Name: Enrolment No:	**UPES**

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018
Course: Fundamentals of Mainframe and skills (CSMT 1002)   Semester: I
Programme: B.Tech (CSE with specialization in Mainframe Technology)
Time: 03 hrs.   Max. Marks: 100
Instructions: All sections are compulsory.

	SECTION A		
S. No.		**Marks**	**CO**
Q 1	Write the name of any four operating systems that run on IBM mainframe hardware.	**4**	**CO1**
Q 2	Memorize the default options in ISPF to allocate a dataset and to view a dataset.	**4**	**CO2**
Q 3	State the significance of Record Descriptor Word (RDW) and Block Descriptor Word (BDW) in variable block record format.	**4**	**CO3**
Q 4	Define the term "System Display Search Facility (SDSF)".	**4**	**CO4**
Q 5	Write the name of programming languages supported by z/OS.	**4**	**CO5**
	SECTION B		
Q 6	Differentiate between batch processing and online transaction processing workloads.	**10**	**CO1**
Q 7	Write the role of management class, storage class, primary quantity and secondary quantity during allocation of a PDS in z/OS.	**10**	**CO2**
Q 8	Describe the function keys used for scrolling in ISPF. Also discuss the meaning of values (CSR, DATA, PAGE, MAX) that user can enter on scroll amount field.	**10**	**CO3**
Q 9	Discuss the phases involved in application development life cycle. OR Describe various methods used to invoke the z/OS Unix Shell interface.	**10**	**CO5**
	SECTION-C		

Q 10	Elaborate significance of ISPF edit profile in z/OS. Discuss following edit profile options in detail with example:
	  a) RECOVERY
	  b) STATS
	  c) AUTOSAVE
	  d) CAPS
		20	**CO3**

Q 11	Elaborate the role of Job Entry System (JES) in z/OS. Explain the phases involved in Job Entry System- 2 (JES-2) job processing.
	OR
	
	Describe the following terms:
	  a) JCL
	  b) JCL statement format
	  c) JOB statement in JCL
	  d) EXEC statement in JCL
		20	**CO4**

	e) DD statement in JCL		

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<div align="center">SECTION A</div>

S. No.		Marks	CO
Q 1	Differentiate between central processor and system assistance processors.	**4**	**CO1**
Q 2	Write the steps to perform log-on in z/OS using emulator.	**4**	**CO2**
Q 3	Define high-level qualifier and low-level qualifier of dataset name in z/OS.	**4**	**CO3**
Q 4	Memorize the batch processing operation mode.	**4**	**CO4**
Q 5	Illustrate the process to start z/OS UNIX Shell session from TSO/E environment.	**4**	**CO5**

<div align="center">SECTION B</div>

Q 6	Describe the term Service Level Agreement (SLA) and its relation with workload.	**10**	**CO1**
Q 7	Elaborate fixed, variable, fixed block and variable block record formats for datasets in z/OS.	**10**	**CO2**
Q 8	Write the steps to copy a record written in one PDS member to another PDS member using ISPF.	**10**	**CO3**
Q 9	Describe the phases of JES-2 job processing along with its diagram. OR Discuss the role of JCL in mainframe environment. Describe the format of JCL statements.	**10**	**CO4**

<div align="center">SECTION-C</div>

Q 10	Discuss the process to locate a dataset using z/OS integrated catalog facility. Write the significance of master catalog and user catalog during locating a dataset in z/OS with the help of flow diagram.	**20**	**CO3**
Q 11	Describe the role of POSIX in Mainframe environment. Discuss the types of open system interfaces used to move application across platforms with little or no modifications. OR Elaborate the following: a) Phases of application development life cycle b) Software Configuration and Library Management	**20**	**CO5**