Exam   :   **C7020-230**

Title   :   IBM Watson V3 Application Development

Vendor   :   IBM

Version   :   V12.35

Section 2

NO.1 Which IBM Watson service can be used for text analytics that detects both sentiment and emotion from people's digital footprints?

A. Personality Insights

B. Facial Recognition

C. Natural Language Classifier

D. Natural Language Understanding

Section 3

NO.2 Where is the source code for the IBM Watson SDK located?

A. IBM Watson Developer Cloud repository on Github

B. IBM Watson Knowledge Center

C. IBM Bluemix documentation

D. IBM DeveloperWorks site

Section 2

NO.3 For IBM Watson Conversation service, which of these strings of text would qualify as an entity?

A. Do you have any houses?

B. types of houses

C. House of Representatives

D. where can I get

Section 5

NO.4 Which statement is applicable when configuring external log hosts for IBM Watson applications running on IBM Bluemix?

A. Configuring external log hosts is not allowed for applications running IBM Watson services on Bluemix.

B. Logs can be streamed from the system to an external log host, such as a third-party log aggregator.

C. The characteristics of the external log host does not affect the configuration process.

D. There is no need to use external log hosts as Bluemix keeps most of the log information needed in memory.

Section 3

NO.5 What are two available IBM Watson REST APIs grouped as Data Insights services? (Choose two.)

A. Tradeoff Analytics

B. Big Data Analytics

C. Concept Extraction

D. Retrieve and Rank

E. Watson Discovery News

Section 2

NO.6 The IT helpdesk of a large enterprise routinely conducts surveys of its users. The survey allows the users to rate the performance of the helpdesk and to enter about 3-4 lines of comments in a free form text field.

Which IBM Watson service should the IT helpdesk use to derive insights from the texts and to look for patterns among complaints for improvements?

A. Tone Analyzer to evaluate sentiments expressed in the comments.

B. Use Personality insights to analyze traits of the users logging the comments.

C. Use Discovery to extract keywords and entities for common patterns across the comments plus gain insight into the sentiment expressed by each comment.

D. Use Natural Language Classifier to look for concepts mentioned in the review.

Section 4

NO.7 A cognitive FAQ widget on a company's support portal allows users to ask questions related to the company and its products.

Which two IBM Watson services will create this pattern? (Choose two.)

A. Tradeoff Analytics

B. Natural Language Understanding service Semantic Roles API

C. Conversation

D. Discovery

E. Personality

Insights

Section 1

NO.8 Which two Natural Language Processing artifacts are part of the Watson Knowledge Studio? (Choose two.)

A. mention detection

B. parsing rules

C. part-of-speech tagging

D. sentence tokenization

E. relation detection

Section 3

NO.9 Which two options can be detected by the IBM Watson Natural Language Understanding service - Entities API? (Choose two.)

A. relationships between entities

B. names of persons, places and organizations

C. cities and geographic features

D. co-references between entities

E. a person's gender based on their picture

Section 1

NO.10 In the sentence below, which word or phrase is an example of a generic mention class? "Severe storms in this area usually occur in late winter, but Tropical Storm Helga was an anomaly."

A. Helga

B. late winter

C. Tropical Storm Helga

D. storms

Section 4

NO.11 Before a developer can work with any of the Watson Developer Cloud services, they need to obtain service credentials.

What is the proper procedure to do this in IBM Bluemix (Bluemix)?

A. Log-in to IBM Watson Developer Cloud, navigate to your account, and view your user credentials.

B. Create a service instance Within Bluemix, create the service credentials, use the service credentials

in the application.

C. Log-in to Bluemix, navigate to your account profile, then copy the account credentials into the application for service access.

D. Log-in to IBM Watson Developer Cloud create an instance of the service, and view/record your Service credentials.

Section 3

NO.12 Which actions depict configuring IBM Watson Discovery service collection?

A. Converting, enriching and normalizing sample data.

B. Switching from a default configuration to a custom configuration using uploaded personal data.

C. Testing which query methods result in accurate answers.

D. Determining how much space must be allocated to an environment.

Section 4

NO.13 Which authorization must a developer acquire prior to creating an IBM Watson service instance?

