



SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

MODEL QUESTION BANK (DESCRIPTIVE)

Subject with Code :Internet of Things (18MC9130)

Course & Branch: MCA

Year & Sem:II-MCA& II-Sem

Regulation: R18

UNIT –I

INTRODUCTION, DESIGN PRINCIPLES FOR CONNECTED DEVICES

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| 1) a) What is the role of things and internet in IoT? | 6M |
| b) Explain the technology of IoT with enchanted objects. | 6M |
| 2) a) Explain the content of TCP/IP protocol suite. | 6M |
| b) Briefly describe about IP Addresses & MAC Addresses.-L2 | 6M |
| 3) a) Explain about TCP & UDP Ports-L2 | 6M |
| b) Discuss about application layer protocols | 6M |
| 4) a) Discuss about ambient technology with basic as magic metaphor-L3 | 6M |
| b) Illustrate about keeping Privacy as a secret.-L2 | 6M |
| 5) a) Explain about Internet Communications | 6M |
| b) Differentiate between Static and Dynamic address assignment | 6M |
| 6) a) Who is making the IoT with enchanted objects | 6M |
| b) Briefly explain about the 'Internet' of 'Things' | 6M |
| 7) a) Explain about web thinking for connected devices | 6M |
| b) Discuss about graceful degradation and affordances | 6M |
| 8) a) Explain about IP/TCP Communications | 6M |
| b) Describe the following with DNS and IPv6 | 6M |
| 9) a) Differentiate application and other layer protocols | 6M |
| b) Briefly discuss about Http and Https in detail | 6M |
| 10) a) Mention about other common ports | 6M |
| b) Explain about other application layer protocols | 6M |

UNIT –II**PROTOTYPING, PROTOTYPING EMBEDDED DEVICES**

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| 1) a) Simply discuss about sketching and familiarity about protocols. | 6M |
| b) Explain costs versus ease of prototyping | 6M |
| 2) a) Discuss about prototyping and production | 6M |
| b) Describe about physical prototypes and mass personalization | 6M |
| 3) a) Explain about changing embedded platform | 6M |
| b) Briefly about climbing into the cloud | 6M |
| 4) a) Compare open source versus closed source | 6M |
| b) Mention about mixing of open and closed source | 6M |
| 5) a) Discuss about closed source for mass market projects | 6M |
| b) How tapping into the community occurs | 6M |
| 6) a) Describe about electronics in embedded devices | 6M |
| b) Briefly explain about sensors and actuators | 6M |
| 7) a) Explain about embedded computing basics | 6M |
| b) Discuss about microcontrollers and system on chips | 6M |
| 8) a) Briefly explain about arduino in embedded devices | 6M |
| b) Describe the development of arduino and key notes on the hardware | 6M |
| 9) a) Explain the development of Raspberry Pi | 6M |
| b) How the cases and extension boards will occur | 6M |
| 10) a) Describe about BeagleBone Black in embedded devices | 6M |
| b) Compare Electric Imp and other notable platforms | 6M |

UNIT-III**PROTOTYPING THE PHYSICAL DESIGN, PROTOTYPING ONLINE COMPONENTS**

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| 1) a) Describe about prototyping the physical design | 6M |
| b) Explain briefly about prototyping online components | 6M |
| 2) a) Explore about Iterate, sketch and preparation | 6M |
| b) Discuss about preparation and nondigital methods | 6M |
| 3) a) Simply explain about laser cutting | 6M |
| b) Describe about software hinges and joints in laser cutting | 6M |
| 4) a) Briefly explain about 3D printing | 6M |
| b) Explain the types of software's in 3D printing | 6M |
| 5) a) Simple note on CNC milling | 6M |
| b) Explain the purpose of recycling and repurposing | 6M |
| 6) a) How to get start with an API | 6M |
| b) Discuss about mashing up API's | 6M |
| 7) a) How to write a new API | 6M |
| b) Simply discuss about implementing the API | 6M |
| 8) a) Explain how to react with real time reactions | 6M |
| b) Discuss with polling and comet | 6M |
| 9) a) Describe about extensible messaging and presence protocol | 6M |
| b) Explain about MQ Telemetry transport | 6M |
| 10) a) Discuss about constrained application protocol | 6M |
| b) Compare with real time reactions with other protocols | 6M |

UNIT-IV**TECHNIQUES FOR WRITING EMBEDDED CODE, BUSINESS MODELS**

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| 1) Explain with simple techniques for writing embedded code | 12M |
| 2) Briefly explain about memory management and their types | 12M |
| 3) Describe about performance and battery life | 12M |
| 4) a) Discuss about libraries | 06M |
| b) Simply discuss about debussing concept in embedded code | 06M |
| 5) a) Write a short history of business models | 06M |
| b) Contrast craft to mass production | 06M |
| 6) a) Explain who is the business model for canvas | 06M |
| b) Simply discuss about different models and their key functions | 06M |
| 7) a) Explain how funding an IoT startup | 06M |
| b) Discuss about hobby projects and open source | 06M |
| 8) a) Discuss about government and crowd funding | 06M |
| b) Simply discuss about lean startups | 06M |
| 9) Elaborate the business models in prototype reality | 12M |
| 10) Explain with the working models and funding an IoT | 12M |

UNIT-V**MOVING TO MANUFACTURE, ETHICS**

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| 1) a) Explain how moving to manufacture occurs | 06M |
| b) Discuss about something on ethics | 06M |
| 2) a) Briefly explain about designing kits | 06M |
| b) How to designing printed circuit board | 06M |
| 3) Explain the manufacture of PCB in detailed | 12M |
| 4) Describe about mass producing the case and other fixtures | 12M |
| 5) a) Simply discuss about certifications | 06M |
| b) Explain about costs in ethics | 06M |
| 6) Elaborate about scaling up software in detail | 12M |
| 7) a) How to characterizing the IoT | 06M |
| b) Explain how security and privacy in ethics | 06M |
| 8) Elaborate the content of control in ethics | 12M |
| 9) How the environment will work in ethics | 12M |
| 10) a) Explain the simple solutions in ethics | 06M |
| b) How to cautious optimism in open market | 06M |

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