

QUESTION 1 (30 Marks)

- a) Deline the following terminologies using two relevant examples each:-
- (i) Emerging Technology. [6 marks]
 - (ii) Trend *→ general direction in which a field is moving* [5 Marks]
 - (iii) Society [5 Marks]
- b) Discuss the link between emerging trends in ICT and traditional models of computer application areas in the context of a society's history [5 Marks]
- c) For each of the following emerging computer mediated technologies briefly describe their projected impact on individuals and industry within society the next five-ten years
- i. Social Media [5 Marks]
 - ii. Virtual and augmented reality [5 Marks]
- c) State five social-ethical issues related to the use and effects of computers in society [5 marks]
- d) Define the term "Information society" as used in ICT emerging technological trends and society. [2 marks]
- e) State four different areas where computer tasks are carried out at component and system level [4 marks]
- f) The Internet of things (IoT) is the inter-networking of physical devices. List three other concept names by which it can be referred to as [2 marks]
- g) Name a trend from the generation of computing in which only one program could run at a time [1 mark]

QUESTION TWO (20 Marks)

- a) Correctly define the term big data [2 marks]
- b) How is computer management implemented? [2 Marks]
- c) Identify three categories of society where mobile communication has applied the social aspect of convenience [3 marks]
- d) Explain how virtual reality works in computer technology [2 marks]
- e) Name five recommended steps that must be undertaken before doing any other work on a new computer network [5 marks]
- f) Discuss any three emerging trends from the third generation of telecommunications history [3 marks]
- g) Explain the importance of the following computing and I.T. revolutions:-
- i. The hardware revolution
 - ii. The software programming revolution
 - iii. State one relevant example of a trend in each revolution [3 marks]

QUESTION THREE (20 Marks)

- a. You have recently graduated after successful completion of your Information technology and/or computing degree. Technical university of Kenya hires you to work for them as an I.T. professional. One of your first assignments is to implement a B.Y.O.D policy. Discuss the steps you would take to introduce a formal B.Y.O.D. programme [5 Marks]

- b. State three type of ways in which components in a network can be interconnected [3 marks]
- c. State the three main areas that the mainstream definition of big data is divided into [3 marks]
- d. Define computer management [2 Marks]
- e. Name two advantages of CAL (computer assisted Learning) [2 marks]
- f. Explain what the address space expansion in IPv6 mean as a factor in the development of IoT [3 marks]
- d. Name two areas in which online and offline convergence will offer powerful commercial potential in ICT and society [2 marks]

QUESTION FOUR (20 Marks)

- a) Name three social aspects of ICT that significantly impact society [3 marks]
- b) What is a startup? [3 marks]
- c) Describe the seven accepted pillars of technology in society [7 marks]
- d) State two key markers of mobile ICT. Write a brief description for each marker [3 marks]
- e) Name two states of a network from the system administrator's point of view [2 marks]
- f) Discuss any three areas of Kenyan society currently experiencing emerging trends in computer applications [3 marks]

QUESTION FIVE (20 Marks)

- b) List three research questions of interests on the nature of cloud computing [3 marks]
- b) Name one factor that will enable social media to offer major opportunities for engagement with society [2 marks]
- c) Give two examples of how modern web browsers anticipate user's needs [2 marks]
- d) Name the emerging trend in configuring and managing wired & wireless networks and state two goals it is recognized for attaining [4 marks]
- e) List two strengths and two weaknesses of computers [4 marks]
- f) Describe how IoT works [4 marks]
- g) Python is an example of what generation of computer language? [1 mark]