A. an IBM Watson Developer Cloud account

B. an IBM Bluemix account

C. an IBM Marketplace account

D. an IBM PartnerWorld account

Section 2

NO.14 What is a common use case for the IBM Watson Natural Language Classifier service?

A. Find the right person for a specific job or project based on classifications found in a person's resume.

B. Organize tweets into a set of categories, such as events, news, or options.

C. Enable back and forth natural language conversations with a user for clarifying questions or helping a user take an action.

D. Design marketing material and provide a product recommendation that is more personal and relevant.

Section 3

NO.15 Which game development engine has a corresponding IBM Watson SDK?

A. OGRE

B. Cryengine

C. Minecraft

D. Unity

Section 1

NO.16 In the context of machine learning, what is overfitting?

A. Overfitting is the creation of a statistical model that describes noise instead of the underlying relationship.

B. Overfitting is the creation of a model that is too general, so it performs well on just about every test that is run against it.

C. Overfitting is the creation of an imprecise model which is the result of only using training data without using any validation data.

D. Overfitting is an artificially accurate model and can occur when the test data is too similar to the

training data.

Section 1
NO.17 What is a method for measuring the accuracy of an unsupervised machine learning system?
A. changing training set size and averaging results
B. cross-validation tests
C. density estimation
D. using a confusion matrix
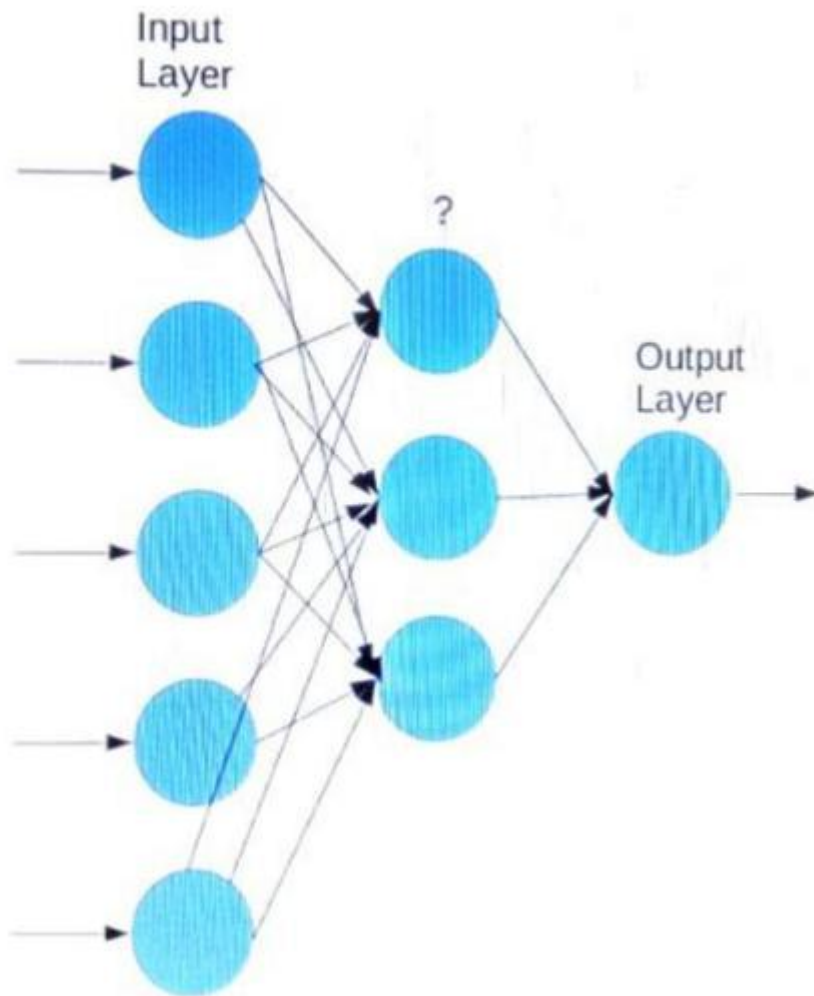Explanation:
Reference
https://www.researchgate.net/post/Which_are_the_methods_to_validate_an_unsupervised
_machine_learning_algorithm

Section 3
NO.18 Which characteristic makes an API RESTfuI?
A. It only works with Javascript.
B. It uses standard HTTP methods (e.g., GET, PUT, POST, or DELETE).
C. It defines a number of custom media types for resources and is discoverable based on multiple known end-points.
D. It uses non-standard HTTP methods.

