



PIONEER INTERNATIONAL UNIVERSITY

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UNIVERSITY EXAMINATIONS

ACADEMIC YEAR: 2020/2021 UNIT NAME: **INTEGRATIVE PROGRAMMING & TECHNOLOGIES**

SEMESTER: **MAY-AUGUST 2021**

UNIT CODE: **BSSE 4130**

DATE: **AUGUST 2021**

TIME: **2 HOURS**

INSTRUCTIONS: Answer question one (30 marks) and any other two

QUESTION ONE

(30 Marks)

- a) Describe the acronym ETL as used in Data Integration (4MKS)
- b) (i) Illustrate with an example, the structure of a well-formed XML document with data (6MKS)
(ii) State the two uses of the XML (2MKS)
- c) (i) Describe the HTTP Protocol as used in Integrative Technologies and Programming (2MKS)
(ii) Outline the four phases of the HTTP (4MKS)
- d) Describe the three layers of 3-tier web application architecture with an example in each case. (6MKS)
- e) Use html tags to create the form below for capturing the name of a person and their age and a PHP Script that will display the name and the age entered when the submit button is clicked.

(6MKS)

Name:

Age:

QUESTION TWO

(20 Marks)

- a) Explain the following terminologies as uses in integrative Programming and technologies
 - i. Data Integration (2MKS)
 - ii. API (2MKS)
 - iii. CORBA (2MKS)
 - iv. Test-driven Development (2MKS)
- b) Quality data is the key to achieving profitable insights with data integration. State three factors affecting the quality of data (3MKS)
- c) Explain the role of the following acronyms as used in integrative programming and technologies
 - i. XLST (2MKS)
 - ii. XML (2MKS)

d) Distinguish between the data consumer and data provider as used in data integration (2MKS)

e) Outline the 3Vs of big data (3MKS)

QUESTION THREE

(20 Marks)

a) Distinguish between a packet and protocol as used in network programming (4MKS)

b) Convert the following schema into Data Type Definition (DTD) (4MKS)

```
<!DOCTYPE note SYSTEM "Note.dtd">
<note>
  <to>Tove</to>
  <from>Jani</from>
  <heading>Reminder</heading>
  <body>Don't forget me this weekend!</body>
</note>
```

c) Explain three categories of data Integration methods (6MKS)

d) Internet Protocol is responsible for delivering packets between systems on the internet and specifies their format. Draw and label the IP Packet structure (6MKS)

QUESTION FOUR

(20 Marks)

a) Use the HTML form Below to answer the questions that follows

Contact Form

Name

Email

Phone

Message

i. Write the HTML code that will display the above form including attributes for the form objects that will be used to pass the data to a MySQL database (10MKS)

ii. Write a server side script using PHP to store the details captured in the form above in the MySQL database. (10MKS)