

Student Name:

Answer **all** of the following questions

Q1. Multiple Choices

- 1) Authentication means:
 - a) The process of checking that the person attempting to gain access to a system is the person whose logon they are using.
 - b) Giving user name and password
 - c) Using Biometrics
 - d) All of the above
- 2) In Fat-client access model:
 - a) A user gets a local instance of the client software installed on their laptop or remote PC.
 - b) A user does NOT get a local instance of the client software installed on their laptop or remote PC.
 - c) Clients access the system via a web browser.
 - d) All of the above
- 3) Examples of Standards:
 - a). ICD -10 : International Classification of Diseases
 - b). HL7
 - c). DICOM
 - d). All of the above
- 4) Feature detection means:
 - a) Extracting useful parameters from the segmented regions.
 - b) An automated classification procedure using useful parameters
 - c) Spreading out the image gray levels throughout the visible range
 - d) None of the above
- 5) In PACS Topology, core PACS sub-systems consists of:
 - a) Image management and database management only
 - b) users management and storage management only.
 - c) Image management only.
 - d) Image, database, users and storage managements
- 6) In Lossless compression, :
 - a) It uses simple run-length encoding (RLE)
 - b) It uses Huffman encoding
 - c) It assigns shortest codes to most frequently occurring values.
 - d) All of the above
- 7) In HIS, Managed Care System consists of:
 - a). Care Plans
 - b). Support Task list
 - c). Support provision of care in unit
 - d). All of the above
- 8) DICOM is:
 - a). A codification of imaging information, such as information about the radiological examination, the patient and so forth;
 - b). A protocol for the exchange of imaging data
 - c). Intended to ensure that a wide variety of equipment can be interfaced with the network and data can be recognized by all nodes on networks
 - d). All of the above
- 9) The following statement is **incorrect**:
 - a) Px64 Compression is used to store images as mathematical equations rather than as pixel blocks.
 - b). In fractal compression, the large image is compressed as a whole to allow more data to be compressed.
 - c) Wavelet standard is used for codec interoperability to allow dissimilar codecs to interoperate and can be used for interactive real-time applications.
 - d) All of the above
- 10) An example of Temporal subtraction is:
 - a) Digital subtraction Angiography (DSA)
 - b) Subtraction a reference image from later images that are registered to the first.
 - c) Two images at different situations must be used
 - d) All of the above.

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Q2. A) Draw a block diagram of a PACS system?

B) Design a computer – based infant apnea monitoring system (block diagram)?