Section 1
NO.19 In a neural network, what is the name of the region marked with a question mark?

A. Hidden Layer
B. Computational Layer
C. Cognitive Layer
D. Intelligence Layer

Section 3
NO.20 Which two statements accurately describe file size management for IBM Watson
Discovery service? (Choose two.)
A. Sample documents must be uploaded to a separate collection other than actual content.
B. There is a limit of no more than 5 documents sample documents.
C. Sample documents must be deleted before uploading documents to a collection.
D. The maximum file size for a sample document is 5MB.
E. The maximum file size for documents in a collection is 50MB.

Section 3
NO.21 Why the data crawler would be used with the IBM Watson Discovery service?
A. The data crawler automates the upload of content to the Discovery service.
B. Use the data crawler when structured data must be mined from other services.
C. When working with the tooling, the data crawler can be used to upload sample documents.
D. When there is a business need to dynamically crawl websites, Twitter and constantly
changing content.

Explanation:
Reference https://www.ibm.com/watson/developercloud/doc/discovery/data-crawler.html

Section 1
NO.22 A system with a set of classifiers is trained to recognize eight different company logos
from images. It is 78% accurate.
Without further information, which statement is true?
A. The system has 78% precision and recall.
B. The system has a precision of 78% and a recall of 22%.
C. The system is equally reliable for classifying any one of the eight logo types 78% of the time.
D. The accuracy of the system for any one class cannot be determined.

Section 4
NO.23 How can an IBM Watson Conversation agent be configured in a language other
than English?
A. The only language offered for Watson Conversation is English due to limitations in
compatibility with other IBM Watson services that can be integrated in to a Watson Conversation
agent.
B. Use the available REST API to configure the language using the ISO country code.
**C. Upon creating a workspace for the Watson Conversation agent, select the language of
the conversational agent in the Language drop-down.**
D. In the Conversation workspace, check the box next to the supported language within the panel
in the Dialog tab.

https://watson-conversation.ng.bluemix.net/au-syd/6ff609c8-7d17-4c54-ac4f-2a9a70b60aab/workspaces

Section 1
NO.24 Which statement best describes the unsupervised learning process when
performing clustering on a large data set?
A. The system understands the significance of the data points and a cognitive sub-process
clusters the data, removing the need for a human supervisor.
B. A neural network is deployed in unsupervised mode to determine to which cluster a data
point belongs.
C. Examples of data points and their associated cluster are fed into the system allowing it to learn
and generalize for the rest of the data set.
**D. Data points are compared at random and the differences between their features are used to
determine whether they belong in the same cluster or not.**

Section 2
NO.25 A developer is using machine learning techniques to train a cognitive system, which
will identify fraudulent insurance claims.
What would be best suited for training data?
A. A set of known legitimate claims mixed in with random claim samples.
B. A set of known fraudulent claims mixed in with random claim samples.
C. A new set of unknown claims.
D. Samples of known fraudulent and legitimate claims.

Section 3
NO.26 What is the purpose of the maximum alternatives parameter in the IBM Watson Speech to

Text service?

A. Reports hypotheses for acoustically similar alternatives for words of the input audio.

B. Represents the intermediate hypotheses of a transcription that are likely to change before the service returns the final result.

C. Accepts a Boolean value that tells the service whether to provide confidence measures for the words of the transcription.

D. Accepts an integer that tells the service to return the n-best alternative hypotheses.

Section 4

NO.27 What is the name of the JSON object that can be used to store data across multiple interactions with an IBM Watson Conversation dialog flow?

