems implement IoT solutions such as:	Binding books	Typing letters	Painting walls	Automatically adjusting a thermostat	○○○●
149. The decentralized ledger of blockchain provides _____ of transactions.	Duplication only	Secrecy only	Transparency	Deletion	○○●○
150. In IoT, devices are connected through the Internet for:	Communication	Cooking	Printing	Painting	●○○○