

## CONTINUING EDUCATION TEST #1

### Release of Patients

For each of the following questions, select the best answer. Then circle the number on the CE Tests Answer Sheet that corresponds to the answer you have selected. Complete the answer sheet. Keep a record of your responses so that you can compare them with the correct answers, which will be published in the next issue of *JNMT*. Answers to these test questions should be returned on the Answer Sheet no later than **November 15, 1995**. An 80% correct response rate is required to receive 1.0 CEH (Continuing Education Hour) credit for each article. SNM Technologist Section members can find their VOICE number on the upper left-hand corner of their *JNMT* mailing labels. If you've joined our Nonmember VOICE Tracking Program, please check the **NMVT** box on the Answer Sheet (no extra fee is required). Documentation will appear on your VOICE transcript which is issued in March of each year. Nonmembers who have not joined our Nonmember VOICE Tracking Program must mail a \$10.00 check or money order, made payable to SNM, along with the completed quiz. You will receive a certificate of completion indicating credit awarded for receiving a passing score of 80% or better.

**A.** Organizations which provide recommendations on the safe use of radioactive materials include: \_\_\_\_\_

- 101. NCRP
- 102. ICRP
- 103. NRC
- 104. state governments
- 105. all of the above

**B.** NCRP Report Number 37 assumes that for an exposure of 1 R, an individual will receive an absorbed dose of 1 rad and a dose equivalent of: \_\_\_\_\_

- 106. 0.1 rem
- 107. 1.0 rem
- 108. 10.0 rem
- 109. 100.0 rem

**C.** The NCRP recommended permissible level for nonoccupational exposure in 1970 was: \_\_\_\_\_

- 110. 0.1 rem
- 111. 0.2 rem
- 112. 0.5 rem
- 113. 1.0 rem

**D.** The NCRP recommends release of patients from the hospital after therapeutic doses of  $^{131}\text{I}$  with restrictions based on the ages of the persons with whom the patient is likely to come into contact.

- 114. true
- 115. false

**E.** The NCRP categories of contact define no contact as: \_\_\_\_\_

- 116. greater than 10.5 m
- 117. greater than 1.0 m
- 118. greater than 2.0 m
- 119. greater than 10.0 m

**F.** Both the NCRP and the ICRP recommend a dose limit of 0.1 rem for members of the public and both allow for a maximum dose of: \_\_\_\_\_

- 120. 1 mSv
- 121. 2 mSv
- 122. 5 mSv
- 123. 10 mSv

**G.** The NRC's recent revision of 10 CFR 20 included a requirement that the dose in any unrestricted area from external sources does not exceed \_\_\_\_\_ in any one hour.

- 124. 0.001 rem
- 125. 0.002 rem
- 126. 0.010 rem
- 127. 0.100 rem

**H.** The current 10 CFR 35 regulations for release from confinement includes which of the following provisions?

- 128. the measured dose rate from the patient is less than the 10 mrem/hr.
- 129. the total effective dose equivalent to individuals is less than 0.2 rem/hr.
- 130. the activity has undergone 5 half-lives.
- 131. the activity in the patient is less than 30 mCi.
- 132. none of the above.

**I.** Patient instructions after  $^{131}\text{I}$  therapy, which are designed to minimize internal contamination of other persons, include: \_\_\_\_\_

- 133. avoid mouth-to-mouth contact
- 134. don't share items such as toothbrushes
- 135. flush the toilet 2 or 3 times
- 136. wash eating utensils separately
- 137. all of the above

**J.** Instructions given to the patient after  $^{131}\text{I}$  therapy to limit external exposure to other persons include: \_\_\_\_\_

- 138. sleep in twin beds
- 139. return to work
- 140. use public transportation
- 141. limit time spent in public places
- 142. none of the above

**K.** Which of the following factors are important in determining the duration of precautions to be taken following  $^{131}\text{I}$  therapy?

- 143. the activity at discharge
- 144. the  $T_{\text{eff}}$  of the radiopharmaceutical
- 145. the dose limit to be observed
- 146. the individuals with whom the patient will have contact
- 147. all of the above

**L.** A breastfeeding woman who has been given 110 mCi of  $^{131}\text{I}$  therapy solution may resume breast feeding in one week.

- 148. true
- 149. false

**M.** The release criteria for patients who have received therapeutic quantities of radiopharmaceuticals are presently based on activity or exposure rate.

- 150. true
- 151. false

**N.** Patients who have received an  $^{131}\text{I}$  therapy dose are allowed to leave the hospital when the dose rate at 1 m is below 10 mrem/hr.

- 152. true
- 153. false

**O.** Iodine-131 therapy patients may leave the hospital when the activity in the body drops below 50 mCi.

- 154. true
- 155. false

Please see end of second CE test for answer sheet and answers to the June 1995 CE test.