A. output

B. context

C. node

D. module

https://console.bluemix.net/docs/services/conversation/dialog-build.html#dialog-build

Section 3

NO.28 What is an approach for integrating a database into an IBM Watson solution?

A. Use the Discovery service to search through candidate queries and surface the ones most relevant to the user input.

B. Use the Document Conversion service to search the database for the entries with the strongest relationship to the user input.

C. Use the intent from the Natural Language Classifier as part of a query.

D. Use the concepts from Natural Language Understanding to search the database for the most relevant documents.

Section 3

NO.29 Which IBM Watson Natural Language Understanding service APIs would be best suited for identifying the names of persons or organizations in unstructured text documents?

A. Entities

B. Concepts

C. Taxonomy

D. Keywords

Section 3

NO.30 How are language preferences set for IBM Watson Natural Language Classifier (NLC)?

A. The NLC can automatically detect the language of the incoming request.

B. A language parameter is specified as a part of every call to the classifier.

C. There are no options to do this as the NLC works only on English language utterances.

D.The language parameter is specified in the training meta data file when creating a classifier.

Section 3

NO.31 Built into the IBM Watson Discovery service is the Watson Discovery News data set. How is this collection different from other collections?

A. The Watson Discovery News collection is specific to the company news domain, whereas a collection is specific to a domain.

B. Documents from the Watson Discovery News collection can be ingested as sample documents to

better configure a private collection.
C. The Watson Discovery News configuration and documents cannot be adjusted.
D. The Watson Discovery News data set and a private collection can be queried with a single query call.

Section 4
NO.32 What are the input and output data types of the IBM Watson Tone Analyzer service?
A. Input of JSON or plain text and output in JSON.
B. Input of JSON or plain text and output in XML.
C. Input of XML or plain text and output in JSON.
D. Only plain text is supported for both input and output.
Explanation:
Input JSON or plain text that contains your written content into the service, and then get back results in JSON that analyzes the tone for each sentence of your input.

Section 3
NO.33 Which IBM Watson service is trainable?
A. Personality Insights
B. Tone Analyzer
C. Visual Recognition
D. Document Conversion
Explanation:
Reference https://www.ibm.com/watson/developercloud/visual-recognition.html

Section 3
NO.34 What is the purpose of the IBM Watson Visual Recognition REST API classify endpoint?
A. It turns a collection of images into structured data that can easily be indexed and queried.
B. It analyzes the uploaded images against classifiers.
C. It enables users to upload a set of images as a zip file for insight extraction.
D. It trains a new classifier on the uploaded image data.

Section 2
NO.35 What are two IBM Watson services included in the Social Customer Care Starter Kit? (Choose two.)
A. Discovery
B. Tone Analyzer
C. Personality Insights
D. Speech to Text
E. Natural Language Understanding

Section 1
NO.36 Which group of methods is used by cognitive systems to understand human languages like English and French?
A. Neuro-Linguistic Programming
B. Natural Language Processing
C. Cognitive Language Interpretation
D. Human Text Processing

Answer: B

Section 1
NO.37 In neural networks, which method enables a developer to obtain the output and compare it with the real value to get the error?
A. Back Propagation
B. Cognitive Propagation
C. Forward Propagation
D. Answer Propagation

Section 3
NO.38 What best describes the process of how classification is done with the IBM Watson Natural Language Classifier?
A. Train the system to map utterances or questions to specific intents or classes.
B. Train the system with as many documents as possible.
C. Automatically detect the intent of the user based upon statistical analysis.
D. Read in user's questions or utterances and map them to classes.

Section 2
NO.39 What Watson solution can answer common support questions typically handled by a live agent?
A. Conversation
B. Language Translator
C. Tone analyzer
D. Natural Language
Classifier

Section 2
NO.40 Which IBM Watson service is applicable to analyze data insights for Instagram images?
A. Discovery
B. Visual Recognition
C. Conversation
D. Natural Language
Understanding

Section 2
NO.41 What combination of three cognitive capabilities are applicable for a physician advisor? (Choose three.)
A. keyword extraction
B. emotion analysis
C. entity extraction
D. structured data analytics
E. text classification
F. sentiment analysis

Section 4
NO.42 Which statement is a recommended practice when creating an IBM Watson cognitive virtual agent?
A. When searching for articles related to an entity or keyword from the Watson Discovery News service, use the relevance parameter to improve the accuracy of the search.
B. Increase the amount of the transcribed text to improve the quality and confidence of the extracted

concepts.

