Name: Enrolment No:	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, May 2021

Course: Banking and Insurance Analytics **Semester: VIII**
Program: B. Tech. (BAO) **Time : 03 hours**
Course Code: CSBI4005P **Max. Marks: 100**

SECTION A

1. Each Question will carry 5 Marks
2. Instruction: Complete the statement / Select the correct answer(s)/ Type the short Answers

Q1	What are the two types of BI reports? A. Development intelligence report and Report documents. B. Development documents and analytical documents C. Analytical reports and Operational reports D. Intelligence reports and Operational reports	**CO2**
Q2	**State True or False: (T/F)** A. A vertical bar chart is sometimes called a column bar chart. B. The basis of Business Intelligence is not data. C. A Scatter (XY) Plot has points that show the relationship between two sets of data. D. Metrics are parameters or measures of quantitative assessment used for measurement, Comparison or to track performance or production. E. In a bar chart, the arc length of each slice (and consequently its central angle and area), is Proportional to the quantity it represents.	**CO4**
Q3	What are the characteristics of a Data Warehouse? A. Subject oriented; Integrated and Non-volatile. B. Subject oriented; Integrated, Time variant and Non-volatile. C. Subject oriented; Time variant and Non-volatile. D. Objective, Time variant; Integrated and Non-volatile.	**CO1**
Q4	Server Administration is performed by? A. Server Administrator. B. System Administrator. C. Database Administrator. D. None of the above.	**CO5**
Q5	What are the typical two types of organizational culture? A. Autocratic and Entrepreneurial B. Autocratic and Democratic C. Innovative and Entrepreneurial	**CO5**

<table>
<tr><td></td><td>D. Automatic and Entrepreneurial</td><td></td></tr>
<tr><td>Q6</td><td>Define the terminology: Mobile BI and Collaborative BI.</td><td>CO3</td></tr>
<tr><td colspan="3">SECTION B
1. Each question will carry 10 marks
2. Instruction: Write short / brief notes</td></tr>
<tr><td>Q7</td><td>• Explain the terminology FSDM. (2)
• Explain Banking Data Warehouse architecture with the help of a suitable diagram (8)</td><td>CO1</td></tr>
<tr><td>Q8</td><td>• Define the term Business Intelligence. (2)
• What is analytics and explain the three types of analytics with proper example.(8)</td><td>CO2</td></tr>
<tr><td>Q9</td><td>Explain the all OLAP operations in detail with proper diagram and example. (10)</td><td>CO3</td></tr>
<tr><td>Q10</td><td>• Explain ASUG business intelligence maturity model. (5)
• Draw the logical BI diagram and what should be included in a proof of concept.(5)</td><td>CO4</td></tr>
<tr><td>Q11</td><td>Attempt any Question from: A or B or C. All question carries same marks (10)

A. Suppose an institute offers only one diploma course on machine learning of duration 1 year. They collected some data for the past few years as given below:

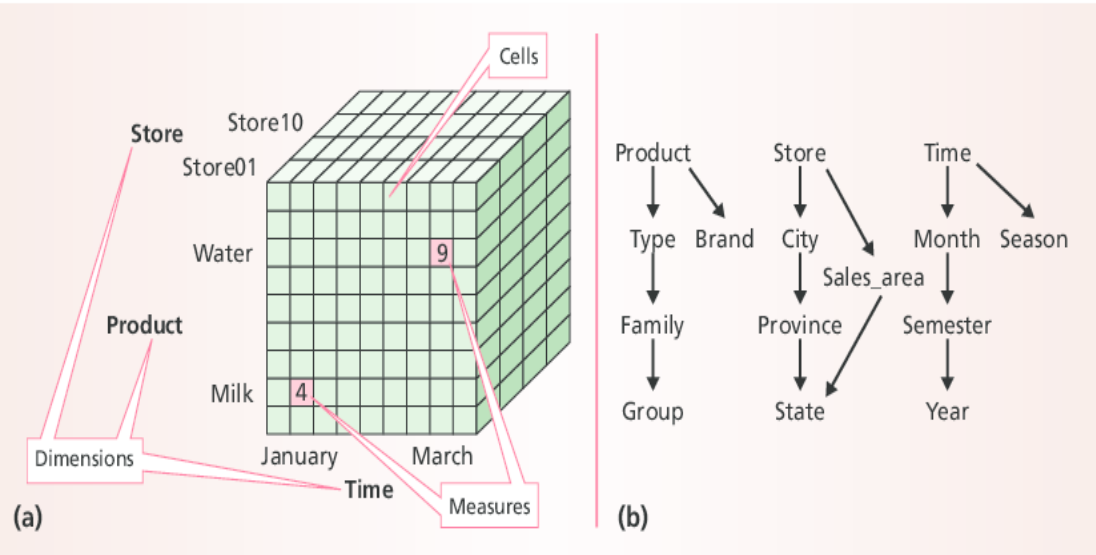
<table>
<tr><td></td><td>2016</td><td>2017</td><td>2018</td><td>2019</td></tr>
<tr><td>Students admitted</td><td>104</td><td>116</td><td>120</td><td>100</td></tr>
<tr><td>Students graduated</td><td>87</td><td>92</td><td>100</td><td>75</td></tr>
<tr><td>Research Grants applied</td><td>3</td><td>7</td><td>6</td><td>9</td></tr>
<tr><td>Research Grants received</td><td>0</td><td>3</td><td>5</td><td>4</td></tr>
<tr><td>Total Classes</td><td>72</td><td>65</td><td>64</td><td>70</td></tr>
<tr><td>Total Cost</td><td>54000</td><td>60000</td><td>64000</td><td>60000</td></tr>
<tr><td>Faculty Training Sessions</td><td>9</td><td>7</td><td>2</td><td>5</td></tr>
</table>

