Answer Key (Captains Test: Anatomy & Physiology 2019 (Division C)

1) brachiocephalic artery OR brachiocephalic trunk [1]
2) superior vena cava [1]
3) ascending aorta [1]
4) pulmonary valve [1]
5) right atrium [1]
6) tricuspid valve [1]
7) cusp of tricuspid valve [1]
8) right ventricle [1]
9) papillary muscles [1]
10) left common carotid artery [1]
11) left subclavian artery [1]
12) aortic arch [1]
13) left superior pulmonary vein [1]
14) left inferior pulmonary vein [1]
15) left atrium [1]
16) mitral valve [1]
17) cusp of mitral valve [1]
18) chordae tendineae [1]
19) A [1]
20) structure #9 (papillary muscles) attaches to the cusps of atrioventricular valves via the chordae tendineae and contracts to prevent inversion or prolapse of these valves on systole/ventricular contraction [2]

    Answer mentions: "contracts…on systole/ventricular contraction" [2]

    Answer mentions: "attaches to cusps of atrioventricular valves…" [1]

21) D [1]
22) D [1]
23) B [1]
24) A [1]
25) D [1]
26) E [1]
27) c, a, b [3]
28) C [1]
29) B [1]
30) C [1]
31) atrioventricular [1]

32) sinoatrial [1]
33) bundle of His [1]
34) Purkinje fibers [1]
35) B [1]
36) E [1]
37) A [1]
38) A [1]
39) anti-B [1]
40) A antigen [1]
41) A, O [2, 1 pt. for each correct]
42) anti-A [1]
43) B antigen [1]
44) B, O [2, 1 pt. for each correct]
45) none [1]
46) A antigen, B antigen [2, 1 pt. for each correct]
47) A, B, AB, O [4, 1 pt. for each correct]
48) anti-A, anti-B [2, 1 pt. for each correct]
49) none [1]
50) O [1]
51) B [1]
52) E [1]
53) D [1]
54) D [1]
55) C [1]
56) blood capillaries [1]
57) interstitial fluid [1]
58) lymph capillaries [1]
59) lymph veins [1]
60) lymph ducts [1]
61) large circulatory veins [1]
62) primary grouping [1]
63) secondary grouping [1]
64) secondary grouping [1]
65) tertiary grouping [1]
66) primary grouping [1]
67) secondary grouping [1]
68) primary grouping [1]
69) secondary grouping [1]
70) tertiary grouping [1]
71) tertiary grouping [1]

72) E [1]
73) red blood cells [1]
74) platelets OR white blood cells [1 for either]
75) platelets OR white blood cells [1 for the correct answer NOT used in #74]
76) hemoglobin [1]
77) B [1]
78) inferior vena cava [1]
79) adrenal gland [1]
80) renal artery [1]
81) renal hilum [1]
82) renal vein [1]
83) aorta [1]
84) kidney [1]
85) ureter [1]
86) rectum [1]
87) urinary bladder [1]
88) urethra [1]
89) Albumin-to-Creatinine Ratio [2]
90) Glomerular Filtration Rate [2]
91) C [1]
92) D [1]
93) A [1]
94) B [1]
95) D [1]
96) C [1]
97) cardiac output = (heart rate) x (stroke volume)

cardiac output = (68 beats/min) x (40 mL/beat)

cardiac output = 2,720 mL/min = 2.720 L/min

Award Point 1 for some correct work shown; award Point 2 for correct numerical answer; award Point 3 for proper units. [3]

98) pulse pressure = (systolic pressure) – (diastolic pressure)

pulse pressure = (80 mmHg) – (50 mmHg)

pulse pressure = 30 mmHg

Award Point 1 for some correct work shown; award Point 2 for correct numerical answer; award Point 3 for proper units. [3]

99) MAP = (diastolic pressure) + 1/3(pulse pressure)

OR

MAP = 2/3(diastolic pressure) + 1/3(systolic pressure)

MAP = 2/3(50 mmHg) + 1/3(80 mmHg)

MAP = 60 mmHg

Award Point 1 for some correct work shown; award Point 2 for correct numerical answer; award Point 3 for proper units. [3]

100) Point 1: Yes, James' MAP is abnormal (normal MAP is 70-100 mmHg).

Points 2 & 3: For each of these two points, provide one (1) of the following plausible causes: sepsis, stroke, hemorrhaging, trauma. [3]