**C. When using the Conversation service, define different opening sentences in the dialog
flow to prevent repetitive conversations where the dialog always asks the same questions.**
D. When constructing a query for the Watson Discovery News service, the developer should
specify the return parameter to control what the query should return.

Section 2
NO.43 Which IBM Watson service would enable retailers to help their customers choose the
appropriate product by balancing multiple product features?
A. Natural Language Understanding
B. Personality Insights
C. Tradeoff analytics
D. Discovery

Section 3
NO.44 Which IBM Watson Natural Language Understanding service is used to identify Subject-
Action-Object triples in unstructured text?
A. Semantic Roles
B. Keywords
C. Categories
D. Linked Data Support
Explanation
Any text-mining technology find triples in text - subject-verb-object or subject-relationship- object
. Cambridge Semantics' architecture is based on an RDF-compliant graph DBMS that makes
this process more efficient and effective.

Section 4
NO.45 Does an application that consumes an IBM Watson service need to be hosted on
IBM Bluemix?
A. No, Bluemix facilities are not required for either the application or for working with the
service.
B. Yes, the networking bindings require that the entire application and Watson service run on
Bluemix.
C. Yes, Watson services are not visible to runtimes running outside of the Bluemix environment.
**D. No, any application framework supporting standard REST API invocation can consume an
Watson service.**

Section 3
NO.46 How is a training data set constructed from user questions for the IBM Watson Natural
Language Classifier?
A. Group the questions into classes.
B. Use an XML formatted data set.
C. Upload documents with similar questions.
D. Create an intents index in a spreadsheet.

Section 2
NO.49 A cognitive solution is implemented to detect what the user wants to do. The user mentions
that he wants to buy a ski jacket for an upcoming vacation in Colorado. Why is it important to
analyze the user's input for entities?
A. There must be an intent for each and every entity detected by the program.
B. The number of entities found in the utterance could improve the accuracy of the answer.

C. Specific content such as the location (Colorado) could be used to further inform the program.

D. They could indicate variations in the flow of the dialog node.

Section 2

NO.50 A software company has announced the latest release of their cloud offering and wants to analyze news and social media to understand how people are talking about their company and how they feel about the new offerings.

Which Watson service can be used to extract the latest news and sentiments about their offerings?

A. Speech to Text

B. Text to Speech

C. Natural Language Understanding

D. Tradeoff Analytics

Section 2

NO.51 A Marketing manager would like to analyze and better understand how people feel about the new brand released last week and use this new knowledge to adjust the campaign message for obtaining higher rate of positive sentiment.

Which IBM Watson service will help her to best accomplish this goal?

A. Natural Language Understanding (Sentiment)

B. Discovery

C. Natural Language Understanding (Keywords)

D. Personality Insights

Section 3

NO.52 Which IBM Watson service is pre-trained and does not allow for any customization?

A. Natural Language Understanding

B. Speech to Text

C. Discovery
D. Tone
Analyzer

Section2
NO.53 What combination of IBM Watson services would best implement the Agent Assist pattern?
A. Speech to Text and Concept Insights
B. Conversation and Discovery
C. Natural Language Classifier
D. Conversation and Relationship Extraction

Section 3
NO.54 When creating a new IBM Watson Visual Recognition classifier, what is the recommended minimum number of images that needs to be provided (for both the positive and negative example sets) in order to obtain the best results?
A. 15-30
B. 1000-2000
C. 500-1000
D. 150-200
Explanation:
Reference http://www.aei.tuke.sk/papers/2017/1/08_Bundzel

