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Question 9 Given -

IP datagram -2400 bytes (including 20 byte header) MTU -152 bytes (According to given rules) Identification -422

Actual payload from IP datagram – 2380 bytes

Since MTU is 152 bytes, therefore each fragment can carry atmost 152-20 = 132 bytes of payload However, 132 is not divisible by 8 (therefore forcing fragment offset to be decimal). Hence, in this case, 128 bytes of the given IP datagram would be present in each fragment

Fragment #	# of Bytes	ID	Offset	Flag
1	128 bytes of actual data + 20 bytes of header = 148 bytes	422	0 (meaning the data should be inserted beginning at byte 0)	1 (meaning there are more fragments)
2	128 bytes of actual data + 20 bytes of header = 148 bytes	422	16 (meaning the data should be inserted beginning at byte 16 * 8= 128)	1 (meaning there are more fragments)
3	128 bytes of actual data + 20 bytes of header = 148 bytes	422	32 (meaning the data should be inserted beginning at byte 32 * 8 = 256)	1 (meaning there are more fragments)
4	128 bytes of actual data + 20 bytes of header = 148 bytes	422	48 (meaning the data should be inserted beginning at byte 384)	1 (meaning there are more fragments)
5	128 bytes of actual data + 20 bytes of header = 148 bytes	422	64 (meaning the data should be inserted beginning at byte 512)	1 (meaning there are more fragments)
6	128 bytes of actual data + 20 bytes of header = 148 bytes	422	80 (meaning the data should be inserted beginning at byte 640)	1 (meaning there are more fragments)
7	128 bytes of actual data + 20 bytes of header = 148 bytes	422	96 (meaning the data should be inserted beginning at byte 768)	1 (meaning there are more fragments)
8	128 bytes of actual data + 20 bytes of header = 148 bytes	422	112 (meaning the data should be inserted beginning at byte 896)	1 (meaning there are more fragments)
9	128 bytes of actual data + 20 bytes of header = 148 bytes	422	128 (meaning the data should be inserted beginning at byte 1024)	1 (meaning there are more fragments)
10	128 bytes of actual data + 20 bytes of header = 148 bytes	422	144 (meaning the data should be inserted beginning at byte 1152)	1 (meaning there are more fragments)
11	128 bytes of actual data + 20 bytes of header = 148 bytes	422	160 (meaning the data should be inserted beginning at byte 1280)	1 (meaning there are more fragments)
12	128 bytes of actual data + 20 bytes of header = 148 bytes	422	176 (meaning the data should be inserted beginning at byte 1408)	1 (meaning there are more fragments)
13	128 bytes of actual data + 20 bytes of header = 148 bytes	422	192 (meaning the data should be inserted beginning at byte 1536)	1 (meaning there are more fragments)

14	128 bytes of actual data + 20 bytes of header = 148 bytes	422	208 (meaning the data should be inserted beginning at byte 1664)	1 (meaning there are more fragments)
15	128 bytes of actual data + 20 bytes of header = 148 bytes	422	224 (meaning the data should be inserted beginning at byte 1792)	1 (meaning there are more fragments)
16	128 bytes of actual data + 20 bytes of header = 148 bytes	422	240 (meaning the data should be inserted beginning at byte 1920)	1 (meaning there are more fragments)
17	128 bytes of actual data + 20 bytes of header = 148 bytes	422	256 (meaning the data should be inserted beginning at byte 2048)	1 (meaning there are more fragments)
18	128 bytes of actual data + 20 bytes of header = 148 bytes	422	272 (meaning the data should be inserted beginning at byte 2176)	1 (meaning there are more fragments)
19	2380 – 2304 = 76 bytes of actual data + 20 bytes of header = 86 bytes	422	288 (meaning the data should be inserted beginning at byte 2304)	0 (meaning this is the last fragment)