## CONTINUING EDUCATION TEST #2

### An Introduction to the Internet, Part 2

**P.** *The Internet can be defined as an interconnected group of computer networks.*

- 156. true
  - 157. false
- 

**Q.** *The common communication standard used by all of the computers on the Internet to send and receive messages is: \_\_\_\_\_*

- 158. DECNET protocol
  - 159. PCP/ID protocol
  - 160. NEMA protocol
  - 161. TCP/IP protocol
  - 162. all of the above
- 

**R.** *Proprietary communication protocols include: \_\_\_\_\_*

- 163. Netware
  - 164. AppleTalk
  - 165. TCP/IP
  - 166. 163 and 164 of the above
  - 167. none of the above
- 

**S.** *A gateway functions by converting a message from one protocol to another.*

- 168. true
  - 169. false
- 

**T.** *E-mail gateways run TCP/IP and have an Internet IP address, but computers on a network which uses the gateway may run which of the following protocols?*

- 170. DECNET
- 171. AppleTalk
- 172. Netware
- 173. all of the above
- 174. 170 and 171 of the above

**U.** *Requirements for connection to the Internet include: \_\_\_\_\_*

- 175. appropriate hardware
  - 176. appropriate software
  - 177. a network
  - 178. 175 and 176 of the above
  - 179. none of the above
- 

**V.** *The minimum requirements for an IBM or compatible PC to connect to the World Wide Web with Mosaic are: \_\_\_\_\_*

- 180. an 80386 Processor
  - 181. 4 megabytes of RAM
  - 182. Windows
  - 183. a 9600-bps modem
  - 184. all of the above
- 

**W.** *A modem is a digital-to-analog converter.*

- 185. true
  - 186. false
- 

**X.** *Data transfer rates via modem are described by: \_\_\_\_\_*

- 187. the baud rate
  - 188. the bits per second
  - 189. the throughput
  - 190. none of the above
  - 191. 187, 188 and 189 of the above
- 

**Y.** *The highest speed at which modems transfer data presently is: \_\_\_\_\_*

- 192. 28,800 bps
- 193. 57,600 bps
- 194. 86,400 bps
- 195. 115,200 bps
- 196. 172,800 bps

**Z.** *The effective data transfer rate is called the: \_\_\_\_\_*

- 197. output
  - 198. throughput
  - 199. input
  - 200. compression rate
  - 201. none of the above
- 

**AA.** *Of the following, which are types of access methods to IAPs?*

- 202. dial-up
  - 203. SLIP
  - 204. PPP
  - 205. 202, 203 and 204 of the above
  - 206. none of the above
- 

**BB.** *World Wide Web browsers include which of the following?*

- 207. Mosaic
  - 208. Gopher
  - 209. Netscape
  - 210. Telnet
  - 211. 207 and 209 of the above
- 

**CC.** *An IAP which offers a SLIP/PPP account, TCP/IP software and Internet application programs is:*

- 212. Performance Systems International
  - 213. Netcom On-line Communications Service, Inc.
  - 214. Minnesota Gopher
  - 215. 212 and 213 of the above
  - 216. none of the above
- 

**DD.** *Of the following, which is/are a public data network?*

- 217. Internet
- 218. CompuServe Packet Network
- 219. Sprintnet
- 220. Tymnet
- 221. 218, 219 and 220 of the above

**Answers to CE Article Test #1, June 1995**

The Continuing Education article "Energy-Weighted Acquisition: Evaluation of Physical Characteristics and Clinical Utility" by Todd Donaghy, et al. was accompanied by a CE test. The correct answers are as follows.

- A. 105    D. 117    G. 128    J. 136    M. 145  
 B. 108    E. 119    H. 130    K. 140  
 C. 111    F. 121    I. 131    L. 143

**Answers to CE Article Test #1, June 1995**

The Continuing Education article "An Introduction to the Internet, Part #1" by Jerry V. Glowniak was accompanied by a CE test. The correct answers are as follows.

- N. 150                      S. 171                      Y. 190, 191,                      AA. 200  
 O. 155                      T. 175                      192 and                      BB. 203  
 P. 156                      U. 179                      194 ac-                      CC. 207  
 Q. all answers              V. 182                      cepted†                      DD. 210  
     accepted\*              W. 187                      Z. all answers                      EE. 211  
 R. 166                      X. 188                      are accepted‡

\* The correct answer is 164. The NSINET is a computer network, as well as ARPANET, ANSNET and ALTERNET. NSINET was not mentioned in the article, however, so readers could not be expected to know this.

† The correct answer is 194. The TCP protocol both reassembles, or adds together, data segments as well as breaking the data into segments. As stated on page 60 of the article, "The networking software on the destination computer successively strips off the headers, reassembles the data into the original message and passes it on to the application program." This dual function of the TCP was unclear; therefore, all answers that are partially correct are accepted.

‡ The correct answer is 198. The IP protocol actually provides the data delivery instructions in the form of an address. The TCP ensures that the data delivered is the data that was sent. The TCP does not direct where the data goes. This distinction was not clear in the article; therefore, all answers are accepted.

**CONTINUING EDUCATION TESTS #1 and #2**

**Answer Sheet**

101	111	121	131	141	151	161	171	181	191	201	211	221	231	241
102	112	122	132	142	152	162	172	182	192	202	212	222	232	242
103	113	123	133	143	153	163	173	183	193	203	213	223	233	243
104	114	124	134	144	154	164	174	184	194	204	214	224	234	244
105	115	125	135	145	155	165	175	185	195	205	215	225	235	245
106	116	126	136	146	156	166	176	186	196	206	216	226	236	246
107	117	127	137	147	157	167	177	187	197	207	217	227	237	247
108	118	128	138	148	158	168	178	188	198	208	218	228	238	248
109	119	129	139	149	159	169	179	189	199	209	219	229	239	249
110	120	130	140	150	160	170	180	190	200	210	220	230	240	250

Name \_\_\_\_\_

Hospital or Facility \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

VOICE No. \_\_\_\_\_ Or please check one:  NMVTP participant (no fee required)  Nonmember—\$10 check or money order enclosed

Return a copy of this answer sheet to:  
 Continuing Education Coordinator, *Journal of Nuclear Medicine Technology*  
 Marcia Ferg, The Society of Nuclear Medicine, 1850 Samuel Morse Dr., Reston, VA 22090-5316. FAX: (703) 708-9015.

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