

HCL Technologies Industrial Training

BPM Training Examination Oral– Due Date 4 January 2018

IBM BPM Course Theory-BPM 8001

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Reading Time: 4 days

Writing Time: TWO Hours

Permitted Materials: Notes and any other material

*Answer **all** questions in this section using the answer booklet(s) provided. Answers are expected to be succinct but complete. Answers that are too long and irrelevant will be penalized. Please do the technical work in IBM BPM Cloud and also take screenshots in a word document*

Question 1 List 5 major BPM vendors in the world in order of market share?

1.
2.
3.
4.
5.
6.

Question 2a List all IBM BPM versions since 2011 and their version names?[5 marks]
What were the major changes between 2 versions of your choice?[5 marks]

Question 2b List all 3 IBM BPM databases and explain what each database is used for ?[5 marks]

Question 2c Process Center, Process Server, Process Portal and Process Web Designer do different things please explain those and show their differences. Please include diagrams.[5 marks]

Question 3 Explain in 10 lines maximum the history of IBM BPM.

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Question 4

1. [5 marks] Explain what BPMN means and how different it is from BPEL?
2. [5 marks] Please explain Cloud Computing and its advantages?
3. [5 marks] IBM BPM Advanced, IBM BPM Standard whats the difference?A poor guy will choose which one?
4. [6 marks] Please create a process app on IBM BPM Cloud called **ExamBPM-YourName** that you will use for all the exercises below

Question 5a Define Web Services and REST. Explain the differences between the 2 and also advantages and disadvantages of each.[5 marks]

Question 5b Please explain differences between synchronous and asynchronous services. Give examples. [5 marks]

Question 5c Please explain differences between a BPM System Task and BPM Human Task and explain the differences?give an example of you choice?[5 marks]

Question 5d Define SOA or Service Oriented Architecture? Please explain a sample business project where you would use the following not the one you have done in class.

1. [5 marks] Datapower or Message Broker? Integration?
2. [5 marks] Robotics Process Automation?
3. [5 marks] IBM BPM

Question 6

Question 6a [5 marks]

Given a business of your choice please give a sample business process that you would design. List the business advantages of that business process. Log in on Cloud and design a process application following the right naming standards in the ExamBPM-YourName process application you defined in **Question 4**.

Question 6b Draw a sample process model highlighting the following on this paper and then implement in IBM Cloud

1. [5 marks] List of participants and naming of the human task
2. [5 marks] List of human tasks and system tasks
3. [6 marks] Gateways used and why?Decision points
4. [6 marks] Choice of Team Algorithm and why you using that team on each Human Task.

Question 6c Draw a sample process model highlighting the following on this paper and then implement in IBM Cloud

1. [10 marks] Design a business object data model specifying the data types-maximum 30 fields making use of complex objects as well.
2. [10 marks] Design a Tracking Group for Reporting based on the process data model with maximum of 5 fields

Question 7 REST vs SOAP Web Services

1. [10 marks] Why is REST preferred to Soap Web Services? Explain advantages of each and disadvantages.
2. [10 marks] REST uses JSON. Explain what JSON is and give a sample JSON object.
3. [10 marks] JSON and XML are different in what way?.
4. [10 marks] Given the process model you designed above in question 6 please create the JSON object of your process Business Object using bare hands.
5. [10 marks] Given the JSON object you designed and making use of the REST API on the cloud and the following APIs , Process API-Exposed API to find your process and Start Process API please start the process and show screenshots and attach to a word document and submit as part of this exam results.

Question 8

1. [10 marks] Please create a starters team of your process and only give access to 3 people.
2. [10 marks] REST uses JSON. Explain what JSON is and give a sample JSON object.
3. [10 marks] Given the process model you designed above in question 6 please create the JSON object of your process Business Object using bare hands.

Question 9

1. [10 marks] Please define all the intermediate events in BPM and show their use
2. [10 marks] Please show how one can start a process using a UCA. Do a sample Demo in the Cloud BPM.
3. [10 marks] Please explain the 4 statuses a process during its life cycle. Please show a diagram of the element or object in the pallet you can use to terminate a process
4. [10 marks] Log.info is used for writing logs in BPM please show a sample script where you show a log printing.

Question 10 Please define a 2 step process in IBM BPM Cloud and inside the Exam Process Application and show the model here. Call the process ServiceFlowToolkitDemo-YourName

1. [10 marks] Please define a toolkit and explain its advantages.
2. [10 marks] Please define a Service Flow and explain its advantages.
3. [10 marks] Please define a service flow in a toolkit that you create that takes as input a preferred town in South Africa and returns the province. eg Pretoria will return Gauteng. Please implement the rule logic using javascript and paste the javascript logic here.
4. [10 marks] Please consume the toolkit in your process app with 2 steps after creating a snapshot of the toolkit. Add a system service to consume the service flow in the process app and in between the first Human Task and second Human Task. Please dont forget to map the objects. Please run a test to demo this functionalist and take screenshots and put in the word document of evidence.

