

**0478 and 0984(9-1)
COMPUTER SCIENCE
TOPIC MARK SCHEMES SET-3
SMART EXAM RESOURCES**

Unit 1.1 Number Systems

MARKS SCHEME

Unit 1.1 Number Systems

ANSWER 1

One mark per each correct denary value. - 41 - 200	2
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ANSWER 2(a) Base-2

1

ANSWER 2(b)

4

- **9**
- **16**
- **40**
- **161**

ANSWER 3(a) Base-10

1

ANSWER 3(b)

- **5**
- **32**
- **26**
- **171**

ANSWER 3(c)(i) **00100101**

1

ANSWER 3(c)(ii) **00011011**

1

ANSWER 3(d)(i)

Any one from: - To represent HTML colour codes - In error messages	1
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ANSWER 3(d)(ii)

Any one from: - Assembly code/language - Memory address locations - In error messages - Memory dump	1
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ANSWER 4(a)

One mark for correct binary value, one mark for leading zeros 00000000 01000111	2
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Unit 1.1 Number Systems

ANSWER 4(b)

<p>One mark for leading zeros, one mark for correct binary value</p> <p>00000001 00000001</p>	2
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ANSWER 4(c) **0516**

1

ANSWER 5

<p>One mark for each correct binary conversion One mark for each correct denary conversion</p>			6
Hexadecimal ticket number	12-bit binary value	Denary value	
028	0000 0010 1000	40	
1A9	0001 1010 1001	425	
20C	0010 0000 1100	524	

ANSWER 6

<p>One mark per each nibble:</p>									6
43	0	1	0	0	0	0	1	1	
B7	1	0	1	1	0	1	1	1	
F0	1	1	1	1	0	0	0	0	