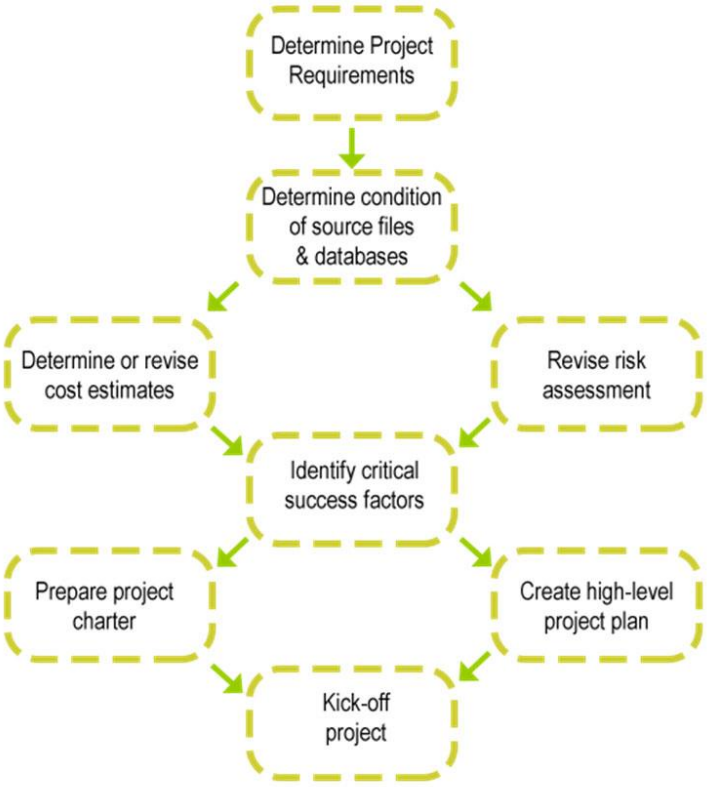
To measure the institute’s performance, the management decided on some ‘Key Performance Indicators’ (KPIs) defined as:
1) Graduation Rate: How many students graduating in that year.
2) Research Grant: Percentage of research grant received over applied.
3) Cost per Student: The amount of money required to educate one student.

Compute the KPIs for each year. Where do you think these KPIs will be used in the Kaplan-Norton Balanced Scorecard?

OR

B. Suppose you have been given the following data cube (a) from a company and hierarchies on dimensions(b):</td><td>CO3</td></tr>
</table>

	 Explain how cross tabulation can help to deal with the different hierarchies?	**CO2**
	OR C. Discuss Rayport-Jaworski performance dashboard and strategy framework and which graphs should be avoided and which should be used when and how.	**CO3**
	Section C **1. Each Question carries 20 Marks.** **2. Instruction: Write long answer.** **And attempt any one question from question no. 12 (A or B)**	
Q12	A. Dealing with a BI solution architecture, you are asked to create an architecture of UPES. Explain how Centralized and Decentralized architecture will differ. Explain other alternative architectures. How can you expand UPES BI potential? **OR** B. The steps are required to plan a BI project are given in the figure below. The company that you are working for is a stocks investment firm. How are you going forward to implement a BI project, and also discuss project planning, Project resources and project task? (P.T.O)	**CO5**

	 Determine Project Requirements Determine condition of source files & databases Determine or revise cost estimates Revise risk assessment Identify critical success factors Prepare project charter Create high-level project plan Kick-off project	**CO5**