

CONTINUING EDUCATION TEST #1

Camera Purchasing by Bid Specification

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 **February 15, 1997**. 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 **NMVTP** 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. A bid specification for a gamma camera contains which of the following?

- 101. performance criteria
- 102. field-of-view criteria
- 103. resolution criteria
- 104. acceptance criteria
- 105. all of the above are correct

B. Which of the following crystal thicknesses is/are available today from most gamma camera manufacturers?

- 106. 1/4 in.
- 107. 3/8 in.
- 108. 1/2 in.
- 109. 3/4 in.
- 110. 106, 107 and 108 are correct

C. Which crystal thickness is the most efficient for imaging lower energies such as from ^{99m}Tc ?

- 111. 1/4 in.
- 112. 3/8 in.
- 113. 1/2 in.
- 114. 3/4 in.

D. Gamma camera pulse height analyzers can typically process photopeaks from which of the following energy ranges?

- 115. 50–500 keV
- 116. 500–1000 keV
- 117. 1000–2000 keV
- 118. 140–511 keV
- 119. all of the above are correct

E. The slip-ring design allows continuous unidirectional rotation of the camera heads.

- 120. true
- 121. false

F. A SPECT gamma camera, with heads positioned outside of the gantry, allows which of the following?

- 122. use of a wider imaging table
- 123. whole-body imaging
- 124. a larger radius of rotation
- 125. planar imaging outside the gantry
- 126. all of the above are correct

G. The FWHM divided by the photopeak energy results in a numerical value for which of the following?

- 127. uniformity
- 128. linearity
- 129. energy resolution
- 130. spatial resolution
- 131. total system performance

H. It does not make a difference which isotope is used to measure energy resolution.

- 132. true
- 133. false

I. A high 20% count-rate loss value for a gamma camera indicates which of the following?

- 134. better uniformity
- 135. better count-rate capability
- 136. better energy resolution
- 137. better spatial resolution
- 138. all of the above are correct

J. Which of the following is an important parameter to be considered when purchasing a SPECT imaging table?

- 139. table color
- 140. table attenuation
- 141. table resolution
- 142. table linearity
- 143. table length

K. Collimators are made by which of the following techniques?

- 144. casting
- 145. etching
- 146. pressing
- 147. laminating
- 148. 144, 145 and 146 are correct

L. SPECT phantoms that may be used for acceptance testing and quality control testing include _____.

- 149. PLES phantom
- 150. bar phantom
- 151. Jaszczak phantom
- 152. Carlson phantom
- 153. 151 and 152 are correct

M. Acceptance testing is a procedure that is performed on a daily basis to determine if the gamma camera is functioning properly.

- 154. true
- 155. false

N. NEMA is the National Electrical Manufacturers Association, the organization that sets standards for the measurement and reporting of gamma camera performance parameters.

- 156. true
- 157. false

CONTINUING EDUCATION TEST #2

Internet Update

O. *The fastest modems today operate at which of the following speeds?*

- 158. 3 kilobytes/sec
- 159. 3 kilobits/sec
- 160. 33 kilobytes/sec
- 161. 33 kilobits/sec
- 162. 333 kilobytes/sec

P. *Devices used to increase data transmission rates include _____.*

- 163. Integrated Services Digital Network (ISDN)
- 164. Asymmetric Digital Subscriber Line (ADSL)
- 165. @ Home
- 166. hypertext markup language (HTML)
- 167. 163, 164 and 165 are correct

Q. *Internet service providers (ISPs) include _____.*

- 168. MCI
- 169. Sprint
- 170. AT&T
- 171. Worldnet
- 172. all of the above are correct

R. *The major online access services include _____.*

- 173. America Online
- 174. CompuServe
- 175. Prodigy
- 176. Microsoft Network
- 177. all of the above are correct

S. *Web browsers include _____.*

- 178. Netscape
- 179. Internet Explorer
- 180. Worldnet
- 181. 178 and 179 are correct
- 182. 178, 179 and 180 are correct

T. *A plugin is a hardware device that allows the Web browser to download file.*

- 183. true
- 184. false

U. *Which of the following is the official standards-setting body for hypertext markup language (HTML)?*

- 185. Microsoft Corporation
- 186. Netscape
- 187. World Wide Web Organization
- 188. IBM
- 189. Intel

V. *Manufacturers can create and use new HTML tags before they become standards.*

- 190. true
- 191. false

W. *Virtual reality modeling (or markup) language (VRML) is a language which allows the three-dimensional display of images.*

- 192. true
- 193. false

X. *JAVA is a _____.*

- 194. Web page
- 195. HTML tag
- 196. programming language
- 197. transfer protocol
- 198. plugin

Y. *Internet search services include _____.*

- 199. Excite
- 200. HotBot
- 201. Yahoo!
- 202. Lycos
- 203. all of the above are correct

Z. *A cookie is a file containing information about a Web page.*

- 204. true
- 205. false

AA. *If a person is listed in a Bell telephone directory in the U.S., they have been included in the directory services of all of the following except _____.*

- 206. whois
- 207. Switchboard
- 208. Search America
- 209. Four11
- 210. 207, 208 and 209 are correct

BB. *Web sites that serve as search services for medical resources include _____.*

- 211. Search America
- 212. Health Gate
- 213. Knowledge Finder
- 214. Microsoft Web
- 215. 212 and 213 are correct

Answers to CE Article Test #1, September 1996

The continuing education article "Breast Tumor Scintigraphy" by Peller, et al. was accompanied by a CE test. The correct answers are as follows.

- A. 101 D. 111 G. 120 J. 130 M. 143
- B. 106 E. 113 H. 123 K. 136
- C. 107 F. 118 I. 126 L. 137

Answers to CE Article Test #2, September 1996

The continuing education article "Calculation and Prevention of Radionuclide Intake" by Kane, et al. was accompanied by a CE test. The correct answers are as follows.

- N. 145 P. 152 R. 162 T. 168 V. 176 X. 186
- O. 150 Q. 153 S. 166 U. 171 W. 180

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 _____ Title _____

Hospital or Facility _____ Dept. _____

Street Address _____

City _____ State _____ Zip _____ Phone (____) _____

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

Return a copy of this answer sheet no later than February 15, 1997 to:
 Continuing Education Coordinator, *Journal of Nuclear Medicine Technology*
 Marcia Ferg, The Society of Nuclear Medicine, 1850 Samuel Morse Dr., Reston, VA 20190.
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