Question 10 Please define a Service Flow called TriggerMyLovelyBPMAApp to start the process defined in Question 6. The Service Flow should trigger the process using javascript and make use of the startProcessByName API. Please return the process start Date by making use of the findProcessInstanceId API. Please run a test on Soap UI Service API and document your proof in a word document.[[20 marks]

Question 11 Please define a 3 step process and use it to demo a this scenario where if the first task is not done in 20 minutes then it should go to the 3 task.Please run a test and document your test results.[[10 marks]

Question 12a Please create a process called Demo-Coach-CoachViews-Yourname with 2 steps to show case coach development. The process will be having the following fields, name, surname, age,date of birth, province, application status field which can take the following statuses namely "Pending","Approved" or "Declined".

1. [10 marks]
2. [10 marks] Please define Coach and Coach Views and give differences of the 2 using examples. Please create a coach view in a process and showcase how to use in in a coach and run a test.
3. [10 marks] What is a managed asset?.
4. [10 marks] Please import a picture in a BPM process application.Please import and show it on a coach.
5. [10 marks] Pleasee implement a coach with a drop down to choose the 3 application statuses on your process you created. Make use of a Service Flow and Environmental Variable-ENV to do this.Please run a test and show that the status is changing.
6. [10 marks] Please put a validation to make the fields name, surname and age and date of birth mandatory. Please make sure the name and surname cannot have 40 characters or more and also make sure the date of birth cannot be in the future.

Question 12b Please explain the differences of a Private, Input and Output Variable in a BPM process or Service Flow? Give an example of either a process model or a service flow to show this. [[20 marks]

Question 12c Please explain the differences of a BPM Process and a service flow.
[20 marks]

Question 13 Please define process apps in your exam process app to show case the following. Show test results in a word document.

1. [5 marks] Sub Process. **Give the process the following name Demo-Sub Process-YourName.**
2. [5 marks] Linked Process. **Give the process the following names Demo-Linked Process-YourName.**
3. [6 marks] Parallel Tasks. **Give the process the following names Demo-Parallel Task-YourName.**

Question 14 Team Dashboard and Calendars. Please define processes in your exam process app to show case Team Dashboard and call it TeamDashBoard-Demo-YourName in the IBM BPM Cloud process application you did in Question 6.

1. [5 marks] Define a 2 step process .
2. [5 marks] Create a team and a manager team with different users.
3. [6 marks] Assign on each task the team and use round robin as the algorithm.
4. [6 marks] Assign due dates SLA on the process to 10 days and 4 days on task 1 and 6 days on task 2. Use the 9am -5pm Weekday Calendar. Please login with the user and manager after running 10 tests and show the task distribution using the Team Roster. Is the Algorithm working and is the Calendar Working?

Question 14 REST API. Please define processes in your exam process app to show case REST API and call it REST API-BookAMeal-Demo-YourName in the IBM BPM Cloud process application you did in Question 6. Call it the Book a Meal Process. It will have 3 steps with the following human tasks, Book a Meal-assigned to the Customer, second step called Approve Meal Order assigned to a Chef or a Cook , and a 3rd step assigned to a Delivery Meal guy or lady who delivers the meal.

1. [5 marks] Define a 3 step process to show case the above and show swimlanes applicable.
2. [5 marks] Create a process BO with the applicable data items that mirror the Book a Meal Process.
3. [6 marks] Define the process BO as an input variable of your process and output variable as well
4. [5 marks] Create the JSON object to start the process.
5. [5 marks] Trigger the process from REST using start process
6. [6 marks] Do a Finish Task using the Task API by supplying the updated status and JSON BO and taskId. This will trigger the next task, Do a finish task of the next task as well and check the status as well. Please show the results in Word Document. and check the status using the Process API, current Status.

Question 15 EPVs and ENVs.

1. [5 marks] Please explain what is an EPV and ENV in BPM. What is the advantages of the EPVs.
2. [5 marks] Define EPV in a process of your choice and use it in a decision point
3. [5 marks] Define an ENV in a process of your choice and use it in a script or decision point.

Question 16-Stretch Question ..
BPM and ECM Documents

Please define process app called **Demo-DocumentUpload-YourName**.

1. [5 marks] Create a 2 step process
2. [5 marks] Call the first step upload document.Create a Human Service called Upload Document HS
3. [6 marks] Call the second step called View Document Human Task and create a Human Service called View Document HS
4. [6 marks] Implement a Coach using a header and footer coach views to upload a document
5. [6 marks] Implement a Coach using a header and footer coach views to view a document you just uploaded
6. [6 marks] Explain the concept called CMIS

———— *End of Examination* ————