

Program: BE Biomedical Engineering

Curriculum Scheme: Revised 2012

Examination: Final Year Semester VII

Course Code: BMC705 and Course Name: Networking & Information System in Medicine

Time: 1 hour

Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	What is the IEEE 802.3 standard popularly known as?
Option A:	WiFi
Option B:	LLC
Option C:	Token bus
Option D:	Ethernet
Q2.	Which of the following fields contains error detection information in the Ethernet frame?
Option A:	CRC
Option B:	Preamble
Option C:	Source address
Option D:	SFD
Q3.	At which layer of the TCP/IP protocol suite is the Port number used?
Option A:	Application layer
Option B:	Transport layer
Option C:	Network layer
Option D:	Physical layer
Q4.	Which of the following layers of the OSI model is responsible for translation, compression, and encryption?
Option A:	Session layer
Option B:	Application layer
Option C:	Presentation layer
Option D:	Network layer
Q5.	For which of the following networks "WiMAX" is used as a standard?
Option A:	Personal area network
Option B:	Local area network
Option C:	Metropolitan area network
Option D:	Wide area network
Q6.	What is the size of IPv6 address?

Option A:	128 bit
Option B:	32 bit
Option C:	48 bit
Option D:	64 bit
Q7.	In subnetting the number of addresses in each subnet has to be _____.
Option A:	a power of 2
Option B:	a multiple of 128
Option C:	divisible by 128
Option D:	divisible by 64
Q8.	A three-layer switch is a faster and more sophisticated form of which of the following connecting devices?
Option A:	Repeater
Option B:	Link-layer switch
Option C:	Router
Option D:	Hub
Q9.	At which layer of OSI model is the Datagram switching normally done?
Option A:	Physical layer
Option B:	Network layer
Option C:	Data link layer
Option D:	Presentation layer
Q10.	In which of the following network security services, the user is verified prior to access to the system resources (files, for example)?
Option A:	Message Integrity
Option B:	Message Authentication
Option C:	Entity Authentication
Option D:	Message Nonrepudiation
Q11.	How many keys are needed in asymmetric-key cryptography for a two-way communication between Alice and Bob?
Option A:	Two keys
Option B:	Four keys
Option C:	Six keys
Option D:	Eight keys
Q12.	If shift cipher with key = 8 is used to encrypt the message "BANANA", what would be the transformed ciphertext?
Option A:	FERERE
Option B:	NMZMZM
Option C:	DCPCPC
Option D:	JIVIVI
Q13.	Which of the following is not a simple modern cipher?

Option A:	XOR cipher
Option B:	Caesar cipher
Option C:	S-box cipher
Option D:	P-box cipher
Q14.	Which of the following is not a basic component of the PACS?
Option A:	Acquisition gateway
Option B:	PACS Server and Archive
Option C:	PACS Workstations
Option D:	HIS/RIS database
Q15.	Generally who uses the PACS review workstation?
Option A:	Radiologist
Option B:	Patient's relative
Option C:	Referring clinician
Option D:	Technologist
Q16.	Which of the following a PACS display workstation doesn't include?
Option A:	Communication network connection
Option B:	Global database
Option C:	Display
Option D:	Resource management and Processing software
Q17.	Which of the following is true for the client-server model of PACS?
Option A:	Images are automatically sent to the designated diagnostic and review workstations from the server.
Option B:	The system is a completely portable as the web-based application can be used on site as well as at home with an Internet connection.
Option C:	Images are centrally archived in the PACS server.
Option D:	Workstations have short-term cache storage.
Q18.	Which of the following is an element of the Hospital Operation Component of HIS?
Option A:	Material Services
Option B:	General Ledger
Option C:	Payroll
Option D:	Pathology System
Q19.	Which of the following RAID levels has relatively poor write performance but excellent read performance that matches well to the clinical requirements of PACS?
Option A:	RAID 10
Option B:	RAID 3
Option C:	RAID 4
Option D:	RAID 5

Q20.	Which of the following is not a valid method for interfacing PACS with HIS and RIS?
Option A:	Workstation Emulation
Option B:	Database-to-Database Transfer
Option C:	Interface Engine
Option D:	Gateway Emulation
Q21.	Which of the following PACS server models is based on the theory of distributing tasks evenly so that no one system is overwhelmed?
Option A:	Single server model
Option B:	Multi server model
Option C:	Load balancing model
Option D:	Clustered failover model
Q22.	Which of the following is not one of the key concepts in the IHE technical framework?
Option A:	Data model
Option B:	IHE actors
Option C:	IHE producer
Option D:	Integration profile
Q23.	Which of the following profiles is not a part of the Patient Care Coordination IHE domain?
Option A:	Patient Synchronized Application (PSA)
Option B:	Exchange of Personal Health Record Content (XPHR)
Option C:	Emergency Department Referral (EDR)
Option D:	Medical Summaries (MS)
Q24.	In the IHE model the abbreviation ADT stands for
Option A:	Application, Duplication, Triplication
Option B:	Active, Denial, Technology
Option C:	Admission, Discharge, Transfer
Option D:	Access, Duty, Training
Q25.	Which of the following is not a valid segment contained in the HL7 message "patient admission"?
Option A:	Message header segment
Option B:	Event type segment
Option C:	Patient identification segment
Option D:	Patient colleague visit segment