Section 1
NO.55 What is the formula for recall in a classification system?
 A. True Positives/ (True Positives+False Negatives)
B. True Positives/ (True Positives+False Positives)
C. False Positives/ (True Negatives+False Negatives)
D. True Positives/ (True Positives+True Negatives)

Section 4
NO.56 What are two advantages gained by using IBM Bluemix (Bluemix) as the application platform for an application using Watson services? (Choose two.)
A. Bluemix provides an integrated and secure set of features for continuous development and continuous deployment.
B. The Bluemix application developer can choose among multiple release versions of the Cloud Foundry framework.
C. Bluemix provides services for securely integrating on premises and off premises applications.
D. Bluemix is built on proprietary API' s which provide competitive advantages.
E. Bluemix promotes 12-factor methodology since Bluemix is deployed exclusively as a public cloud model.

Section 2
NO.57 Which combination of three IBM Watson services is applicable to assist an agent at a phone-based customer call center? (Choose three.)
A. Conversation
B. Tradeoff Analytics
C. Discovery
D. Natural Language Classifier

E. Speech to Text
F. Relationship Extraction

Explanation:
Reference https://github.com/havasnewyork/IBM-Watson-Developer-Certification-
Study-Guide

Section 3
NO.58 What is important when creating an IBM Watson Visual Recognition
classifier?
A. Ensure use of only PNG formatted images.
B. Collect training images for the same classification that are very similar to each other.
**C. Provide an approximately equal number of both positive and negative examples of pictures to
train with.**
D. Make sure training images are high resolution foe better accuracy.

Section 3
NO.59 What information does the IBM Watson Natural Language Understanding service extract
from html, text, or web-based content when it analyzes entities?
 A. text and title information
B. people, companies, organizations
C. topic keywords
D. subject-action-object relations

Section 4
NO.60 In the context of a IBM Watson cognitive virtual agent, what type of input data can the
IBM Watson Conversation service consume?
A. images
B. speech
C. string of text
D. audio

Section 3
NO.61 When is it appropriate to include multiple classes for a sample text in the training data for
IBM Watson Natural Language Classifier?
A. When text is very detailed such that identifying a single class may cause inaccuracies.
**B. When experts interpret the same text in different ways, multiple classes support
those interpretations.**
C. When the text utterances are very similar in nature and we want to mark slight differences using
classes
D. When the classifier has been retrained and we want to preserve old classes from a previous
training set.
https://www.ibm.com/watson/developercloud/doc/natural-language-classifier/using-yourdata.html

Section 5
NO.62 How can a developer prevent IBM Bluemix from logging data in an API request to an
IBM Watson service?
A. Set a header parameter called X-Stop-Training-Watson to true in the HTTP request.
B. Disable training from in the IBM Bluemix dashboard.
C. Pass a parameter called DisableTraining=false in the API request.

D. Set a header parameter called X-Watson-Learning-Opt-Out with the value true in the HTTP request.

Section 1
NO.63 Which type of learning do regression, support vector machines, and Bayesian classifiers typically fall under?
A. cognitive learning
B. supervised learning
C. unsupervised learning
D. reinforcement learning

Section 4
NO.64 What two system entities can be configured within an IBM Watson Conversation agent?
A. sys-intent
B. sys-entity
C. sys-number
D. sys-condition

Section 3
NO.65 How can the IBM Watson Speech to Text service be controlled to continue transcribing until the input audio stream terminates?
A. Set the value of the Continuous parameter to true in the input to recognize the API.
B. This is not possible as the Speech to Text service stops transcription at the first pause.
C. Set the value of the DoNotStop parameter to true in the input to recognize the API.
D. Set the value of multipart parameter to true in the input to recognize the API.
Answer: A
Explanation:
By default, the service stops transcription at the first end-of-speech (EOS) incident, which is denoted by a half-second of non-speech (typically silence) or when the stream terminates. Set the continuous parameter to true to instruct the service to transcribe the entire audio stream until the stream terminates. In this case, the results can include multiple transcript elements to indicate phrases separated by pauses. You can concatenate the transcript elements to assemble the complete transcription of the audio stream.